

How To Dev - Workshop

Core Idea

Core Idea

 Software is messy, especially when distributed.

Greatest compliment

Greatest compliment

 It just works!

What brakes programs?

What brakes programs?

 Code

What brakes programs?

 Code

 Environment

Development enablers

Development enablers

 Code

Development enablers

 Code - Version control system

Development enablers

 Code - Version control system - **Git**

Development enablers

 Code - Version control system - **Git**

 Environment

Development enablers

-  Code - Version control system - **Git**
-  Environment - Containerized environment

Development enablers

 Code - Version control system - **Git**

 Environment - Containerized environment - **Docker**

Development enablers

 **Git**

 **Docker**

Development enablers

 **Linux**

 **Git**

 **Docker**

Linux



Linux

 Most computations runs on **servers**

Linux

- 🌱 Most computations runs on **servers**
- 🌱 Most **servers** runs **Linux**

Linux

- 🌱 Most computations runs on **servers**
- 🌱 Most **servers** runs **Linux**
- 🌱 Most effective in resources

Linux

- 🌱 Most computations runs on **servers**
 - 🌱 Most **servers** runs **Linux**
 - 🌱 Most effective in resources
 - 🌱 **Linux** philosophy

Linux

Linux Philosophy

Linux

Linux Philosophy

 Do only one thing

Linux

Linux Philosophy

 Do only one thing

 And do it well

Linux

Linux Philosophy

In practice

Linux

Linux Philosophy

In practice

 Built out of tiny independent programs

Linux

Linux Philosophy

In practice

-  Built out of tiny independent programs
-  Productive terminal environment

Linux

 Fill at ~ in the \$

Linux

 Fill at ~ in the \$

 Fill at **home** in the **terminal** (shell)

Linux

 This is the / of the problem

Linux

- 🍫 This is the / of the problem
- 🍫 This is the **root** of the problem

Linux

 My ~ is at **/home/user/**

Linux

 Where have you **bin/** ?

Linux

 Where have you **bin/** ?

 Directory structure:

/bin /home /opt /tmp /usr /var /etc

Linux

 Don't **Bash** your head against the keyboard

Linux

Hands-on keyboard!

Linux

Hands-on keyboard!

 Go to cmd

Linux

Hands-on keyboard!

 Go to cmd

 `ssh -i how-to-dev_key.pem`
`howtodev@172.160.226.208`

Linux

Utilities

Linux

Utilities



List all files in a directory

Linux

Utilities

 ls

 cd

Change directory

Linux

Utilities

 ls

 cd

 cat / less

Show content of file

Linux

Utilities

 ls

 cd

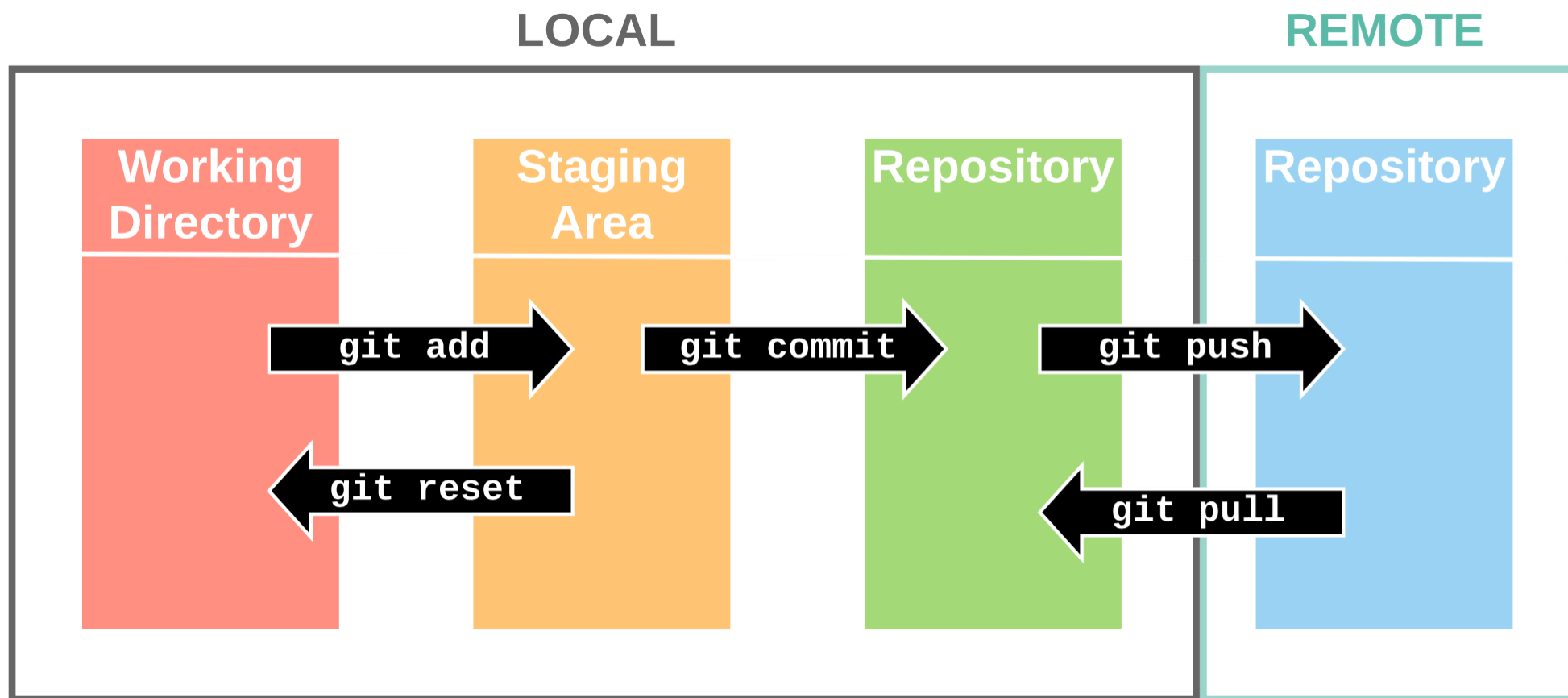
 cat / less

 mkdir / cp / mv

Make, copy, move or rename files

Git

Git



Git

 `mkdir <dir_name>`

Git

```
 mkdir <dir_name>  
 git init .
```


Git

 `mkdir <dir_name>`

 `git init .`

 `git status`

Git

 nano <file_name>
Enter some info to file.

Git

 nano <file_name>

 git status

Git

 nano <file_name>

 git status

 git add <file_name>

Git

 nano <file_name>

 git status

 git add <file_name>

 git status

Git

 nano <file_name>

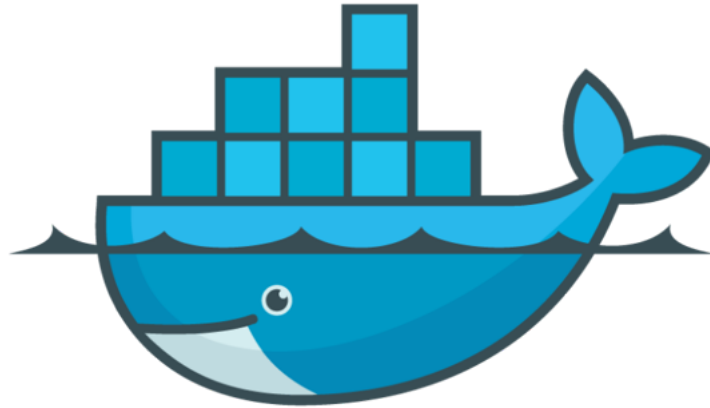
 git status

 git add <file_name>

 git status

 git commit -m "some commit message"

Docker



Docker

 `docker build --tag "how-to-dev" .`

Building a new docker image based on the 'Dockerfile'
in the current directory.

Docker

 docker image list

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
how-to-dev	latest	d211d6bfa5ab	About a minute ago	202MB

Docker

🍌 `docker run --interactive --tty --name <my_name>
how-to-dev bash`


🍌 `docker run -it --name <my_name> how-to-dev bash`

Docker

 docker container list

 docker container list --all

Docker

 `docker run -it --name <my_name> how-to-dev bash --
detach`

Docker

 docker container list

 docker container list --all

Docker

 `docker exec -t ben-sivan bash -c "ls"`