OLD DOMINION UNIVERSITY

CYSE 301 CYBERSECURITY TECHNIQUES AND OPERATIONS

Assignment #7 Make your Own VPN Server

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(35pt) Create a Linux Instance on GCP named vpn-301-YourMIDAS (show the IP address and region assigned for the VM).

Installing the script from github, and implementing it.

```
Linux vpn-301sisma002.c.prismatic-smoke-420816.internal 6.1.0-20-cloud-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.
85-1 (2024-04-11) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
bshar004@vpn-301sisma002:~$ sudo apt-get install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  git-man liberror-perl patch
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-email git-gui gitk gitweb git-cvs git-mediawiki git-svn ed
  diffutils-doc
The following NEW packages will be installed:
  git git-man liberror-perl patch
0 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
Need to get 9377 kB of archives.
After this operation, 48.0 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:2 https://deb.debian.org/debian bookworm/main amd64 liberror-perl all 0.17029-2 [29.0 kB]
Get:3 https://deb.debian.org/debian bookworm/main amd64 git-man all 1:2.39.2-1.1 [2049 kB]
Get:4 https://deb.debian.org/debian bookworm/main amd64 git amd64 1:2.39.2-1.1 [7171 kB]
Get:5 https://deb.debian.org/debian bookworm/main amd64 patch amd64 2.7.6-7 [128 kB]
Fetched 9377 kB in 0s (34.8 MB/s)
Selecting previously unselected package liberror-perl.
(Reading database ... 67169 files and directories currently installed.)
Preparing to unpack .../liberror-perl_0.17029-2_all.deb ...
Unpacking liberror-perl (0.17029-2) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1%3a2.39.2-1.1_all.deb ...
Unpacking git-man (1:2.39.2-1.1) ...
Selecting previously unselected package git.
Preparing to unpack .../git_1%3a2.39.2-1.1_amd64.deb ...
```

```
ssh.cloud.google.com/v2/ssh/projects/prismatic-smoke-420816/zones/us-west4-b/instances/vpn-301sisma002?authuser=0&hl=en_US&p...   —   □   ×

ssh.cloud.google.com/v2/ssh/projects/prismatic-smoke-420816/zones/us-west4-b/instances/vpn-301sisma002?authuser=0&hl=e...

SSH-in-browser                              ⬆ UPLOAD FILE   ⬇ DOWNLOAD FILE   🚩   ⌨   ⚙

Preparing to unpack .../git_1%3a2.39.2-1.1_amd64.deb ...
Unpacking git (1:2.39.2-1.1) ...
Selecting previously unselected package patch.
Preparing to unpack .../patch_2.7.6-7_amd64.deb ...
Unpacking patch (2.7.6-7) ...
Setting up liberror-perl (0.17029-2) ...
Setting up patch (2.7.6-7) ...
Setting up git-man (1:2.39.2-1.1) ...
Setting up git (1:2.39.2-1.1) ...
Processing triggers for man-db (2.11.2-2) ...
bshar004@vpn-301sisma002:~$ ld
-bash: ld: command not found
bshar004@vpn-301sisma002:~$ ls
bshar004@vpn-301sisma002:~$ git clone  https://github.com/Nyr/openvpn-install.git
Cloning into 'openvpn-install'...
remote: Enumerating objects: 562, done.
remote: Counting objects: 100% (562/562), done.
remote: Compressing objects: 100% (277/277), done.
remote: Total 562 (delta 298), reused 541 (delta 285), pack-reused 0
Receiving objects: 100% (562/562), 172.99 KiB | 1.32 MiB/s, done.
Resolving deltas: 100% (298/298), done.
bshar004@vpn-301sisma002:~$
```

This is supposed to be changed to, DNS server to google, but I forgot to rescreen shot the troubleshooting process from the video.


```
ssh.cloud.google.com/v2/ssh/projects/prismatic-smoke-420816/zones/us-west4-b/instances/vpn-301sisma002?authuser=0&hl=e...

SSH-in-browser                              ⬆ UPLOAD FILE   ⬇ DOWNLOAD FILE   🚩   ⌨   ⚙

Welcome to this OpenVPN road warrior installer!

This server is behind NAT. What is the public IPv4 address or hostname?
Public IPv4 address / hostname [34.125.33.9]:

Which protocol should OpenVPN use?
   1) UDP (recommended)
   2) TCP
Protocol [1]: 1

What port should OpenVPN listen to?
Port [1194]: 8888

Select a DNS server for the clients:
   1) Current system resolvers
   2) Google
   3) 1.1.1.1
   4) OpenDNS
   5) Quad9
   6) AdGuard
DNS server [1]: 1

Enter a name for the first client:
Name [client]: cyse391
```
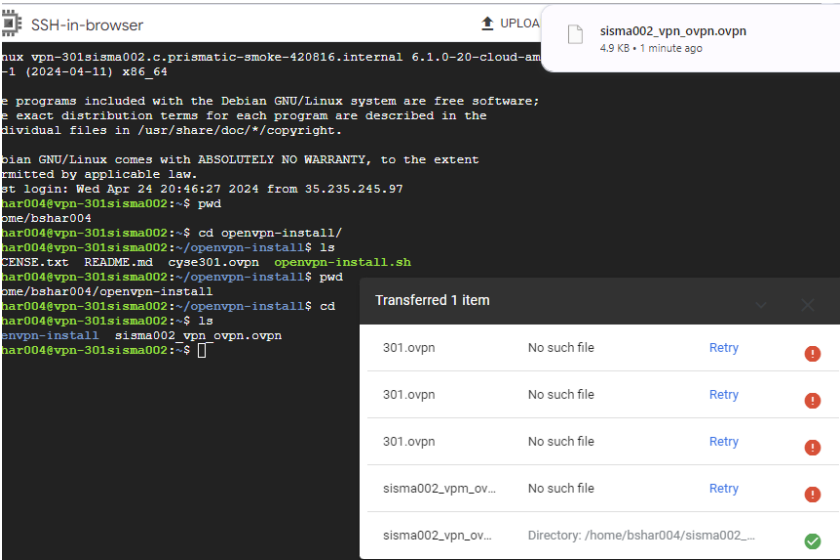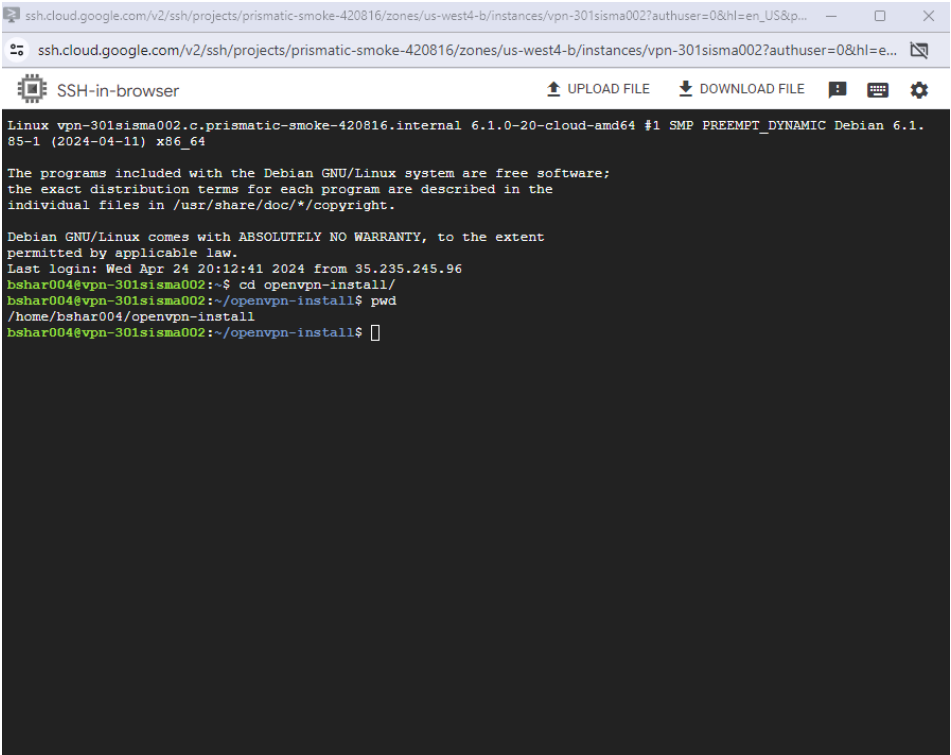
(35pt)Configure the server and generate a client named "yourMidas_vpn.ovpn" and download it from the server.

(30 pt) Connect to your VPN server from a laptop or cell phone client and show the public IP address returned from the website "What is My IP address