

Week One Lab - SSH and Debian Setup

Step 1: SSH Key Generation

```
PS C:\Users\Tcraw> ssh-keygen -t ed25519 -f $env:USERPROFILE\.ssh\ocean
Generating public/private ed25519 key pair.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in C:\Users\Tcraw\.ssh\ocean
Your public key has been saved in C:\Users\Tcraw\.ssh\ocean.pub
The key fingerprint is:
SHA256:hFFjr4l68z5u0PJihRNvjMow/hfSucYBKQyQ0sCTas4 tcraw@Ca-Van-Cit-Client
The key's randomart image is:
+--[ED25519 256]--+
|oooo  .          |
|.to .  +          |
|... o  ..=         |
|..   o oo.o        |
|+     .So 0.       |
|E    o . @+*       |
|      . + +o@.     |
|      . o.X  +     |
|      .o= B+.      |
+----[SHA256]-----+
PS C:\Users\Tcraw> |
```

Step 2: Public Key Added to DigitalOcean

```

PS C:\Users\Tcraw> get-content$env:USERPROFILE\.ssh\ocean.pub
get-content$env:USERPROFILE\.ssh\ocean.pub : The term
'get-content$env:USERPROFILE\.ssh\ocean.pub' is not recognized as the name of a
cmdlet, function, script file, or operable program. Check the spelling of the
name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ get-content$env:USERPROFILE\.ssh\ocean.pub
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (get-content$env...\ssh\ocean.pub
:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\Tcraw> Get-Content$env:USERPROFILE\.ssh\ocean.pub
Get-Content$env:USERPROFILE\.ssh\ocean.pub : The term
'Get-Content$env:USERPROFILE\.ssh\ocean.pub' is not recognized as the name of a
cmdlet, function, script file, or operable program. Check the spelling of the
name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ Get-Content$env:USERPROFILE\.ssh\ocean.pub
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (Get-Content$env...\ssh\ocean.pub
:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\Tcraw> Get-Content $env:USERPROFILE\.ssh\ocean.pub
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIHuCDYL9/zORGsz6275rGfmCYFcKIPuV/sJdondeHJqD t
craw@Ca-Van-Cit-Client
PS C:\Users\Tcraw> |

```

Step 3: SSH Key 'OathKeeper' Registered in DigitalOcean

SSH Keys

SSH keys provide a more secure way of logging into a virtual private server with SSH than using a password alone. [Learn more ↗](#)

Add SSH Key

Name	Fingerprint	
OathKeeper	fa:bb:e7:e5:bb:a0:52:be:c0:aa:97:85:22:46:39:fa	 

Step 3 (continued): Droplet Linked to SSH Key

Name	IP Address	Created ▲	Tags
 debian-s-1vcpu-512mb-10gb-sfo... 512 MB / 10 GB Disk / SFO3 - Debian 12 x64	134.199.233.146	13 hours ago	 Upsize More ▾

Step 4: SSH Config and Connection

```
Connection to 134.199.233.146 closed.
PS C:\Users\Tcraw> notepad $env:USERPROFILE\.ssh\config
PS C:\Users\Tcraw> ssh debian
ssh: Could not resolve hostname debian: No such host is known.
PS C:\Users\Tcraw> notepad $env:USERPROFILE\.ssh\config
PS C:\Users\Tcraw> ssh debian
Linux debian-s-1vcpu-512mb-10gb-sfo3-01 6.1.0-26-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.112-1 (2024-09-30) 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.
Last login: Thu Sep  4 02:45:28 2025 from 207.81.237.105
root@debian-s-1vcpu-512mb-10gb-sfo3-01:~# |
```

Step 5: Debian 14 Upgrade Verification

```
Upgrading:
gcc-15-base libatomic1 libgcc-s1 libstdc++6

Summary:
Upgrading: 4, Installing: 0, Removing: 0, Not Upgrading: 0
Download size: 874 kB
Space needed: 24.6 kB / 7460 MB available

Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [39 B]
Get:2 http://mirrors.digitalocean.com/debian forky/main amd64 libatomic1 amd64 15.2.0-2 [10.7 kB]
Get:3 http://mirrors.digitalocean.com/debian forky/main amd64 gcc-15-base amd64 15.2.0-2 [52.3 kB]
Get:4 http://mirrors.digitalocean.com/debian forky/main amd64 libstdc++6 amd64 15.2.0-2 [736 kB]
Get:5 http://mirrors.digitalocean.com/debian forky/main amd64 libgcc-s1 amd64 15.2.0-2 [75.4 kB]
Fetched 874 kB in 1s (1321 kB/s)
apt-listchanges: Reading changelogs...
(Reading database ... 45929 files and directories currently installed.)
Preparing to unpack .../libatomic1_15.2.0-2_amd64.deb ...
Unpacking libatomic1:amd64 (15.2.0-2) over (15.2.0-1) ...
Preparing to unpack .../gcc-15-base_15.2.0-2_amd64.deb ...
Unpacking gcc-15-base:amd64 (15.2.0-2) over (15.2.0-1) ...
Setting up gcc-15-base:amd64 (15.2.0-2) ...
(Reading database ... 45929 files and directories currently installed.)
Preparing to unpack .../libstdc++6_15.2.0-2_amd64.deb ...
Unpacking libstdc++6:amd64 (15.2.0-2) over (15.2.0-1) ...
Setting up libstdc++6:amd64 (15.2.0-2) ...
(Reading database ... 45929 files and directories currently installed.)
Preparing to unpack .../libgcc-s1_15.2.0-2_amd64.deb ...
Unpacking libgcc-s1:amd64 (15.2.0-2) over (15.2.0-1) ...
Setting up libgcc-s1:amd64 (15.2.0-2) ...
Setting up libatomic1:amd64 (15.2.0-2) ...
Processing triggers for libc-bin (2.41-12) ...
root@debian-s-1vcpu-512mb-10gb-sfo3-01:~# uname -r
6.1.0-26-amd64
root@debian-s-1vcpu-512mb-10gb-sfo3-01:~# lsb_release -a
No LSB modules are available.
Distributor ID: Debian
Description:    Debian GNU/Linux forky/sid
Release:        n/a
Codename:       forky
root@debian-s-1vcpu-512mb-10gb-sfo3-01:~# |
```