



The Center for Cyber and AI (CyAI) at California State University, San Bernardino, is dedicated to advancing cybersecurity education and empowering students with the skills needed to excel in a rapidly evolving digital landscape. Beyond the classroom, CyAI drives cybersecurity awareness throughout the community, develops cutting-edge curriculum for junior colleges and high schools, and forges impactful partnerships with local, state, and federal agencies, as well as industry leaders. As a trailblazer in AI research and innovation, CyAI remains at the forefront of technological advancements, leading the way in shaping the future of cybersecurity and AI.

The National Cybersecurity Training and Education Center (NCYTE) at WhatcomCommunity College (WCC) is an Advanced Technological Education (ATE) NationalCenter, grant-funded by the National Science Foundation (NSF).The National Cybersecurity Training & Education (NCYTE) Center advances cybersecurity education in the U.S. by investing in technological innovation, resources,professional development and tools to support faculty, community colleges, and theworkforce pipeline of tomorrow.

CERTIFICATE

OF ACHIEVEMENT

CYBER CAREER CHALLENGE

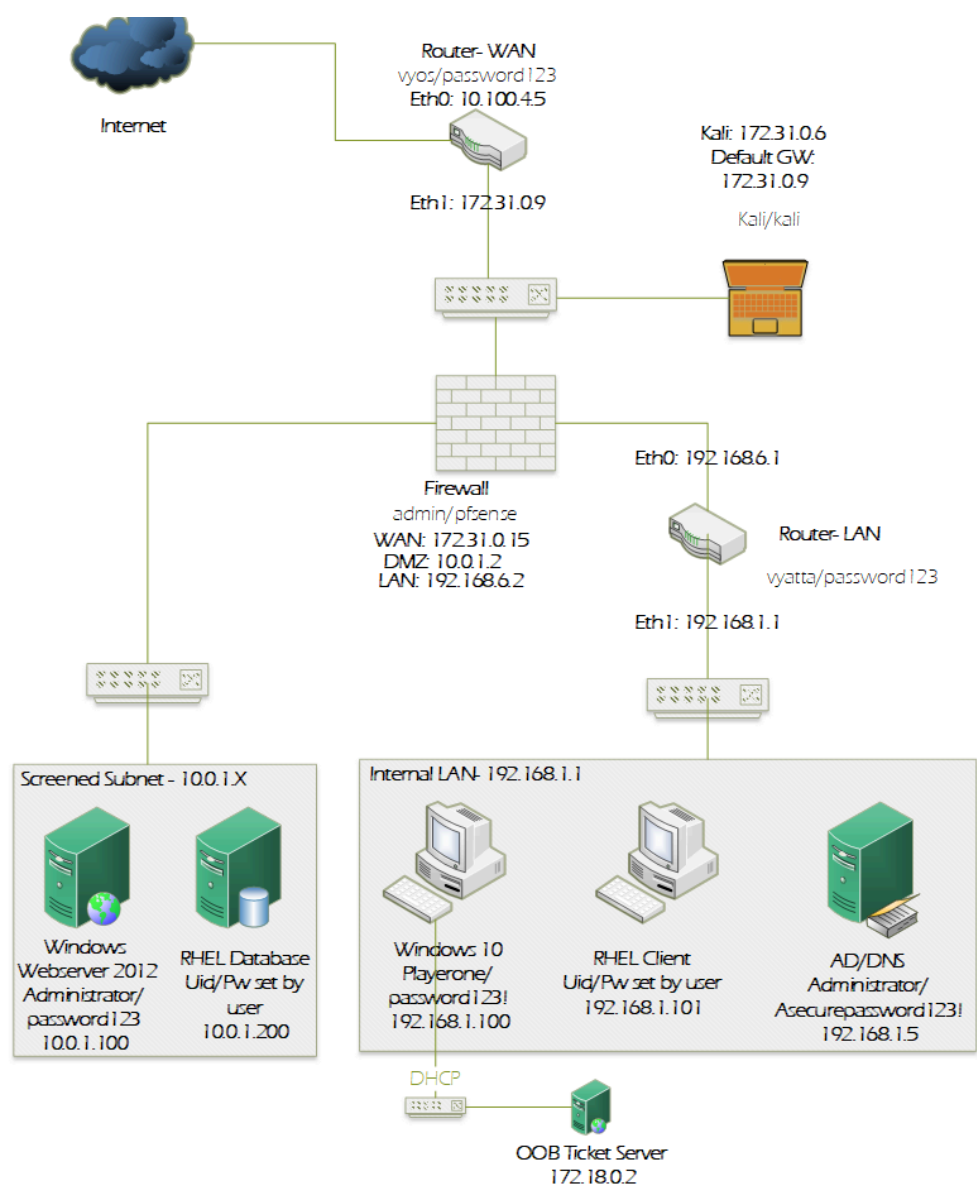
2025

This certificate is proudly presented to

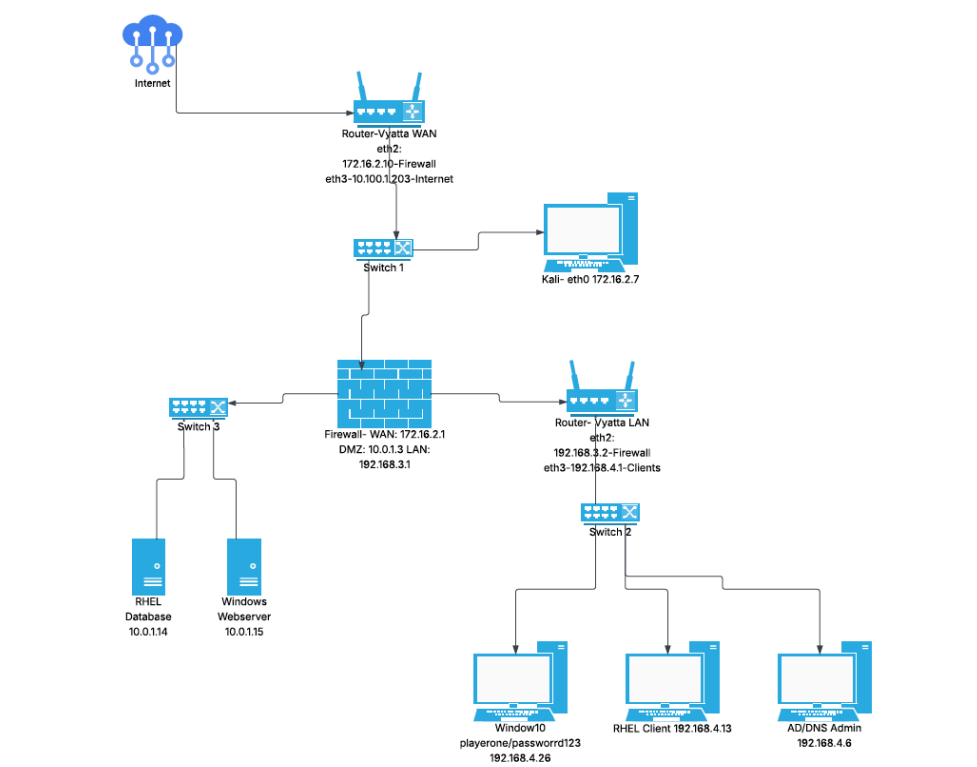
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Cyber Career Challenge Instructor

The Cyber Career Challenge experience is designed to give participants the opportunity to gain important workforce experience before entering the workforce. Participants work on a small business network (diagram below) in teams of about 5. The teams are given a list of requirements (listed below) that they must complete by the date of allowing user access and being the subject of a week long penetration test. The results of the experience and the list of specific tasks the participant completed is listed on the next page along with the diagram and modifications made to the network.



Final Network - Below is the network diagram as it was modified and a list of some of the tasks completed in support of the development of this network.



Completed Task	Related NICE Framework Task	Work Role
Created a gantt chart	T0170: Develop planning guidance or project schedules for IT or cybersecurity projects.	Program Manager
Created users on the machines	T0731: Create, modify, and manage user accounts and permissions.	System Administrator
Assisted in connecting machines to communicate	T0286: Configure and optimize network hubs, routers, and switches.	Network Operations Specialist
Created a network diagram of IP addresses used	T0009: Document existing network architecture and develop network diagrams.	Network Operations Specialist
Configured IP addresses for each machine to connect	T0023: Install and configure network equipment and firewalls to establish secure connections.	Network Operations Specialist
Designed and developed the web application using Django, including layout, routing, and styling	T0304 – Develop and implement websites and applications.	Software Developer (SP-DEV-001)
Created the brand concept and visual identity for the project's fashion business (StyleForge)	T0306 – Design or integrate graphic elements into websites and applications.	Software Developer (SP-DEV-001)

Business Concept		
	Identified three goods	List of items submitted
	Identified three services	List of items submitted
Project Management		
	Gantt Chart	Completed Chart Posted
	Visio diagram of network	Diagram is accurate - information is correct
	FedRAMP System Security Plan	Accurate and complete
Account Management		
	Network authentication	Access the network admin console
	Admin account	Log in as admin
	User accounts	Log in as user
	Guest user account (such as consultant)	log in as a guest user
Web Management		
	Web site created	Access website from browser
	Shopping cart	access shopping cart on website
	purchase goods	purchase a good
	Purchase service	purchase a service
Database Management		
	Database setup	Access database interface
	Query db re goods	Query database for list of goods and other queries

Built and styled a user-facing form to collect service requests from visitors	T0310 – Design, develop, and implement forms and workflows for data collection and processing.	Software Developer (SP-DEV-001)
Assisted in deployment planning and ensured compatibility with Windows Server & future database integration	T0269 – Install and configure database engines.	Database Administrator (OM-DTA-001)
Participated in Gantt chart planning, offering input on feature timing and integration sequencing	T0208 – Provide recommendations for possible improvements and upgrades.	Product Support Manager (OV-PMA-005)
Set up and configured the database structure and schemas	T0269 – Install and configure database engines.	Database Administrator
Created and initialized user tables with appropriate fields and permissions	T0731 – Create, modify, and manage user accounts and permissions.	System Administrator
Implemented basic security configurations for the database, including access controls and encryption settings	T0295 – Apply security settings to databases.	Database Administrator
Documented database configuration details, including credentials and access protocols	T0010 – Document system design information including database design.	System Security Analyst
Participated in team meetings to discuss configuration strategies and share implementation updates	T0011 – Collaborate with others to develop system designs or implementation plans	Cybersecurity Analyst
Assisted in testing network and database configurations to ensure secure and reliable communication	T0239 – Perform system testing and validation procedures	System Tester
Optimized database queries and indexing to improve data retrieval performance	T0266 – Monitor performance and tune database systems	Database Administrator
Firewall Configuration	T0438: Create, edit, and manage network access control lists on specialized cyber defense systems (e.g., firewalls and intrusion prevention systems).	Cyber Defense Infrastructure Support Specialist
Network Configuration and Routing Setup	T0035: Configure and optimize network hubs, routers, and switches (e.g., higher-level protocols, tunneling).	Network Operations Specialist
Created admin accounts and set user privileges	T0060: Develop an understanding of the needs and requirements of information end-users.	Knowledge Manager
Documented activities, addresses, and kept up to date with systems	T0063: Develop and document systems administration standard operating procedures.	System Administrator
Used Software to analyze and investigate the security of the system being protected (CSET)	T0161: Perform analysis of log files from a variety of sources (e.g., individual host logs, network traffic logs, firewall logs, and intrusion detection system [IDS] logs) to identify possible threats to network security.	Cyber Defense Incident Responder
Implemented Open VPN on select Systems	T0180: Perform system administration on specialized cyber defense applications and systems (e.g., antivirus, audit and remediation) or Virtual Private Network (VPN) devices, to include installation, configuration, maintenance, backup, and restoration.	Cyber Defense Infrastructure Support Specialist
Presented opinions on certain tasks and issues, such as gantt chart/diagram	T0208: Provide recommendations for possible improvements and upgrades.	Product Support Manager
Worked with different coding languages across multiple systems (Linux & Windows CLI)	T0404: Utilize different programming languages to write code, open files, read files, and write output to different files.	Data Analyst