ADDITIONAL RESOURCES
Association of Information Technology Professionals (AITP)
aitp.org
Microsoft (MCSA, MCSE)
microsoft.com/learning

VENDOR CERTIFICATIONS
Vendor certifications are an important extra for entry-level positions. Earning a vendor certification demonstrates a minimum level of technical knowledge and competence. Some relevant certifications are:

- CompTIA Network +
- CompTIA Security+
- Microsoft Certified IT Professional (MCITP)
- Microsoft Certified Technology Specialist (MCTS)
- MS Certified Solutions Associate (MCSA):
  - Client Support Help Desk
- MS Certified Solutions Associate (MCSA):
  - Enterprise/Server Support Professional
- MS Certified Solutions Expert (MCSE):
  - Desktop Infrastructure
- MS Certified Solutions Expert (MCSE):
  - Server Infrastructure
- Red Hat Certified System Administrator (RHCSA)
- Red Hat Certified System Engineer (RHCE)

FOR MORE INFORMATION CONTACT:
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Graduates of the Operating Systems/Networking program gain experience in general networking concepts as well as Microsoft operating systems/networking and Red Hat Linux operating systems/networking. Use this fact sheet to investigate your academic and career options, and to master your job search.

**JOB-SPECIFIC SKILLS**

*Skills and knowledge you will obtain at Lakeland to prepare for a successful career in the field.*

**HARDWARE/SOFTWARE SKILLS:**
- Configure workstations on a network
- Consult with the operating systems and networking software vendors for technical support
- Install, configure and upgrade a variety of desktop and server software and their related products
- Perform computer maintenance and optimization
- Perform general technical troubleshooting and give consultation to development teams
- Understand the hardware and software used in a network (servers, switches and routers)

**PROGRAMMING SKILLS:**
- Systems analysis and design
- Use logic and problem-solving
- Basic programming skills

**DESKTOP OPERATING SYSTEMS AND NETWORK SKILLS:**
- File management (organize, file and store)
- Knowledge of how specific operating systems work (Windows, UNIX and Linux)
- Knowledge of local area networking (LAN), wide area networking (WAN), wireless and telecommunications protocols
- Support various environments

**GENERAL MANAGEMENT SKILLS:**
- Capacity planning for growth and changes
- Decision making
- Leadership
- Presentation preparation
- Project management
- Set-up and maintenance of documentation and standards
- Understand core business functions and how information technology interrelates with business
TRANSFERABLE SKILLS

Skills you have acquired throughout your life that will help you excel in the field include:

- Ability to multitask
- Leadership
- Logical thinking
- Organizational proficiency
- Punctual
- Problem-solving
- Verbal and written communication

PERSONAL ATTRIBUTES

These nontechnical attributes will enable you to be a competent, reliable employee in any company.

- Accurate
- Adaptable
- Analytical
- Collaborative
- Creative
- Critical thinker
- Customer-focused
- Dead-on-time
- Detail-oriented
- Demonstrate initiative
- Efficient
- Ethical
- Flexible
- Honest
- Independent
- Investigative
- Logical
- Organized
- Patient
- Personable
- Problem-solving
- Professional presence
- Questioning
- Quick learner
- Respectful
- Self-motivated

RELATED JOB TITLES

Note: This is only a representative list and does not exhaust all possible titles in the field.

- Engineer
- Network Administrator
- Network Architect
- Network Engineer
- Network Manager
- Pre-sales Engineer/Technical
- Telecommunications Manager
- Telecommunications Specialist
- Wireless Network Engineer

*Some positions may require a bachelor’s degree or higher.

POSSIBLE EMPLOYERS

Note: This is only a representative list and does not exhaust all types of employers.

- Banks and financial institutions
- Consulting companies
- Education
- Government agencies
- Health care
- Insurance companies
- Manufacturing
- Nonprofit organizations
- Public accounting
- Real estate
- Research
- Retail
- Self-employment
- Service
- Technology
- Wholesale
### Network and Computer Systems Administrators (national averages)

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>2016 Median Pay</strong></td>
<td>$79,700 per year/$38.32 per hour</td>
</tr>
<tr>
<td><strong>Typical Entry-level Education</strong></td>
<td>Bachelor’s Degree</td>
</tr>
<tr>
<td><strong>Work Experience in a Related Occupation</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>On-the-job Training</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Number of Jobs, 2014</strong></td>
<td>382,600</td>
</tr>
<tr>
<td><strong>Job Outlook, 2014-24</strong></td>
<td>8% (As fast as average)</td>
</tr>
<tr>
<td><strong>Employment Change, 2014-24</strong></td>
<td>30,200</td>
</tr>
</tbody>
</table>


### Annual mean wage of network and computer systems administrators, by state, May 2016

#### Annual mean wage

- $48,370 - $68,430
- $76,230 - $84,900
- $69,320 - $76,130
- $85,190 - $106,000

Source: https://www.bls.gov/oes/current/oes151142.htm

Blank areas indicate data not available.