CAREER PATHWAY
An occupational profile and qualification summary based on labor market information summarized by the Workforce Intelligence Network.

WIN | WORKFORCE INTELLIGENCE NETWORK

COMPUTER NETWORK ARCHITECTS

INFORMATION TECHNOLOGY (IT) INDUSTRY
OCCUPATION OUTLOOK IN MICHIGAN, 2025

OCCUPATION SUMMARY

This occupation focuses on designing and implementing computer and data communication networks, including LANs, WANs, intranets, and extranets. It involves analyzing network capacity, planning infrastructure, and incorporating security measures, while also recommending hardware and software solutions. Professionals in this role maintain network performance, troubleshoot issues, and create disaster recovery plans to ensure system reliability. Learn more at onetonline.org

JOB TITLES

The Computer Network Architects occupation refers to the entire industry in which someone works. Some examples of specific job titles for this occupation include:

- *Automation Engineers*
- *Network Analysts*
- *Controls Engineers*
- *Software Systems Engineers*
- *Electrical Design Engineers*

Debt-free training and additional support may be available to jobseekers and those currently employed in this career
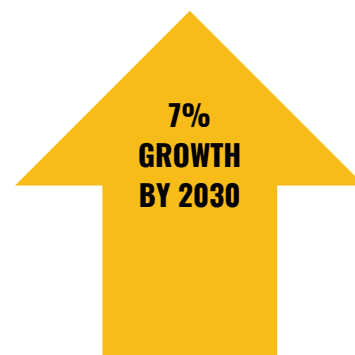Contact your local *Michigan Works! Agency* to learn more
michiganworks.org/michigan-works-network

AVERAGE WAGE IN MICHIGAN

	Entry	Median	Experienced
Hourly	$31.11	$56.41	$79.71
Annually	$64,709	$117,333	$165,797

OCCUPATIONAL GROWTH

Projected to grow faster than average (7%); 230 annual job openings are predicted.

7% GROWTH BY 2030

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EARN WHILE YOU LEARN: REGISTERED APPRENTICESHIP

Employers or sponsors may provide apprenticeship opportunities, enabling individuals to acquire hands-on experience, engage in related instruction while receiving compensation. Completing a registered apprenticeship program can lead to career advancement and an average annual income of $80,000. Learn more.

GROW A CAREER WITH ADVANCED DEGREES AND CERTIFICATES

PROFESSIONAL CERTIFICATIONS

- Cisco Certifications
- Information Systems Security Professional Certification
- Microsoft Certified Systems Engineer
- CompTIA Certifications
- Project Management Professional Certification
- VMware Certified Professional (VCP)
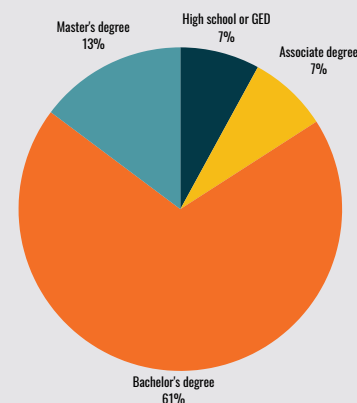- Juniper Networks Certified Internet Associate

ADVANCED DEGREES AVAILABLE
(Associate, Bachelor's and Master's Degrees)

- Business Administration
- Computer Science
- Software Engineering

EDUCATION
Percentage of Job Postings by Education Level

- Master's degree 13%
- High school or GED 7%
- Associate degree 7%
- Bachelor's degree 61%

A POTENTIAL PATH TO SUCCESS

Explore strategies for overcoming significant factors that can impact employment by clicking here. The following illustration outlines a potential career trajectory based on labor market insights within this occupation.

ENTRY LEVEL COMPETENCIES (0-2 YEARS EXPERIENCE)
Current employees who obtain training may be offered a new position, additional responsibility, and/or additional benefits.

Skills/knowledge in:
- Computer Science
- Automation
- Network Routing
- Microsoft Suite

Qualifications:
- Valid Driver's License

Skills/knowledge in:
- Project Management
- Telecommunications
- Firewall
- Operating Systems
- Python (Programming Language)
- Auditing

MID-LEVEL COMPETENCIES (3-6 YEARS EXPERIENCE)
Continue gaining skills to stay relevant in an ever-changing ecosystem.

Skills/knowledge in:
- Network Engineering
- Wide Area Networks
- Network Switches
- Local Area Networks

Qualifications:
- Cisco Certified Network Associate

Skills/knowledge in:
- Virtual Private Networks (VPN)
- Network Infrastructure
- Systems Engineering
- Scripting
- Electrical Engineering
- Linux

Qualifications:
- Microsoft Certified Systems Engineer

PROFESSIONAL LEVEL COMPETENCIES (7+ YEARS EXPERIENCE)
Employers value staff that stay relevant and gain new skills.

Skills/knowledge in:
- Border Gateway Protocol
- Network Architecture
- Open Shortest Path First (OSPF)
- Amazon Web Services
- Network Security
- Cisco Identity Services Engine (ISE)

Qualifications:
- Cisco Certified Network Professional

Skills/knowledge in:
- Multiprotocol Label Switching
- Ansible
- Application Programming Interface (API)
- Dynamic Host Configuration Protocol (DHCP)
- ITIL 4

Qualifications:
- Certified Information Systems Security Professional

This information was pulled and combined to create these profiles by WIN staff. Data pulled from ONet, Lightcast, and Indeed.