## Accessing Jetstream Instances

Once a Jetstream instance is created, it can be accessed using the Web Desktop, Web Shell and Native SSH interactions. Using SSH is found to be the fastest method when working with these instances. Fig 1 displays the details of a particular instance in the portal. Under interactions we can find multiple methods that can be used to access that Virtual Machine.

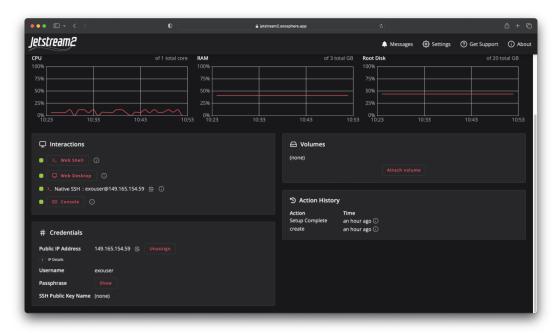


Fig1 Instances Page

## Web Shell:

On clicking the web shell button a new tab with a Linux like terminal will be available. Here Linux commands can be executed to install required packages or run code on the VM.

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Welcome to Ubunity 22.04.1 LTS (ONLY/Linux 5.15-65-50-generic x86.64)

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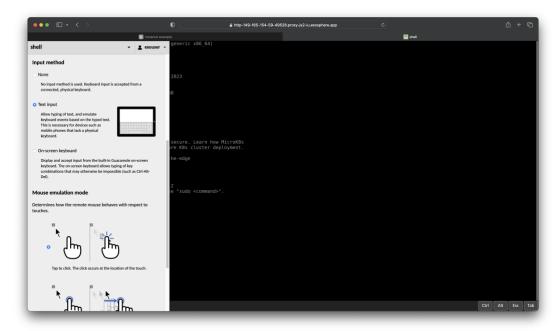
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By default, the web shell does not allow for text to pasted on to the terminal window. To do so use the keyboard shortcut "command + control + shift" on a Mac or "Ctrl + Alt + Shift" on Windows which will display additional options on the left.



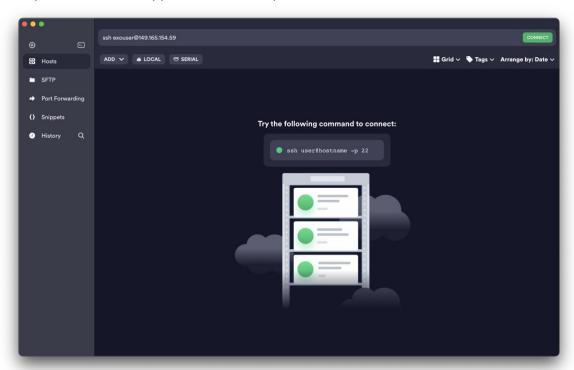
The input method should be changed to Text input. Once changed a text box will appear at the bottom of the terminal window where text can be pasted. Similarly, if text is to be copied from the terminal, highlight the required text and use the previous keyboard shortcut. The selected text will appear under the clipboard textbox which can then be copied to your local clipboard.

## SSH:

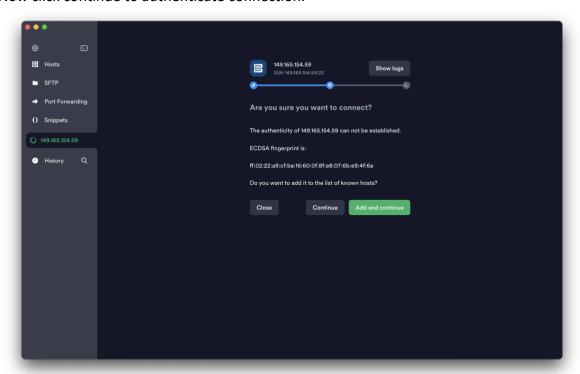
Even though the web shell is a great and easy method to interact with a VM, the added complexity to copy and paste text is not convenient and the Jetstream portal could occasionally be slow resulting in poor web performance hence using SSH is recommended. SSH is a protocol used to connect to a remote computer by using its IP address. SSH connections can be established from the terminal/console app on MacOS/Linux however a SSH client like Putty will be required for Windows. For the demonstration "Termius" a free cross platform SSH client is used and can be downloaded free from this link <a href="https://termius.com">https://termius.com</a>. Scroll to the bottom of the page where individual links for each operating system is provided under the download section.



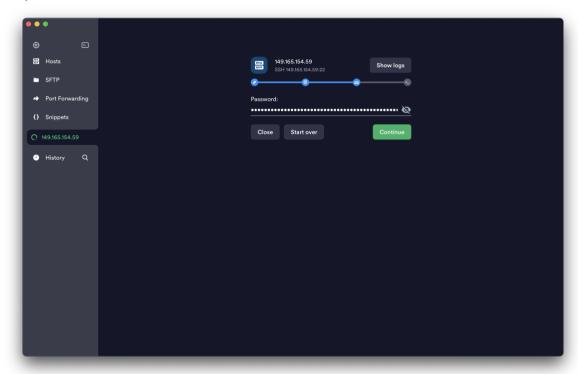
From the instances page (Fig1) copy the text beside Native SSH and paste it in the textbox at the top of the Termius app like so, "ssh [copied text]" and click connect.



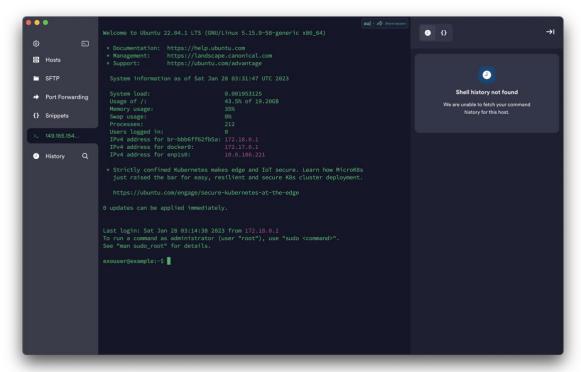
Now click continue to authenticate connection.



Copy the Passphrase from the Credentials section in the instances page (Fig 1) and paste it in the password field and click continue.



Upon successful authentication a command line interface like the web shell will be available which can be used to install packages or run code on the VM. Since, the VM is being accessed from the local machine, files can be copied from local to the VM using the scp command. More information can be found here <a href="https://linuxize.com/post/how-to-use-scp-command-to-securely-transfer-files/">https://linuxize.com/post/how-to-use-scp-command-to-securely-transfer-files/</a>.



## Web Desktop:

This option launches the desktop GUI of that instance. Please be advised that this environment will be slow and is not recommended.

