

Final Project Overview

Estimated duration: 5 minutes

Introduction

Welcome to the final project, **Perform Reconnaissance and Automate Tasks**. In this project, you will apply system administration and information-gathering techniques to a practical, hands-on scenario using Kali Linux. You will also demonstrate your ability to automate administrative tasks using Python scripting.

Scenario

Imagine yourself as a junior system administrator tasked with managing Kali Linux systems and gathering reconnaissance data for internal audits.

Tasks

You will complete three parts in this project, each aligned with core technical competencies:

Part 1: Perform security tasks

Part 2: Gather information about a domain using whois, dig, and Nmap

Part 3: Automate DNS lookups with a Python script using the dig command

Instructions for learners

1. Complete all three parts in the provided cloud-based IDE environment.
2. Make a note of the commands used, the output generated, and the script developed as you complete each part. These details will be required later for your final submission.
3. Answer all the questions and submit the assignment as proof of completing the final project's requirements. Your submission will be auto-graded using an AI tool.

Grading criteria

This final project includes 14 questions based on practical tasks performed in the Cloud IDE environment. It is worth 30 points and consists of 13 text-based response questions and 1 multiple-choice question.

The point distribution is as follows:

- [1] Provide the command used to create a new user named "test" - *2 points*
- [2] Provide the command used to rename "test" to "test_user" - *2 points*
- [3] Provide the command used to update the password for "test_user" - *2 points*
- [4] Provide the command used to delete the "test_user" account and home directory - *2 points*
- [5] Provide the command used to retrieve publicly available information about the domain, ibm.com - *2 points*
- [6] Identify the year the ibm.com domain was created - *1 point*
- [7] Provide the full name of the domain registrant from the whois data - *2 points*
- [8] Provide the organization listed as the registrant from the whois data - *2 points*

- [9] Provide the command used to run dig to gather DNS information for the domain ibm.com - 2 *points*
- [10] Provide the A record (IPv4 address) for ibm.com from the dig output - 2 *points*
- [11] Provide the DNS server found using dig - 2 *points*
- [12] Provide the Nmap command used to perform service version detection on the host scanme.nmap.com - 2 *points*
- [13] Identify the OS detected by Nmap - 2 *points*
- [14] Provide the complete Python script (dig.py) - 5 *points*

Author

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