

Tools of the Trade – Linux and SQL

Provider: Coursera

Completion Date: June 12, 2025

Overview

This course focused on foundational computing skills needed in cybersecurity, with emphasis on the Linux operating system and SQL. It was the fourth course in the Google Cybersecurity Certificate program and built on previous training in networks and security frameworks. The course introduced operating systems, Linux commands in the Bash shell, and database queries using SQL. The goal was to develop skills for navigating systems, managing permissions, and retrieving security-relevant data.

Key Topics

- Operating system fundamentals and how they connect hardware, applications, and users
- Linux architecture, distributions, and the shell as a command line interface
- Navigating and managing files in Linux with Bash commands
- Managing permissions, ownership, and user access
- Using SQL to query databases, filter information, and join tables
- Applying logical operators and conditions to refine results

Practical Applications

Labs provided practice with Linux commands to manage directories, permissions, and users. Additional labs emphasized SQL queries to investigate login activity, identify suspicious access, and organize employee and machine data. This combination of Linux and SQL work built practical skills to interact with both operating systems and relational databases, which are critical for entry level security analysts.

Personal Reflection

This course gave me confidence in applying Linux commands and SQL to real world security scenarios. It reinforced the importance of understanding how systems function at a fundamental level in order to protect them effectively. The exercises also taught me to troubleshoot issues when outputs did not match expectations, which is an essential skill for analysts.