

Demand for Information Technology Occupations in Delaware



March 2018

ONLINE POSTINGS OVERVIEW

In 2017 more than 8,200 opportunities for Delaware information technology positions were posted online.

Industry data was available for 70 percent of the postings.

- By far, the most openings were found in two industries: Finance and Insurance (47 percent) and Professional, Scientific and Technical services (34 percent).
- The next notable industry was Manufacturing with over 300 postings during the year.



ONLINE POSTINGS BY INDUSTRY



Industry	2017 Postings	
Finance and Insurance (52)	2,673	47%
Professional, Scientific, and Technical Services (54)	1,964	34%
Manufacturing (31-33)	328	6%
Retail Trade (44-45)	163	3%
Information (51)	123	2%
Health Care and Social Assistance (62)	117	2%
Administrative and Support and Waste Management and Remediation Services (56)	69	1%
Mining, Quarrying, and Oil and Gas Extraction (21)	56	1%
Public Administration (92)	52	1%
Educational Services (61)	39	1%
Transportation and Warehousing (48-49)	38	1%
Accommodation and Food Services (72)	36	1%
Utilities (22)	31	1%
All other industries	57	1%
<i>Total</i>	<i>5,746</i>	<i>100%</i>

ONLINE POSTINGS BY OCCUPATION



Occupation		2017 Postings	
11-3021	Computer and Information Systems Managers	2,673	47%
15-1111	Computer and Information Research Scientists	1,964	34%
15-1121	Computer Systems Analysts	328	6%
15-1122	Information Security Analysts	163	3%
15-1131	Computer Programmers	123	2%
15-1132	Software Developers, Applications	117	2%
15-1133	Software Developers, Systems Software	69	1%
15-1134	Web Developers	56	1%
15-1141	Database Administrators	52	1%
15-1142	Network and Computer Systems Administrators	39	1%
15-1143	Computer Network Architects	38	1%
15-1151	Computer User Support Specialists	36	1%
15-1152	Computer Network Support Specialists	31	1%
	<i>Total</i>	<i>8,274</i>	<i>100%</i>

ADDITIONAL OCCUPATIONS

Based on analysis of the current occupational landscape, projected annual openings and 2017 online jobs postings, four additional occupations should be considered as part of the DelTech program offerings.

Information Security Analysts (15-1122)

- Current Employment: 479; Projected annual openings: 36
- 2017 online postings: 478

Computer Programmers (15-1131)

- Current Employment: 890; Projected annual openings: 58
- 2017 online postings: 280

Web Developers (15-1134)

- Current Employment: 416; Projected annual openings: 37
- 2017 online postings: 406

Computer User Support Specialists (15-1151)

- Current Employment: 1,647; Projected annual openings: 141
- 2017 online postings: 673



ONLINE POSTINGS CERTIFICATIONS

Postings data is limited with respect to the the availability of certification data, however they do include data on skills that is much more robust.

Of the more than 8,200 online postings for IT occupations in 2017, just 813 (10%) included one or more certifications in the posting text.

The top certifications included Certified Information Systems Security Professional (168 postings), Certified Information Systems Auditor (118 postings), and Project Management Certification (88 postings).



***A note on education: Only half of all postings include information about minimum required education. The majority (83%) required a BA; 8% required high school or vocational training, and 5% required an associate's degree. Less than 5% required more than a BA.*

ONLINE POSTINGS **TOP 15** **CERTIFICATIONS**



Certification	2017 Postings	
Certified Information Systems Security Professional (CISSP)	168	21%
Certified Information Systems Auditor (CISA)	116	14%
Project Management Certification (E.G. PMP)	88	11%
Cisco Certified Network Associate	80	10%
Certified Information Security Manager (CISM)	79	10%
Cisco Certified Network Professional (CCNP)	61	8%
Network+ Certified	56	7%
It Infrastructure Library	48	6%
Certified A+ Technician	45	6%
Security Clearance	41	5%
Scrum	40	5%
Microsoft Certified Professional (MCP)	39	5%
Sans/Giac Certification	38	5%
Professional Engineer	38	5%
Microsoft Certified Solutions Expert (MCSE)	31	4%

ONLINE POSTINGS

SKILLS CLUSTERS

The tool used for this analysis, Labor Insight by Burning Glass, creates skills clusters, or groups of skills that are closely aligned, have similar functionality, and can be trained together.

The online postings for the relevant occupations included significant IT and analysis skills relevant to training.

More than 55 unique IT skills clusters were identified in the postings. The three most prevalent were Software Development Principles (2,901 postings), Java (2,591 postings) and SQL (2,548 postings).



ONLINE POSTINGS

TOP 15 IT SKILLS CLUSTERS



Skills Cluster	2017 Postings	
Software Development Principles	2,901	38%
Java	2,591	34%
SQL	2,548	33%
Operating Systems	2,080	27%
System Design and Implementation	1,941	25%
Oracle	1,684	22%
JavaScript and jQuery	1,633	21%
Technical Support	1,378	18%
Microsoft Office and Productivity Tools	1,331	17%
Database Administration	1,161	15%
Big Data	1,048	14%
Scripting Languages	1,041	14%
Scripting	1,041	14%
Web Development	1,031	13%
Programming Principles	1,000	13%

ONLINE POSTINGS

EMPLOYERS

Employer information was available for about 4,950 of the IT jobs posted online in 2017, or 60 percent of all postings.

Number of postings per employer	Employers	
More than 100 postings	5	1%
50-99	10	2%
30-49	6	1%
20-29	15	3%
10-19	31	6%
5 to 9	72	15%
3 to 4	92	19%
1-2 postings	262	53%
Total employers	493	100%



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<u>Tab name</u>	<u>Description</u>
2017-2022 Summary-All Occs	Summary data for all IT occupations, includes employment, projections, and postings
2017 Postings by Industry	Number of online postings by industry
Individual Occupation tables	
DATA KEY-Sample IT Managers	Definitions of data found in occupation tables
11-3021 IT Managers	Computer and Information Systems Managers
15-1111 Comp-Info Research	Computer and Information Research Scientists
15-1121 Comp Systems Analysts	Computer Systems Analysts
15-1122 Info Security Analysts	Information Security Analysts
15-1131 Computer Programmers	Computer Programmers
15-1132 Developers-Applications	Software Developers, Applications
15-1133 Developers-Systems	Software Developers, Systems Software
15-1134 Web Developers	Web Developers
15-1141 Database Administrators	Database Administrators
15-1142 Network-Systems Admin	Network and Computer Systems Administrators
15-1143 CompNetwork Architects	Computer Network Architects
15-1151 CompUser Support Spec	Computer User Support Specialists
15-1152 CompNetwrk Support Spec	Computer Network Support Specialists
Skills and certifications tables	
Job Postings - IT Skills	Number of postings by IT Skills cluster
Job Postings - Analysis Skills	Number of postings by Analysis Skills cluster
Job Postings - Certifications	Number of postings by type of certification
Employers	
Job Postings - Employers	Full list of employers with 3 or more postings in 2017
Data sources	
EMSI - Data Sources and Calcs	EMSI - Data Sources and Calculations

SOC	Description	2017 Jobs	2022 Jobs	2017 - 2022 Change	2017 - 2022 % Change	2017 - 2022 Openings	Annual Openings	2017 online postings
11-3021	Computer and Information Systems Managers	1,288	1,349	61	5%	535	107	120
15-1111	Computer and Information Research Scientists	60	56	(4)	(7%)	21	4	109
15-1121	Computer Systems Analysts	3,421	3,591	170	5%	1,272	254	963
15-1122	Information Security Analysts	479	499	20	4%	182	36	478
15-1131	Computer Programmers	890	851	(39)	(4%)	280	56	280
15-1132	Software Developers, Applications	3,382	3,525	143	4%	1,231	246	4,069
15-1133	Software Developers, Systems Software	1,555	1,592	37	2%	536	107	33
15-1134	Web Developers	416	453	37	9%	186	37	406
15-1141	Database Administrators	617	627	10	2%	208	42	442
15-1142	Network and Computer Systems Administrators	1,278	1,319	41	3%	438	88	334
15-1143	Computer Network Architects	653	660	7	1%	221	44	303
15-1151	Computer User Support Specialists	1,647	1,742	95	6%	705	141	673
15-1152	Computer Network Support Specialists	675	702	27	4%	275	55	64
15-1199	Computer Occupations, All Other	302	328	26	9%	130	26	
		16,664	17,295	631	4%	6,221	1,244	8,274

Current training program

Network security and administration

Database Management and Analytics

App Dev/Prog

SOC	Description	10%tile hourly earnings	Median Hourly Earnings	75%tile hourly earnings	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
11-3021	Computer and Information Systems Managers	\$47.31	\$72.81	\$89.85	Bachelor's degree	5 years or more	None
15-1111	Computer and Information Research Scientists	\$31.20	\$42.42	\$51.69	Doctoral or professional degree	None	None
15-1121	Computer Systems Analysts	\$30.11	\$45.10	\$54.71	Bachelor's degree	None	None
15-1122	Information Security Analysts	\$31.44	\$48.18	\$58.36	Bachelor's degree	Less than 5 years	None
15-1131	Computer Programmers	\$26.57	\$38.41	\$47.35	Bachelor's degree	None	None
15-1132	Software Developers, Applications	\$28.53	\$47.82	\$58.40	Bachelor's degree	None	None
15-1133	Software Developers, Systems Software	\$41.55	\$56.13	\$62.71	Bachelor's degree	None	None
15-1134	Web Developers	\$20.28	\$40.03	\$47.73	Associate's degree	None	None
15-1141	Database Administrators	\$25.38	\$43.23	\$54.78	Bachelor's degree	Less than 5 years	None
15-1142	Network and Computer Systems Administrators	\$24.56	\$36.69	\$47.13	Bachelor's degree	None	None
15-1143	Computer Network Architects	\$34.79	\$59.66	\$71.47	Bachelor's degree	5 years or more	None
15-1151	Computer User Support Specialists	\$17.54	\$25.78	\$31.70	Some college, no degree	None	None
15-1152	Computer Network Support Specialists	\$19.17	\$31.42	\$44.00	Associate's degree	None	None
15-1199	Computer Occupations, All Other	\$23.90	\$36.82	\$44.20	Bachelor's degree	None	None

Current training program

Network security and administration

Database Management and Analytics

App Dev/Prog

Source: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 postings

NAICS Code	Industry	2017 # Postings	2017 % Postings
52	Finance and Insurance	2,673	47%
54	Professional, Scientific, and Technical Services	1,964	34%
31-33	Manufacturing	328	6%
44-45	Retail Trade	163	3%
51	Information	123	2%
62	Health Care and Social Assistance	117	2%
56	Administrative and Support and Waste Management and Remediation Services	69	1%
21	Mining, Quarrying, and Oil and Gas Extraction	56	1%
92	Public Administration	52	1%
61	Educational Services	39	1%
48-49	Transportation and Warehousing	38	1%
72	Accommodation and Food Services	36	1%
22	Utilities	31	1%
81	Other Services (except Public Administration)	20	0%
42	Wholesale Trade	15	0%
23	Construction	11	0%
71	Arts, Entertainment, and Recreation	7	0%
53	Real Estate and Rental and Leasing	3	0%
55	Management of Companies and Enterprises	1	0%
	<i>Total</i>	<i>5,746</i>	<i>100%</i>

SAMPLE/DATA OVERVIEW**Computer and Information Systems Managers (11-3021)****Definition**

2017 jobs	1,288	Total employment in this occupation in 2017
2022 jobs	1,349	Projected employment in 2022
-2017-22 change	61	Numerical change/growth in employment 2017-2022
-2017-22 %change	5%	Percentage change/growth in employment 2017-2022
Projected annual openings	107	Number of openings each year -includes new positions and turnover
Hourly earnings		Hourly earnings at 10th, 50th, and 75th percentile to show range
-10th %tile	\$47.31	
-Median	\$72.81	
-75th %tile	\$89.85	

Total 2017 postings	120	100%	Total annual online postings
Industry included on posting	98	82%	Of the total postings (120), the share with industry data (98, 82%)
52 Finance and Insurance	51	43%	
54 Professional, Scientific, and Technical Services	21	18%	
31-33 Manufacturing	13	11%	
51 Information	6	5%	
61 Educational Services	2	2%	Of the postings with industry data (98) the share in each industry
Administrative and Support and Waste Management			
56 and Remediation Services	1	1%	
62 Health Care and Social Assistance	1	1%	
92 Public Administration	1	1%	
44-45 Retail Trade	1	1%	
48-49 Transportation and Warehousing	1	1%	

SAMPLE/DATA OVERVIEW**Computer and Information Systems Managers (11-3021)****Definition****Skills Clusters**

*postings skills cluster data	109	91%	Of the total postings (120), the share with skills data (109, 91%)
Finance: Budget Management	50	46%	
Information Technology: Microsoft Office and Productivity Tools	46	42%	
Business: Business Process and Analysis	32	29%	
Business: Project Management	32	29%	
Business: Business Strategy	29	27%	Of the postings with skills data (109) the share with each skill
Information Technology: System Design and Implementation	28	26%	-each posting can include multiple skills
Customer and Client Support: Basic Customer Service	25	23%	
Business: People Management	22	20%	
Sales: Business Development	22	20%	
Information Technology: Software Development Principles	21	19%	

Certifications

*postings with certifications	12	10%	Of the total postings (120), the share with certification data (12, 10%)
PROJECT MANAGEMENT CERTIFICATION (E.G. PMP)	7	58%	Of the postings with certification data (12) the share with each certification -each posting can include multiple certifications -includes only certifications appearing in 20% of more of postings with certification data

SAMPLE/DATA OVERVIEW**Computer and Information Systems Managers (11-3021)****Definition****Employers**

JP Morgan Chase Company	26	29%	Of the total postings, the share for each employer; not all postings include employer data.
Accenture	12	13%	
General Electric Company	7	8%	
Bancorp	5	6%	
Capital One	4	4%	
Alcatel-Lucent	3	3%	
Anthem Blue Cross	3	3%	
Ellucian	3	3%	
inVentiv Health	3	3%	

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Computer and Information Systems Managers (11-3021)

2017 jobs	1,288	
2022 jobs	1,349	
-2017-22 change	61	
-2017-22 %change	5%	
Projected annual openings	107	
Hourly earnings		
-10th %tile	\$47.31	
-Median	\$72.81	
-75th %tile	\$89.85	
Total postings	120	100%
Industry included on posting	98	82%
52 Finance and Insurance	51	52%
54 Professional, Scientific, and Technical Services	21	21%
31-33 Manufacturing	13	13%
51 Information	6	6%
61 Educational Services	2	2%
56 Administrative and Support and Waste Management and Remediation Services	1	1%
62 Health Care and Social Assistance	1	1%
92 Public Administration	1	1%
44-45 Retail Trade	1	1%
48-49 Transportation and Warehousing	1	1%
Skills Clusters		
*postings skills cluster data	109	91%
Business: Business Process and Analysis	32	29%
Business: Business Strategy	29	27%
Business: People Management	22	20%
Business: Project Management	32	29%
Customer and Client Support: Basic Customer Service	25	23%
Finance: Budget Management	50	46%
Information Technology: Microsoft Office and Productivity Tools	46	42%
Information Technology: Software Development Principles	21	19%
Information Technology: System Design and Implementation	28	26%
Sales: Business Development	22	20%
Certifications		
*postings with certifications	12	10%
PROJECT MANAGEMENT CERTIFICATION (E.G. PMP)	7	58%

Computer and Information Systems Managers (11-3021)

Employers		
JP Morgan Chase Company	26	22%
Accenture	12	10%
General Electric Company	7	6%
Bancorp	5	4%
Capital One	4	3%
Alcatel-Lucent	3	3%
Anthem Blue Cross	3	3%
Ellucian	3	3%
inVentiv Health	3	3%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Computer and Information Research Scientists (15-1111)

2017 jobs	60	
2022 jobs	56	
-2017-22 change	(4)	
-2017-22 %change	-7%	
Projected annual openings	4	
Hourly earnings		
-10th %tile	\$31.20	
-Median	\$42.42	
-75th %tile	\$51.69	
Total postings	109	100%
Industry included on posting	95	87%
52 Finance and Insurance	57	60%
54 Professional, Scientific, and Technical Services	24	25%
31-33 Manufacturing	12	13%
22 Utilities	2	2%
Skills Clusters		
*postings skills cluster data	102	94%
Analysis: Machine Learning	72	71%
Analysis: Data Science	71	70%
Information Technology: Scripting Languages	69	68%
Information Technology: Big Data	66	65%
Analysis: Mathematics	61	60%
Analysis: Statistical Software	60	59%
Analysis: Data Analysis	52	51%
Analysis: Data Mining	49	48%
Information Technology: SQL	48	47%
Analysis: Statistics	38	37%
Economics, Policy, and Social Studies: Economics	36	35%
Information Technology: Data Warehousing	32	31%
Business: Risk Management	27	26%
Information Technology: Software Development Principles	26	25%
Science and Research: Scientific Disciplines	26	25%
Information Technology: Data Management	25	25%
Analysis: Data Visualization	23	23%
Business: Business Strategy	22	22%
Certifications		
*postings with certifications	10	9%

Computer and Information Research Scientists (15-1111)

Employers

JP Morgan Chase Company	35	32%
Qps	11	10%
Citi	7	6%
Accenture	6	6%
Agilent Technologies, Inc.	6	6%
Anthem Blue Cross	4	4%
Air Liquide	3	3%
E. I. Du Pont De Nemours And Company	3	3%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Computer Systems Analysts (15-1121)

2017 jobs	3,421	
2022 jobs	3,591	
-2017-22 change	170	
-2017-22 %change	5%	
Projected annual openings	254	
Hourly earnings		
-10th %tile	\$30.11	
-Median	\$45.10	
-75th %tile	\$54.71	
Total postings	963	100%
Industry included on posting	761	79%
52 Finance and Insurance	387	51%
54 Professional, Scientific, and Technical Services	235	31%
62 Health Care and Social Assistance	47	6%
31-33 Manufacturing	28	4%
51 Information	13	2%
21 Mining, Quarrying, and Oil and Gas Extraction	13	2%
56 Administrative and Support and Waste Management and Remediation Services	7	1%
61 Educational Services	5	1%
22 Utilities	5	1%
42 Wholesale Trade	5	1%
23 Construction	4	1%
92 Public Administration	4	1%
72 Accommodation and Food Services	3	0%
48-49 Transportation and Warehousing	3	0%
71 Arts, Entertainment, and Recreation	2	0%
Skills Clusters		
*postings skills cluster data	891	93%
Business: Business Process and Analysis	470	53%
Information Technology: System Design and Implementation	296	33%
Information Technology: Microsoft Office and Productivity Tools	277	31%
Information Technology: SQL	264	30%
Business: Project Management	245	27%
Information Technology: Software Development Principles	225	25%
Information Technology: Oracle	150	17%
Information Technology: Operating Systems	149	17%
Analysis: Statistical Software	135	15%
Information Technology: Database Administration	133	15%
Certifications		
*postings with certifications	68	7%
PROJECT MANAGEMENT CERTIFICATION (E.G. PMP)	15	22%

Computer Systems Analysts (15-1121)**Employers**

JP Morgan Chase Company	180	19%
Accenture	103	11%
Christiana Care	41	4%
Bank of America	24	2%
Barclays	24	2%
M & T Bank	23	2%
Citi	18	2%
Anthem Blue Cross	16	2%
U.S. Bancorp	15	2%
Wipro	15	2%
Sallie Mae, Inc	14	1%
Exelon	13	1%
C & L Group	10	1%
First Data	10	1%
Computer Aid Incorporated	9	1%
Highmark Health	9	1%
TD Bank	7	1%
Cornerstone Ondemand	6	1%
General Electric Company	6	1%
Infosys	6	1%
Veterans Sourcing Group	6	1%
Fieldcore	5	1%
Hallmark Global Technologies	5	1%
Perdue	5	1%
Suez	5	1%
Ce Solutions	4	0%
Computer Enterprises	4	0%
E. I. Du Pont De Nemours And Company	4	0%
Ashland Corporate	3	0%
Berkley Technology Services	3	0%
Boehringer Ingelheim	3	0%
Capital One	3	0%
Delasoft Incorporated	3	0%
Emtec Incorporated	3	0%
Pepco Holdings	3	0%
The PNC Financial Services Group, Inc.	3	0%
University of Delaware	3	0%
Wilmington	3	0%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Information Security Analysts (15-1122)

2017 jobs	479	
2022 jobs	499	
-2017-22 change	20	
-2017-22 %change	4%	
Projected annual openings	36	
Hourly earnings		
-10th %tile	\$31.44	
-Median	\$48.18	
-75th %tile	\$58.36	
Total postings	478	100%
Industry included on posting	377	79%
52 Finance and Insurance	193	51%
54 Professional, Scientific, and Technical Services	128	34%
31-33 Manufacturing	23	6%
62 Health Care and Social Assistance	9	2%
48-49 Transportation and Warehousing	6	2%
92 Public Administration	5	1%
56 Administrative and Support and Waste Management and Remediation Services	3	1%
51 Information	3	1%
22 Utilities	3	1%
72 Accommodation and Food Services	1	0%
23 Construction	1	0%
61 Educational Services	1	0%
55 Management of Companies and Enterprises	1	0%
Skills Clusters		
*postings skills cluster data	411	86%
Information Technology: Cybersecurity	236	57%
Information Technology: Operating Systems	117	28%
Finance: Auditing	111	27%
Information Technology: System Design and Implementation	105	26%
Information Technology: Enterprise Resource Planning (ERP)	100	24%
Business: Risk Management	99	24%
Business: Project Management	94	23%
Information Technology: General Networking	88	21%
Business: Business Process and Analysis	85	21%
Public Safety and National Security: Government Clearance and Security Standards	62	15%
Certifications		
*postings with certifications	214	45%
CERTIFIED INFORMATION SYSTEMS SECURITY PROFESSIONAL (CISSP)	114	53%
CERTIFIED INFORMATION SYSTEMS AUDITOR (CISA)	107	50%
CERTIFIED INFORMATION SECURITY MANAGER (CISM)	70	33%

Information Security Analysts (15-1122)**Employers**

JP Morgan Chase Company	63	13%
M & T Bank	31	6%
Accenture	29	6%
U.S. Bancorp	17	4%
Citi	11	2%
Granite Services	11	2%
TD Bank	10	2%
Capital One	9	2%
General Electric Company	9	2%
Anthem Blue Cross	8	2%
Bank of America	8	2%
Sallie Mae, Inc	8	2%
Sirius Computer Solutions	7	1%
Dxc	5	1%
American Express	4	1%
Barclays	4	1%
Berkley Technology Services	4	1%
Chemours	4	1%
E. I. Du Pont De Nemours And Company	4	1%
Ibs	4	1%
Universal Health Services, Inc.	4	1%
Christiana Care	3	1%
Computer Consultants International	3	1%
Computer Sciences Corporation	3	1%
Incyte Corporation	3	1%
Navigant	3	1%
Okaya Infocom	3	1%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Computer Programmers (15-1131)

2017 jobs	890	
2022 jobs	851	
-2017-22 change	(39)	
-2017-22 %change	-4%	
Projected annual openings	56	
Hourly earnings		
-10th %tile	\$26.57	
-Median	\$38.41	
-75th %tile	\$47.35	
Total postings	280	100%
Industry included on posting	191	68%
52 Finance and Insurance	68	36%
54 Professional, Scientific, and Technical Services	62	32%
44-45 Retail Trade	23	12%
31-33 Manufacturing	10	5%
61 Educational Services	8	4%
51 Information	5	3%
48-49 Transportation and Warehousing	5	3%
56 Administrative and Support and Waste Management and Remediation Services	4	2%
62 Health Care and Social Assistance	3	2%
71 Arts, Entertainment, and Recreation	2	1%
92 Public Administration	1	1%
Skills Clusters		
*postings skills cluster data	226	81%
Information Technology: SQL	91	40%
Information Technology: Java	85	38%
Information Technology: Software Development Principles	76	34%
Information Technology: JavaScript and jQuery	58	26%
Business: Project Management	56	25%
Information Technology: System Design and Implementation	51	23%
Information Technology: Operating Systems	47	21%
Information Technology: Oracle	45	20%
Information Technology: Microsoft Office and Productivity Tools	38	17%
Information Technology: Web Development	36	16%
Certifications		
*postings with certifications	14	5%

Computer Programmers (15-1131)

Employers		
JP Morgan Chase Company	24	9%
Barclays	11	4%
Incyte Corporation	11	4%
University of Delaware	8	3%
Accenture	7	3%
Big Lots Incorporated	7	3%
UnitedHealth Group	7	3%
Anthem Blue Cross	6	2%
Bank of America	6	2%
Icon Clinical Research	6	2%
Data Incorporated	5	2%
Sears	5	2%
Best Buy	4	1%
Clinpharma Consulting Global Group Llc	4	1%
C & L Group	3	1%
Cabelas	3	1%
Capital One	3	1%
E. I. Du Pont De Nemours And Company	3	1%
Mphasis Corporation Usa	3	1%
Navient Corporation	3	1%
Salesforce.Com	3	1%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Software developers, Applications (15-1132)

2017 jobs		3,382	
2022 jobs		3,525	
-2017-22 change		143	
-2017-22 %change		4%	
Projected annual openings		246	
Hourly earnings			
-10th %tile		\$ 28.53	
-Median		\$ 47.82	
-75th %tile		\$ 58.40	
Total postings		4,069	100%
Industry included on posting		2,679	66%
52	Finance and Insurance	1,421	53%
54	Professional, Scientific, and Technical Services	920	34%
31-33	Manufacturing	134	5%
51	Information	53	2%
21	Mining, Quarrying, and Oil and Gas Extraction	35	1%
56	Administrative and Support and Waste Management and Remediation Services	25	1%
62	Health Care and Social Assistance	21	1%
22	Utilities	19	1%
48-49	Transportation and Warehousing	14	1%
92	Public Administration	11	0%
72	Accommodation and Food Services	8	0%
44-45	Retail Trade	8	0%
61	Educational Services	6	0%
71	Arts, Entertainment, and Recreation	2	0%
81	Other Services (except Public Administration)	1	0%
42	Wholesale Trade	1	0%
Skills Clusters			
*postings skills cluster data		3,771	93%
Information Technology: Software Development Principles		2,181	58%
Information Technology: Java		2,075	55%
Information Technology: SQL		1,620	43%
Information Technology: Operating Systems		1,208	32%
Information Technology: JavaScript and jQuery		1,179	31%
Information Technology: Oracle		1,148	30%
Information Technology: System Design and Implementation		1,060	28%
Information Technology: Programming Principles		787	21%
Information Technology: Test Automation		706	19%
Information Technology: Web Servers		722	19%
Certifications			
*postings with certifications		228	6%

Software developers, Applications (15-1132)**Employers**

JP Morgan Chase Company	784	19%
Accenture	319	8%
Capital One	158	4%
General Electric Company	61	1%
Bank of America	60	1%
C & L Group	53	1%
Exelon	35	1%
Citi	33	1%
Blackrock Incorporated	32	1%
Veterans Sourcing Group	32	1%
Anthem Blue Cross	24	1%
Okaya Infocom	24	1%
U.S. Bancorp	23	1%
Nityo Infotech	22	1%
M & T Bank	20	0%
Sevone Inc	20	0%
Barclays	19	0%
Netnames	15	0%
Sirius Computer Solutions	14	0%
Ce Solutions	13	0%
Data Incorporated	13	0%
Social Finance, Inc	13	0%
Computer Aid Incorporated	12	0%
Sierra Business Solution Llc	12	0%
Agilent Technologies, Inc.	11	0%
Ameriplan	11	0%
American Express	10	0%
Highmark Health	9	0%
NTT Data	9	0%
Pepco Holdings	9	0%
Ta Instruments	9	0%
Verint Systems Incorporated	9	0%
United States Technical Solutions	8	0%
Mathworks	7	0%
WSFS Financial Corporation	7	0%
Bayhealth	6	0%
Citadel Information Services	6	0%
Compass Group	6	0%

Software developers, Applications (15-1132)

E-Solutionsinc	6	0%
Emtec Incorporated	6	0%
Houghton Mifflin Company	6	0%
Psci	6	0%
Technocraft Solutions	6	0%
3M Company	5	0%
Ashland Corporate	5	0%
Chesapeake Utilities Corporation	5	0%
Comprehensive Resources Incorporated	5	0%
Hallmark Global Technologies	5	0%
It First Source	5	0%
Mphasis Corporation	5	0%
Mphasis Corporation Usa	5	0%
Next Level Business Services	5	0%
Pronix Inc	5	0%
TD Bank	5	0%
Two95 International Inc	5	0%
Wipro	5	0%
Advance Technologies Llc	4	0%
Alcatel-Lucent	4	0%
Amsted Industries	4	0%
Amtex Systems	4	0%
Astrazeneca	4	0%
Berkley Technology Services	4	0%
Charles River Company	4	0%
Chemours	4	0%
Ciber Incorporated	4	0%
First Data	4	0%
Hss Incorporated	4	0%
Infoways	4	0%
Last Word Consulting	4	0%
Mphasis	4	0%
Salesforce.Com	4	0%
Sallie Mae, Inc	4	0%
Sofi	4	0%
Technology Resource Group	4	0%
The Department Of Technology	4	0%
VLS Systems	4	0%
Vindy	4	0%
Virtusa	4	0%
Waters	4	0%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Software Developers, Systems Software (15-1133)

	2017 jobs	1,555	
	2022 jobs	1,592	
	-2017-22 change	37	
	-2017-22 %change	2%	
	Projected annual openings	107	
	Hourly earnings		
	-10th %tile	\$41.55	
	-Median	\$56.13	
	-75th %tile	\$62.71	
<hr/>			
Total postings		33	100%
<hr/>			
Industry included on posting		24	73%
54 Professional, Scientific, and Technical Services		11	46%
52 Finance and Insurance		9	38%
48-49 Transportation and Warehousing		2	8%
56 Administrative and Support and Waste Management and Remediation Services		1	4%
31-33 Manufacturing		1	4%
<hr/>			
Skills Clusters			
*postings skills cluster data		31	94%
Information Technology: SQL		20	65%
Information Technology: Scripting		15	48%
Information Technology: Big Data		14	45%
Information Technology: Operating Systems		14	45%
Information Technology: System Design and Implementation		13	42%
Information Technology: Oracle		12	39%
Information Technology: Technical Support		12	39%
Information Technology: Software Development Principles		11	35%
Information Technology: Database Administration		9	29%
Business: Business Process and Analysis		8	26%
<hr/>			
Certifications			
*postings with certifications		4	12%
<hr/>			
Employers			
Bank of America		3	9%
Computer Aid Incorporated		3	9%
Berkley Technology Services		2	6%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Web Developers (15-1134)

	2017 jobs	416	
	2022 jobs	453	
	-2017-22 change	37	
	-2017-22 %change	9%	
	Projected annual openings	37	
	Hourly earnings		
	-10th %tile	\$20.28	
	-Median	\$40.03	
	-75th %tile	\$47.73	
Total postings		406	100%
Industry included on posting		225	55%
54	Professional, Scientific, and Technical Services	98	44%
52	Finance and Insurance	69	31%
44-45	Retail Trade	26	12%
62	Health Care and Social Assistance	7	3%
56	Administrative and Support and Waste Management and Remediation Services	6	3%
31-33	Manufacturing	5	2%
72	Accommodation and Food Services	4	2%
51	Information	4	2%
53	Real Estate and Rental and Leasing	2	1%
42	Wholesale Trade	2	1%
61	Educational Services	1	0%
92	Public Administration	1	0%
Skills Clusters			
	*postings skills cluster data	349	86%
	Information Technology: JavaScript and jQuery	220	63%
	Information Technology: Web Development	215	62%
	Design: User Interface and User Experience (UI/UX) Design	168	48%
	Information Technology: Web Design	125	36%
	Information Technology: Software Development Principles	87	25%
	Design: Graphic and Visual Design Software	90	26%
	Design: Graphic and Visual Design	71	20%
	Information Technology: PHP Web	56	16%
	Business: Business Process and Analysis	55	16%
	Information Technology: Version Control	51	15%
Certifications			
	*postings with certifications	1	0%

Web Developers (15-1134)

Employers

Petco	26	6%
JP Morgan Chase Company	24	6%
Accenture	10	2%
Anthem Blue Cross	7	2%
C & L Group	6	1%
Barclays	5	1%
Advance America	4	1%
Social Finance, Inc	4	1%
Aarc	3	1%
Aetna Information Technology	3	1%
American Express	3	1%
Astrazeneca	3	1%
Capital One	3	1%
Computer Task Group	3	1%
Iron Mountain Incorporated	3	1%
Veterans Sourcing Group	3	1%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Database Administrators (15-1141)

2017 jobs	617	
2022 jobs	627	
-2017-22 change	10	
-2017-22 %change	2%	
Projected annual openings	42	
Hourly earnings		
-10th %tile	\$25.38	
-Median	\$43.23	
-75th %tile	\$54.78	
Total postings	442	100%
Industry included on posting	300	68%
52 Finance and Insurance	146	49%
54 Professional, Scientific, and Technical Services	124	41%
31-33 Manufacturing	7	2%
48-49 Transportation and Warehousing	4	1%
62 Health Care and Social Assistance	3	1%
81 Other Services (except Public Administration)	3	1%
44-45 Retail Trade	3	1%
72 Accommodation and Food Services	2	1%
56 Administrative and Support and Waste Management and Remediation Services	2	1%
61 Educational Services	2	1%
21 Mining, Quarrying, and Oil and Gas Extraction	2	1%
92 Public Administration	1	0%
42 Wholesale Trade	1	0%
Skills Clusters		
*postings skills cluster data	395	89%
Information Technology: SQL	206	52%
Information Technology: Database Administration	179	45%
Information Technology: Data Warehousing	155	39%
Information Technology: Operating Systems	143	36%
Information Technology: Oracle	133	34%
Information Technology: Extraction, Transformation, and Loading (ETL)	119	30%
Information Technology: Big Data	91	23%
Information Technology: Java	89	23%
Information Technology: System Design and Implementation	88	22%
Information Technology: Software Development Principles	86	22%
Certifications		
*postings with certifications	20	5%

Database Administrators (15-1141)**Employers**

JP Morgan Chase Company	55	12%
Accenture	38	9%
U.S. Bancorp	11	2%
Citi	9	2%
Sallie Mae, Inc	8	2%
Anthem Blue Cross	7	2%
Barclays	7	2%
Capital One	7	2%
Bank of America	6	1%
First Data	6	1%
Blackrock Incorporated	5	1%
General Electric Company	4	1%
Ibs	3	1%
Isl Techsolutions Inc	3	1%
Netnames	3	1%
Nityo Infotech	3	1%
Psci	3	1%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Network and Computer Systems Administrators (15-1142)

2017 jobs	1,278	
2022 jobs	1,319	
-2017-22 change	41	
-2017-22 %change	3%	
Projected annual openings	88	
Hourly earnings		
-10th %tile	\$24.56	
-Median	\$36.69	
-75th %tile	\$47.13	
Total postings	334	100%
Industry included on posting	258	77%
52 Finance and Insurance	91	35%
54 Professional, Scientific, and Technical Services	88	34%
31-33 Manufacturing	15	6%
51 Information	13	5%
62 Health Care and Social Assistance	11	4%
72 Accommodation and Food Services	8	3%
44-45 Retail Trade	8	3%
81 Other Services (except Public Administration)	7	3%
61 Educational Services	5	2%
56 Administrative and Support and Waste Management and Remediation Services	4	2%
92 Public Administration	3	1%
42 Wholesale Trade	3	1%
21 Mining, Quarrying, and Oil and Gas Extraction	1	0%
22 Utilities	1	0%
Skills Clusters		
*postings skills cluster data	296	89%
Information Technology: Systems Administration	160	54%
Information Technology: Operating Systems	123	42%
Information Technology: General Networking	117	40%
Information Technology: Technical Support	117	40%
Information Technology: Microsoft Office and Productivity Tools	89	30%
Information Technology: Network Protocols	78	26%
Information Technology: System Design and Implementation	77	26%
Information Technology: Cloud Solutions	70	24%
Information Technology: Network File System (NFS)	64	22%
Information Technology: Enterprise Resource Planning (ERP)	59	20%
Certifications		
*postings with certifications	48	14%

Network and Computer Systems Administrators (15-1142)

Employers

Anthem Blue Cross	16	5%
M & T Bank	16	5%
JP Morgan Chase Company	10	3%
Accenture	9	3%
Comcast	9	3%
U.S. Bancorp	8	2%
Best Buy	7	2%
Blackrock Incorporated	7	2%
Sykes	6	2%
Barclays	4	1%
Berkley Technology Services	4	1%
Alpha Technologies Incorporated	3	1%
American Express	3	1%
Bank of America	3	1%
Christiana Care	3	1%
Perdue	3	1%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Computer Network Architects (15-1143)

2017 jobs	653	
2022 jobs	660	
-2017-22 change	7	
-2017-22 %change	1%	
Projected annual openings	44	
Hourly earnings		
-10th %tile	\$34.79	
-Median	\$59.66	
-75th %tile	\$71.47	
Total postings	303	100%
Industry included on posting	210	69%
54 Professional, Scientific, and Technical Services	85	40%
52 Finance and Insurance	43	20%
44-45 Retail Trade	26	12%
51 Information	12	6%
31-33 Manufacturing	11	5%
92 Public Administration	10	5%
62 Health Care and Social Assistance	5	2%
21 Mining, Quarrying, and Oil and Gas Extraction	4	2%
23 Construction	3	1%
81 Other Services (except Public Administration)	3	1%
56 Administrative and Support and Waste Management and Remediation Services	2	1%
61 Educational Services	2	1%
72 Accommodation and Food Services	1	0%
48-49 Transportation and Warehousing	1	0%
22 Utilities	1	0%
42 Wholesale Trade	1	0%
Skills Clusters		
*postings skills cluster data	265	87%
Information Technology: General Networking	136	51%
Information Technology: Network Configuration	102	38%
Information Technology: Telecommunications	95	36%
Information Technology: Network Protocols	70	26%
Information Technology: System Design and Implementation	66	25%
Business: Project Management	59	22%
Business: Business Process and Analysis	56	21%
Customer and Client Support: Basic Customer Service	54	20%
Business: Business Management	52	20%
Information Technology: Technical Support	45	17%

Computer Network Architects (15-1143)**Certifications**

*postings with certifications	77	25%
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Employers

JP Morgan Chase Company	22	7%
Accenture	16	5%
SRA International Incorporated	8	3%
AT&T	5	2%
Blackrock Incorporated	4	1%
Exelon	4	1%
Ibs	4	1%
Cygnus Professionals Inc	3	1%
General Electric Company	3	1%
KBR	3	1%
M & T Bank	3	1%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Computer User Support Specialists (15-1151)

2017 jobs	1,647	
2022 jobs	1,742	
-2017-22 change	95	
-2017-22 %change	6%	
Projected annual openings	141	
Hourly earnings		
-10th %tile	\$ 17.54	
-Median	\$25.78	
-75th %tile	\$31.70	
Total postings	673	100%
Industry included on posting	480	71%
54 Professional, Scientific, and Technical Services	146	30%
52 Finance and Insurance	119	25%
44-45 Retail Trade	68	14%
31-33 Manufacturing	67	14%
92 Public Administration	15	3%
56 Administrative and Support and Waste Management and Remediation Services	13	3%
62 Health Care and Social Assistance	10	2%
51 Information	10	2%
72 Accommodation and Food Services	9	2%
61 Educational Services	7	1%
81 Other Services (except Public Administration)	6	1%
23 Construction	3	1%
48-49 Transportation and Warehousing	2	0%
42 Wholesale Trade	2	0%
71 Arts, Entertainment, and Recreation	1	0%
21 Mining, Quarrying, and Oil and Gas Extraction	1	0%
53 Real Estate and Rental and Leasing	1	0%
Skills Clusters		
*postings skills cluster data	605	90%
Information Technology: Technical Support	506	84%
Customer and Client Support: Basic Customer Service	252	42%
Information Technology: Operating Systems	162	27%
Information Technology: Microsoft Office and Productivity Tools	158	26%
Information Technology: Help Desk Support	140	23%
Business: Business Process and Analysis	139	23%
Information Technology: System Design and Implementation	121	20%
Information Technology: SQL	98	16%
Administration: Office Machines	85	14%
Information Technology: General Networking	80	13%

Computer User Support Specialists (15-1151)**Certifications**

*postings with certifications	104	15%
CERTIFIED A+ TECHNICIAN	32	31%
NETWORK+ CERTIFIED	31	30%

Employers

Best Buy	57	8%
JP Morgan Chase Company	56	8%
General Electric Company	34	5%
Computer Aid Incorporated	20	3%
First Data	10	1%
Netnames	10	1%
Us General Service Administration	9	1%
Accenture	8	1%
Nemours	8	1%
Open Systems Technologies	8	1%
C & L Group	7	1%
Phoenix Technology Partners	7	1%
Waters	7	1%
Amazon.com	6	1%
Air National Guard	5	1%
Amzn Wacs Incorporated	5	1%
Ariens Company	5	1%
Blackrock Incorporated	5	1%
Compass Group	5	1%
Data Incorporated	5	1%
Siemens	5	1%
Ta Instruments	4	1%
U.S. Bancorp	4	1%
University of Delaware	4	1%
Viva USA	4	1%
A3 Solutions Incorporated	3	0%
Barclays	3	0%
Citi	3	0%
Ellucian	3	0%
Emtec Incorporated	3	0%
Ibs	3	0%
Pcm Sales, Inc	3	0%
Rogers Corporation	3	0%
SRA International Incorporated	3	0%
State of Delaware	3	0%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Computer Network Support Specialists (15-1152)

2017 jobs	675	
2022 jobs	702	
-2017-22 change	27	
-2017-22 %change	4%	
Projected annual openings	55	
Hourly earnings		
-10th %tile	\$19.17	
-Median	\$31.42	
-75th %tile	\$44.00	
Total postings	64	100%
Industry included on posting	35	55%
54 Professional, Scientific, and Technical Services	18	51%
52 Finance and Insurance	12	34%
51 Information	4	11%
56 Administrative and Support and Waste Management and Remediation Services	1	3%
Skills Clusters		
*postings skills cluster data	61	95%
Information Technology: General Networking	31	51%
Information Technology: Operating Systems	25	41%
Information Technology: Microsoft Office and Productivity Tools	23	38%
Information Technology: Network Configuration	21	34%
Administration: Office Machines	20	33%
Information Technology: Network Protocols	19	31%
Information Technology: Technical Support	17	28%
Information Technology: System Design and Implementation	16	26%
Business: Project Management	15	25%
Administration: Scheduling	14	23%
Certifications		
*postings with certifications	20	31%
MICROSOFT CERTIFIED PROFESSIONAL (MCP)	14	70%
CISCO CERTIFIED NETWORK ASSOCIATE	12	60%
NETWORK+ CERTIFIED	12	60%
Employers		
Anthem Blue Cross	7	11%
Amsted Industries	5	8%
Granite Services	4	6%
NCR Corporation	4	6%
H&R Block	2	3%
JP Morgan Chase Company	2	3%

Sources: EMSI 2017.Q4 and Burning Glass Labor Insight 2017 data

Job Postings: Top IT Skills Clusters	Postings with a skill cluster		ALL	Relevant programs		
	#	%		Database Management & Analytics	Network Security and Administration	App dev/ Prog
Software Development Principles	2,901	38%	x			
Java	2,591	34%				x
SQL	2,548	33%	x			
Operating Systems	2,080	27%	x			
System Design and Implementation	1,941	25%	x			
Oracle	1,684	22%		x		x
JavaScript and jQuery	1,633	21%	x			
Technical Support	1,378	18%	x			
Microsoft Office and Productivity Tools	1,331	17%	x			
Database Administration	1,161	15%		x		
Big Data	1,048	14%	x			
Scripting Languages	1,041	14%	x			
Scripting	1,041	14%	x			
Web Development	1,031	13%				x
Programming Principles	1,000	13%	x			
Web Servers	958	13%	x			
Data Warehousing	897	12%		x		
Microsoft Development Tools	885	12%	x			
Test Automation	866	11%	x			
Version Control	833	11%	x			
Enterprise Resource Planning (ERP)	770	10%	x			
Extensible Languages	765	10%		x		x
Middleware	702	9%	x			
General Networking	661	9%	x			
Extraction, Transformation, and Loading (ETL)	577	8%	x			
Systems Administration	505	7%		x	x	
Software Quality Assurance	487	6%	x			
Data Management	482	6%		x		
Cybersecurity	478	6%	x			
Network Configuration	459	6%	x			
Network Protocols	456	6%	x			
Cloud Solutions	444	6%	x			
Telecommunications	408	5%			x	
C and C++	360	5%			x	x
IT Management	330	4%	x			
PHP Web	286	4%		x		x
Integrated Development Environments (IDEs)	279	4%				x
Mainframe Technologies	262	3%	x			
Microsoft Windows	228	3%	x			
Help Desk Support	206	3%	x			
Web Design	204	3%		x		x
Network File System (NFS)	195	3%	x			

Job Postings: Top IT Skills Clusters	Postings with a skill cluster		ALL	Relevant programs		
	#	%		Database Management & Analytics	Network Security and Administration	App dev/ Prog
SAP	139	2%		x		x
IT Hardware	133	2%	x			
Mobile Development	128	2%				x
Software Development Tools	120	2%				x
Microsoft SQL Extensions	120	2%		x		
Advanced Microsoft Excel	103	1%		?		
Networking Hardware	94	1%			x	
Project Management Software	83	1%	x			
Basic Computer Knowledge	76	1%	x			
iOS Stack	74	1%	x			
Scaling	57	1%	x			
Health Checks	53	1%	x			
Geographic Information System (GIS) Software	37	0%	x			
Anti-Malware Software	25	0%	x			

Note: Skills listed appeared in the 7,350 postings that included a type of skill

Source: Burning Glass Labor Insight, 2017

Job Postings: Analysis Skills Clusters	Postings with a skill cluster		Relevant programs			
	#	%	ALL	Database Management & Analytics	Network Security and Administration	App dev/ Prog
Statistical Software	511	7%		x		
Data Analysis	419	5%		x		
Mathematics	361	5%		x		x
Validation	312	4%	x			
Business Intelligence Software	286	4%		x		
Data Visualization	278	4%		x		x
Business Intelligence	224	3%		x		
Machine Learning	171	2%	x			
Data Science	137	2%		x		x
Data Mining	126	2%		x		x
Data Techniques	99	1%		x		x
Statistics	93	1%		x		
Ad Hoc Analysis and Reporting	35	0%		x		
Mathematical Software	24	0%	x			
Mathematical Modeling	23	0%	x			

Note: Skills listed appeared in the 7,350 postings that included a type of skill

Source: Burning Glass Labor Insight, 2017

	Postings with a certification		Relevant programs			
	#	%	ALL	Database Management & Analytics	Network Security and Administration	App dev/ Prog
Top 25 certifications*						
Total number of postings with a certification (out of 8,274 postings)	813	10%				
Certified Information Systems Security Professional (CISSP)	168	21%			x	
Certified Information Systems Auditor (CISA)	116	14%			x	
Project Management Certification (E.G. PMP)	88	11%	x			
Cisco Certified Network Associate	80	10%			x	
Certified Information Security Manager (CISM)	79	10%			x	
Cisco Certified Network Professional (CCNP)	61	8%			x	
Network+ Certified	56	7%			x	
It Infrastructure Library	48	6%				
Certified A+ Technician	45	6%	x			
Security Clearance	41	5%			x	
Scrum	40	5%				x
Microsoft Certified Professional (MCP)	39	5%	x			
Sans/Giac Certification	38	5%			x	
Professional Engineer	38	5%			x	
Microsoft Certified Solutions Expert (MCSE)	31	4%			x	
Six Sigma Certification	31	4%				
Certified Senior System Architect	26	3%				
Cisco Certified Internetwork Expert (CCIE)	24	3%			x	
Certified In Risk And Information Systems Control	22	3%				
TOGAF	16	2%				
Engineer In Training Certification	13	2%			x	
Oracle Certified Professional Java Programmer	12	1%				x
American Board For Engineering And Technology (ABET) Accredited	11	1%				
Microsoft Certified Systems Engineer (MCSE)	10	1%			x	

Note: Certifications listed appeared in 10 or more of the 813 postings that included a certification

Source: Burning Glass Labor Insight, 2017

Employer	2017 Job Postings
JP Morgan Chase Company	1,282
Accenture	357
Capital One	187
General Electric Company	126
Bank of America	116
Anthem Blue Cross	99
M & T Bank	99
Citi	85
C & L Group	83
U.S. Bancorp	82
Barclays	80
Best Buy	68
Blackrock Incorporated	56
Exelon	55
Christiana Care	50
Computer Aid Incorporated	47
Veterans Sourcing Group	46
Netnames	39
Sallie Mae, Inc	36
First Data	31
Nityo Infotech	31
Okaya Infocom	29
Data Incorporated	27
Sirius Computer Solutions	27
Petco	26
TD Bank	26
Ce Solutions	24
University of Delaware	24
American Express	23
Sevone Inc	23
Wipro	23
Berkley Technology Services	22
Ibs	21
Agilent Technologies, Inc.	20
E. I. Du Pont De Nemours And Company	20
Incyte Corporation	20
Social Finance, Inc	19
Highmark Health	18
Sierra Business Solution Llc	18
Granite Services	17
Nemours	15
NTT Data	14

Employer	2017 Job Postings
Pepco Holdings	14
Psci	14
Verint Systems Incorporated	14
Bancorp	13
Chemours	13
Comcast	13
Hallmark Global Technologies	13
Open Systems Technologies	13
Ta Instruments	13
Waters	13
Ariens Company	12
Astrazeneca	12
Emtec Incorporated	12
Viva USA	12
Ameriplan	11
Ashland Corporate	11
Compass Group	11
Navigant	11
SRA International Incorporated	11
United States Technical Solutions	11
Us General Service Administration	11
WSFS Financial Corporation	11
Ellucian	10
It First Source	10
Technocraft Solutions	10
Alcatel-Lucent	9
Amsted Industries	9
Chesapeake Utilities Corporation	9
Alpha Technologies Incorporated	8
Bayhealth	8
Icon Clinical Research	8
Mphasis Corporation	8
Perdue	8
Siemens	8
The Department Of Technology	8
Wilmington	8
Amazon.com	7
Big Lots Incorporated	7
Charles River Company	7
Computer Consultants International Incorporated	7
Cornerstone Ondemand	7
Dxc	7

Employer	2017 Job Postings
Fieldcore	7
Hosting	7
Isl Techsolutions Inc	7
Mathworks	7
Navient Corporation	7
Phoenix Technology Partners	7
Qps	7
Salesforce.Com	7
The Bancorp Bank	7
The Bancorp, Inc	7
UnitedHealth Group	7
Vindy	7
AT&T	6
Beebe Healthcare	6
Citadel Information Services	6
Computer Enterprises	6
Delasoft Incorporated	6
E-Solutionsinc	6
Houghton Mifflin Company	6
Infosys	6
KBR	6
Liberty Mutual	6
Mphasis	6
Msys Incorporated	6
Sykes	6
Tekwissen,Llc	6
Trinity Logistics	6
Virtusa	6
3M Company	5
Aetna Incorporated	5
Air National Guard	5
Amtex Systems	5
Amzn Wacs Incorporated	5
Clinpharma Consulting Global Group Llc	5
Comprehensive Resources Incorporated	5
Cygnus Professionals Inc	5
Delaware Tech	5
Gannett Company Incorporated	5
Hss Incorporated	5
Incorporan Inc	5
Infoways	5
Klingberg Family Centers Incorporated	5

Employer	2017 Job Postings
Mishimoto	5
Mtm Technologies	5
Next Level Business Services	5
Oliva	5
Pddn Inc	5
Promatrix	5
Pronix Inc	5
Sears	5
Solenis	5
Suez	5
The Denzel Group	5
The PNC Financial Services Group, Inc.	5
Two95 International Inc	5
Advance America	4
Advance Technologies LLC	4
Amerihealth Caritas	4
Chubb	4
Ciber Incorporated	4
Computer Sciences Corporation	4
Computer Task Group	4
Corporation Service Company	4
Data Wave Technologies Inc	4
Delaware River & Bay Authority	4
Delaware State University	4
Deloitte	4
Econosoft Incorporated	4
Emd Serono	4
Idc Technologies Incorporated	4
Last Word Consulting	4
Lighthouse Technology Services	4
NCR Corporation	4
Navient Solutions, Inc	4
Ntech Solutions	4
Planet Payment, Inc	4
Professional Integration	4
Raas Infotek LLC	4
Smartshore Services LLC	4
Sofi	4
State of Delaware	4
Switchlane Inc	4
Technology Resource Group	4
Turnberry Solutions	4

Employer	2017 Job Postings
US Air Force	4
Universal Health Services, Inc.	4
VLS Systems	4
Vss Monitoring Incorporated	4
Windstream Communications	4
3A Soft Inc	3
A3 Solutions Incorporated	3
Aarc	3
Aetea Information Technology	3
Air Liquide	3
Apetan Consulting	3
Ashland Incorporated	3
Bcd Travel	3
Bcforward	3
Bey Company	3
Boehringer Ingelheim	3
Cabelas	3
Cadia Rehabilitation	3
Cnet Global Solutions Inc	3
Computer Aid	3
Computer Consultants International	3
Cyber Space Technologies Llc	3
Decisivedge Llc	3
Empire Flippers	3
Fahrenheit It	3
Fusion Plus	3
Global It Con Llc	3
Honeywell	3
Huxley Banking & Financial Services	3
International Information Technology Team, Inc	3
Invista	3
Iris Software	3
Iron Mountain Incorporated	3
Itbrainiac Inc	3
Ivm Global Inc	3
Kennedywalker Group	3
Kent General Hospital	3
Kksoftwareassociates	3
Lowe's Companies, Inc	3
Mavtech Solutions	3
Merritt Technical Associates Incorporated	3
Oxyprime Llc	3

Employer	2017 Job Postings
Pcm Sales, Inc	3
Pcn	3
Placers	3
Pridevel Consulting Llc	3
Proficient Business Systems	3
Rapport It Services Llc	3
Rms Computer Corporation	3
Rogers Corporation	3
Sotera Defense Solutions	3
Spar Information Systems	3
Super Solutions	3
Systems Engineering Services Corporation	3
Ta Instruments Incorporated	3
Technocraftsol	3
Tekmoksha	3
The Bancorp	3
Waters Corporation	3
Www Rigusinc Com	3
Zip Code Wilmington	3
Zodiac Solutions	3
inVentiv Health	3

Source: Burning Glass Labor Insight, 2017