

Christmas Cheer Laser, part 9

Answers to Previous Questions

10) What OS is this terminal running?

The file system looks like Linux. Check with these two commands.

```
PS /home/elf/archive/refraction> gc /etc/lsb-release
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=18.04
DISTRIB_CODENAME=bionic
DISTRIB_DESCRIPTION="Ubuntu 18.04.3 LTS"
PS /home/elf/archive/refraction>
```

Yes, it's Linux. What does \$PSVersionTable have to say?

```
PS /home/elf/archive/refraction> $PSVersionTable

Name                           Value
----                           -
PSVersion                       6.2.3
PSEdition                       Core
GitCommitId                     6.2.3
OS                               Linux 4.19.0-6-cloud-amd64 #1 SMP Debian 4.19.67-2+deb10u2 (2...
Platform                       Unix
PSCompatibleVersions            {1.0, 2.0, 3.0, 4.0...}
PSRemotingProtocolVersion      2.3
SerializationVersion           1.1.0.1
WSManStackVersion              3.0
```

PowerShell Core 6.2.3 on Ubuntu 18.04.3

11) How do you run a brand new script/executable in this OS? (If you need a hint look in /bin. The permissions are in Windows format instead of rwx format, but there is still useful information.)

In Linux, a script or executable has to have the execute permission, the 'x' in 'rwx'.

You normally add that permission with `chmod +x filename`

In /bin, we find that `chmod` may be available.

```
PS /home/elf> dir /bin

Directory: /bin

Mode                LastWriteTime         Length Name
----                -
-r-----          6/6/19 10:28 PM     1113504 bash
-r-----          1/18/18  9:43 AM         59608 chmod
-r-----          1/18/18  9:43 AM         35000 echo
-r-----          9/18/19  3:00 PM     219456 grep
-r-----         12/1/17  4:11 AM     170760 less
-r-----          8/22/19 11:47 PM         38952 more
-r-----         1/10/17  4:25 AM     154192 netstat
-r-----          8/9/19  3:37 PM     133432 ps
-r-----          1/18/18  9:43 AM         35000 sleep
-r-----          3/22/19  7:05 PM         44664 su

PS /home/elf>
```

12) What is the value of the last parameter?

```
PS /home/elf/archive/refraction> dir

Directory: /home/elf/archive/refraction

Mode                LastWriteTime         Length Name
----                -
-----                11/7/19 11:57 AM             134 riddle
-----                11/5/19  2:26 PM        5724384 runme.elf

PS /home/elf/archive/refraction> chmod +x ./runme.elf
PS /home/elf/archive/refraction> ./runme.elf
refraction?val=1.867
PS /home/elf/archive/refraction>
```

```
chmod +x ./runme.elf
./runme.elf
```

The value of the fourth parameter is `refraction?val=1.867`.

Note: You may have to go back and expand the archive again, sorry.

Use the parameters you've found and the API information from `Invoke-WebRequest -Uri http://localhost:1225/).RawContent` to return the laser to operation. Note: It's a good idea to turn the laser off, make the changes, then turn the laser on and check status. Also, the gas values are submitted by a POST instead of a GET request.

Question

What commands did you use to restore the laser to operation?