

Computer Network Architects

Occupational Profile

WHAT THEY DO

Analyzes, designs tests and evaluates network systems, such as local area networks (LAN), wide area networks (WAN), Internet, intranet, and other data communications systems. Performs network modeling, analysis, and planning. Researches and recommends network and data communications hardware and software. Includes telecommunications specialists who deal with the interfacing of computer and communications equipment. May supervise computer programmers. Belongs to the Information Technology cluster and Network Systems, Information Support and Services, and Programming and Software Development pathways.

IS THIS FOR YOU?

Work Interests are described in the following categories (compatible with Holland's Model) by people who tend to succeed in this career:

- **Conventional** – You are an "organizer". Keeping things neat and organized is important to you. You like working with charts and reports, and work well with power and authority.
- **Investigative** – You are a "thinker". When you have a problem, you like to analyze it and look at different ways to solve it. You like to work by yourself, and you don't like explaining your ideas to other people.
- **Realistic** – You are a "doer". You like physical activities and projects. You like to find the answers to problems by doing hands-on work instead of talking about solutions.

Work Values are aspects of work that are satisfying to you. The following work values are generally associated with this career.

- **Achievement** – It's very important to you that your work allows you to use your best abilities. You want to see the results of your work and get a feeling of accomplishment.
- **Support**—It's very important to you to know the company stands behind its workers and has competent, considerate and fair management.
- **Working Conditions**—It's very important to you that your work satisfies your needs in areas like salary, job security and your working style preferences, such as working alone, staying busy all the time or having variety in your work tasks.
- **Recognition**—It's very important to you that your work satisfies your need for prestige and leadership opportunities, as well as opportunities for advancement.
- **Independence** – It's very important to you that your work allows you to make decisions on your own. You want to try out your own ideas and work with little supervision.

Aptitudes reflect a person's ability to acquire skills and knowledge. The following aptitudes are important for success in the career:

- **General Learning Ability**
- **Verbal Aptitude**

SKILLS YOU NEED

Basic Skills:

- Reading Comprehension
 - Active Listening
 - Writing
 - Speaking
- Critical Thinking
- Active Learning
- Learning Strategies
 - Monitoring

Transferable Skills (applicable in other careers):

High level

- Evaluating the quality of products and materials
 - Operating communications equipment
 - Planning and giving information and help
 - Preparing electronic data files
 - Preparing technical or research reports
 - Processing data on computers
- Working as a member of a data processing team

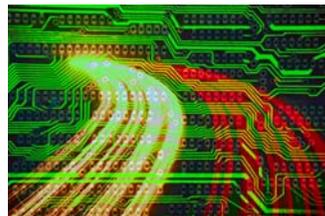
Workplace Skills:

High level

- Complex Problem Solving
 - Equipment Selection
 - Installation
 - Troubleshooting

Medium level

- Coordination
- Equipment Maintenance
 - Instructing
- Judgment and Decision Making
- Management of Financial Resources
- Management of Material Resources
 - Operation and Control
 - Operation Monitoring
 - Operations Analysis
 - Persuasion
 - Programming
- Quality Control Analysis
 - Repairing
- Service Orientation
- Social Perceptiveness
 - Systems Analysis
 - Systems Evaluation
 - Technology Design
 - Time Management



Additional skills for this occupation may be found at <http://www.iowaworkforcedevelopment.gov/career-exploration-resources>

ESTIMATED & PROJECTED EMPLOYMENT

Occupational Title	2012 Estimated Employment	2022 Projected Employment	2012-22 Employment Change	Annual Growth Rate (%)	Total Annual Openings
Total, All Occupations	1,758,205	1,955,480	197,275	1.1	61,665
Computer & Mathematical Occupations	33,470	40,560	7,085	2.1	1,275
Computer Network Architects	785	925	140	1.8	25

Source: <http://www.iowaworkforcedevelopment.gov/occupational-projections-0>

2015 WAGE & SALARY (\$)

Occupational Title	Average Wage	Average Salary	Entry Wage	Entry Salary	Experienced Wage	Experienced Salary
Total, All Occupations	19.77	41,122	9.55	19,858	24.88	51,755
Computer & Mathematical Occupations	34.36	71,470	21.43	44,571	40.83	84,919
Computer Network Architects	42.94	89,321	29.58	61,516	49.63	103,224

Source: <http://www.iowaworkforcedevelopment.gov/occupational-projections-0>

EDUCATION & TRAINING

Education	Work Experience	Job Training
Bachelor's Degree	More than 5 years	None

Employers usually prefer applicants who have at least a bachelor's degree, but for more technically complex jobs, graduate degrees are preferred. Source: <http://www.iowaworkforcedevelopment.gov/occupational-projections-0> and <https://secure.ihaveaplaniowa.gov/>

NATIONAL CAREER READINESS CERTIFICATE (NCRC)

Skill	Median Skill Level
Applied Mathematics	n.a.
Locating Information	n.a.
Reading for Information	n.a.

This ACT-developed credential demonstrates achievement and a certain level of workplace employability skills. The greater the score, the greater the skill level (Bronze = 3, Silver = 4, Gold = 5, Platinum = 6).

Source: <http://www.act.org/workkeys/analysis/occup.html>

PRIMARY INDUSTRY SECTORS

(Where are Computer Network Architects Employed?)

Insurance Carriers
Professional, Scientific, and Technical Services
Telecommunications
Educational Services
Merchant Wholesalers
Data Processing
Nonstore Retailers

Source: <http://www.iowaworkforcedevelopment.gov/occupational-projections-0>

ADDITIONAL SOURCES:

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