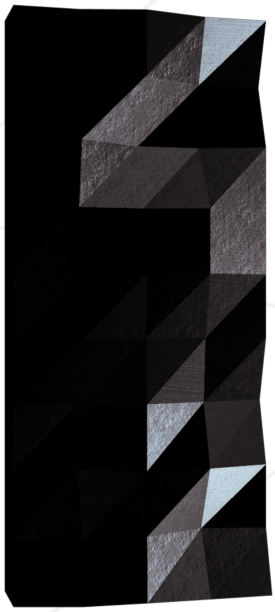

Cloud-1

Automated deployment of `Inception`

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Summary: Automated deployment of ***`Inception`*** *on a remote server.*

Version: 7.2

There is no cloud it's just someone else's computer

Contents

Chapter I

Introduction

This topic is inspired by the subject `Inception`. The goal is to deploy your site and the necessary docker infrastructure on an instance provided by a cloud provider.

In this version, each process will have its container. You CANNOT deploy the same images from `Inception` and be done with it ;) You can of course get the source of the website (Your WordPress blog for instance), but you have to deploy it using a container per process and automation.

Automation is essential here. The stages of deployment must be automated by a tool of your choice (We suggest Ansible).

This complete web server must be able to run several services in parallels such as Wordpress, PHPmyadmin and a database.

Chapter II

Platform choice

42 does not provide the servers needed to run your application. All your code will need to be hosted on servers outside the school, which you will need to procure (and pay for) on your own.

This project requires access to cloud resources. Several options are available depending on your needs and the opportunities accessible to you. Here are some possibilities:

- Take advantage of free student credits offered by providers like Azure, AWS, GCP ...
- Check if your campus can cover cloud hosting costs with a provider.

We encourage you to explore these solutions to choose the option that best suits your project.

If you decide to use a providers, you may be billed. Be sure to read the terms of use and the services you can use with your credits. Remember to turn off the services you are not using. In short, be careful, it is YOUR responsibility, we provide you with everything you need so that this project costs you absolutely nothing.

You are in a REAL work environment, your decisions have REAL consequences.

The machine will be provided to you when you sign up for the project, and when you run a correction. Furthermore, it will be destroyed (and your data stored on it as well) when you mark your project as completed or when you validate this project.

Chapter III

Mandatory part

The deployment of your application must be fully automated. We suggest you use Ansible but you are free to use another tool if you wish. It is imperative to provide a functional site equivalent to the one obtained with `Inception` just using your script.

You need to install a simple WordPress site on an instance. You must ensure that:

- Your site can restart automatically if the server is rebooted.
- In case of reboot all the data of the site are persisted (images, user accounts, articles, ...).
- It is possible to deploy your site on several servers in parallel.
- The script must be able to function in an automated way with for only assumption an ubuntu 20.04 LTS like OS of the target instance running an SSH daemon and with Python installed.
- Your applications will run in separate containers that can communicate with each other (1 process = 1 container)
- Public access to your server must be limited and secure (for example, it is not possible to connect directly to your database from the internet).
- The services will be the different components of a WordPress to install by yourself. For example Phpmyadmin, MySQL, ...
- You must have a docker-compose.yml.
- You will need to ensure that your SQL database works with WordPress and PHP-MyAdmin.
- Your server should be able, when possible, to use TLS.
- You will need to make sure that, depending on the URL requested, your server redirects to the correct site.

Chapter IV

Focus points

This paragraph is very important, read it carefully, as many times as necessary. If you have any doubts, ask.

Most providers (AWS or GCP for example) offer a free level of use that will allow this project to be carried out at a lower cost or even for free.

In any case, YOU ARE RESPONSIBLE FOR CHOOSING AND STOPPING DEPLOYED BODIES AND SERVICES: if you forget a server or let a task run on a loop, you may exceed the credits allocated to you and you will have to pay for it. this use.

You will pay particular attention to the size of all the servers and services you put in place. If you oversize your resources, it will potentially be expensive, and use up your credits faster. Also, not all services or server sizes are eligible for free usage levels offered by providers in general.

The use of third-party services is entirely YOUR responsibility, YOU will be charged if YOU exceed your free credits. The school cannot help you in your relations with external suppliers.

Also, pay attention to the code hosted on GitHub or other public repo: do not leave keys or identifiers lying around.

In short, we are not in a sandbox, these are real resources.

Chapter V

Submission and peer-evaluation

Turn in your assignment in your `Git` repository as usual. Only the work inside your repository will be evaluated during the defense. Don't hesitate to double check the names of your folders and files to ensure they are correct.

It does not include a bonus game.

We will not pay too much attention to the look of the site, a basic WordPress is enough. We will tolerate the absence of a memorable domain name, but if you have a domain name, it is appreciable. Especially when this memorable name allows you to access your site in HTTPS. There are free domain names providers like:

- DuckDNS
- .tk TLD

`If you want to take a new domain name specifically for this exercise, it will be at your expense.`