LAB EXERCISE

1

COMP3134

Introduction to Cyber Security

Week: 1

Objective(s):
Set up technologies used for this course & research commonly used server ports

Learning Outcome(s):
Recall security fundamental terms and diagrams

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Summary

Goal: Set up technologies used for this course & research commonly used server ports

In Effort to: Recall security fundamental terms and diagrams

A. Git & GitHub Account

We will apply for the GitHub Education Student Developer Pack

Account Creation and Student Developer Pack Application

A GitHub account is needed to save and upload your work on GibHub

Navigate to this url and following the instructions

https://help.github.com/en/github/teaching-and-learning-with-github-education/applying-for-a-student-developer-pack#applying-for-a-github-student-developer-pack

Installation of GIT on Personal Machines

This action is needed only once on your personal machines. On the lab machines, this application is already installed.

Navigate to this url and following the instructions

https://git-scm.com/book/en/v2/Getting-Started-Installing-Git

Set-up Username in GIT

This action is needed only once on your personal machines but every time on the lab machines.

Navigate to this url and following the instructions

https://help.github.com/en/github/using-git/setting-your-username-in-git

Set-up Commit Email Address

This action is needed only once on your personal machines but every time on the lab machines.

Navigate to this url and following the instructions

https://help.github.com/en/github/setting-up-and-managing-your-github-user-account/setting-your-commit-email-address

Create a Repository

This action is needed only once.

Navigate to this url and following the instructions

https://help.github.com/en/github/getting-started-with-github/create-a-repo

You will create a repo named "**comp3134Winter2022**".

PLEASE READ
For simplicity sake, always commit to the master branch.
In Step 7) Choose the option to commit to the master branch.

Clone Your Repository

This action is needed only once on your personal machines but every time on the lab machines.

Navigate to this url and following the instructions

https://help.github.com/en/github/creating-cloning-and-archiving-repositories/cloning-a-repository

You will clone the repo named "**comp3134Winter2022**"

B. Set Up for Virtual Private Server (VPS)

We will sign up for a VPS via Digital Ocean. Complete the steps below:

Sign Up for Digital Ocean Account

Navigate to the following url and sign up for a digital ocean account

https://cloud.digitalocean.com/registrations/new

Choose the option “Sign up with GitHub” and following the instructions

You need to input a payment method however, you will apply for and receive promo credits in the next step and you should not be charged.

Obtaining Digital Ocean Credits via GitHub Promo Offers Page

Navigate to the following url:
https://education.github.com/pack/offers

You may be forces to confirm (or re-confirm) your student status. Please choose the option: Student & input your student email address

After gaining access to the url above, search for "DigitalOcean" by searching the content page (Control+F or Commad+ F)

Click on the link to get a promo code. After a few seconds, it will appear in place of the link

Copy the promo code.

Applying Promo Code to Digital Ocean Account

Navigate your Digital Ocean Dashbaord
Click on the account icon at the top-right hand corner of the page.

Click on the Billing tab

Scroll to the bottom of the Billing page and enter the Promo Code

Create an Ubuntu Droplet
You will create a VPS using the Ubuntu distribution.

Navigate to the following url to view the steps, HOWEVER, please note the changes in the text below the link

https://www.digitalocean.com/docs/droplets/how-to/create/

In the Step: Create Droplet
Choose the tab "Marketplace"
Then choose the option "LAMP on 20.04"

In the Step: Choose a Plan
Choose Basic, Shared CPU @ $5 per month

In the Step: Choose a datacenter region
Choose Toronto

Skip the headings VPC Network and Select Additional Options

In the Step: Authentication
I will use the option **Password**, however, you may use SSH keys or create your own password. Only use the SSH keys if you are comfortable.

To go Blackboard and submit

- the IP of your droplet
- The username of your GitHub account

C. Create Your first File for Course

Navigate to your Git local repository directory

Create a folder named **wk1**
Navigate to the **wk1** folder created in the step above
Create text file named **serverports.txt**
State and answer the following questions in the text file

- What is the definition of server port?
- What is server port range?
- How many bits does number above represent?
- State 10 common server ports

D. Push File to GitHub

Whenever you want to update your online repository with your local changes, you need to follow these basic steps:

- git add all the new or modified files to your staging area
- Execute a git commit to take a snapshot of your local staging area
- git push the snapshot to your online repository

Whether you have modified an existing file or created a new file in the local repository, the procedure remains the same.

Open GitBash
Navigate to local repository

```
cd /path/to/local/repo
```

Type in

```
git add modified_filename1 modified_filename2 newly_created_filename1
```

This will add the specified files to your staging area.

If you do not call git add on a modified file, the staging area will simply keep the version of the file which existed when it was last added via git add.

You may also call

```
git add .
```

to add all modified or new files in your entire project to your staging area.

Once your staging area is ready, you must commit your changes by typing

```
git commit -m “a descriptive message about this commit”
```

Finally, you push your commit to your online repository by typing :

```
git push remote_name branch_name
```

or more specifically:

```
git push origin master
```