



# CYBRScore™

## SKILLS ASSESSMENT CATALOG

*Learn it. Prove it. Protect it. What's your CYBRScore?*

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# CYBRScore Skills Assessment

The CYBRScore Skills Assessment is carefully designed to meet the recommendations of the NICE Cybersecurity Workforce Framework (NCWF). NCWF is viewed as the “cybersecurity workforce dictionary,” providing the nationally recognized information and standards necessary to educate, recruit, train, develop, and retain a highly-qualified cyber security workforce.

NCWF identifies seven high-level categories of common cyber security functions. These provide the overarching structure of the NCWF. These categories are further divided into work roles. The NCWF also identifies specific competencies and related knowledge, skills, and abilities (KSAs) expected of a professional working in one of the identified work roles.

CYBRScore Skills Assessments utilize the NCWF recommendations to provide a performance-based assessment solution for employers seeking to evaluate their current workforce and position candidates.

| CATEGORIES              |   |
|-------------------------|---|
| Securely Provision (SP) | Conceptualizes, designs, and builds secure information technology (IT) systems, with responsibility for aspects of systems and/or networks development        |
| Operate & Maintain (OM) | Provides the support, administration, and maintenance necessary to ensure effective and efficient information technology (IT) system performance and security |
| Oversee & Govern (OV)   | Provides leadership, management, direction, or development and advocacy so the organization may effectively conduct cyber security work                       |
| Protect & Defend (PR)   | Identifies, analyzes, and mitigates threats to internal information technology (IT) systems and/or networks   |
| Analyze (AN)            | Performs highly specialized review and evaluation of incoming cyber security information to determine its usefulness for intelligence                         |
| Collect & Operate (CO)  | Provides specialized denial and deception operations and collection of cyber security information that may be used to develop intelligence                    |
| Investigate (IN)        | Investigates cyber security events or crimes related to information technology (IT) systems, networks, and digital evidence                                   |

# OM500

## SYSTEM ADMINISTRATION

OM500 - System Administration is designed to assess the knowledge, skills and abilities required by the System Administration specialty area as defined by the NICE Cybersecurity Workforce Framework.

Individuals in this role should have a comprehensive understanding of installing, configuring, troubleshooting and maintaining server configurations (hardware and software) to ensure their confidentiality, integrity, and availability. They should also be able to manage accounts, firewalls, and patches, and be responsible for access control, passwords, and account creation and administration.

### TARGET AUDIENCE

Employers seeking to verify the performance-based skills of their current workforce, or to assess a candidate employee prior to making a critical hiring decision

### OBJECTIVE

Test one's competency-level in the System Administration specialty area

### RELEVANT JOB ROLES

|                        |                             |
|------------------------|-----------------------------|
| LAN Administrator      | System Operations Personnel |
| Platform Specialist    | Systems Administrator       |
| Security Administrator | Website Administrator       |
| Server Administrator   |                             |

## ASSESSED COMPETENCIES

|                          |   |                      |
|--------------------------|---|----------------------|
| Computer Forensics       | Information Systems/Network Security          | Software Engineering |
| Computer Languages       | Information Technology Architecture           | Systems Integration  |
| Configuration Management | Information Technology Performance Assessment | Systems Life Cycle   |
| Encryption               | Infrastructure Design                         | Technology Awareness |
| Identity Management      | Network Management                            | Telecommunications   |
| Incident Management      | Operating Systems                             |                      |

## ASSESSED KNOWLEDGE

|  |
|--|
| Basic System Administration, Network & Operating System Hardening Techniques |
| Enterprise IT Architecture   |
| File Extensions  |
| File System Implementations  |
| IT Security Principles & Methods   |
| Local Area & Wide Area Networking Principles & Concepts                      |
| Measures/Indicators of System Performance & Availability                     |
| Network Protocols  |
| New Technological Developments in Server Administration                      |
| Organizational IT User Security Policies                                     |
| Performance Tuning Tools & Techniques  |
| Principles & Methods for Integrating Server Components                       |
| Server Administration & Systems Engineering Theories, Concepts, & Methods    |
| Server & Client Operating Systems  |
| Server Diagnostic Tools & Fault Identification Techniques                    |
| Systems Administration Concepts  |
| Transmission Methods & Jamming Techniques                                    |
| Type/Frequency of Routine Maintenance Needed for Proper Function             |
| Unix Command Line  |
| Virtual Private Network Security   |
| Virtualization Technologies & Virtual Machine Development & Maintenance      |

## ASSESSED SKILLS

|   |
|---|
| Conducting Server Planning, Management & Maintenance  |
| Configuring & Optimizing Software   |
| Configuring & Utilizing Software-Based Computer Protection Tools                                |
| Correcting Physical & Technical Problems that Impact Server Performance                         |
| Diagnosing Connectivity Problems  |
| Diagnosing Failed Servers   |
| Identifying & Anticipating Server Performance, Availability, Capacity or Configuration Problems |
| Installing Computer & Server Upgrades   |
| Maintaining Directory Services  |
| Monitoring & Optimizing Server Performance  |
| Recovering Failed Servers   |
| System Administration for Unix/Linux Operating Systems  |
| Using Virtual Machines  |

**OM500**  
SYSTEM ADMINISTRATION

**CYBRScore**

# PR400

## VULNERABILITY ASSESSMENT & MANAGEMENT

PR400 - Vulnerability Assessment & Management is designed to assess the knowledge, skills and abilities required by the Vulnerability Assessment & Management specialty area as defined by the NICE Cybersecurity Workforce Framework.

Individuals in this role should have a comprehensive understanding of the tools and techniques to detect and exploit security vulnerabilities in web-based applications, networks, and computer systems that use the Windows and Linux OS, as well as recommend mitigation countermeasures.

### TARGET AUDIENCE

Employers seeking to verify the performance-based skills of their current workforce, or to assess a candidate employee prior to making a critical hiring decision

### OBJECTIVE

Test one's competency-level in the Vulnerability Assessment & Management specialty area

### RELEVANT JOB ROLES

|                                       |                               |   |
|---------------------------------------|-------------------------------|---|
| Blue Team Technician                  | Ethical Hacker                | Reverse Engineer                                  |
| Certified TEMPEST Professionals       | Governance Manager            | Risk/Vulnerability Analyst                        |
| Certified TEMPEST Technical Authority | Information Security Engineer | Technical Surveillance Countermeasures Technician |
| Close Access Technician               | Internal Enterprise Audit     | Vulnerability Assessment Analyst                  |
| CND Auditor                           | Penetration Tester            | Vulnerability Manager                             |
| Compliance Manager                    | Red Team Technician           |   |

## ASSESSED COMPETENCIES

|                          |                                      |                              |
|--------------------------|--------------------------------------|------------------------------|
| Computer Forensics       | Human Factors                        | Network Management           |
| Computer Languages       | Identity Management                  | Systems Testing & Evaluation |
| Computer Network Defense | Information Assurance                | Vulnerability Assessment     |
| Contracting/Procurement  | Information Systems/Network Security |                              |
| Criminal Law             | Infrastructure Design                |                              |

## ASSESSED KNOWLEDGE

|  |
|--|
| Application Vulnerabilities  |
| Classes of Attacks   |
| Content Development  |
| Constitution of Network Attacks & Relationship to Threats/Vulnerabilities          |
| Data Backup, Types of Backups, Recovery Concepts & Tools                           |
| General Attack Stages  |
| Information Assurance Principles & Organizational Requirements for Data Protection |
| Interpreted & Compiled Computer Languages  |
| Laws, Policies, Procedures & Governance Related to Critical Infrastructure Impact  |
| Network Access, Identity & Access Management                                       |
| Network Protocols & Directory Services   |
| Network Security Architecture Concepts   |
| Operational Threat Environments  |
| Pentesting Principles, Tools & Techniques  |
| Programming Language Structures & Logic  |
| System & Application Security Threats & Vulnerabilities                            |
| Systems Diagnostic Tools & Fault Identification Techniques                         |
| System Requirements for Safety, Performance & Reliability                          |
| Traffic Flow Across a Network  |

## ASSESSED SKILLS

|  |
|--|
| Applying Host/Network Access Controls  |
| Assessing Robustness of Security Systems & Designs                             |
| Detecting Host & Network-Based Intrusions Via Intrusion Detection Technologies |
| Evaluating Trustworthiness of Supplier/Product                                 |
| Mimicking Threat Behaviors   |
| Performing Damage Assessments  |
| Performing Packet-Level Analysis   |
| Using Pentesting Tools & Techniques  |
| Using Social Engineering Techniques  |
| Using Network Analysis Tools to Identify Vulnerabilities                       |

## ASSESSED ABILITIES

Identification of Systemic Security Issues Based on Analysis of Vulnerability & Configuration Data

# PR400

VULNERABILITY ASSESSMENT & MANAGEMENT

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