EC-Council
Building A Culture Of Security

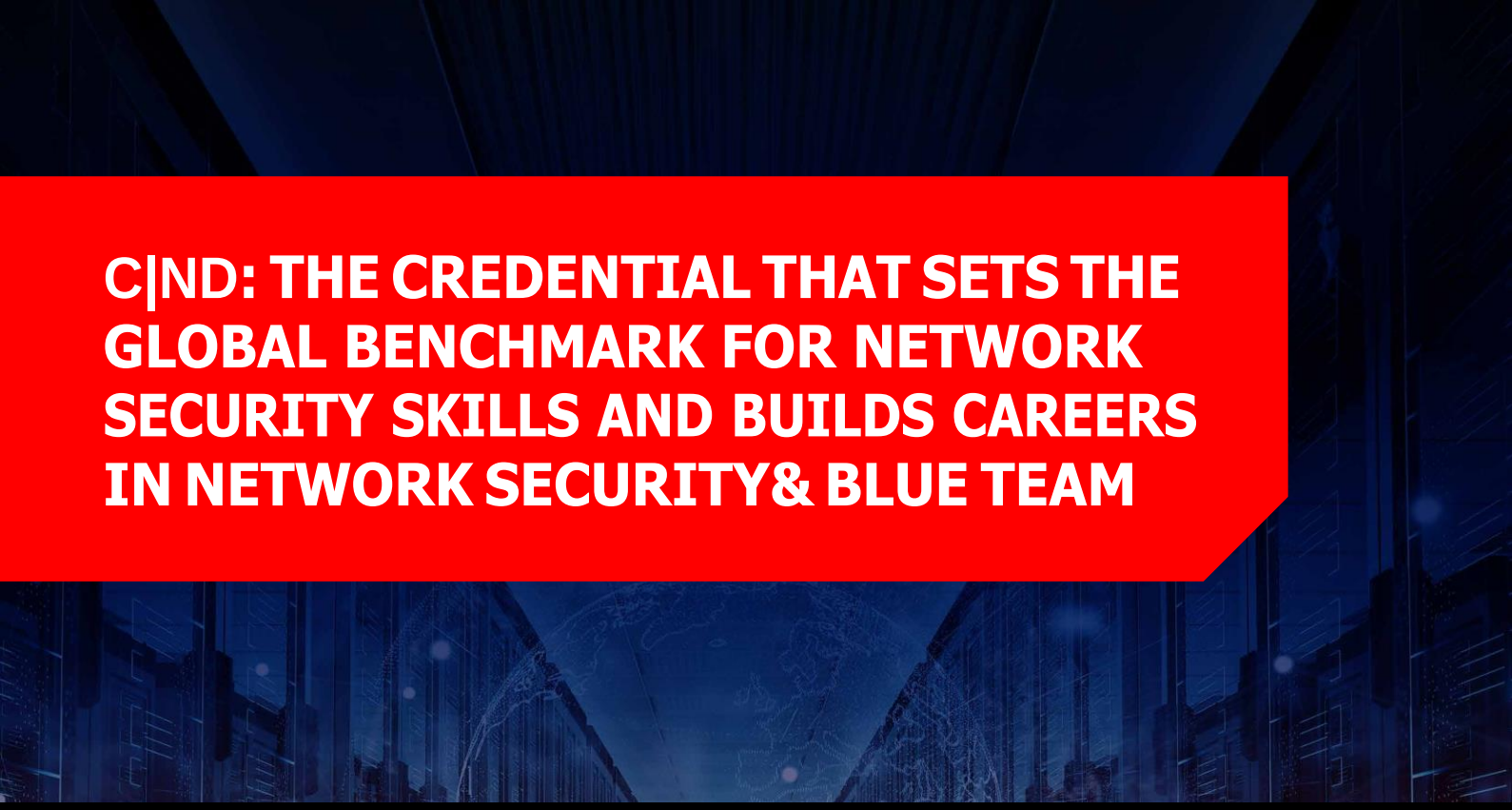
C|ND
Certified | Network Defender

# CERTIFIED NETWORK DEFENDER

## TRAIN FOR NEXT GENERATION NETWORK SECURITY

Protect Detect Respond Predict

www.eccouncil.org



# C|ND: THE CREDENTIAL THAT SETS THE GLOBAL BENCHMARK FOR NETWORK SECURITY SKILLS AND BUILDS CAREERS IN NETWORK SECURITY& BLUE TEAM

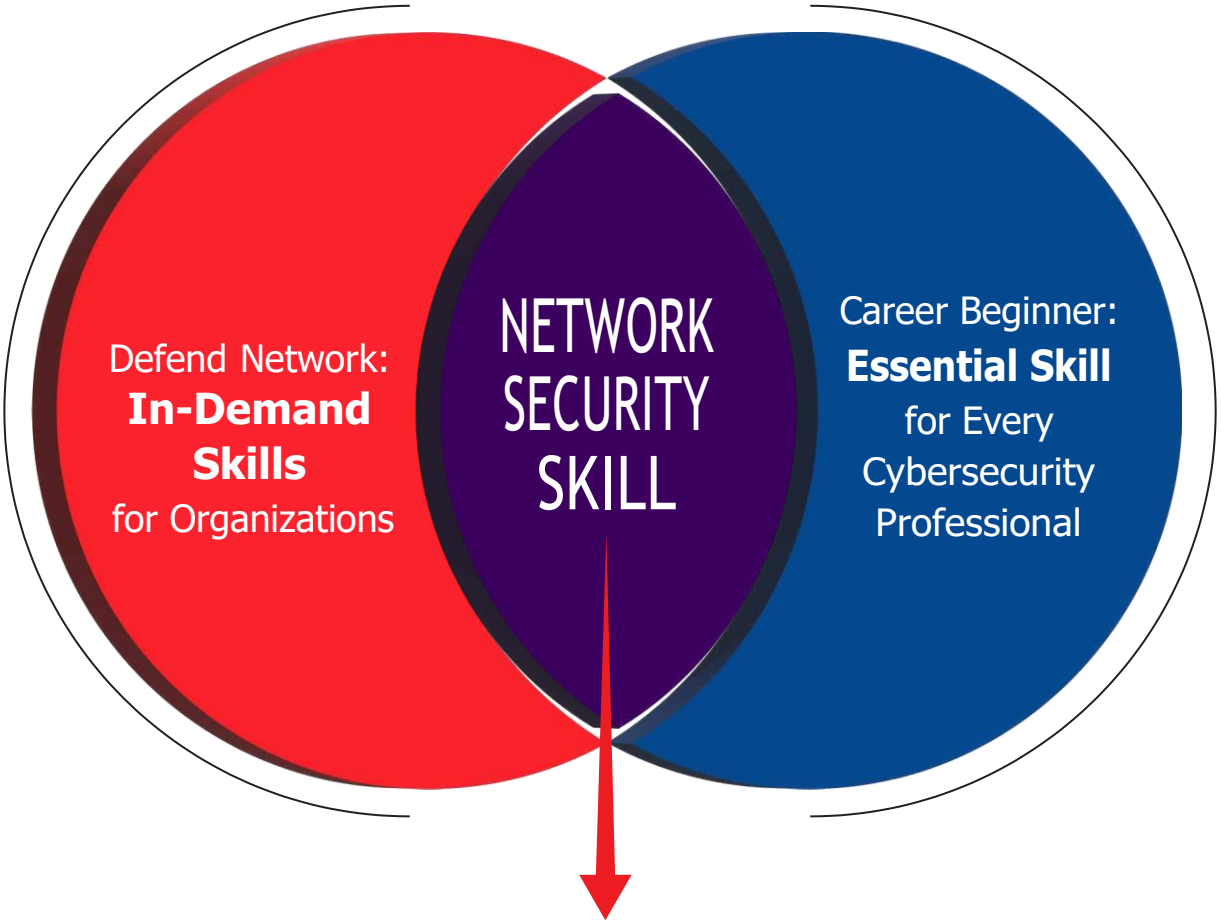
Network security skills are in high demand among organizations as well as cybersecurity aspirants.

## 1. HIGHLY SOUGHT AFTER BY ORGANIZATIONS:

The increasing frequency and sophistication of cyberattacks have contributed to a growing demand for network security professionals. Network security is a critical aspect of cybersecurity, as protecting data integrity, confidentiality, and availability within networks is a top priority for organizations.

## 2. ESSENTIAL FUNDAMENTAL SKILL:

Mastering network security is an essential fundamental skill for aspiring cybersecurity professionals as it entails fortifying firewalls, implementing robust encryption protocols, and configuring intrusion detection systems-foundational elements vital to securing the intricate web of interconnected systems against sophisticated cyber threats, ensuring data integrity, confidentiality, and seamless network operations.




# CERTIFIED NETWORK DEFENDER

**World's Most Comprehensive & Practical Network Security Training Program**

Network Security is one of the Top In-Demand Cybersecurity Skills.

(TechTarget, LinkedIn, Shiksha, Harvard blog, EC-Council)

WHAT IS THE

# EC-COUNCIL CERTIFIED NETWORK DEFENDER

## (C|ND) **PROGRAM?**

EC-Council's Certified Network Defender (C|ND) is an essential vendor-neutral network security certification for every IT and systems administrator who needs to operate with a secure mindset.

Students will learn the critical skills required to defend their networks and operating environments across local networks, endpoints, cloud infrastructure, applications, OT, and Mobile. They will also acquire knowledge of effective proper log analysis, network traffic monitoring, basic investigation and response, as well as business continuity and disaster recovery.

Additionally, they will dive into threats, analyzing the attack surface, and studying threat prediction and threat intelligence as it relates to their administration and defense responsibilities.

Often referred to as blue-teaming, C|NDs will be able to apply defense and countermeasure strategies in their organizations, playing a critical role not only in attack prevention but also in detection, response, and remediation as they configure networks and systems to operate securely. The C|ND program will cover the concepts and fortify skills through hands-on practice across over 110 labs delivered on live target machines.

The C|ND program designed by industry experts prepares network defenders with strategic, technological, and operational network security capabilities, enabling them to design, develop, and maintain secure networks.

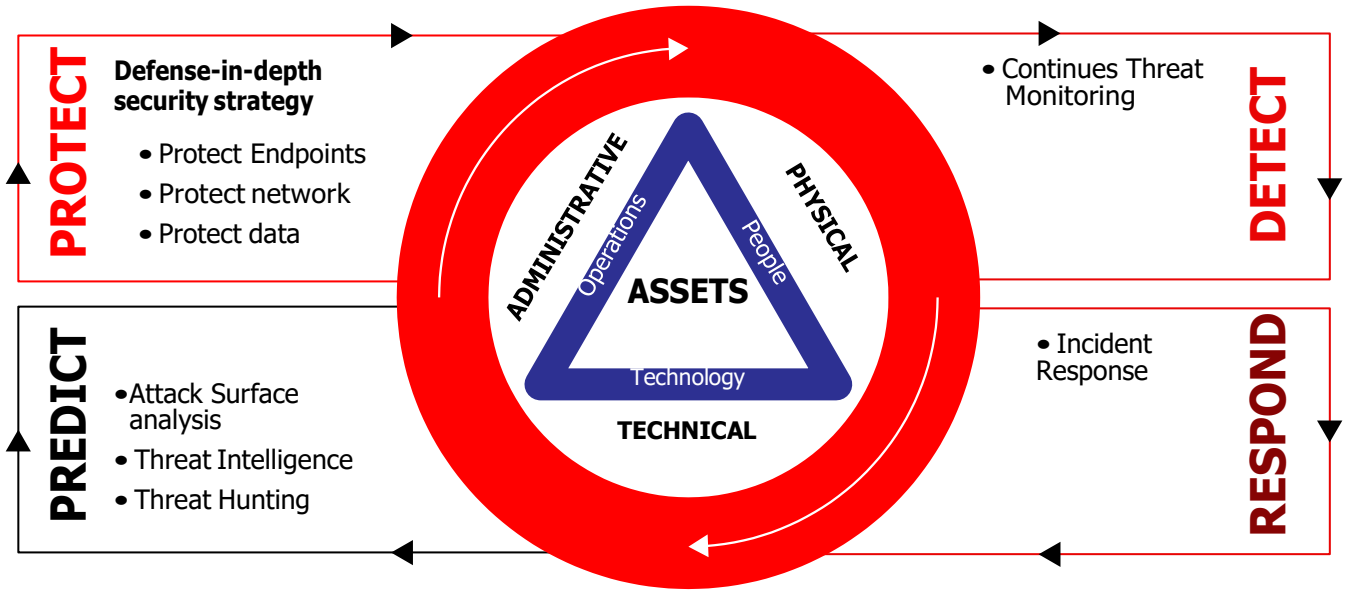
C|ND IS THE WORLD'S FIRST

# NETWORK SECURITY PROGRAM

## WITH A CONTINUAL/ADAPTIVE SECURITY STRATEGY:

**1.Protect 2. Detect 3. Respond 4. Predict**

According to Gartner, 'traditional "prevent and detect" approaches are inadequate.' Opportunistic by nature, malicious actors look for the easiest ways to attack most users and siphon off maximum gains. Developing a continuous Adaptive Security Cycle helps organizations stay ahead of cybercriminals by creating and improving security systems. And that's what you learn in the **C|ND** program.



# C|ND Course Modules:



| APPENDIX (Self-Study) |
| --- |
| APPENDIX A: Computer Network Fundamentals |
| APPENDIX B: Physical Network Security |
| APPENDIX C: Virtual Private Network (VPN) Security |
| APPENDIX D: Endpoint Security – MAC Systems |


# WHAT WILL YOU LEARN?

1. Planning and administering network security for organizations
2. Recognizing security risks, threats, and vulnerabilities
3. Ensuring compliance with regulatory standards
4. Designing and implementing network security policies
5. Applying security principles in distributed and mobile computing environment
6. Implementing Identity and Access Management, encryption, and network segmentation
7. Managing Windows and Linux Security Administration
8. Addressing security risks in mobile devices and IoT
9. Implementing strong data security techniques
10. Managing security in virtualization technologies and cloud platforms
11. Implementing wireless network security
12. Conducting risk and vulnerability assessments
13. Providing first response to security incidents
14. Identifying Indicators of Compromise and Attack
15. Integrating threat intelligence for proactive defense
16. Conducting Attack Surface Analysis
17. Assisting in Business Continuity and Disaster Recovery planning
18. Monitoring network traffic and performing log management
19. Managing proxy, content filtering, and troubleshooting network issues
20. Hardening security of endpoints and selecting firewall solutions
21. Configuring IDS/IPS for enhanced security
22. Maintaining an inventory of network devices
23. Providing security awareness guidance and training
24. Managing AAA for network devices
25. Reviewing audit logs and analyzing security anomalies
26. Maintaining and configuring security platforms
27. Evaluating security products and operations procedures
28. Identifying and classifying organizational assets
29. Implementing system integrity monitoring tools
30. Understanding EDR/XDR and UEBA solutions
31. Conducting PIA processes for privacy assessment
32. Collaborating on threat hunting and incident response
33. Understanding SOAR platforms in cybersecurity operations
34. Integrating Zero Trust principles into security architectures
35. Staying updated on emerging cyber threats
36. Understanding the role of AI/ML in cyber defense.

# 4 KEY FEATURES

## AND CRITICAL COMPONENTS OF THE C|ND PROGRAM

**1** **The World's First Network Security Program with a Continual/Adaptive Security Strategy:**

1. Protect 2. Detect 3. Respond 4. Predict

**2** **Covers Defense-In-Depth Security Strategy:**

1. Policies, Procedures, and Awareness 2. Physical 3. Perimeter
4. Internal Network 5. Host 6. Application 7. Data

**3** **Covers Four Security Approaches:**

1. Preventive Approach 2. Reactive Approach
3. Retrospective Approach 4. Proactive Approach

**4** **Covers All Five Functions of the NIST Cybersecurity Framework (CSF):**

1. Identify 2. Protect 3. Detect 4. Respond 5. Recover

# BUILD YOUR NETWORK SECURITY CAREER WITH C|ND

## Advantages of the C | ND Program

- Accredited by the ANAB National Accreditation Board under ANAB ISO/IEC 17024
- Approved by the US DoD under Directive 8570/8140
- Recognized by the National Cyber Security Centre NCSC – part of GCHQ (UK's intelligence, security, and cyber agency) approves EC-Council Training as meeting CYBOK requirements.
- 100+ hands-on labs: More labs than any globally recognized network security certification.
- Lab-intensive program (More than 50% lab)
- Covers modern and advanced network security requirements
- Mapped with NICE Framework under the following category, specialty areas, and work roles
- Your pathway to a career in the blue team
- Master mobile & IoT security defense
- Learn tactical defense of cloud services (AWS, Azure, and GCP)
- Learning beyond technical aspects
- Building perimeter defense skills
- Build job-ready practical skills in live ranges
- Learn the latest technologies and concepts to match modern network security requirements.
- Build hands-on skills with 110 labs simulating real-time environment
- Learn in-depth attack surface analysis
- Mapped with real-time job roles and responsibilities of network defenders
- Designed and developed by SMEs across the globe

# C|ND COVERS MODERN AND ADVANCED NETWORK

## SECURITY REQUIREMENTS:

- Enterprise Mobile Device Security
- Enterprise IoT Device Security
- Cloud Security
- Virtual Network Security
- SDN Security
- NFV Security
- Docker Security
- Container Security
- Kubernetes Security
- Threat Intelligence
- Threat Hunting
- Endpoint Detection and Response (EDR)
- Extended detection and response (XDR)
- User and Entity Behavior Analytics (UEBA)
- Security Orchestration, Automation, and Response (SOAR)

# TRAINING AND EXAM DETAILS

## Training Details:

**iLearn (Self-Study)**

This solution is an asynchronous, self-study environment in a video streaming format.

**iWeek (Live Online)**

This solution is a live, online, instructor-led training course.

**Training Partner (In Person)**

This solution offers "in-person" training so what you can benefit from collaborating with your peers and gaining real-world led by expert, certified instructors.

## Exam Details:

| Exam Code: | Duration: | Availability: | Test Format: |
|---|---|---|---|
| 312-38 | 4 hours | EC-Council Exam Portal | Multiple Choice |

# JOB ROLES WITH C|ND

C|ND is a network security course designed to help organizations create and deploy the most comprehensive network security system. C|ND is mapped to the below job roles based on common job role frameworks recognized by organizations worldwide. C|NDis a network security course designed to help organizations create and deploy the most comprehensive network defense system.

- **Network Administrators**
- **Network Security Administrators**
- **Network Engineer**
- **Security Operator**
- **Data Security Analyst**
- **Network Security Engineer**
- **Network Defense Technician**
- **Security Analyst**
- **Cybersecurity Engineer**
- **Network Security**

## Who Can Apply?

Students/IT Professionals/Any other industry professionals planning a career in cybersecurity.

Anyone who wants to start a career in the blue team and network security.

## Salaries

The average salary for a network security engineer in the **United States is $125,014.**

Source: Glassdoor

# RECOGNITION/ENDORSEMENT/ MAPPING

NICE
*100% mapping to NICE Workforce Framework for Cybersecurity*

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17024
PERSONNEL CERTIFICATION BODY

**United States Department of Defense (DoD)**

## Why Do Top Network Security Professionals Across the Globe Love the C|ND Program?

**Robinson Shai**
**South Africa**
Cybersecurity Professional

Other programs emphasize the understanding of networks, but C|ND shows the weaknesses in a network and how to cover them to protect the networks. C|ND is the single most certification that pays so much attention to security. To enter cybersecurity, you should go for a certification that gives you an understanding of a network and teaches you how to secure it. There is no way to defend a network without knowing how it works. C|ND teaches you about a network and how you can incorporate security within a network. C|ND covers a wide range of topics, including securing data storage, protecting machines, configuring network sites, and even delves into physical security measures such as cameras and access control systems.

**Samuel Boateng**

**USA**

President and CEO of Slamm Technologies

It has also helped me achieve a lot and higher certifications in the field because it laid a great foundation for my life and career. One of the good things about C|ND, is that you can never compare it with any program. C|ND, comes with this unique approach to networking, and the way it puts security together makes it easy to understand. In C|ND, you learn the seven layers of the OSI model, understand the basic concept of putting things together, and understand your network is the key area. C|ND, teaches you to monitor the log analysis side, which shows how logs can be analyzed and investigated. And that is my favorite part. C|ND, provides knowledge on securing your systems, the infrastructure, and every part of your Internet of Things. It shows you everything that you need to know about security.

C|ND has upgraded my knowledge in a way that I was able to use that knowledge in the operational and strategical environment and apply that knowledge to increase the security of the company networks. There are plenty of security vendors and training programs in the market. But, they cannot compare it to C|ND. C|ND is the most complete program that covers all necessary topics regarding network security.

The first thing I like about the C|ND program is that it covers major cybersecurity approaches like preventive, reactive retrospective, and proactive security. This will help plan, establish, and maintain the security in the network as well as properly react in the case of an incident.

**Ivica Gjorgjevski**

**USA**

Information Security Officer
Stopanska Banka
Macedonia

# ORGANIZATIONS THAT EMPLOY C|ND CERTIFIED MEMBERS