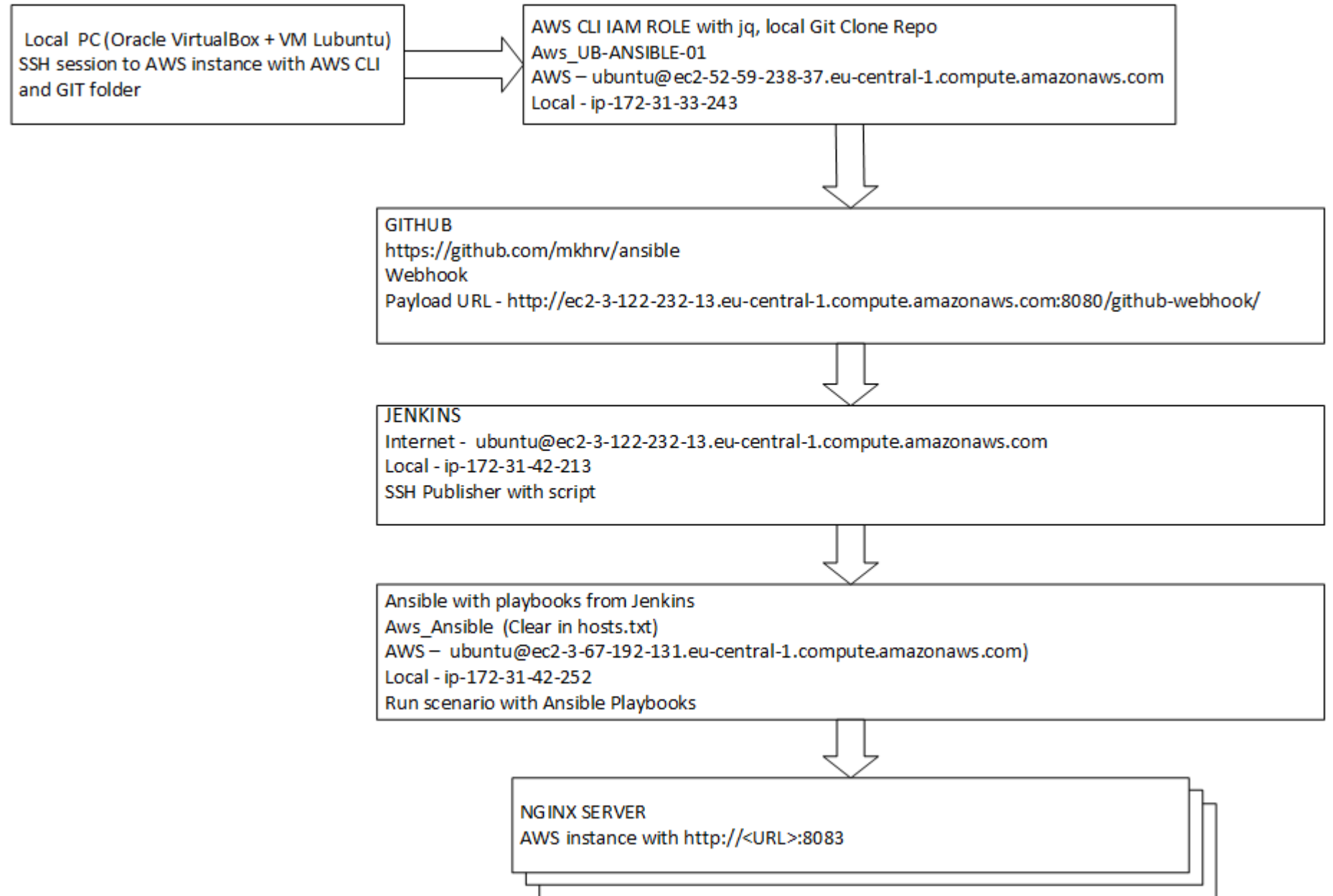


# Simple AWS Project

Automated deploying web site content on AWS EC2 instance

Mykhailo Khairov  
EPAM 2021 DevOps

# Project design



What I got to do?  
What do I get?

- 1. Run ssh session from local PC to [ubuntu@ec2-52-59-238-37.eu-central-1.compute.amazonaws.com](https://ubuntu@ec2-52-59-238-37.eu-central-1.compute.amazonaws.com)
- 2. GO to ~/ec2/ and run ./cr\_main and wait for 2 minutes.
- 3. Copy fqdn from ~/ec2/dns\_inst and open it in your internet browser with 8083 port.



# GitHub credentials config

```
~/GIT/ansible$ cat /home/user/.ssh/config
```

Host \*

Hostname github.com

User mkhrv

IdentityFile /home/user/.ssh/id\_ed25519

- Check connection

```
$ssh -T git@github.com
```

- Clone GIT Content from GitHub to local VM

```
$git clone git@github.com:mkhrv/ansible.git
```

# AWS VM with ansible credentials config on local Windows host

- Putty hostname - [ubuntu@ec2-3-67-192-131.eu-central-1.compute.amazonaws.com](https://ubuntu@ec2-3-67-192-131.eu-central-1.compute.amazonaws.com)
- Putty port – 22
- Putty SSH-Auth - C:\Users\adminn\Documents\two.ppk (\*.pem configured with puttygen.exe)

# AWS VM with jenkins credentials config on local Windows host

- Putty hostname - ubuntu@ec2-3-122-232-13.eu-central-1.compute.amazonaws.com
- Putty port – 22
- Putty SSH-Auth - C:\Users\adminn\Documents\two.ppk (\*.pem configured with puttygen.exe)

# Configure ansible

Edit /etc/ansible/ansible.cfg

inventory = /home/ubuntu/ansible/hosts.txt

ubuntu@ip-172-31-42-252:~/ansible\_git\$ ansible --version

ansible 2.9.22

config file = /etc/ansible/ansible.cfg

configured module search path = [u'/home/ubuntu/.ansible/plugins/modules',  
u'/usr/share/ansible/plugins/modules']

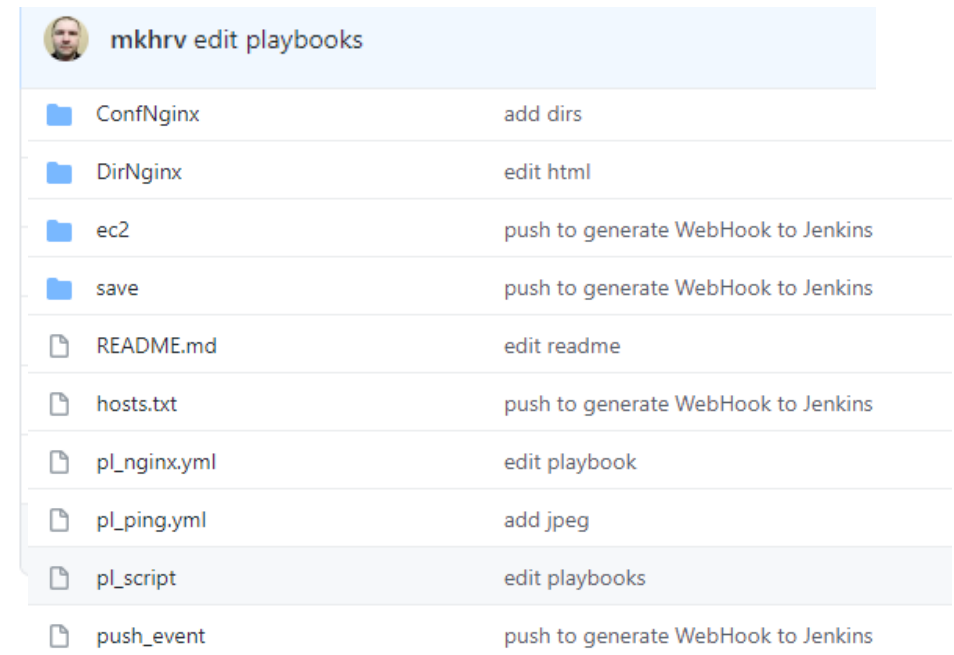
ansible python module location = /usr/lib/python2.7/dist-packages/ansible

executable location = /usr/bin/ansible











python version = 2.7.12 (default, Mar 1 2021, 11:38:31) [GCC 5.4.0 20160609]

# Configure GIT

- Repository – mkhrv/ansible
  - Settings:
  - Webhooks – Payload URL - <http://ec2-3-122-232-13.eu-central-1.compute.amazonaws.com:8080/github-webhook/> (it's Jenkins AWS VM)
  - - Content type – application/json
  - - Which events – Just the push events
- Bash scripts to manage instance  
with aws cli in ec2 folder



The screenshot shows a GitHub repository interface for the user 'mkhrv' with the title 'edit playbooks'. It displays a list of files and folders with their respective actions. The 'pl\_script' file is currently selected and highlighted.

	ConfNginx	add dirs
	DirNginx	edit html
	ec2	push to generate WebHook to Jenkins
	save	push to generate WebHook to Jenkins
	README.md	edit readme
	hosts.txt	push to generate WebHook to Jenkins
	pl_nginx.yml	edit playbook
	pl_ping.yml	add jpeg
	pl_script	edit playbooks
	push_event	push to generate WebHook to Jenkins



# Scripts describe

config_template	push to generate WebHook to Jenkins
cr_ans_hosts	push to generate WebHook to Jenkins
cr_conf	push to generate WebHook to Jenkins
cr_main	push to generate WebHook to Jenkins
create_file	push to generate WebHook to Jenkins
create_inst	push to generate WebHook to Jenkins
create_inst_old	push to generate WebHook to Jenkins
descr_inst	push to generate WebHook to Jenkins
dns_inst	push to generate WebHook to Jenkins
ec2_cr_inst	push to generate WebHook to Jenkins
ec2_describe	push to generate WebHook to Jenkins
hosts.txt	push to generate WebHook to Jenkins
ins_crd	push to generate WebHook to Jenkins
kn_host	push to generate WebHook to Jenkins
mapping.json	push to generate WebHook to Jenkins
push_to_git	push to generate WebHook to Jenkins
term_inst	push to generate WebHook to Jenkins
terminate	push to generate WebHook to Jenkins

-rw-rw-r-- config\_template – template for ~/.ssh/config  
-rwxrwxr-x cr\_ans\_hosts - generate hosts for ansible  
-rwxrwxr-x cr\_conf – generate ~/.ssh/config with aws inst. fqdn  
-rw-rw-r-- create\_file – log from aws ec2 run-instances.....  
-rwxrwxr-x create\_inst – create new inst. to aws ec2  
-rwxrwxr-x create\_inst\_old – not used  
-rwxrwxr-x cr\_main – init script to process of creation  
-rwxrwxr-x descr\_inst – get fqdn of new instance  
-rw-rw-r-- dns\_inst – result of descr\_inst with fqdn  
-rw-rw-r-- ec2\_cr\_inst – not used  
-rw-rw-r-- ec2\_describe – not used  
-rw-rw-r-- hosts.txt – result of cr\_ans\_hosts for ansible  
-rw-rw-r-- ins\_crd – new instance id from create\_inst script  
-rwxrwxr-x kn\_host – script ssh-keyscan script for new instance  
-rw-rw-r-- mapping.json – storage parameters to new instance  
-rwxrwxr-x push\_to\_git – script to git push  
-rw-rw-r-- terminate – log with result of term\_inst script  
-rwxrwxr-x term\_inst – script to terminate new instance

# Configure Jenkins job “ansible”

- -New Item – Freestyle project
- - Discard old builds – Strategy – Log Rotation – Max #10
- Source Code Management – Git - [git@github.com:mkhrv/ansible.git](https://github.com/mkhrv/ansible.git)
- Credentials – mkhrv
- Branch Specifier - \*/main
- Repository browser – Auto
- Build Triggers – GitHub hook triggers for GITScm polling
- SSH Server – “ansible aws” – it’s [ubuntu@ec2-3-67-192-131.eu-central-1.compute.amazonaws.com](https://ubuntu@ec2-3-67-192-131.eu-central-1.compute.amazonaws.com)
- Verbose output in console
- Transfer Set – Source files - \*, ConfNginx/\*, DirNginx/\*
- Exec command - /bin/bash /home/ubuntu/ansible\_git/pl\_script  
echo \$BUILD\_ID
-