OSYS2022 Linux Scripting
Assignment 1 – BANDIT
Issued: January 4, 2024

Introduction

Before diving in to designing and building scripts, we need to ensure we have the fundamental knowledge and skills of working at the command line in Linux, as each of these individual skills will be combined when creating scripts.

This assignment will have you applying fundamental command line skills in a hands-on environment where you will progress through a 'wargame' called Bandit. The emphasis here is not on beating the game, or even beating your classmates, though I am sure that some of you will make this competitive. The goal here is for you to learn, to have an opportunity to get hands-on, to practice, to fail (many times over), and ultimately to understand WHAT you need to do in each level and WHY that is the correct method.

Required Resources
You will require the following to perform this assignment:
• Client able to connect to another system via SSH

- PowerShell
- Linux Terminal
- Putty (https://www.putty.org/)

• https://overthewire.org/wargames/bandit/

Marking
Outcome(s) being measured:
• Outcome 2: Apply command line syntax and skills required to manage a Linux system

Task 1 – Toolbox Document

If you have yet to create a toolbox document, you will need to do so now as many of the commands used through this assignment will be utilized throughout the remainder of this course. I do not want you submitting things in a professional document – the idea here is I am forcing you to take notes!

I recommend you try out OneNote, or an open-source equivalent such as Cherrytree (https://www.giuspen.com/cherrytree/)

You are to create a new section in your toolbox document where you track the following information:

• Level number
• All commands used on that level (regardless of if they contribute to solving or not – this is to show the process you followed on that level, and to aid you in identifying what you have already tried). Duplicate commands can be left out

• Summary of commands required to solve the level, in order of execution
• One to three paragraphs explaining the steps involved to solve the level, referencing the commands used to complete (explanations will become more involved as you progress through levels)
• Password discovered to connect to next level

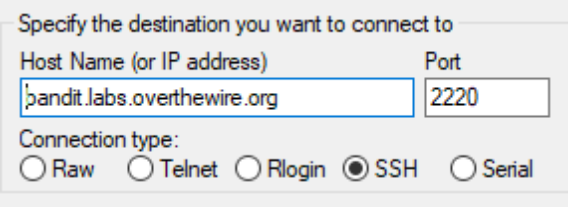
Guides are available online that will walk you through each level. I strongly encourage you to only use such resources once you have exhausted your own ideas, and the ideas of your classmates. If you do use such a guide to complete a level, take some time to ensure you fully understand WHAT each command does and WHY that is the solution.

Task 2 – Bandit Wargame
When your toolbox is prepared, it is time to jump in and tackle the Bandit wargame!

• Link to Wargame website: https://overthewire.org/wargames/bandit/

You will see down the left that the game is organized by levels. We start by clicking on 'Level 0' which will provide you the instructions you need to connect to their server. From there, 'Level 1' is where you are provided your instructions for how to find the password to connect to the next level.
Below I have provided you the initial command you need to connect to level 0:

• PowerShell: ssh bandit0@bandit.labs.overthewire.org -p 2220
• Linux Terminal: ssh bandit0@bandit.labs.overthewire.org -p 2220



Level 0 credentials:
• Username: bandit0
• Password: bandit0

Once you have connected in, click on the 'Level 0 ->Level 1' link and use the provided information to help you find the password. They provide hints for commands that may aid you in solving the level – not all of them will be related but they all will come into play in further levels.

Level 1 credentials:
• Username: bandit1
• Password: <discovered_in_level_0>

Task 3 – Toolbox Submission
Once you have progressed as far as you are able within the time we have, either submit your toolbox document or screenshots of the relevant information to Brightspace. There is no need for professional documentation.

Assessment

This assignment is worth %10 of your final grade and is marked out of 50.

Maximum points available:

Level 0-4 –> 16 points
Level 5-9 –> 16 points
Level 0-14 –> 18 points
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50

Below are some feedback comments given to students who lost marks. Make sure you don't get these.

"I deducted marks in one section for not consistently showing commands with parameters throughout all sections. Sometimes you did and sometimes you didn't."

"Did not show the commands used with parameters/explanation in the order used."

"Missing explanation in level"

"Missing text explanations of your process at each stage."

"Should not have used cyberchef."