

Program Endorsement Brief: 0708.10/Computer Networking Small Business Computer Networking

Los Angeles/Orange County Center of Excellence, March 2019

Summary:

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide regional labor market supply and demand data related to networking. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with relevant occupations.

The following summarizes key findings from this data brief:

- The number of jobs related to computer networking are expected to increase by 5% over the next five years, resulting in over 4,150 annual job openings due to new job growth and/or replacement need.
- Over the past 12 months, there have been nearly 3,000 online job postings related to computer networking in Los Angeles and Orange Counties. Only job postings listing high school diploma or associate degree as a requirement were considered.
- In the region, 11 colleges have programs closely related to computer networking.
- Between 2014 and 2017, community colleges in the region conferred an average of 224 awards annually (associate degrees and certificates) in related training programs.

Occupational Demand—In Los Angeles/Orange County, computer networking-related jobs (occupations listed in Appendix A) are projected to increase by 5% over the next 5 years. There will be over 4,150 annual job openings due to new job growth and/or replacement need.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties¹

Geography	2017 Jobs	2022 Jobs	2017-2022 Change	2017-2022 % Change	Annual Openings
Los Angeles	34,990	36,658	1,668	5%	2,777
Orange	17,098	17,975	877	5%	1,374
Total	52,088	54,633	2,545	5%	4,151

¹ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Wages—Entry-level and median hourly wages for the occupations of interest in the region are between \$15.43 and \$54.10, respectively. Entry-level wages are higher than the MIT Living hourly wage for one adult in the region (\$13.54 in Los Angeles County, \$15.31 in Orange County). Experienced workers earn between \$42.34 and \$90.23, which is higher than the living wage.

Job Postings—There were nearly 3,000 online job postings related to computer networking listed in the past 12 months. The majority of job postings are for systems administrator, help desk technician, and network administrator. Only job postings listing high school diploma or associate degree as a requirement were considered. Top specialized skills are: technical support, customer service, Microsoft Active Directory, repair, and systems administration. The top employers in the region are: SMCI, Northrop Grumman, Raytheon, Frontier Communications, and ManTech International Corp.

Educational Attainment—The BLS lists a Bachelor’s degree as the typical entry-level education for network and computer systems administrators and computer network architects; an Associate degree is listed for computer network support specialists; and some college/no degree for computer user support specialists. The national-level educational attainment data indicates between 37% and 45% of workers in the field have completed some college or an associate degree.

Community College Supply—Appendix A shows the annual and three-year average number of awards conferred by community colleges in the related TOP code: Computer Networking (0708.10). The colleges with the most completions in the region is Coastline. In 2018, there was one other related program recommendation request from regional community colleges.

Appendix A: Regional community college awards (certificates and degrees), 2014-2017

TOP Code	Program	College	2014-15 Awards	2015-16 Awards	2016-17 Awards	3-Year Award Average
0708.10	Computer Networking	Cerritos	5	5	10	7
		Coastline	114	14	20	49
		Cypress	30	27	28	28
		Fullerton	1	N/A	N/A	1
		Irvine	27	12	19	19
		LA City	9	6	11	9
		LA Pierce	16	21	32	23
		Long Beach	12	11	25	16
		Mt San Antonio	11	2	9	7
		Saddleback	15	23	21	20
		West LA	35	55	47	46
Total			275	176	222	224

Appendix B: Occupational demand and wage data by county

Exhibit 3. Los Angeles County

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
Computer User Support Specialists (15-1151)	17,398	18,511	1,113	6%	1,513	\$15.43	\$26.37	\$42.34
Network and Computer Systems Administrators (15-1142)	9,962	10,186	224	2%	663	\$23.89	\$42.68	\$64.12
Computer Network Support Specialists (15-1152)	4,531	4,767	236	5%	381	\$20.11	\$32.92	\$58.53
Computer Network Architects (15-1143)	3,098	3,194	96	3%	220	\$31.05	\$54.10	\$90.23
Total	34,990	36,658	1,668	5%	2,777			

Exhibit 4. Orange County

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
Computer User Support Specialists (15-1151)	8,719	9,251	532	6%	752	\$17.41	\$26.73	\$44.08
Network and Computer Systems Administrators (15-1142)	4,449	4,622	173	4%	313	\$23.52	\$42.52	\$63.12
Computer Network Support Specialists (15-1152)	2,137	2,249	112	5%	180	\$17.57	\$33.80	\$55.13
Computer Network Architects (15-1143)	1,793	1,854	61	3%	129	\$25.10	\$51.54	\$76.64
Total	17,098	17,975	877	5%	1,374			

Exhibit 5. Los Angeles and Orange Counties

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
Computer User Support Specialists (15-1151)	26,117	27,762	1,645	6%	2,265	\$16.20	\$26.50	\$42.97
Network and Computer Systems Administrators (15-1142)	14,412	14,808	396	3%	977	\$23.77	\$42.62	\$63.88
Computer Network Support Specialists (15-1152)	6,669	7,016	347	5%	561	\$19.50	\$33.19	\$57.56
Computer Network Architects (15-1143)	4,890	5,048	158	3%	349	\$30.07	\$53.06	\$84.81
Total	52,088	54,633	2,545	5%	4,152			

Appendix C: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (EMSI)
- Employment Development Department, Labor Market Information Division, OES
- Employment Development Department, Unemployment Insurance Dataset
- Living Insight Center for Community Economic Development
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- MIT Living Wage

For more information, please contact:

Lori Sanchez, Director
Center of Excellence, Los Angeles/Orange County Region
Lsanchez144@mtsac.edu

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