

Using Twistcode Terminal

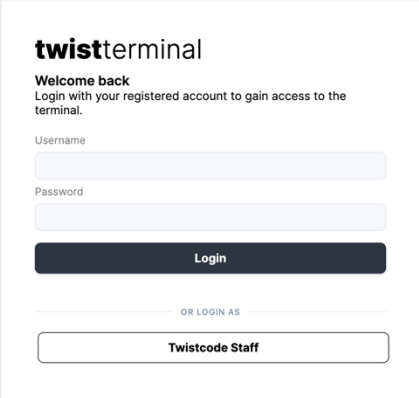
Twistcode Terminal provides access to much of the functionality of a desktop and a Terminal from within your web browser. It is recommended to use Chromium based browser such as Google Chrome/Microsoft Edge and enable clipboard access for better experience.

Contents

1) Login Screen	2
2) Home Screen	3
3) User Menu.....	4
4) Client Screen	5
4.1) Client Menu	5
4.2) Copying/pasting Text	6
5) Switching and Tiling Connections	7
5.1) Adding a Connection to the Current View.....	8
5.2) Typing with Multiple Connections	9
6) Disconnecting and Navigation	10
7) Sharing the Connection.....	11
8) Transferring Files.....	12
8.1) Using the File Browser	12
8.2) Using the Drag and Drop	13
9) On-screen keyboard.....	14
10) Scaling the Display	15
11) Changing Your Password	16

1) Login Screen

Twistcode will provide user with access credentials to the portal via email. Use your email address and provided password to login. The portal is available at <https://volta.hpc.my> (depending on your server specification – please refer to your server details email).

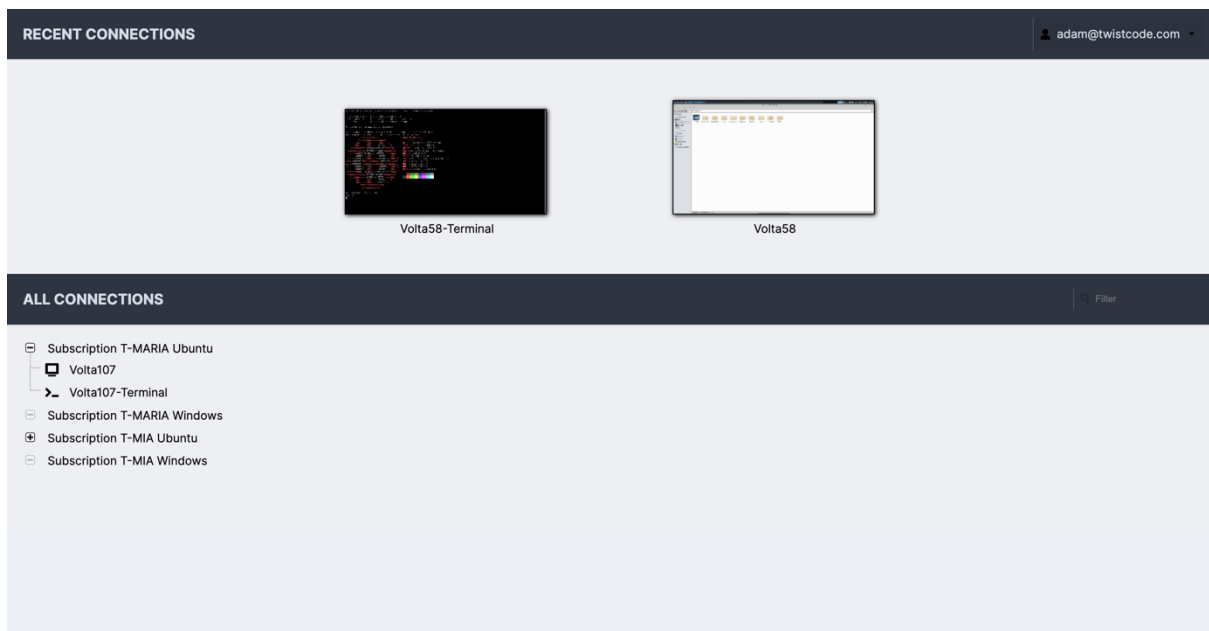


The image shows a login screen for 'twistterminal'. The title is 'twistterminal' in a bold, lowercase font. Below the title, it says 'Welcome back' and 'Login with your registered account to gain access to the terminal.' There are two input fields: 'Username' and 'Password'. Below these fields is a dark blue 'Login' button. At the bottom, there is a link that says 'OR LOGIN AS' followed by a button labeled 'Twistcode Staff'.

2) Home Screen

Once you have successfully logged in, you will be taken to either the portal home screen, where all available connections are listed, or directly to a connection, if you only have access to one connection.

The home screen will contain a list of all connections to which you have access, along with thumbnails of any recently used or active connections. If you have access to many connections and wish to quickly locate a specific connection, you can also enter search terms within the “Filter” field to filter the list of connections by name.



Clicking on any connection will open that connection within the current window or tab, but multiple connections can be used simultaneously. You can easily navigate back to the home screen without disconnecting by using your browser's back button or the “**Home**” button in the [User Menu](#). Each connection you use will remain active until explicitly disconnected, or until you navigate away from the application entirely. Active connections can be seen as thumbnails updating in real-time on the home screen.

3) User Menu

Except for the client screen discussed below, all portal screens contain a menu in the upper-right corner called the “**User Menu**”. This menu displays your username and contains several options which depend on your user’s level of access:

Home

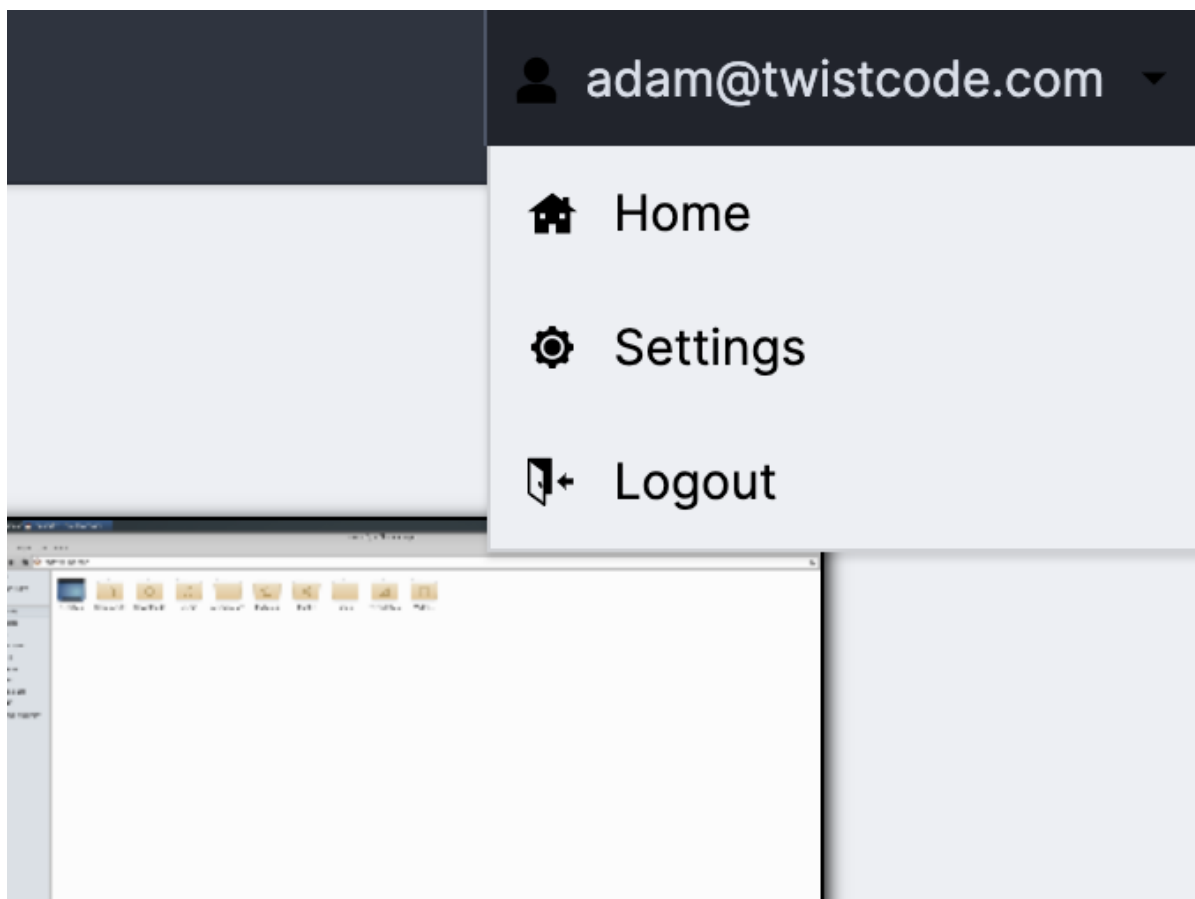
Navigates back to the home screen, if you are not already there. If you only have access to one connection, this will be replaced with a link to that connection.

Settings

Navigates to the settings interface, which provides access to user preferences such as display language and password management.

Logout

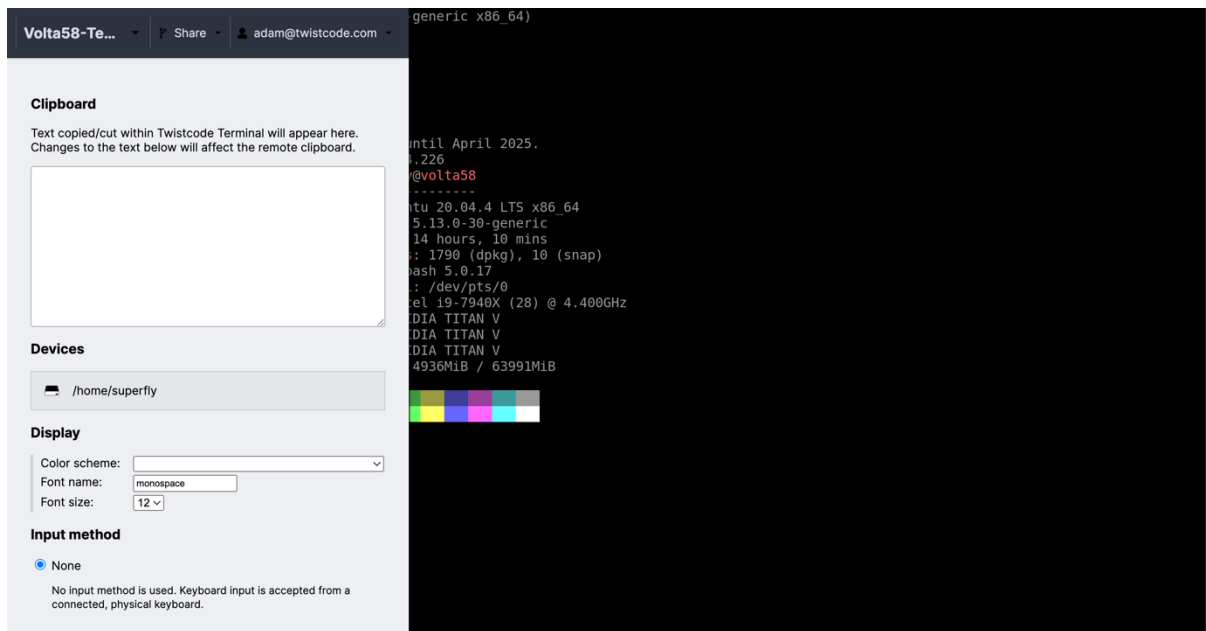
Logs out of portal completely, closing all current connections and ending the portal session.



4) Client Screen

Once you open a connection, you will see a real-time view of the remote display or terminal. You can interact with this display or terminal just as you would normally do. Your mouse and keyboard will function as if they were connected directly to the remote machine.

The remote display will take up the entire browser window, with no buttons or menus to disturb the view. With the intent of providing a seamless experience, options specific to remote desktop are hidden within the client menu, which can be opened as needed.



4.1) Client Menu

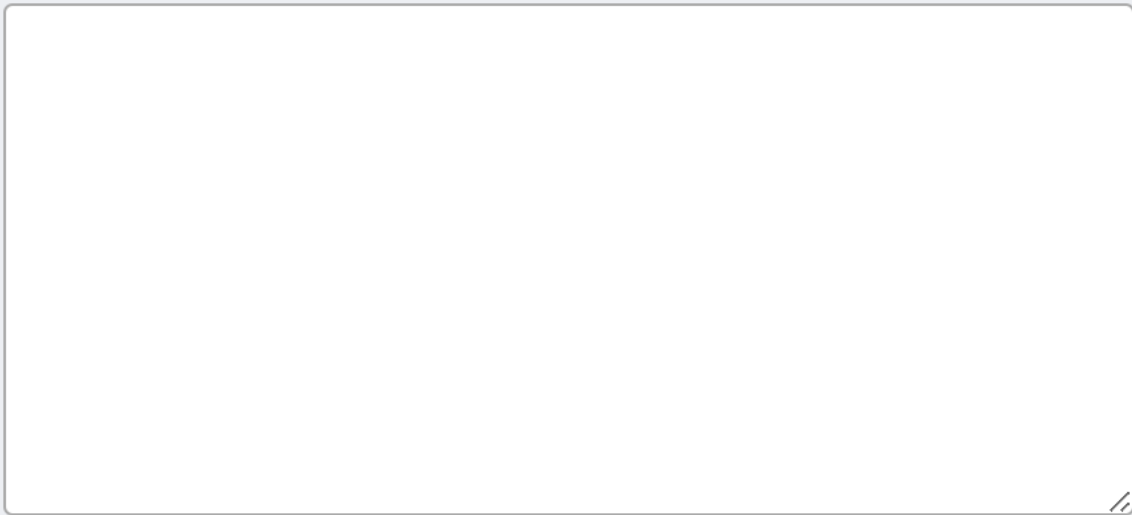
The Client Menu is a sidebar which is hidden until explicitly shown. On a desktop or other device which has a hardware keyboard, you can show this menu by pressing **Ctrl+Alt+Shift** (Windows) or **Control+Option+Shift** (macOS). If you are using a mobile or touchscreen device that lacks a keyboard, you can also show the menu by swiping right from the left edge of the screen. To hide the menu, you press the key combinations again or swipe left across the screen.

4.2) Copying/pasting Text

The text area functions as an interface between the remote clipboard and the local clipboard. Text from the local clipboard can be pasted into the text area, causing that text to be sent to the clipboard of the remote desktop/terminal. Similarly, if you copy or cut text within the remote desktop/terminal, you will see that text within the text area, and can manually copy it into the local clipboard if desired.

Clipboard

Text copied/cut within Twistcode Terminal will appear here.
Changes to the text below will affect the remote clipboard.



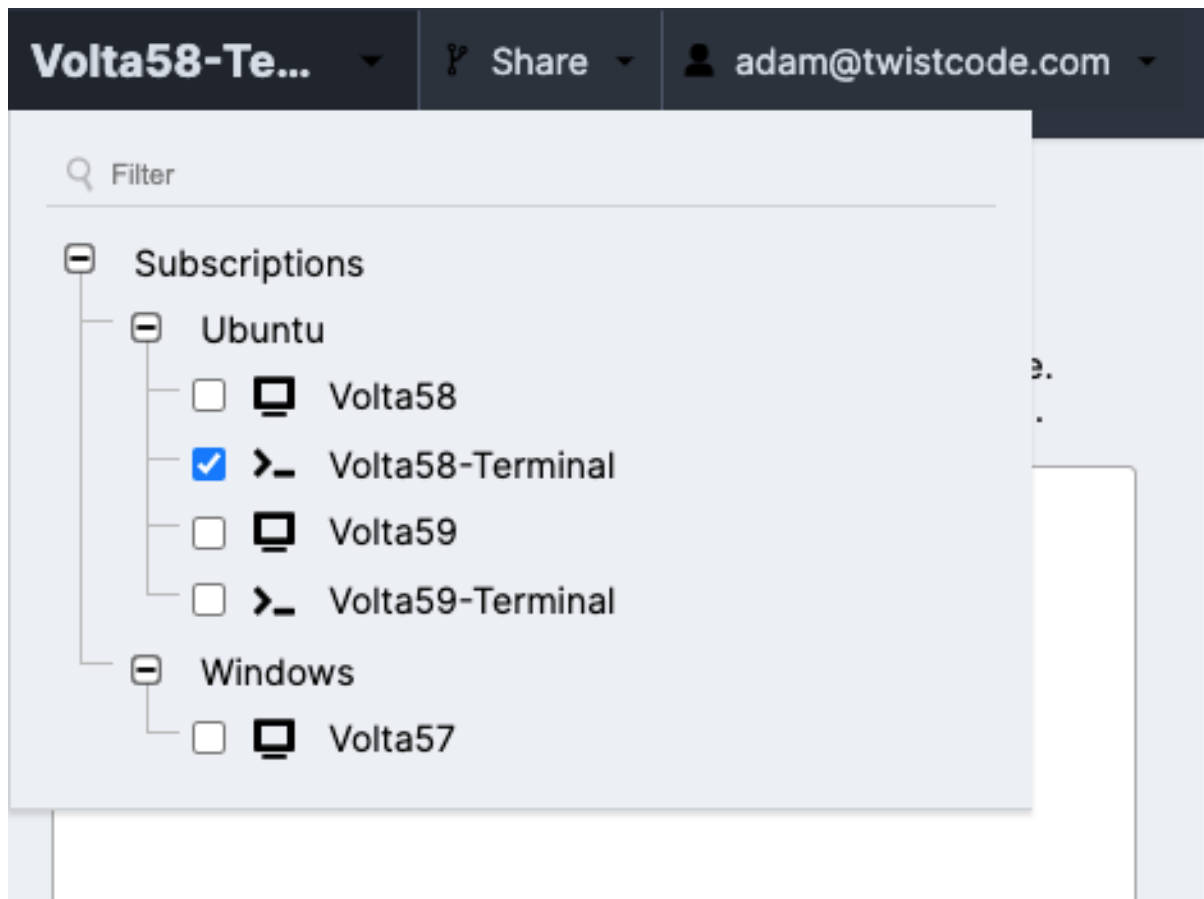
Copying and pasting text work seamlessly between remote clipboard and local clipboard (if clipboard access is enabled in the browser). For example, you are using MacBook (macOS) to access the portal, and you are connecting to a Linux terminal on the remote.

- To copy from local macOS, use default copy key combination for macOS (**Command+C**), and paste in remote Linux terminal using default key combination for Linux (**Ctrl+Shift+V**).
- To copy from remote Linux terminal, just highlight the text you wish to copy and paste in local macOS, using default key combination for macOS (**Command+V**).

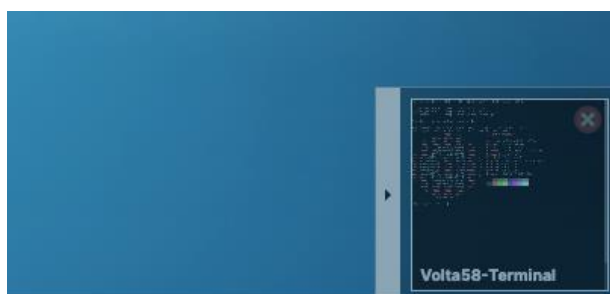
Pro Tips: All highlighted text in SSH session or RDP/VNC session will be automatically copied to your browser clipboard. So, just highlight and paste!

5) Switching and Tiling Connections

If you have access to more than one connection, clicking the current connection name at the top of the client menu will open a drop-down menu containing a list of your other available connections:



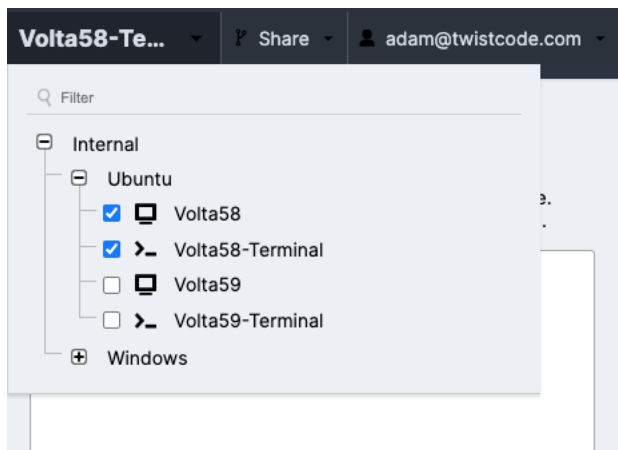
Clicking on the name of another connection in this drop-down menu will immediately switch to that connection. The previous connection will remain running as a thumbnail within a panel attached to the lower-right corner of the screen. This panel updates in real-time and remains visible if you have multiple active connections, even if you navigate away to another part of the application:



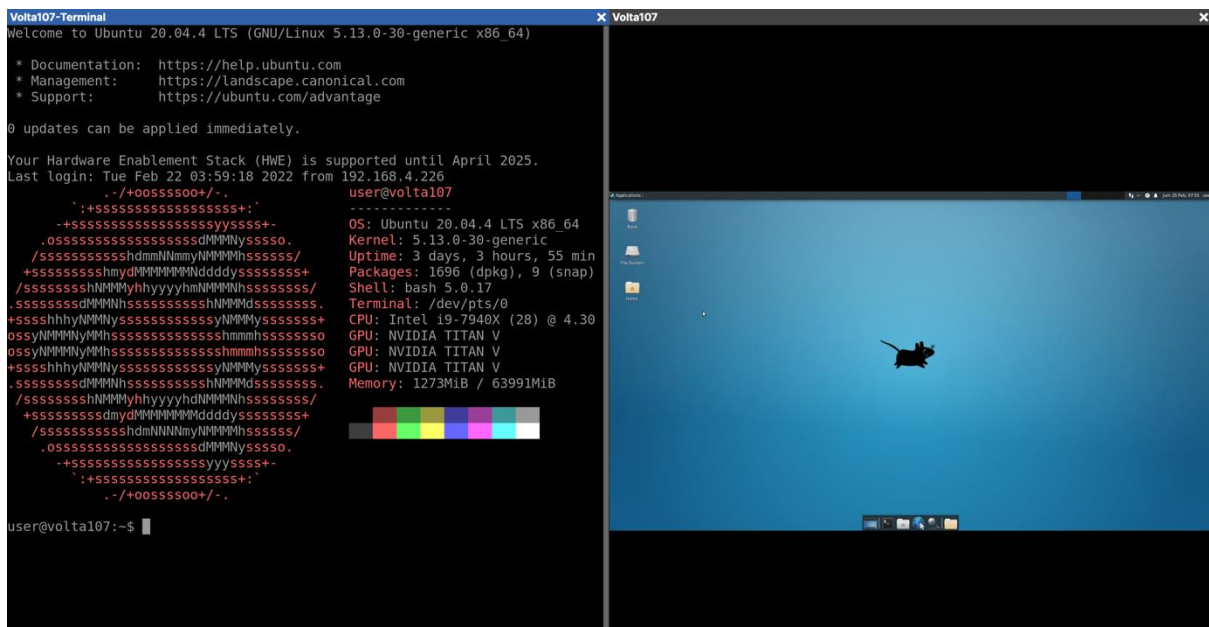
Clicking on any connection within the panel will navigate back to that connection, while clicking the “X” icon in the upper-right corner of the connection thumbnail will immediately close the connection.

5.1) Adding a Connection to the Current View

Multiple connections may also be opened simultaneously within the same view by clicking the checkboxes next to the names of those connections in the connection menu:



All connections opened in this way are automatically arranged in equally sized tiles to fill the available area:



With multiple connections displayed as tiles, keyboard interaction and the client menu will only affect the currently focused connection, as indicated by the blue title and border. Clicking or tapping within another connection will change the focus and allow keyboard interaction with that connection.

5.2) Typing with Multiple Connections

By holding down **Ctrl** (to select an individual connection) or **Shift** (to select a rectangle of connections), multiple connection may be focused on the same time. While multiple connections are focused, each key pressed will be broadcast across each focused connection:

```
Volta107-Terminal                               Volta131-Terminal
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.13.0-30-generic x86_64)
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.13.0-30-generic x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

0 updates can be applied immediately.

Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Tue Feb 22 03:59:18 2022 from 192.168.4.226
user@volta107:~$
OS: Ubuntu 20.04.4 LTS x86_64
Kernel: 5.13.0-30-generic
Uptime: 3 days, 3 hours, 55 min
Packages: 1696 (dpkg), 9 (snap)
Shell: bash 5.0.17
Terminal: /dev/pts/0
CPU: Intel i9-7940X (28) @ 4.30
GPU: NVIDIA TITAN V
GPU: NVIDIA TITAN V
Memory: 1273MiB / 63991MiB

user@volta107:~$ whoami
user
user@volta107:~$

Volta131-Terminal
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.13.0-30-generic x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

0 updates can be applied immediately.

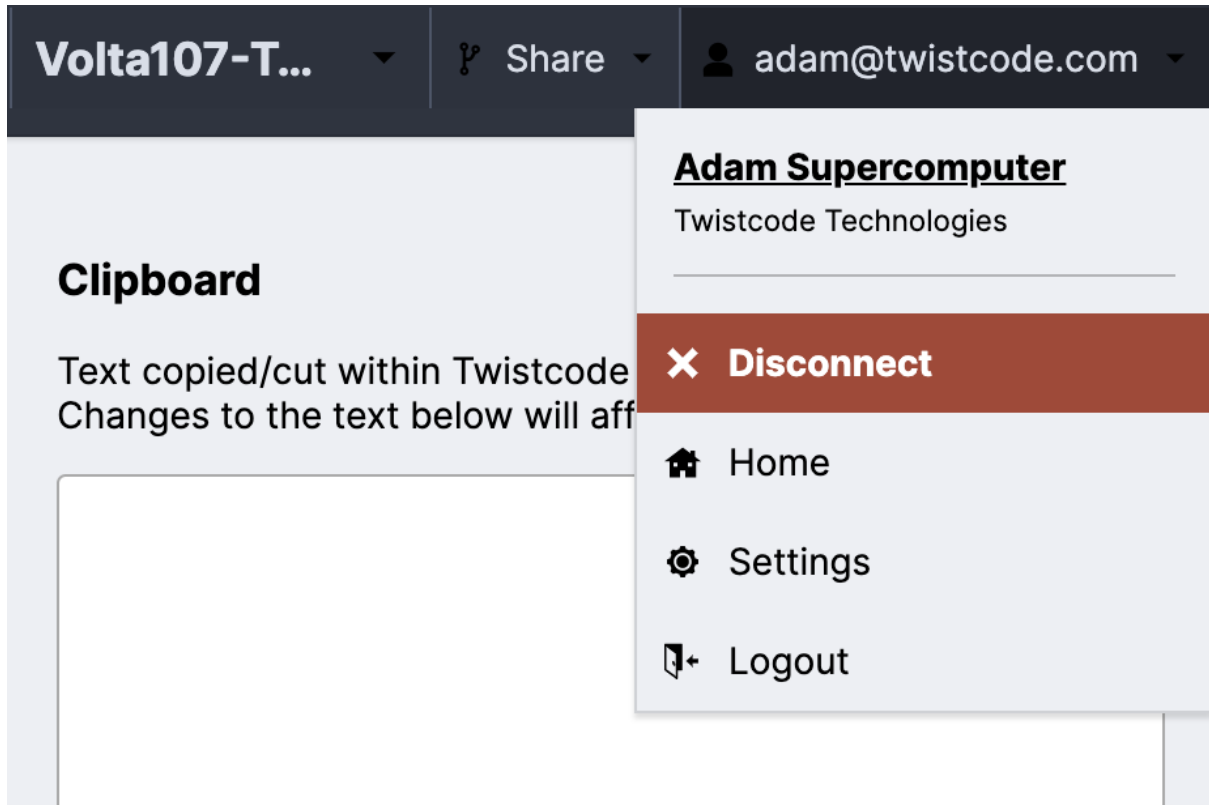
Your Hardware Enablement Stack (HWE) is supported until April 2025.
Last login: Tue Feb 22 03:48:55 2022 from 192.168.4.226
user@volta131:~$
OS: Ubuntu 20.04.4 LTS x86_64
Kernel: 5.13.0-30-generic
Uptime: 3 days, 4 hours, 7 mins
Packages: 1696 (dpkg), 9 (snap)
Shell: bash 5.0.17
Terminal: /dev/pts/0
CPU: Intel i9-7940X (28) @ 4.30
GPU: NVIDIA TITAN V
GPU: NVIDIA TITAN V
Memory: 1413MiB / 63991MiB

user@volta131:~$ whoami
user
user@volta131:~$
```

This is particularly useful for running the same series of commands on multiple computers. Further, since portal automatically translates between the user's local keyboard layout and the keyboard layout of the remote server, this will work as expected even if the keyboard layouts of focused connections do not match.

6) Disconnecting and Navigation

When you are done using the current connection, or you wish to navigate elsewhere temporarily, options to do so are within the [User Menu](#) inside the [Client Menu](#):

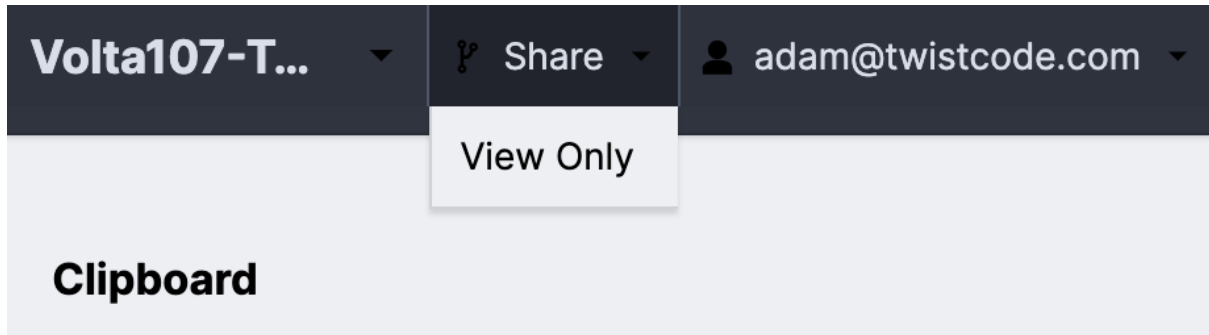


The user menu within the [User Menu](#) provides an additional “**Disconnect**” option that allows you to explicitly close the current connection only. Clicking “**Logout**” will also implicitly disconnect all active connections, including the current connection.

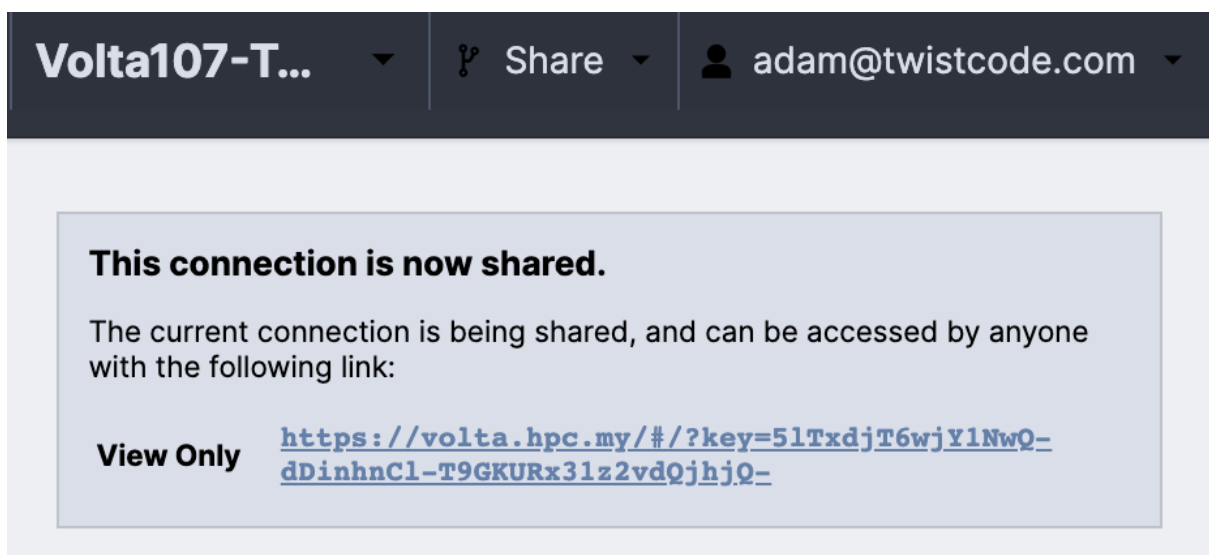
Navigating back to the home screen or to the settings screen will not disconnect you: your connection will continue running in the background while you change settings or initiate another connection, and you can resume any active connection by clicking on it within the home screen.

7) Sharing the Connection

A “Share” menu is available next to your username in the [Client Menu](#). Clicking on this menu opens a list of options for sharing the current connection.



Clicking any of the options within the “Share” menu will immediately generate a unique share link which can be distributed to anyone, even to users which do not otherwise have accounts within this Twistcode system.



When the link is visited, that user will be given temporary access to your connection, restricted according to the sharing option chosen. This access, and the validity of the link overall, lasts only until you disconnect. Once the connection is closed, the link ceases to be valid, and any users sharing the connection with you will be disconnected.

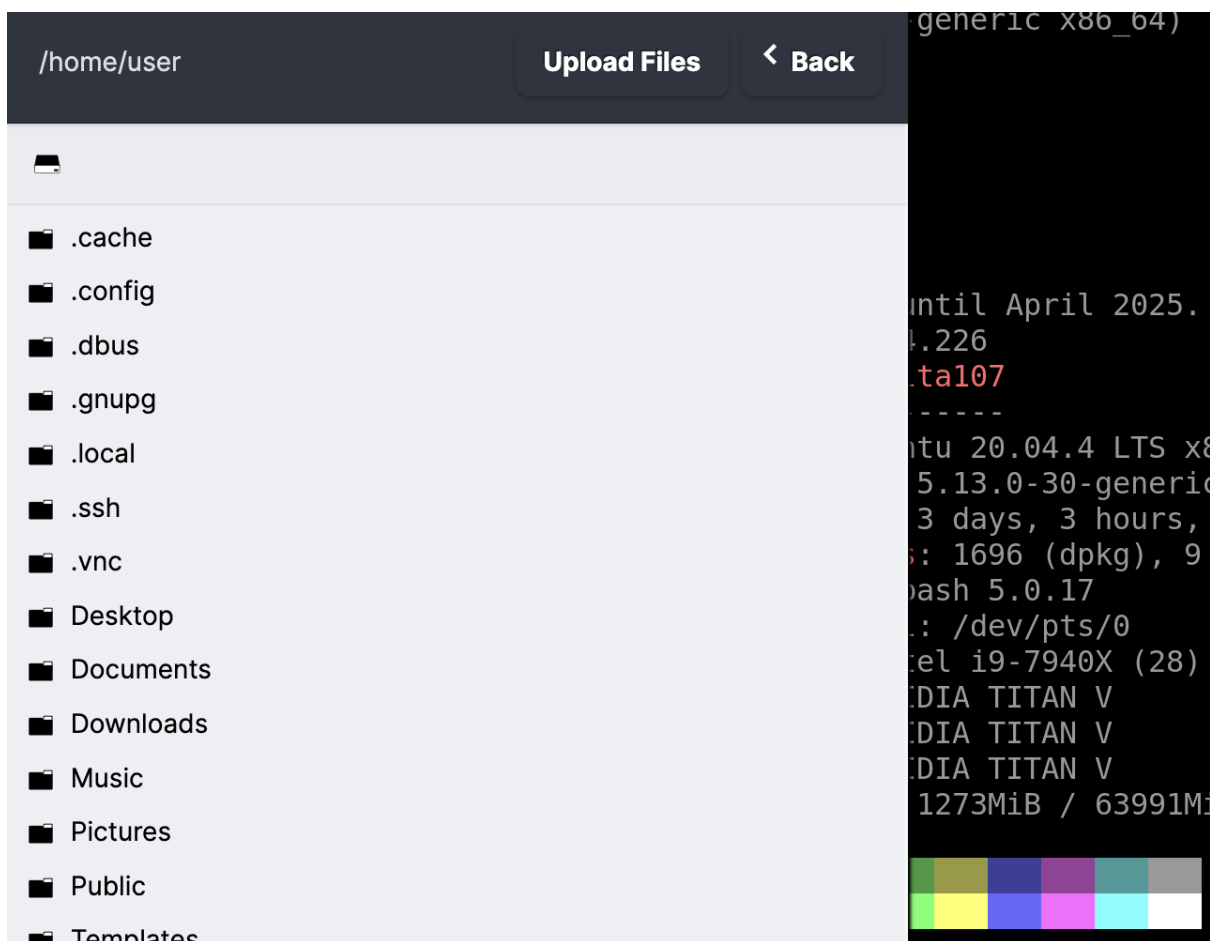
8) Transferring Files

You can transfer files back and forth between your local computer and the remote desktop if it is supported by the underlying protocol and enabled on the connection. Currently, this application supports file transfer for VNC, RDP, and SSH, using SFTP protocol.

Files can be transferred to the remote computer by dragging and dropping the files into your browser window, or through using the file browser located in the [Client Menu](#).

8.1) Using the File Browser

You will see one or more filesystem devices listed within the [Client Menu](#). Clicking on one of the filesystems opens a file browser which lists the files and directories within that filesystem.



Double-clicking on any directory will change the current location of the file browser to that directory, updating the list of files shown as well as the “breadcrumbs” at the top of the file browser. Clicking on any of the directory names listed in the breadcrumbs will bring you back to that directory and clicking on the drive icon on the far left will bring you all the way back to the root level.

Downloads are initiated by double-clicking on any file shown, while uploads are initiated by clicking the **“Upload Files”** button. Clicking **“Upload Files”** will open a file browsing dialog where you can choose one or more files from your local computer, ultimately uploading the selected files to the directory currently displayed within the file browser.



The state of all file uploads can be observed within the notification dialog that appears once an upload begins and can be cleared once completed by clicking the **“Clear”** button. Downloads are tracked through your browser’s own download notification system.

The root folder for file browser is all pointed to the user home directory as listed below:

- SSH Linux: /home/user
- VNC Linux: /home/user
- Windows RDP: C:\Users\user

8.2) Using the Drag and Drop

You can drag and drop files directly into the browser window. The location for file upload via drags and drop is listed below:

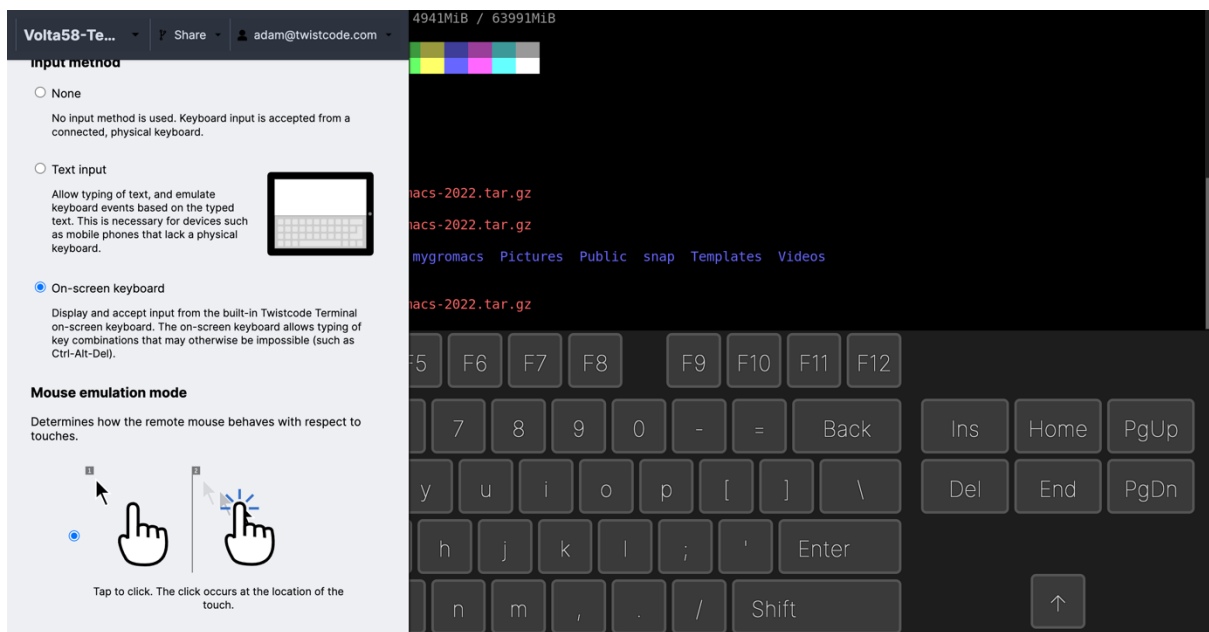
- SSH Linux: /home/user
- VNC Linux: /home/user/Downloads
- Windows RDP: C:\Users\user\Downloads

9) On-screen keyboard

Certain key combinations are impossible to press within a web application because they are reserved by the operating system (**Ctrl+Alt+Del** or **Alt+Tab**, for example) or by the web browser. If you press one of these reserved combinations, the effect will be observed locally, not remotely, and the remote desktop will receive only some of the keys.

This application provides its own, built-in on-screen keyboard which allows keys to be sent to the remote desktop without affecting the local system. If the device you're using does not have certain keys which the remote desktop depends on, such as the arrow keys or Ctrl, you can use the on-screen keyboard for this, too. You can show the on-screen keyboard by selecting the "On-screen keyboard" option from the client menu.

Clicking (or tapping) the button of the on-screen keyboard has the same effect as pressing the same buttons on a real keyboard, except that the operating system and browser will not intercept these keypresses; they will only be sent to the remote desktop.



10) Scaling the Display

This application will default to shrinking or expanding the remote display to fit the browser window exactly, but this is not necessarily ideal. If the remote display is much larger than your local display, the screen may be impossible to see or interact with. This is especially true for mobile phones, whose screens need to be small enough to fit in the average hand.

You can scale the display on touch devices by using the familiar pinch gesture. Place two fingers on the screen and bring them closer together to zoom out or further apart to zoom in.

If your device lacks a touch screen, you can also control the zoom level through the menu. The controls for zooming in and out are located at the bottom of the menu. The current zoom level is displayed between two “-” and “+” buttons which control the zoom level in 10% increments.

11) Changing Your Password

If your account has permission to change password, the settings screen will contain a **“Change Password”** section.

To change your password, you must provide your current password, enter the desired new password, and click **“Update Password”**. You will remain logged in, and the change will affect any future login attempt.

SETTINGS adam@twistcode.com

Active Sessions History Users Groups Connections **Preferences**

Options below are related to the locale of the user and will impact how various parts of the interface are displayed.

Display language:

Timezone: |

CHANGE PASSWORD

If you wish to change your password, enter your current password and the desired new password below, and click "Update Password". The change will take effect immediately.

Current Password:

New Password:

Confirm New Password:

DEFAULT INPUT METHOD

The default input method determines how keyboard events are received by Twistcode Terminal. Changing this setting may be necessary when using a mobile device, or when typing through an IME. This setting can be overridden on a per-connection basis within the Twistcode Terminal menu.

None
No input method is used. Keyboard input is accepted from a connected, physical keyboard.

Text input
Allow typing of text, and emulate keyboard events based on the typed text. This is necessary for devices such as mobile phones that lack a physical keyboard.

On-screen keyboard
Display and accept input from the built-in Twistcode Terminal on-screen keyboard. The on-screen keyboard allows typing of key combinations that may otherwise be impossible (such as Ctrl-Alt-Del).