DevOps Project

Automating process of deployment web sites in different platform

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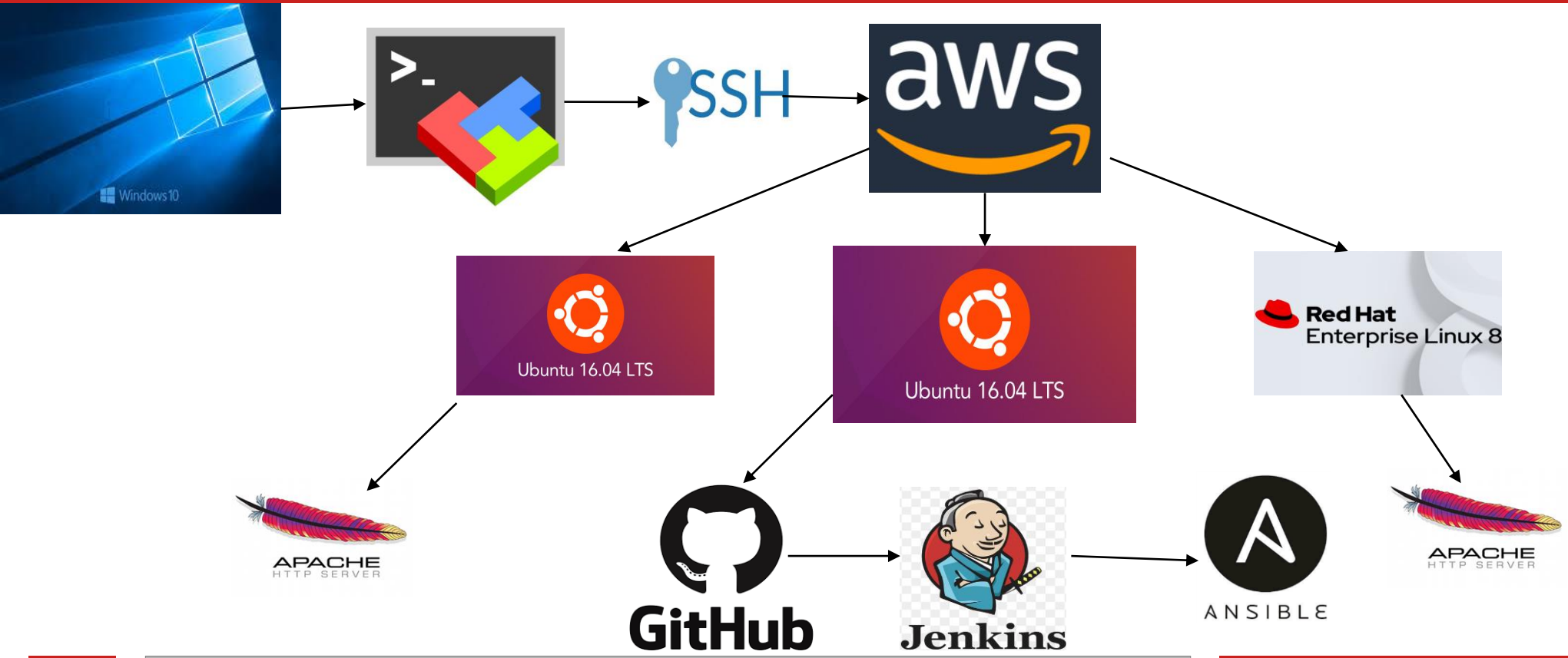
Servers

EPAM DevOps 2020

Used tools


Windows 10
SSH
aws
Ubuntu 16.04 LTS
Ubuntu 16.04 LTS
Red Hat
Enterprise Linux 8
APACHE
HTTP SERVER
GitHub
Jenkins
ANSIBLE
APACHE
HTTP SERVER

Steps on AWS

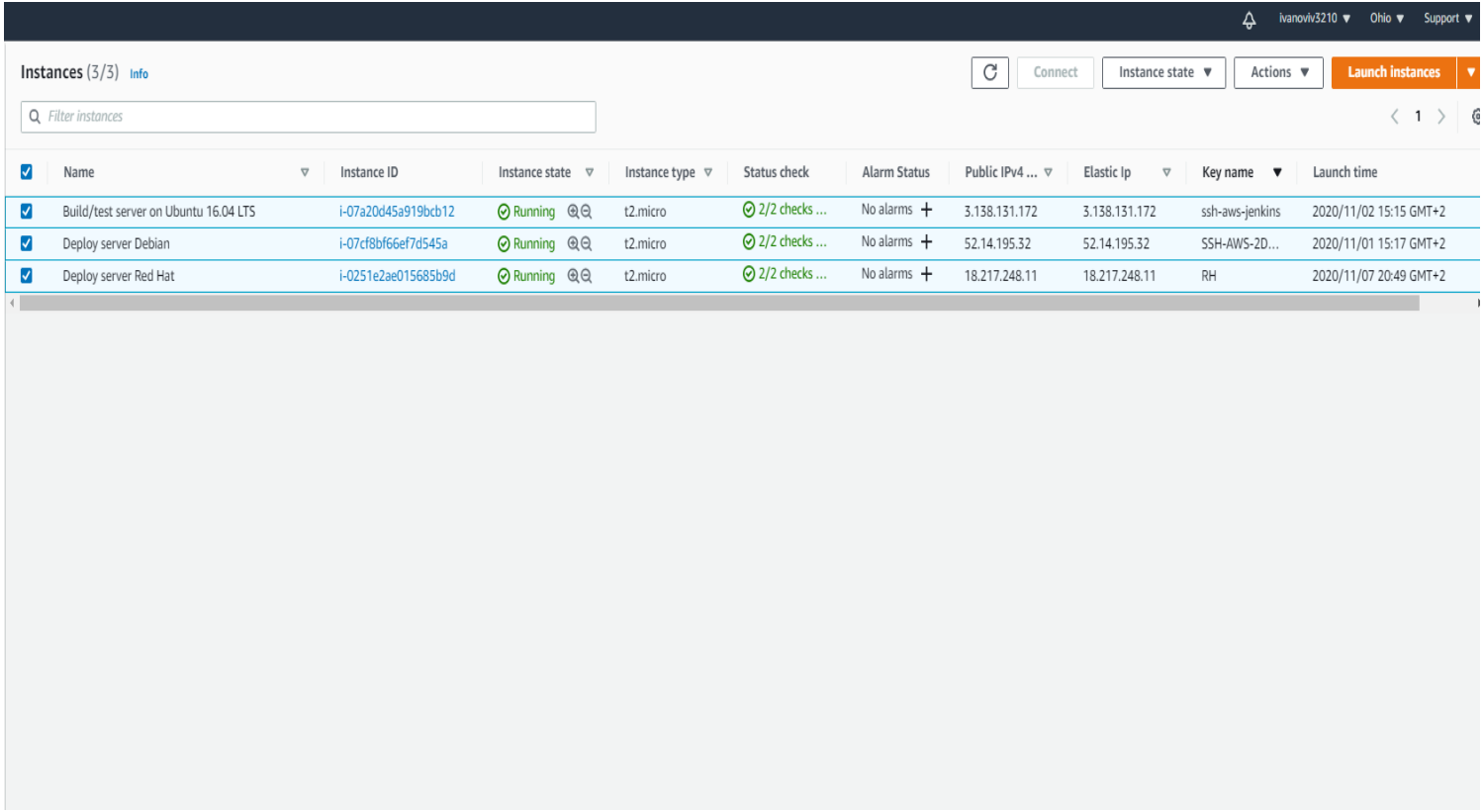
1)Raising 3 Instances

- Development server(Git, Jenkins and Ansible).

- Deployment server on Debian OS.

- Deployment server on Red Hat OS.

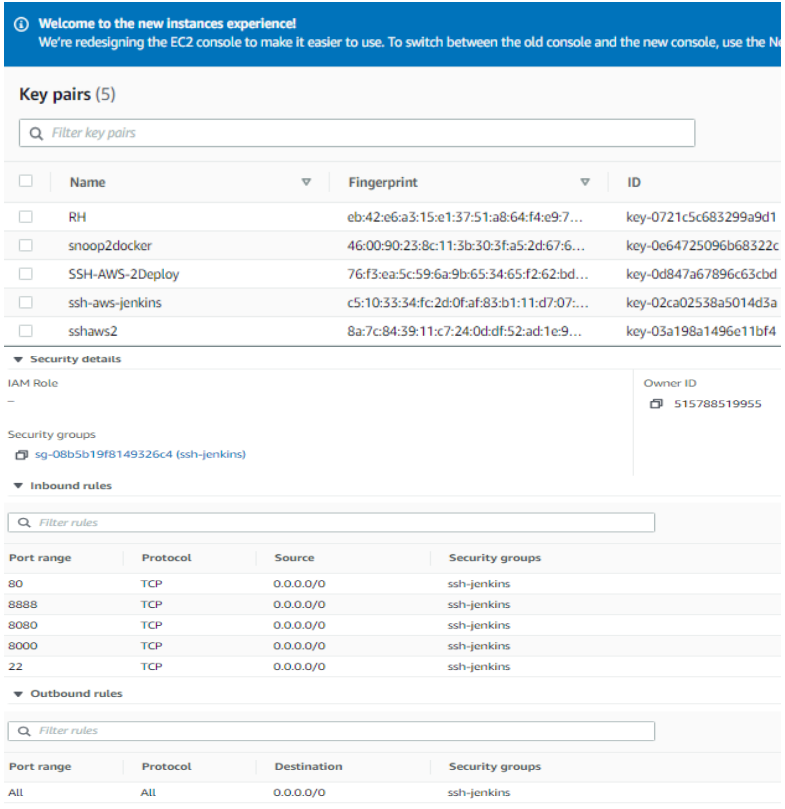
2)Making Elastic Public IP Adresses for instances.



Steps on AWS

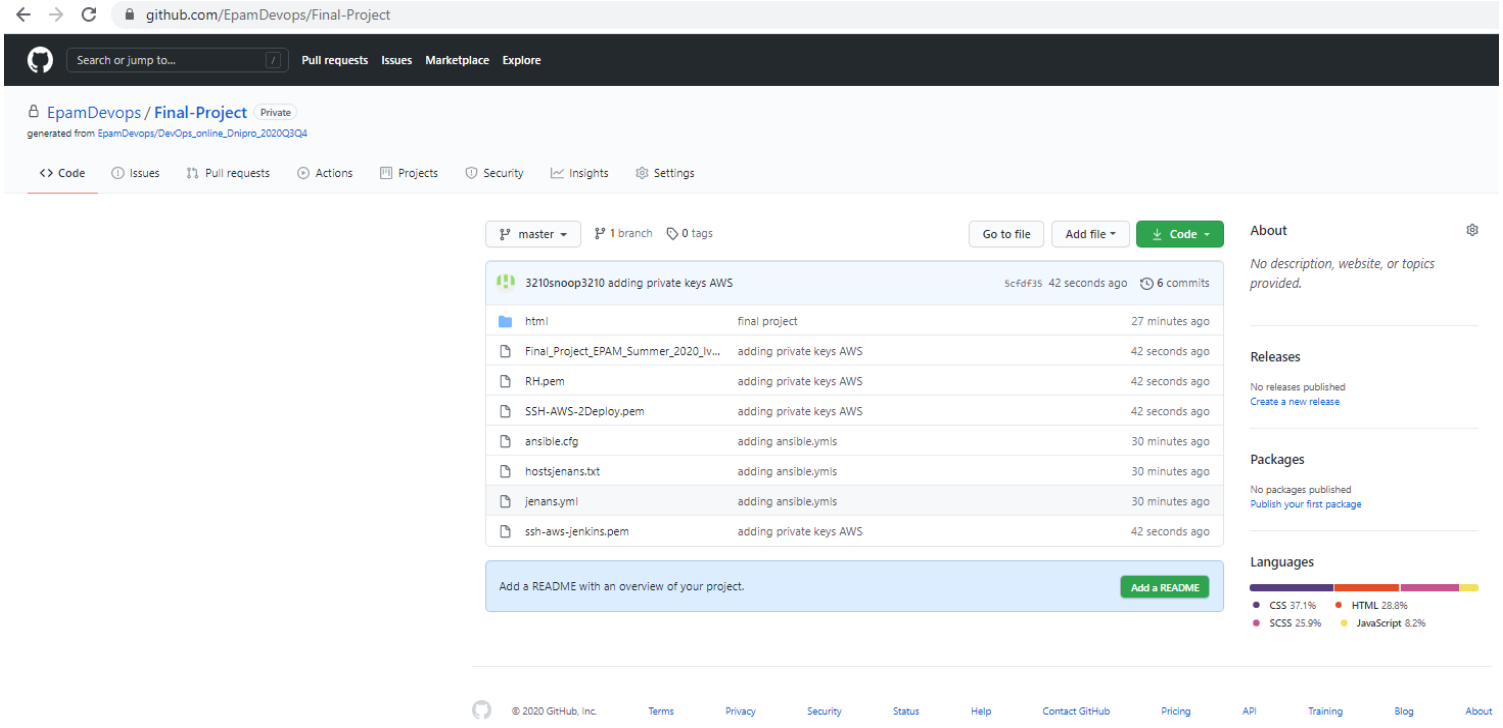
3) Creating SSH Key pairs, Downloading and transferring to servers to connect.

4) Making Security Groups and open Ports For access to Jenkins,Docker,any TCP.



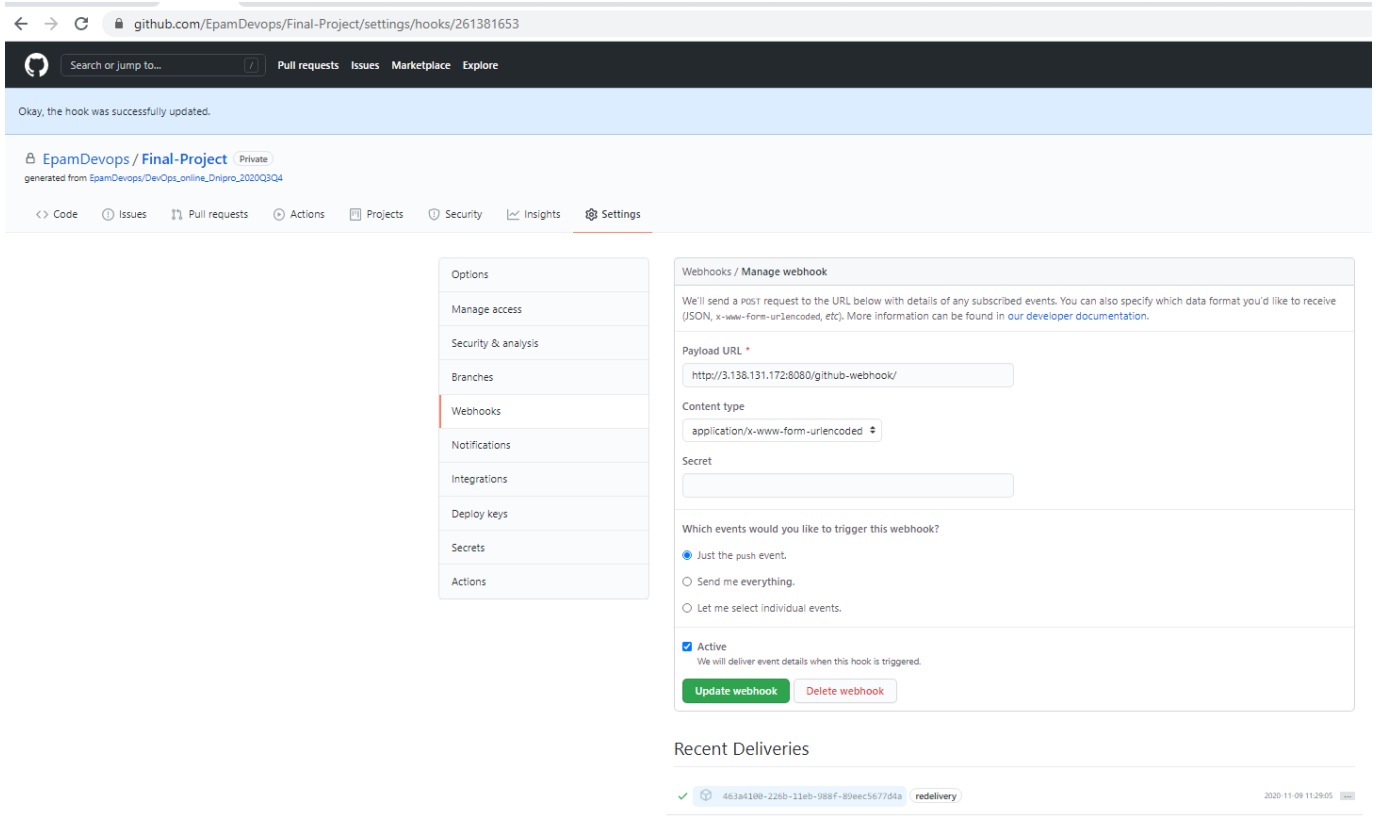
Storing Delopers project on Gih Hub

1) Creating a repository where our site with a database and playbooks Will be stored



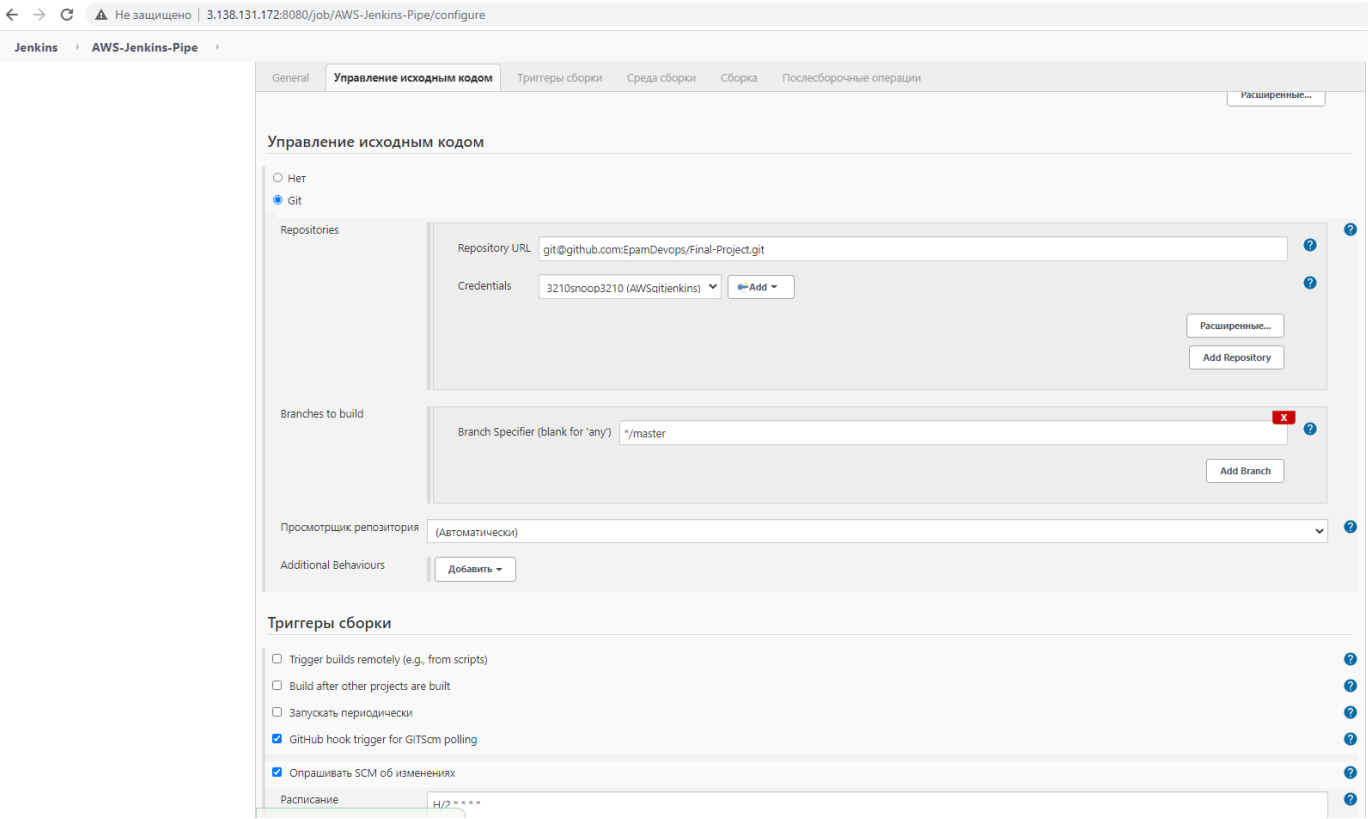
Steps on Git Hub

2) Updating code with Github Web Hook



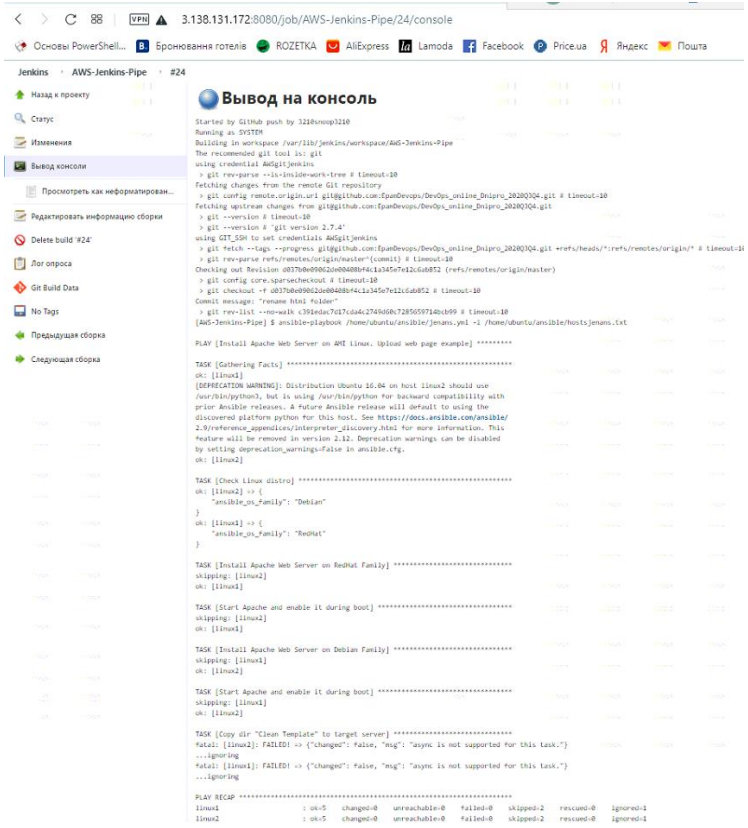
Steps on Jenkins

*1)Integrating our **GitHub Repository** to **Jenkins** Project*



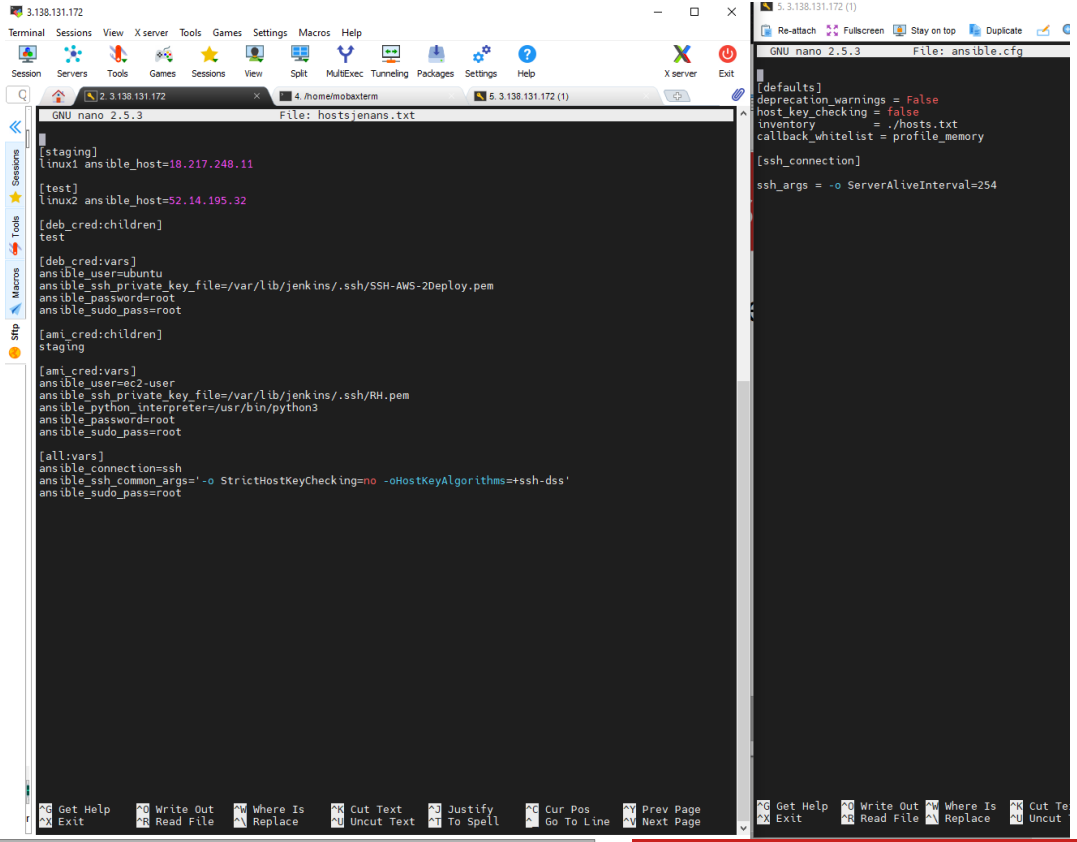
Steps on Jenkins

2)CI/CD by Build
*In step –**Ansible plugin***



Steps on Ansible

1)Creating inventory file
"hostsjenans.txt"
2)Config file
"ansible.cfg"



Steps on Ansible

3)Creating playbook ***Jenans.yml*** *,which Include some steps:*

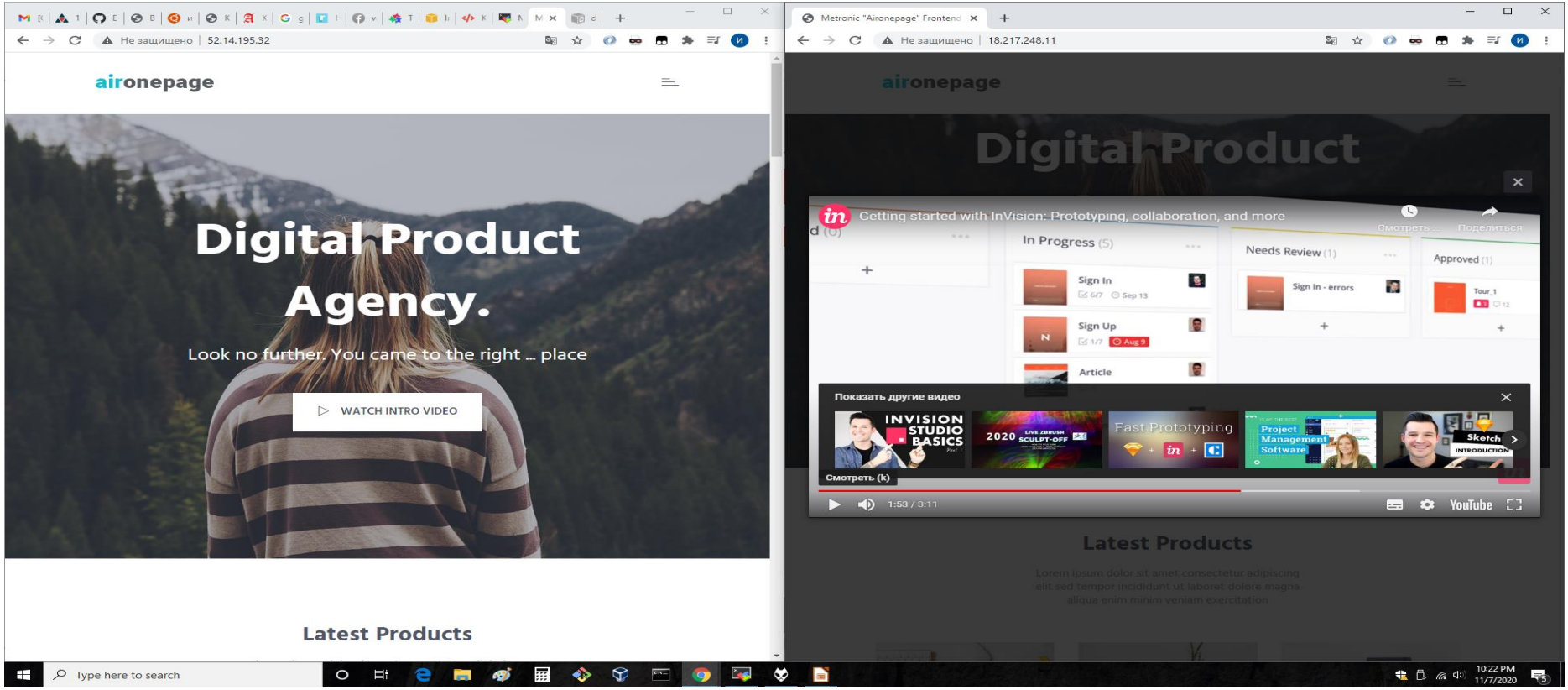
–hosts parameters

–vars

–tasks

```
GNU nano 2.5.3                    File: jenans.yml

---
- name: Install Apache Web Server on AMI Linux. Upload web page example
  hosts: all
  remote_user: root
  become: yes
  become_user: root
  become_method: sudo


  vars:
    source_dir: /home/ubuntu/git/DevOps_online_Dnipro_2020Q3Q4/html
    destin_dir: /var/www


  tasks:

  - name: Check Linux distro
    debug: var=ansible_os_family

  - block: # For RedHat

    - name: Install Apache Web Server on RedHat Family
      yum: name=httpd state=latest

    - name: Start Apache and enable it during boot
      service: name=httpd state=started enabled=yes

    when: ansible_os_family == "RedHat"

  - block: #For Debian

    - name: Install Apache Web Server on Debian Family
      apt:  update_cache=yes name=apache2 state=latest

    - name: Start Apache and enable it during boot
      service: name=apache2 state=started enabled=yes

    when: ansible_os_family == "Debian"

  - name: Copy dir "html" to target Debian and Red Hat servers
    copy: src={{ source_dir }}/.  dest={{ destin_dir }}
    ignore_errors: True
    async: 60
    poll: 60
```

Deployed Web sites on servers at work



Future steps

What we can made better in future :

-we could use wordpress site db to deploy by ansible;

-we could use docker containers for building and testing artefact (saving in volume). After that we killing containers to saving machines power.

End of presentation

Thanks for watching my presentation,

waiting for your questions!