

Computer Network Architects

Occupational Profile



DOES THIS DESCRIBE YOU?

Work Interests involve descriptive categories (compatible with Holland's Model) attributed to success in this career:

- **Conventional** – Enjoy following set procedures and routines developed through higher authority; includes working with data and details more than with ideas.
- **Investigative** – Involves working with ideas requiring an extensive amount of research, fact finding, problem solving, and thought analysis.
- **Realistic** – Involves work activities that include practical, hands-on problems and solutions; often dealing with plants, animals, and real-world materials like wood, tools, and machinery.
- **Enterprising**—Involves starting up and carrying out projects; often leading people and making business decisions that sometimes require risk.

Work Styles depict worker characteristics conducive for this career:

- **Attention to Detail**
- **Dependability**
- **Analytical Thinking**
- **Adaptability/Flexibility**
- **Integrity**

Work Values are associated with aspects of work that provide satisfaction in this career:

- **Achievement** – Sense of accomplishment; results oriented.
- **Working Conditions**—Job security; good working conditions.
- **Independence** – Autonomy; working on your own.

Aptitudes reflect an ability to acquire skills and knowledge for success in this career:

- **Deductive Reasoning**
- **Problem Sensitivity**
- **Information Ordering**
- **Oral Comprehension**
- **Inductive Reasoning**

OVERVIEW

Design and implement computer and information networks, such as local area networks (LAN), wide area networks (WAN), intranets, extranets, and other data communications networks. Perform network modeling, analysis, and planning. May also design network and computer security measures. May research and recommend network and data communications hardware and software. Belongs to the Information Technology career cluster and Network Systems, Information Support and Services, and Programming and Software Development pathways.

SKILLS & KNOWLEDGE NEEDED

Basic Skills:

- Active Listening
- Operations Analysis
- Systems Analysis
- Active Learning
- Complex Problem Solving

Technology Skills:

- Administration Software
- Development Environment Software
- Network Monitoring Software
- Operating System Software
- Web Platform Development Software

Knowledge:

- Computers and Electronics
- Telecommunications
- English Language
- Engineering and Technology
- Customer and Personal Service

ESTIMATED & PROJECTED EMPLOYMENT

Occupational Title	2014 Estimated Employment	2024 Projected Employment	2014-24 Employment Change	Annual Growth Rate (%)	Total Annual Openings
Total, All Occupations	1,795,100	1,949,240	154,140	0.9	58,145
Computer & Mathematical Occupations	33,550	39,630	6,080	1.8	1,140
Computer Network Architects	895	1,040	145	1.6	25

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

2017 WAGE & SALARY (\$)

Occupational Title	Mean Wage	Mean Salary	Entry Wage	Entry Salary	Exp Wage	Exp Salary
Total All Occupations	20.93	43,539	10.09	20,991	26.35	54,813
Computer & Mathematical Occupations	35.88	74,629	21.29	44,287	43.17	89,800
Computer Network Architects	53.48	111,231	29.46	61,283	65.48	136,205

Source: <https://www.iowaworkforcedevelopment.gov/occupational-employment-and-wages>

EDUCATION & TRAINING

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

Many employers desire applicants possessing a bachelor's degree (and in some cases an advanced degree) in a related field, such as computer science, software engineering, or information systems.

Sources: <https://www.iowaworkforcedevelopment.gov/occupational-projections> and https://www.bls.gov/emp/ep_education_training_system.htm

NATIONAL CAREER READINESS CERTIFICATE (NCRC)

Skill	Median Skill Level	Minimum Skill Level	Maximum Skill Level
Applied Mathematics	4	4	4
Locating Information	5	5	5
Reading for Information	5	5	5
Applied Technology	n.a.	n.a.	n.a.
Business Writing	3	3	3
Workplace Observation	5	5	5
Listening for Understanding	3	2	3

An ACT assessment-based credential issued in determining essential work skills needed for employment success across industries and occupations. The greater the score, the greater the skill level (Bronze = 3, Silver = 4, Gold = 5, Platinum = 6 & higher). Source: <http://www.act.org/content/act/en/products-and-services/workkeys-for-employers/assessments.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: <https://www.iowaworkforcedevelopment.gov/occupational-projections>



ADDITIONAL SOURCES:

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