

# Working with screen sessions

As in any device, whenever you turn off the power, you kill every process that was running. The same is for user working stations: if powered off, they will detach any active `ssh` connection (*do you remember it?* If not, take a look [here](#)) and your running processes will be killed.

To overcome this issue, you can rely on the `screen` utility.

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## Command cheat sheet

Command	Description
<a href="#">screen -S</a>	Create a new screen session with a meaningful name
<a href="#">screen -ls</a>	List all available screens
<a href="#">screen -r</a>	Resume an existing screen session
Ctrl + A, D	Detach from a screen session

## screen is a terminal multiplexer

The `screen` GNU utility allows users to **create and work with multiple terminals** in parallel (terminal multiplexer). This lets processes run even when the window is not visible or when the `ssh` session is terminated.

Thus, when you run a command in a screen session, you can **resume** it whenever you like. This is particularly helpful when you run very long tasks or when you are dealing with an unstable connection (*sic*).

Overall, you can think of a screen session as a **virtual terminal** that you create directly into the remote working station or server or cluster. Thus, since it is expected that remote hosts does not go out (not always true, *sic*<sup>2</sup>), processes will continue to run as long as it takes.

## Create a new screen session

To create a new screen session, you just need to type `screen` on your terminal. That's it. A new terminal window will appear and you are already on your screen session.

By doing this, UNIX will assign to your screen just a random numerical identifier. Thus, it is advisable to create screen sessions with human-readable names, so that you can recall what you were doing in each of them.

To create a **screen session with a meaningful *Session* name**, use the `-s` flag:

```
$ screen -S my_new_screen_session
```

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## List all screen sessions

If you wish to get a *List* which screen sessions you have created and (if given) their meaningful names, type

```
$ screen -ls
There are screens on:
    49152.DE_fish      (Attached)
    49056.DE_philippinarum (Detached)
    48960.bivalves_SD   (Detached)
    48864.branchio_phylogenomics (Detached)
4 Sockets in /var/run/screen/S-filipponicolini.
```

In the stdout, you are given the list of available screens, their unique numerical identifier and their meaningful name (if provided). Also, you are told which screens are currently attached and which are detached.

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## Attach/detach to/from a screen session

When you want to *Resume* a previously-created screen session, you have to know either its meaningful name or numerical identifier (that's another reason why meaningful names are really useful). Then you can type:

```
$ screen -r screen_name_or_id
```

And your screen will open.

To *Detach* from a working screen session, press `Ctrl + A`, then press `D`.

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