GET SCET Cyber Camp

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Problem Statement

Our objective with the GET SCET (Sandia Cyber Education Training) Cyber Camp was to give students a high level introduction to the field of cyber security. GET SCET was a week long camp where the first four days were short video lectures followed by a short lab to apply the material they had just learned. The culmination at the end of the week was a Capture-the-Flag (CTF) competition that used all of the knowledge the students had learned throughout the week and gave them an opportunity to compete against their fellow classmates.

GET S.C.E.T.
Sandia Cyber Education Training

CTFd
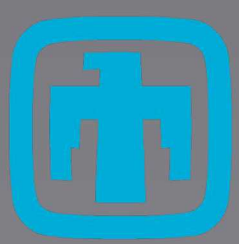
Objectives

Create a series of lectures that are not only targeted from middle school to high school students, but also eases these students into the world of cyber security while engaging the students and igniting an excitement for the field.

Approach

The content that was covered during this course is as followed:

Networking : This class gave students the fundamental breakdown of networking topics like the Open Systems Interconnection (OSI) model and more!

Cryptography: Students gained exposure to the exciting areas of cryptography, like encryption and how we use it to keep our data secure.

Basics of Scripting: Here students learned the basics of automated tasks and security settings with Python and Powershell. This class discussed the fundamentals of both scripting languages and provided a great starting point in the world of scripting.

Windows: Students discovered methods to quickly configure security policies in the Windows operating system. They also learned how to explore and detect system behaviour via sysinternals and how to create security templates in the Microsoft Management Console (MMC).

Linux: This content allowed students to learn the basics of the Linux operating system, from navigating via command line to configuring security policies and settings. Additional resources were also provided to allow students to continue their Linux education.

Each topic consisted of a prerecorded PowerPoint presentation, a written lab for students to walk through with questions, and CTF challenge questions for the competition day at the end of the online camp. The labs and CTF were hosted within CTFd.