OPENINGS REQUIRING CERTIFICATION VS. CERTIFICATE HOLDERS

CISA, CISM, and CISSP certifications have the greatest shortage of certificate holders, when compared to employer demand.

<table>
<thead>
<tr>
<th>Certification</th>
<th>Entry-Level</th>
<th>Mid-Level</th>
<th>Advanced Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Information Privacy Professional (CIPP)</td>
<td>649</td>
<td>1,428</td>
<td></td>
</tr>
<tr>
<td>Certified Information Systems Auditor (CISA)</td>
<td>3,801</td>
<td>4,658</td>
<td>7,406</td>
</tr>
<tr>
<td>Certified Information Security Manager (CISM)</td>
<td>1,563</td>
<td>8,101</td>
<td>14,007</td>
</tr>
<tr>
<td>Global Information Assurance Certification (GIAC)</td>
<td>4,654</td>
<td>8,202</td>
<td></td>
</tr>
<tr>
<td>CompTIA Security+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certified Information Systems Security Professional (CISSP)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOP JOB TITLES

used by employers within the cybersecurity job market.

ENTRY & MID-LEVEL
- Cybersecurity Analyst
- Cybersecurity Administrator
- Cybersecurity Consultant
- Cybersecurity Specialist/Technician
- Vulnerability Analyst/Penetration Tester

ADVANCED LEVEL
- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Systems Engineer

JOB OPENINGS by NICE Cybersecurity Workforce Framework Category

Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the "Operate and Maintain" category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

Securely Provision
Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems' development.

Operate & Maintain
Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.

Oversee & Govern
Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.

Protect & Defend
Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks.

Analyze
Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.

Collect & Operate
Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems, networks, and digital evidence.

Investigate
Responsible for designing, developing, and implementing programs to provide effective and efficient information technology (IT) system performance and security.

*Source: CyberSeek (February 2021)
OPENINGS REQUIRING CERTIFICATION vs. CERTIFICATE HOLDERS

Certified Information Privacy Professional (CIPP) 755
Certified Information Systems Auditor (CISA) 4,500
Certified Information Security Manager (CISM) 7,072
Global Information Assurance Certification (GIAC) 11,848
CompTIA Security+ 14,429
Certified Information Systems Security Professional (CISSP) 17,630

CISA, CISM, GIAC, and CISSP certifications have the greatest shortage of certificate holders, when compared to employer demand.

OPENINGs by NICE Cybersecurity Workforce Framework Category

ENTRY & MID-LEVEL
- Cybersecurity Analyst
- Cybersecurity Administrator
- Cybersecurity Specialist/Technician
- Systems Administrator

ADVANCED LEVEL
- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Systems Engineer

Pursuant to the National Apprenticeship Act, the Department of Labor works to expand opportunities related to apprenticeship programs. This project has been funded, either wholly or in part, with Federal funds from the Department of Labor, Employment & Training Administration under the contract number (work order) DOL-OPS-16-009-GO4N-01-18-F-00060. The contents of this publication do not necessarily reflect the views or policies of the Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement of same by the U.S. Government.

*Source: CyberSeek (February 2021)
**JOB OPENINGS & CERTIFICATIONS**

**FLORIDA**

**OPENINGS REQUIRING CERTIFICATION vs. CERTIFICATE HOLDERS**

CISA, CISM, and CISSP certifications have the greatest shortage of certificate holders, when compared to employer demand.

**CISA, CISP, and CISSP certificates** have the greatest shortage of certificate holders, when compared to employer demand.

**TOP JOB TITLES** used by employers within the cybersecurity job market.

**ENTRY & MID-LEVEL**
- Cybersecurity Analyst
- Cybersecurity Administrator
- Cybersecurity Specialist/Technician
- IT Auditor
- Systems Administrator

**ADVANCED LEVEL**
- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Systems Engineer

**JOB OPENINGS** by NICE Cybersecurity Workforce Framework Category

Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the "Operate and Maintain" category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

**Operate & Maintain**
Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.

**Securely Provision**
Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems' development.

**Oversee & Govern**
Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.

**Protect & Defend**
Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks.

**Analyze**
Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.

**Collect & Operate**
Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.

**Investigate**
Responsible for investigating cyber events or crimes related to information technology (IT) systems, networks, and digital evidence.

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*Source: CyberSeek (February 2021)
OPENINGS REQUIRING CERTIFICATION VS. CERTIFICATE HOLDERS

CISA, CISM, and CISSP certifications have the greatest shortage of certificate holders, when compared to employer demand.

<table>
<thead>
<tr>
<th>Certification Category</th>
<th>OPENINGS</th>
<th>CERTIFICATE HOLDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Information Privacy Professional (CIPP)</td>
<td>296</td>
<td>99</td>
</tr>
<tr>
<td>Certified Information Systems Auditor (CISA)</td>
<td>2,371</td>
<td>1,421</td>
</tr>
<tr>
<td>Certified Information Security Manager (CISM)</td>
<td>2,058</td>
<td>718</td>
</tr>
<tr>
<td>Global Information Assurance Certification (GIAC)</td>
<td>3,601</td>
<td></td>
</tr>
<tr>
<td>ComPTIA Security+</td>
<td>4,605</td>
<td>1,274</td>
</tr>
<tr>
<td>Certified Information Systems Security Professional (CISSP)</td>
<td>6,783</td>
<td></td>
</tr>
</tbody>
</table>

TOP JOB TITLES

used by employers within the cybersecurity job market.

ENTRY & MID-LEVEL
- Cybersecurity Analyst
- Cybersecurity Administrator
- Vulnerability Analyst/Penetration Tester

ADVANCED LEVEL
- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Systems Engineer

JOB OPENINGS by NICE Cybersecurity Workforce Framework Category

Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the "Operate and Maintain" category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

- **Securely Provision**: Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems’ development. 15,472
- **Operate & Maintain**: Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security. 14,687
- **Protect & Defend**: Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks. 8,393
- **Oversee & Govern**: Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work. 7,974
- **Analyze**: Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence. 4,708
- **Collect & Operate**: Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence. 1,789
- **Investigate**: Responsible for investigating cyber events or crimes related to information technology (IT) systems, networks, and digital evidence. 1,419

*Source: CyberSeek (February 2021)
### OPENINGS REQUIRING CERTIFICATION vs. CERTIFICATE HOLDERS

<table>
<thead>
<tr>
<th>Certification</th>
<th>Openings</th>
<th>Certificate Holders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Information Privacy Professional (CIPP)</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Certified Information Systems Auditor (CISA)</td>
<td>78</td>
<td>85</td>
</tr>
<tr>
<td>Certified Information Security Manager (CISM)</td>
<td>64</td>
<td>95</td>
</tr>
<tr>
<td>Global Information Assurance Certification (GIAC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CompTIA Security+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certified Information Systems Security Professional (CISSP)</td>
<td>242</td>
<td>326</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,393</td>
<td>882</td>
</tr>
</tbody>
</table>

CISA and CISM certifications have the greatest shortage of certificate holders, when compared to employer demand.

### TOP JOB TITLES

**ENTRY & MID-LEVEL**
- Cybersecurity Analyst
- Cybersecurity Administrator
- Cybersecurity Specialist/Technician
- Systems Administrator
- Vulnerability Analyst

**ADVANCED LEVEL**
- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Systems Engineer

### JOB OPENINGS by NICE Cybersecurity Workforce Framework Category

Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the "Operate and Maintain" category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

- **Securely Provision**
  - Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems’ development.
  - **1,393**

- **Operate & Maintain**
  - Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.
  - **1,341**

- **Oversee & Govern**
  - Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.
  - **672**

- **Protect & Defend**
  - Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks.
  - **569**

- **Analyze**
  - Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.
  - **306**

- **Collect & Operate**
  - Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.
  - **126**

- **Investigate**
  - Responsible for investigating cyber events or crimes related to information technology (IT) systems, networks, and digital evidence.
  - **56**

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*Source: CyberSeek (February 2021)*

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CYBERSECURITY
JOB OPENINGS & CERTIFICATIONS*
ILLINOIS

OPENINGS REQUIRING CERTIFICATION vs. CERTIFICATE HOLDERS

CISA, CISM, GIAC, and CISSP certifications have the greatest shortage of certificate holders, when compared to employer demand.

<table>
<thead>
<tr>
<th>Certification Type</th>
<th>Openings</th>
<th>Certificates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Information Privacy Professional (CIPP)</td>
<td>101</td>
<td>884</td>
</tr>
<tr>
<td>Certified Information Systems Auditor (CISA)</td>
<td>4,578</td>
<td>2,994</td>
</tr>
<tr>
<td>Certified Information Security Manager (CISM)</td>
<td>4,603</td>
<td>2,028</td>
</tr>
<tr>
<td>Global Information Assurance Certification (GIAC)</td>
<td>8,552</td>
<td>7,900</td>
</tr>
<tr>
<td>ComPTIA Security+</td>
<td>10,327</td>
<td>14,677</td>
</tr>
<tr>
<td>Certified Information Systems Security Professional (CISSP)</td>
<td>13,464</td>
<td>29,939</td>
</tr>
</tbody>
</table>

TOP JOB TITLES
used by employers within the cybersecurity job market.

ENTRY & MID-LEVEL
- Cybersecurity Analyst
- Cybersecurity Administrator
- Cybersecurity Specialist/Technician
- Systems Administrator

ADVANCED LEVEL
- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Systems Engineer

JOB OPENINGS by NICE Cybersecurity Workforce Framework Category
Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the "Operate and Maintain" category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

**Securely Provision**
Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems' development.

**Operate & Maintain**
Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.

**Oversee & Govern**
Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.

**Protect & Defend**
Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks.

**Analyze**
Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.

**Investigate**
Responsible for investigating cyber events or crimes related to information technology (IT) systems, networks, and digital evidence.

**Collect & Operate**
Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.

*Source: CyberSeek (February 2021)

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OPENINGS REQUIRING CERTIFICATION VS. CERTIFICATE HOLDERS

CISA and CISM certifications have the greatest shortage of certificate holders, when compared to employer demand.

**Certified Information Privacy Professional (CIPP)**
- Employer Demand: 29
- Certificate Holders: 63

**Certified Information Systems Auditor (CISA)**
- Employer Demand: 423
- Certificate Holders: 495

**Certified Information Security Manager (CISM)**
- Employer Demand: 182
- Certificate Holders: 395

**Global Information Assurance Certification (GIAC)**
- Employer Demand: 297
- Certificate Holders: 720

**CompTIA Security+**
- Employer Demand: 260
- Certificate Holders: 931

**Certified Information Systems Security Professional (CISSP)**
- Employer Demand: 931
- Certificate Holders: 931

**TOP JOB TITLES**

**ENTRY & MID-LEVEL**
- Cybersecurity Analyst
- Cybersecurity Administrator
- Cybersecurity Specialist/Technician
- Systems Administrator

**ADVANCED LEVEL**
- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Systems Engineer

**JOB OPENINGS** by NICE Cybersecurity Workforce Framework Category

Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the "Operate and Maintain" category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

- **Operate & Maintain**
  - Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.
  - Employer Demand: 3,723

- **Securely Provision**
  - Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems’ development.
  - Employer Demand: 3,221

- **Oversee & Govern**
  - Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.
  - Employer Demand: 1,930

- **Protect & Defend**
  - Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks.
  - Employer Demand: 1,792

- **Analyze**
  - Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.
  - Employer Demand: 883

- **Collect & Operate**
  - Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.
  - Employer Demand: 413

- **Investigate**
  - Responsible for investigating cyber events or crimes related to information technology (IT) systems, networks, and digital evidence.
  - Employer Demand: 265

*Source: CyberSeek (February 2021)*

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## Openings Requiring Certification vs. Certificate Holders

<table>
<thead>
<tr>
<th>Certification</th>
<th>Openings</th>
<th>Certificate Holders</th>
<th>Shortage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISA, CISM, and CISSP certifications</td>
<td>have the greatest shortage of certificate holders, when compared to employer demand.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Top Job Titles

**Used by employers within the cybersecurity job market.**

## Job Openings by NICE Cybersecurity Workforce Framework Category

Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the "Operate and Maintain" category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

- **Securely Provision**
  - Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems' development.
  - 17,947

- **Operate & Maintain**
  - Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.
  - 16,842

- **Oversee & Govern**
  - Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.
  - 10,252

- **Protect & Defend**
  - Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks.
  - 9,628

- **Analyze**
  - Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.
  - 4,407

- **Collect & Operate**
  - Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.
  - 1,506

- **Investigate**
  - Responsible for investigating cyber events or crimes related to information technology (IT) systems, networks, and digital evidence.
  - 1,269
OPENINGS REQUIRING CERTIFICATION VS. CERTIFICATE HOLDERS

CISA, CISM, and CISSP certifications have the greatest shortage of certificate holders, when compared to employer demand.

<table>
<thead>
<tr>
<th>Certification</th>
<th>Holders 2021</th>
<th>Demand 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Information Privacy Professional (CIPP)</td>
<td>409</td>
<td>250</td>
</tr>
<tr>
<td>Certified Information Systems Auditor (CISA)</td>
<td>4,424</td>
<td>6,814</td>
</tr>
<tr>
<td>Certified Information Security Manager (CISM)</td>
<td>4,443</td>
<td>6,998</td>
</tr>
<tr>
<td>Global Information Assurance Certification (GIAC)</td>
<td>7,832</td>
<td>10,533</td>
</tr>
<tr>
<td>CompTIA Security+</td>
<td>3,132</td>
<td>13,911</td>
</tr>
<tr>
<td>Certified Information Systems Security Professional (CISSP)</td>
<td>1,559</td>
<td>4,010</td>
</tr>
</tbody>
</table>

**TOP JOB TITLES**

These are the job titles used by employers within the cybersecurity job market.

**ENTRY & MID-LEVEL**
- Cybersecurity Analyst
- Cybersecurity Administrator
- Cybersecurity Specialist/Technician
- Systems Administrator
- IT Auditor

**ADVANCED LEVEL**
- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Systems Engineer

**JOB OPENINGS** by NICE Cybersecurity Workforce Framework Category

Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the "Operate and Maintain" category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

- **Securely Provision**
  Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems’ development.
  - 41,724 open positions.

- **Operate & Maintain**
  Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.
  - 39,199 open positions.

- **Oversee & Govern**
  Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.
  - 21,903 open positions.

- **Protect & Defend**
  Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks.
  - 21,695 open positions.

- **Analyze**
  Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.
  - 11,107 open positions.

- **Collect & Operate**
  Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.
  - 4,028 open positions.

- **Investigate**
  Responsible for investigating cyber events or crimes related to information technology (IT) systems, networks, and digital evidence.
  - 3,152 open positions.

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OPENINGS REQUIRING CERTIFICATION vs. CERTIFICATE HOLDERS

CIPP, GIAC, CompTIA Sec+, and CISSP certifications have the greatest shortage of certificate holders, when compared to employer demand.

TOP JOB TITLES

used by employers within the cybersecurity job market.

JOB OPENINGS by NICE Cybersecurity Workforce Framework Category

Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the “Operate and Maintain” category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

**Operate & Maintain**

Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.

**Securely Provision**

Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems’ development.

**Protect & Defend**

Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks.

**Oversee & Govern**

Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.

**Analyze**

Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.

**Collect & Operate**

Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.

**Investigate**

Responsible for investigating cyber events or crimes related to information technology (IT) systems, networks, and digital evidence.

**ENTRY & MID-LEVEL**

- Cybersecurity Analyst
- Cybersecurity Administrator
- Cybersecurity Specialist/Technician
- Vulnerability Analyst

**ADVANCED LEVEL**

- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Sr. Systems Engineer

Pursuant to the National Apprenticeship Act, the Department of Labor works to expand opportunities related to apprenticeship programs. This project has been funded either wholly or in part with Federal funds from the Department of Labor Employment Training Administration under the contract number/each order DOL-OPS-16-0007/DBA-15-00060. The contents of this publication do not necessarily reflect the views or policies of the Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.
OPENINGS REQUIRING CERTIFICATION vs.
CERTIFICATE HOLDERS

CISA and CISM certifications have the greatest shortage of certificate holders, when compared to employer demand.

TOP
JOB TITLES
used by employers within the cybersecurity job market.

JOB OPENINGS by NICE Cybersecurity Workforce Framework Category
Entry-level cybersecurity personnel, such as cybersecurity support technicians, often work in the "Operate and Maintain" category which is in greatest demand by employers (the same job opening can be in multiple NICE categories).

Operate & Maintain
Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security.

Securely Provision
Responsible for conceptualizing, designing, and building secure information technology (IT) systems, with responsibility for some aspect of the systems’ development.

Oversee & Govern
Responsible for providing leadership, management, direction, or development and advocacy so the organization may effectively conduct cybersecurity work.

Protect & Defend
Responsible for identifying, analyzing, and mitigating threats to internal information technology (IT) systems or networks.

Collect & Operate
Responsible for specialized denial and deception operations and collection of cybersecurity information that may be used to develop intelligence.

Analyze
Responsible for highly specialized review and evaluation of incoming cybersecurity information to determine its usefulness for intelligence.

Investigate
Responsible for investigating cyber events or crimes related to information technology (IT) systems, networks, and digital evidence.

*Source: CyberSeek (February 2021)

OPENINGS REQUIRING CERTIFICATION

Certified Information Privacy Professional (CIPP)
Certified Information Systems Auditor (CISA)
Certified Information Security Manager (CISM)
Global Information Assurance Certification (GIAC)
CompTIA Security+
Certified Information Systems Security Professional (CISSP)

CISA and CISM certifications have the greatest shortage of certificate holders, when compared to employer demand.

ENTRY & MID-LEVEL
- Cybersecurity Analyst
- Cybersecurity Administrator
- Cybersecurity Specialist/Technician
- Systems Administrator

ADVANCED LEVEL
- Cybersecurity Engineer
- Cybersecurity Manager
- Network Engineer/Architect
- Software Developer/Engineer
- Systems Engineer

WYOMING

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