

CI/CD devops project

"Mediabox" plugin for WDTV Live Media player

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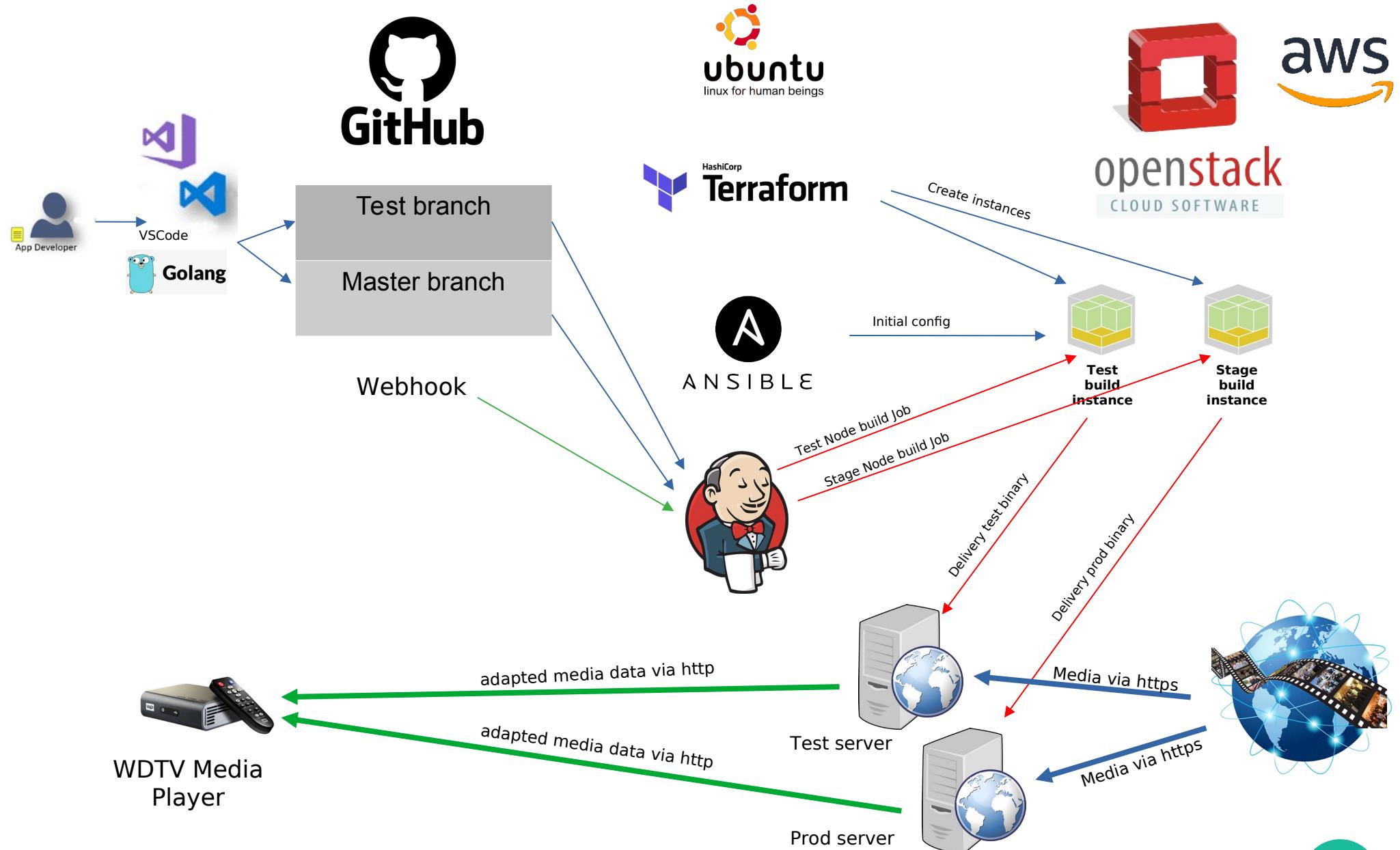
- **Target: Create media plugin for old WDTV Live player (arm linux). Backend based on Golang. Frontend running inside hardware player (php).**
- **Main problems: Old linux core media player not full supported https connections, new ssl codecs, core certificates etc. So need make backend proxy: convert https requests to media data sites into http requests.**
- **Relevance: Many peoples around the world still use this media player with good picture on tv. But product maintainer not support this device anymore. So need the solution.**

- **Project: Deploy OpenStack cloud (own hardware resources used) with two instances for test and stage builds. Backend on Golang using github repo, webhooks for Jenkins build jobs. Instances deployed by Terraform. Initial configuration by Ansible. Successful builds delivery to external work servers. Mediaplayer plugin (php) request info from external servers 8090 port and render page with media on TV (frontend).**

Instruments:

1. Openstack (microstack)
2. Terraform
3. Ansible
4. Jenkins
5. Ubuntu (desktop, servers)
6. VSCode
7. Golang, php
1. WDTV Live Media player
2. Desktop (6Gb AMD Phenom X4 945)
3. Home Server (Atom D425)
4. Home Server (Intel E6500)

Scheme



Workflow

OpenStack

Try to build DevStack variant on supermicro server 2gb. Result - fault. Not enough resources.

```
arty@artysmserv:~$ neofetch
arty@artysmserv:~$ ./00ssssoo/...
arty@artysmserv:~$ sudo useradd -s /bin/bash -d /opt/stack -m stack
[sudo] password for arty:
arty@artysmserv:~$ echo "stack ALL=(ALL) NOPASSWD: ALL" | sudo tee /etc/sudoers.d/stack
stack ALL=(ALL) NOPASSWD: ALL
arty@artysmserv:~$ sudo -u stack -i
stack@artysmserv:~$ pwd
/opt/stack
stack@artysmserv:~$ 

stack@artysmserv:~$ git clone https://opendev.org/openstack/devstack
Cloning into 'devstack'...
remote: Enumerating objects: 47591, done.
remote: Counting objects: 100% (47591/47591), done.
remote: Compressing objects: 100% (21928/21928), done.
remote: Total 47591 (delta 33652), reused 38433 (delta 24948)
Receiving objects: 100% (47591/47591), 9.85 MiB | 4.40 MiB/s, done.
Resolving deltas: 100% (33652/33652), done.
stack@artysmserv:~$ 

arty@artysmserv:~$ ./00ssssoo/...
arty@artysmserv:~$ ./functions-common:time_start:2297
arty@artysmserv:~$ ./functions-common:time_start:2300
arty@artysmserv:~$ ./functions-common:time_start:2300
arty@artysmserv:~$ ./functions:wait_for_service:461
arty@artysmserv:~$ ./functions:wait_for_service:461
arty@artysmserv:~$ ./functions:wait_for_service:461
arty@artysmserv:~$ ./functions:wait_for_service:466
arty@artysmserv:~$ ./functions-common:time_stop:2309
arty@artysmserv:~$ ./functions-common:time_stop:2310
arty@artysmserv:~$ ./functions-common:time_stop:2311
arty@artysmserv:~$ ./functions-common:time_stop:2312
arty@artysmserv:~$ ./functions-common:time_stop:2313
arty@artysmserv:~$ ./functions-common:time_stop:2315
arty@artysmserv:~$ ./functions-common:time_stop:2316
arty@artysmserv:~$ ./functions-common:time_stop:2318
arty@artysmserv:~$ ./functions-common:time_stop:2321
arty@artysmserv:~$ ./functions-common:time_stop:2321
arty@artysmserv:~$ ./functions-common:time_stop:2322
arty@artysmserv:~$ ./functions-common:time_stop:2323
arty@artysmserv:~$ ./functions-common:time_stop:2325
arty@artysmserv:~$ ./functions-common:time_stop:2326
arty@artysmserv:~$ ./functions:wait_for_service:467
arty@artysmserv:~$ ./lib/glance:start_glance:624
arty@artysmserv:~$ ./functions-common:die:198
[Call Trace]
./stack.sh:1344:start_glance
/opt/stack/devstack/lib/glance:624:die
[ERROR] /opt/stack/devstack/lib/glance:624 g-api did not start
exit_trap: cleaning up child processes
Error on exit
```

Workflow

OpenStack

Finally use microstack from snap on desktop with 6Gb + 9Gb swap

```
arty@arty-desktop:~$ sudo microstack init --auto --control --setup-loop-based-cinder-lvm-backend --loop-device-file-size 30
2021-10-03 20:36:56,540 - microstack_init - INFO - Configuring clustering ...
2021-10-03 20:36:56,763 - microstack_init - INFO - Setting up as a control node.
2021-10-03 20:37:02,047 - microstack_init - INFO - Configuring networking ...
2021-10-03 20:37:12,283 - microstack_init - INFO - Opening horizon dashboard up to *
2021-10-03 20:37:13,978 - microstack_init - INFO - Waiting for RabbitMQ to start ...
Waiting for 192.168.1.100:5672
2021-10-03 20:37:25,751 - microstack_init - INFO - RabbitMQ started!
2021-10-03 20:37:25,752 - microstack_init - INFO - Configuring RabbitMQ ...
2021-10-03 20:37:27,491 - microstack_init - INFO - RabbitMQ Configured!
2021-10-03 20:37:27,542 - microstack_init - INFO - Waiting for MySQL server to start ...
Waiting for 192.168.1.100:3306
2021-10-03 20:37:41,283 - microstack_init - INFO - Mysql server started! Creating databases ...
2021-10-03 20:37:44,519 - microstack_init - INFO - Configuring Keystone Fernet Keys ...
2021-10-03 20:38:15,353 - microstack_init - INFO - Bootstrapping Keystone ...
2021-10-03 20:38:32,093 - microstack_init - INFO - Creating service project ...
2021-10-03 20:38:41,221 - microstack_init - INFO - Keystone configured!
2021-10-03 20:38:41,291 - microstack_init - INFO - Configuring the Placement service...
2021-10-03 20:39:13,466 - microstack_init - INFO - Running Placement DB migrations...
2021-10-03 20:39:20,160 - microstack_init - INFO - Configuring nova control plane services ...
2021-10-03 20:39:38,498 - microstack_init - INFO - Running Nova API DB migrations (this may take a lot of time)...
2021-10-03 20:40:22,034 - microstack_init - INFO - Running Nova DB migrations (this may take a lot of time)...
Waiting for 192.168.1.100:8774
2021-10-03 20:42:13,957 - microstack_init - INFO - Creating default flavors...
2021-10-03 20:42:54,940 - microstack_init - INFO - Configuring nova compute hypervisor ...
2021-10-03 20:42:54,941 - microstack_init - INFO - Checking virtualization extensions presence on the host
2021-10-03 20:42:54,971 - microstack_init - INFO - Hardware virtualization is supported - KVM will be used for Nova instances
2021-10-03 20:42:57,460 - microstack_init - INFO - nova-compute is running
2021-10-03 20:42:58,276 - microstack_init - INFO - Login-OpenStack D X +
Waiting for 192.168.1.100:9696
2021-10-03 20:45:30,128 - microstack_init - INFO - nova-api is running
Waiting for 192.168.1.100:9292
2021-10-03 20:46:31,209 - microstack_init - INFO - nova-consoleauth is running
2021-10-03 20:46:35,633 - microstack_init - INFO - nova-scheduler is running
2021-10-03 20:46:51,514 - microstack_init - INFO - nova-conductor is running
2021-10-03 20:48:27,034 - microstack_init - INFO - nova-network is running
2021-10-03 20:48:41,493 - microstack_init - INFO - nova-volume is running
2021-10-03 20:48:48,358 - microstack_init - INFO - nova-compute is running
2021-10-03 20:49:22,065 - microstack_init - INFO - nova-consoleauth is running
arty@arty-desktop:~
```

```
arty@arty-desktop:~$ sudo snap alias microstack.openstack openstack
[sudo] пароль для arty:
Добавлено:
  - microstack.openstack как openstack
arty@arty-desktop:~$ openstack image list
+-----+-----+-----+
| ID      | Name   | Status |
+-----+-----+-----+
| eb6145ff-5719-4ff1-862c-18d0ad0b4da5 | cirros | active |
+-----+-----+-----+
arty@arty-desktop:~$ openstack flavor list
+-----+-----+-----+-----+-----+
| ID    | Name     | RAM | Disk | Ephemeral | VCPUs | Is Public |
+-----+-----+-----+-----+-----+
| 1    | m1.tiny  | 512 | 1    | 0        | 1     | True   |
| 2    | m1.small | 2048 | 20   | 0        | 1     | True   |
| 3    | m1.medium | 4996 | 20   | 0        | 2     | True   |
| 4    | m1.large | 8192 | 20   | 0        | 4     | True   |
| 5    | m1.xlarge | 16384 | 20  | 0        | 8     | True   |
+-----+-----+-----+-----+-----+
arty@arty-desktop:~$ sudo snap get microstack config.credentials.keystone-password
tf0gsUyilekHmWP
arty@arty-desktop:~$
```



openstack.

Log in

User Name

Пароль

Workflow

OpenStack

Add microserver into OpenStack cloud as compute node.

The screenshot shows a terminal session with four windows:

- Top-left window:** arty@arty-desktop:~\$ sudo microstack add-compute. It prompts for a password and displays a long connection string.
- Top-right window:** arty@artymsserver:~\$ top. Shows system load average (0.46, 0.74, 0.47), tasks (133 total), CPU usage (%Cpu(s)), memory (MiB Mem: 1978.8 total), and swap (MiB Swap: 8227.0 total).
- Bottom-left window:** arty@artymsserver:~\$ sudo snap install microstack --devmode --beta. It installs the microstack beta version from Canonical.
- Bottom-right window:** arty@artymsserver:~\$ sudo microstack init --auto --compute --join hKhob3N0bmFtZa0xOTiuMTY4LjEuMTAwq2ZpbmdlcnByaW50xCcgLSWp9yFhL3soMdca... . It logs the configuration of the compute node, including clustering, networking, and virtualization support.
- Second bottom-left window:** arty@artymsserver:~\$ sudo microstack launch cirros -name testsm --availability-zone nova artysmserver. It launches a Cirros VM named testsm in the nova availability zone.
- Second bottom-right window:** arty@arty-mserver:~\$ openstack hypervisor list. It lists the hypervisors: arty-desktop (QEMU) and artymsserver (QEMU).
- Third bottom-left window:** arty@arty-mserver:~\$ microstack launch cirros -name testsm --availability-zone nova artysmserver. It shows the server launching process, including allocating a floating IP and marking it as BUILD.
- Third bottom-right window:** arty@arty-mserver:~\$ ssh -l /home/arty/snap/microstack/common/.ssh/id_microstack cirros@10.20.20.126. It connects to the newly launched VM.
- Fourth bottom-left window:** arty@arty-mserver:~\$ whoami. It shows the user is cirros.
- Fourth bottom-right window:** arty@arty-mserver:~\$ df -h. It shows the disk usage:

Filesystem	Size	Used	Available	Use%	Mounted on
/dev	240.2M	0	240.2M	0%	/dev
/dev/vda1	978.9M	24.0M	914.1M	3%	/
tmpfs	244.2M	0	244.2M	0%	/dev/shm
tmpfs	244.2M	92.0K	244.1M	0%	/run

Workflow

Terraform

Deploy two instances into OpenStack cloud (10.20.20.164, 10.20.20.196) based on ubuntu focal cloud image

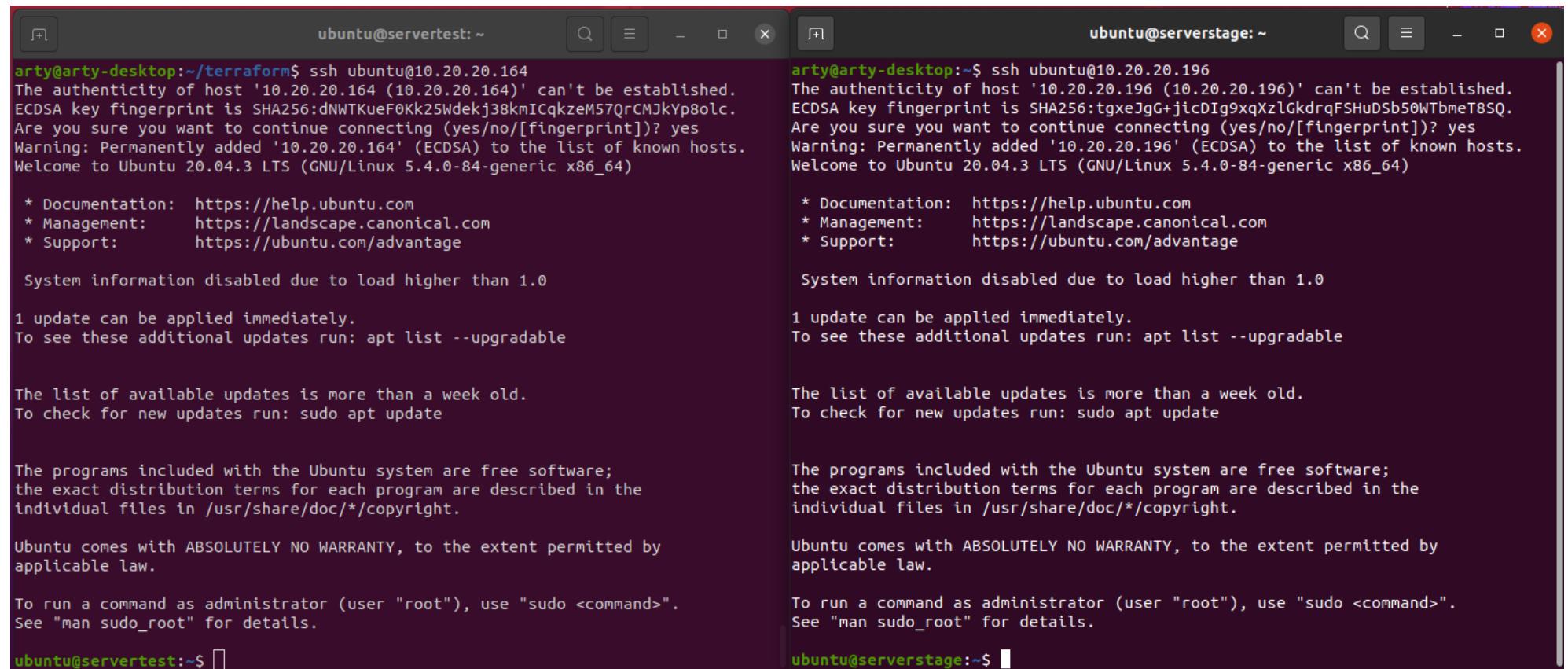
The screenshot shows a desktop environment with three main windows:

- Browser Window:** Displays the OpenStack project interface at <http://192.168.1.100/project/instances/>. The "Instances" tab is selected, showing two deployed Ubuntu Focal instances: "servertest" (IP 10.20.20.164) and "serverstage" (IP 10.20.20.196).
- Terminal Window:** Shows the output of a Terraform command. It lists resource creation events for floating IP, server, and floating IP association resources, followed by an "Apply complete!" message and a list of outputs including floating and private IP addresses for both servers.
- Code Editor (Visual Studio Code):** Displays the `main.tf` Terraform configuration file. The file defines an OpenStack provider, variables for keypair and network, and resources for two servers and their floating IP associations.

Workflow

Terraform

Ssh connection to instances



The image shows two terminal windows side-by-side. Both windows have a dark background and light-colored text. The left window is titled "ubuntu@servertest: ~" and the right window is titled "ubuntu@serverstage: ~". Both windows show the same sequence of commands and responses from an Ubuntu 20.04.3 LTS system.

```
arty@arty-desktop:~/terraform$ ssh ubuntu@10.20.20.164
The authenticity of host '10.20.20.164 (10.20.20.164)' can't be established.
ECDSA key fingerprint is SHA256:dNWTKueF0Kk25Wdekj38kmICqkzeM57QrCMJkYp8olc.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.20.20.164' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.4.0-84-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information disabled due to load higher than 1.0

1 update can be applied immediately.
To see these additional updates run: apt list --upgradable

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@servertest:~$ 
```

```
arty@arty-desktop:~$ ssh ubuntu@10.20.20.196
The authenticity of host '10.20.20.196 (10.20.20.196)' can't be established.
ECDSA key fingerprint is SHA256:tgxeJgG+jicDIg9xqXzlGkdrqFSHuDSb50WTbmeT8SQ.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.20.20.196' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.4.0-84-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

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individual files in /usr/share/doc/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@serverstage:~$ 
```

Workflow

Ansible

Initial configuration update cache, disable unattended upgrade, install OpenJDK and dir for jenkins nodes.

The screenshot shows a Visual Studio Code interface with the following details:

- File Explorer:** Shows a workspace named "WORKSPACE (WORKSPACE)" containing files like hosts, playbook.yml, main.tf, .terraform.lock.hcl, clouds.yaml, and various Go files (exfs.go, filmix.go, mediaboxbnd.go).
- Code Editor:** The file "playbook.yml" is open, displaying Ansible YAML code. The code performs several tasks:
 - Updates the package cache.
 - Disables timers for unattended upgrades.
 - Reloader the systemctl daemon.
 - Removes the "unattended-upgrades" package.
 - Installs OpenJDK 11.
 - Installs mc.
 - Creates a directory for Jenkins at "/home/ubuntu/jenkins".
 - Creates a directory for Jenkins if it doesn't exist.
- Terminal:** The terminal window shows the command "ansible-playbook playbook.yml" being run on a host named "arty@arty-desktop". The output logs the execution of each task, showing success (ok) or changes (changed) on two hosts: "serverstage" and "servertest".
- Status Bar:** Shows "PROBLEMS" with 1 error, "OUTPUT", "TERMINAL" (which is active), and "DEBUG CONSOLE".

Workflow

Jenkins

Install, configure plugins, nodes, build jobs.

The dashboard shows the following information:

- Nodes:** NodeStage (1024.00 MB, 1.89 GB, 2789ms, Linux (amd64)), NodeTest (1024.00 MB, 1.87 GB, 2329ms, Linux (amd64)), мастер (4.58 GB, 30.03 GB, 0ms, Linux (amd64)).
- Build Queue:** 1 job waiting.
- Builders:** 2 builders available.

The configuration for the 'serverstagejob' includes:

- General:** 'serverstage project job' is selected.
- [Plain text] Preview:** Options like Discard old builds, GitHub project, and This build requires lockable resources are shown.
- Source Code Management:** Set to Git, with a repository URL of `git@github.com:Artyhub/mediaboxbnd.git` and credentials named 'arty'.

The configuration for the 'servertestjob' includes:

- Build:** Contains an 'Execute shell' step with the following command:

```
echo "">serverstage
go version
go env -GO111MODULE=auto
#go env
pwd
hostname
go get -u golang.org/x/text
go build ./build/mediaboxbnd *.go
#go run *.go
echo $BUILD_NUMBER
```

- Post-build Actions:** An 'Add post-build action' dropdown is present.

Workflow

Jenkins

Setup ngrok (or Smee.io) - secure introspectable tunnel for GitHub Webhooks (simple port forwarding dont work in this case)

The screenshot shows the Jenkins interface for the Artyhub / mediaboxbnd project. The left sidebar has 'Webhooks' selected. The main panel shows a 'Manage webhook' configuration for a GitHub webhook. The 'Payload URL' is set to `https://[REDACTED].ngrok.io/github-webhook/`. The 'Content type' is set to `application/json`. The 'Secret' field contains a placeholder. Under 'SSL verification', 'Enable SSL verification' is selected. The 'Which events would you like to trigger this webhook?' section has 'Just the push event.' selected. The 'Active' checkbox is checked. A note below says 'We will deliver event details when this hook is triggered.'

A terminal window titled 'arty@arty-desktop: ~/ngrok' is overlaid on the right side of the screen. It shows an ngrok session with the following details:

Session Status	Account	Version	Region	Web Interface	Forwarding	Forwarding
online	Artyhub (Plan: Free)	2.3.40	United States (us)	http://127.0.0.1:4040	http://[REDACTED].ngrok.io -> http://localhost:8080	https://[REDACTED].ngrok.io -> https://localhost:8080

The terminal also displays connection statistics and recent HTTP requests.

Workflow

Test results

```
< > C ⚡ http://10.20.20.164:8090/v1?url=http://ex-fs.net/films/page/1&mode=cat

[https://ex-fs.net/films/106334-ne-vremya-umirat.html|https://ex-fs.net/uploads/posts/2021-10/1633373377-1161049491-ne-vremya-umirat-ex-fs.net.jpg|Не время умирать}
[https://ex-fs.net/films/106432-amerikanskoе-soprotivlenie.html|https://ex-fs.net/uploads/posts/2021-10/1633965811-1054821619-american-insurrection-ex-fs.net.jpg|Американское сопротивление}
[https://ex-fs.net/films/106421-golaya-singulyarnost.html|https://ex-fs.net/uploads/posts/2021-10/1633962876-1028865656-golaya-singulyarnost-ex-fs.net.jpg|Голая сингулярность}
[https://ex-fs.net/films/106411-pomeste.html|https://ex-fs.net/uploads/posts/2021-10/1633887089-77173203-pomeste-ex-fs.net.jpg|Поместье}
[https://ex-fs.net/films/106409-do-samoy-smerti.html|https://ex-fs.net/uploads/posts/2021-10/1633886886_south-of-heaven.jpg|До самой смерти}
[https://ex-fs.net/films/106408-ida-red.html|https://ex-fs.net/uploads/posts/2021-10/1633886794-1967834621-ida-red-ex-fs.net.jpg|Ида Рен}
[https://ex-fs.net/films/106410-esli-u-menya-ne-mozhet-byt-lyubvi-ya-hochu-vlasti.html|https://ex-fs.net/uploads/posts/2021-10/1633886981-1255479349-halsey-if-i-cant-have-love-i-want-power-ex-fs.net.jpg|Если любви, я хочу власти}
[https://ex-fs.net/films/106369-z-l-o-94.html|https://ex-fs.net/uploads/posts/2021-10/1633646822-304980475-zlo-94-ex-fs.net.jpg|З/Л о 94}
[https://ex-fs.net/films/106385-siniy-zaliv.html|https://ex-fs.net/uploads/posts/2021-10/1633713343-183619458-siniy-zaliv-ex-fs.net.jpg|Синий залив}
[https://ex-fs.net/films/106386-staryy-genri.html|https://ex-fs.net/uploads/posts/2021-10/1633713478-1524362890-staryy-genri-ex-fs.net.jpg|Старый Генри}
[https://ex-fs.net/films/106406-nedelya-posvyashcheniya.html|https://ex-fs.net/uploads/posts/2021-10/1633886188-932943542-cheer-for-your-life-ex-fs.net.jpg|Неделя посвящения}
[https://ex-fs.net/films/106430-posledniy-avtobus.html|https://ex-fs.net/uploads/posts/2021-10/1633965647-756068319-the-last-bus-ex-fs.net.jpg|Последний автобус}
[https://ex-fs.net/films/106420-lica.html|https://ex-fs.net/uploads/posts/2021-10/1633962832-1014308165-lica-ex-fs.net.jpg|Лица}
[https://ex-fs.net/films/105688-ne-dyshi-2.html|https://ex-fs.net/uploads/posts/2021-08/1629227824-1434495427-ne-dyshi-2-ex-fs.net.jpg|Не дыши 2}
[https://ex-fs.net/films/106075-holodnyy-raschet.html|https://ex-fs.net/uploads/posts/2021-09/1631983538-1577878346-holodnyy-raschet-ex-fs.net.jpg|Холодный расчет}
[https://ex-fs.net/films/105767-kodeks-killera.html|https://ex-fs.net/uploads/posts/2021-08/1629821541-891891245-kodeks-killera-ex-fs.net.jpg|Кодекс киллера}
[https://ex-fs.net/films/105328-poroхovoy-kokteyl.html|https://ex-fs.net/uploads/posts/2021-10/1633782055-96226969-poroхovoy-kokteyl-ex-fs.net.jpg|Пороховой коктейль}
[https://ex-fs.net/films/103174-odna-v-pole-voin.html|https://ex-fs.net/uploads/posts/2020-12/1608348460-army-of-one.jpg|Одна в поле воин}
[https://ex-fs.net/films/103052-chto-skryvaet-voda.html|https://ex-fs.net/uploads/posts/2021-10/1633781779-bugi.jpg|Что скрывает вода}
[https://ex-fs.net/films/104165-svadby-ne-budet.html|http://ex-fs.net/uploads/posts/2021-06/16238...< > C ⚡ http://10.20.20.164:8090/v1?url=https://ex-fs.net/films/page/2&mode=cat
[https://ex-fs.net/films/104093-bugi.html|https://ex-fs.net/uploads/posts/2021-10/1633781779-bugi.jpg|Буги}
[https://ex-fs.net/films/86759-goryachio-kanikuly.html|http://ex-fs.net/uploads/posts/2018-06/152 [https://ex-fs.net/films/106398-bab.html|https://ex-fs.net/uploads/posts/2021-10/1633800807-2033110421-bab-ex-fs.net.jpg|БАЕ}
[https://ex-fs.net/films/105923-zloe.html|https://ex-fs.net/uploads/posts/2021-09/1631369031-2597 [https://ex-fs.net/films/106397-lukaniya.html|https://ex-fs.net/uploads/posts/2021-10/1633800814-110462441-lukaniya-ex-fs.net.jpg|Лукания}
[https://ex-fs.net/films/106407-mapety-oso拜yak-s-ivideniyami.html|https://ex-fs.net/uploads/1P [https://ex-fs.net/films/106393-eugenia-grandet.html|https://ex-fs.net/uploads/posts/2021-10/1633798996_eugenie-grandet.jpg|Евгения Гранде}
[https://ex-fs.net/films/105586-devyatyy-kalibr.html|https://ex-fs.net/uploads/posts/2021-10/1633...< > C ⚡ http://10.20.20.164:8090/v1?url=https://ex-fs.net/films/page/2&mode=cat
[https://ex-fs.net/films/106312-2.html|https://ex-fs.net/uploads/posts/2021-10/1633118651 [https://ex-fs.net/films/106384-kista.html|https://ex-fs.net/uploads/posts/2021-10/1633713364-1613454968-kista-ex-fs.net.jpg|Киста}
[https://ex-fs.net/films/106312-2.html|https://ex-fs.net/uploads/posts/2021-10/1633118651 [https://ex-fs.net/films/106384-kista.html|https://ex-fs.net/uploads/posts/2021-10/1633713364-1613454968-kista-ex-fs.net.jpg|Киста]
[https://ex-fs.net/films/106401-mif-ohotniki-na-bigutta.html|https://ex-fs.net/uploads/posts/2021-10/163381-god-vechnoy-buri.html|https://ex-fs.net/uploads/posts/2021-10/1633712090-the-pharm.jpg|Год вечной бури}
[https://ex-fs.net/films/106399-glubinnyy-internet-pogruzhение-v-ad.html|https://ex-fs.net/upload...< > C ⚡ http://10.20.20.164:8090/v1?url=https://ex-fs.net/films/page/2&mode=cat
[https://ex-fs.net/films/106377-resonator-miskatonic-u.html|https://ex-fs.net/uploads/posts/2021-10/1633712682_the-resonator-miskatonic-u.jpg|Резонатор: Мискатонический Университет}
[https://ex-fs.net/films/106399-glubinnyy-internet-pogruzhение-v-ad.html|https://ex-fs.net/upload...< > C ⚡ http://10.20.20.164:8090/v1?url=https://ex-fs.net/films/page/2&mode=cat
[https://ex-fs.net/films/106374-zakat-na-reke-stiks.html|https://ex-fs.net/uploads/posts/2021-10/1633712401_sunset-on-the-river-stiks.jpg|Закат на реке Стикс}
[https://ex-fs.net/films/106374-zakat-na-reke-stiks.html|https://ex-fs.net/uploads/posts/2021-10/1633712401_sunset-on-the-river-stiks.jpg|Закат на реке Стикс]
[https://ex-fs.net/films/106377-bestseller.html|https://ex-fs.net/uploads/posts/2021-09/1633712323-apartament-413.jpg|Квартира 413}
[https://ex-fs.net/films/106377-bestseller.html|https://ex-fs.net/uploads/posts/2021-09/1633712323-apartament-413.jpg|Квартира 413]
[https://ex-fs.net/films/104894-vse-domu.html|https://ex-fs.net/uploads/posts/2021-10/1633711652-1664863506-nezvannye-detki-ex-fs.net.jpg|Незванные детки}
[https://ex-fs.net/films/106360-strashnye-istorii-dlya-rasskaza-neznakomcam.html|https://ex-fs.net/uploads/posts/2021-10/1633646718-704928751-strashnye-istorii-dlya-rasskaza-neznakomcam-ex-fs.net.jpg|Страшные истории]
[https://ex-fs.net/films/106366-tebe-odinoчko-segodnya-vecherom.html|https://ex-fs.net/uploads/posts/2021-10/1633646622-121937631-tebe-odinoчko-segodnya-vecherom-ex-fs.net.jpg|Тебе одиночко сегодня вечером}
[https://ex-fs.net/films/106367-zhelyayushchiy-sheltyay_koshka.html|https://ex-fs.net/uploads/posts/2021-10/1633646633-zhelyayushchiy-sheltyay_koshka-ex-fs.net.jpg|Желтая кошка}
[https://ex-fs.net/films/106369-bestseller.html|https://ex-fs.net/uploads/posts/2021-10/1633646186-bestseller-the-river-2000-pryazhka.html|Желтая кошка}
[https://ex-fs.net/films/106370-bestseller.html|https://ex-fs.net/uploads/posts/2021-09/1633712323-bestseller-ex-fs.net.jpg|Бестселлер}
[https://ex-fs.net/films/106065-voszkhodzhenie-pehotiny-nachalo.html|https://ex-fs.net/uploads/posts/2021-09/1631825625_rise-of-the-footsoldier-origins-the-tony-tucker-story-2021.jpg|Восхождение пехотинца}
[https://ex-fs.net/films/106324-cherneе-nochi.html|https://ex-fs.net/uploads/posts/2021-10/1633215185-1098272700-cherneе-nochi-ex-fs.net.jpg|Черные ночи}
[https://ex-fs.net/films/106330-popravki.html|https://ex-fs.net/uploads/posts/2021-10/1633965960-cam-quin-vijas-ex-fs.net.jpg|Поправки}
[https://ex-fs.net/films/106427-povoda-v-ruk.html|https://ex-fs.net/uploads/posts/2021-10/1633965442_taking-the-reins.jpg|Повода в руки}
[https://ex-fs.net/films/106426-mest-professora.html|https://ex-fs.net/uploads/posts/2021-10/1633965388-a-professors-vengeance.jpg|Место профессора}
[https://ex-fs.net/films/106425-idealnoe-sovpadenie.html|https://ex-fs.net/uploads/posts/2021-10/1633965152-the-perfect-wedding-match-2021.jpg|Иdealное совпадение}
[https://ex-fs.net/films/106069-v-tvoem-dome-kto-to-est.html|https://ex-fs.net/uploads/posts/2021-10/163355424-99788013-v-tvoem-dome-kto-to-est-ex-fs.net.jpg|В твоем доме кто-то есть}
[https://ex-fs.net/films/105585-boec-bez-pravil.html|https://ex-fs.net/uploads/posts/2021-10/163355367-464154134-boec-bez-pravil-ex-fs.net.jpg|Боец без правил}
[https://ex-fs.net/films/page/3/|/osd/image/music_player_next_BTN.png|Далее}

ubuntu@servertest:~/.jenkins/workspace/servertestjob
ubuntu@servertest:~/.jenkins/workspace/servertestjob$ ls
build exfs.go filmix.go mediaboxbnd.go
ubuntu@servertest:~/.jenkins/workspace/servertestjob$ cd build
ubuntu@servertest:~/.jenkins/workspace/servertestjob$ ls
mediaboxbnd
ubuntu@servertest:~/.jenkins/workspace/servertestjob$ ./mediaboxbnd
ubuntu@servertest:~/.jenkins/workspace/servertestjob$ buildS . /mediaboxbnd

ubuntu@servertest:~/.jenkins/workspace/servertestjob/build
top 20: 20:36:40 up 12:48, 1 user, load average: 0.14, 0.06, 0.04
Tasks: 93 total, 1 running, 92 sleeping, 0 stopped, 0 zombie
%CPU(s): 8.5 us, 3.6 sy, 0.0 nt, 87.6 id, 0.0 wa, 0.0 hi, 0.3 st, 0.0 st
MB Mem: 1151.7 total, 98.4 free, 228.2 used, 825.0 buff/cache
MB Swap: 1024.0 total, 1023.5 free, 0.5 used. 758.4 avail Mem
PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND
6904 ubuntu 20 0 1007460 13488 7028 S 8.0 1.1 0:03.72 mediaboxbnd
6909 ubuntu 20 0 10884 3944 3424 R 2.9 0.3 0:03.73 top
6259 ubuntu 20 0 2349432 119340 28376 S 1.6 10.1 4:44.85 java
6839 ubuntu 20 0 13932 6184 4726 S 0.6 0.5 0:01.07 sshd
447 root rt 0 280200 17992 8206 S 0.3 1.5 1:01.69 multipathd
1 root 20 0 170624 14408 8352 S 0.0 1.2 3:14.09 systemd
2 root 20 0 0 0 0 S 0.0 0.0 0:00.15 kthread
3 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 rcu_gp
4 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 rcu_par_gp
6 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/0:0H:kblockd

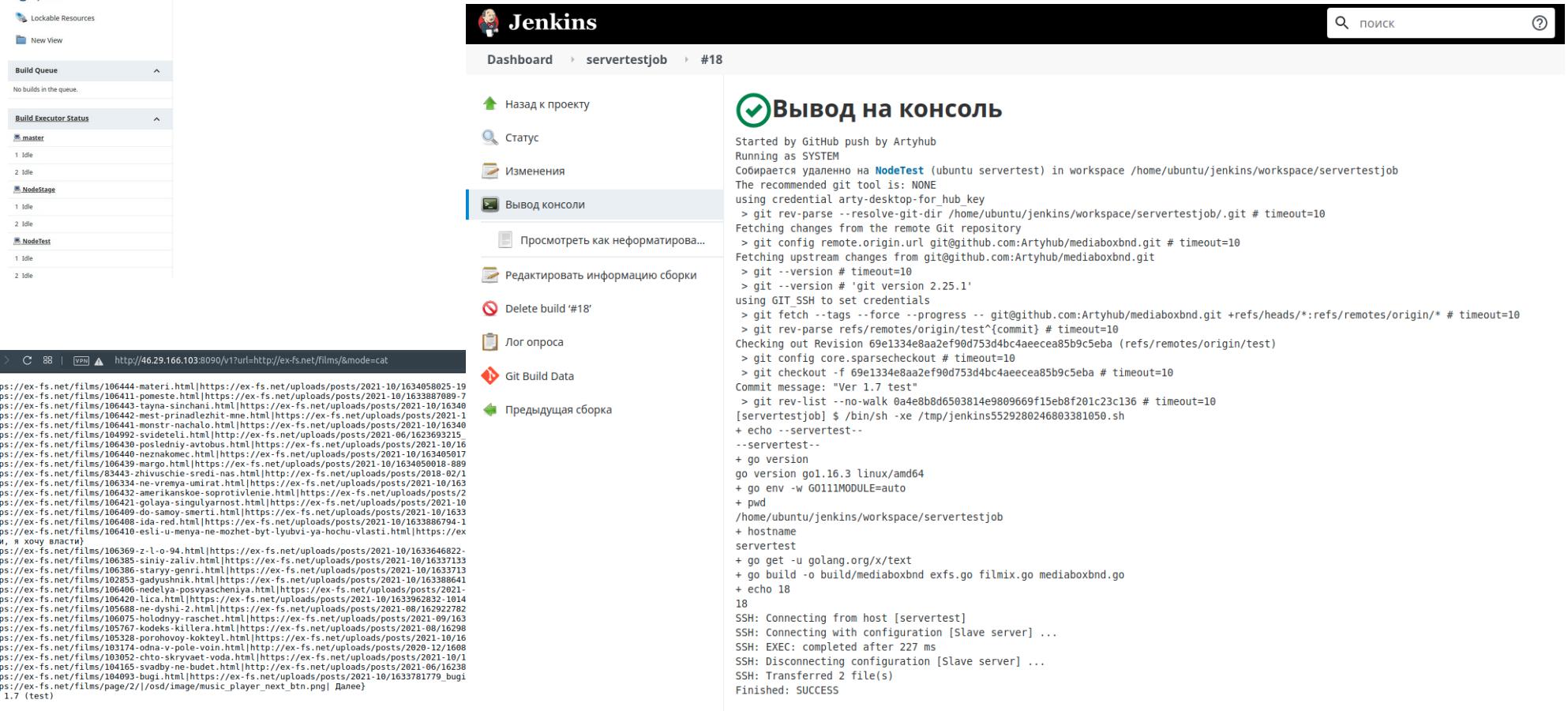
ubuntu@servertest:~/.jenkins/workspace/servertestjob/build
```

Workflow

Test results, delivery to external servers



The Jenkins dashboard displays two jobs: `serverstagejob` and `servertestjob`. Both jobs have a status of green and were last successful 6 hours and 47 minutes ago. The `servertestjob` has a duration of 1 minute and 20 seconds.

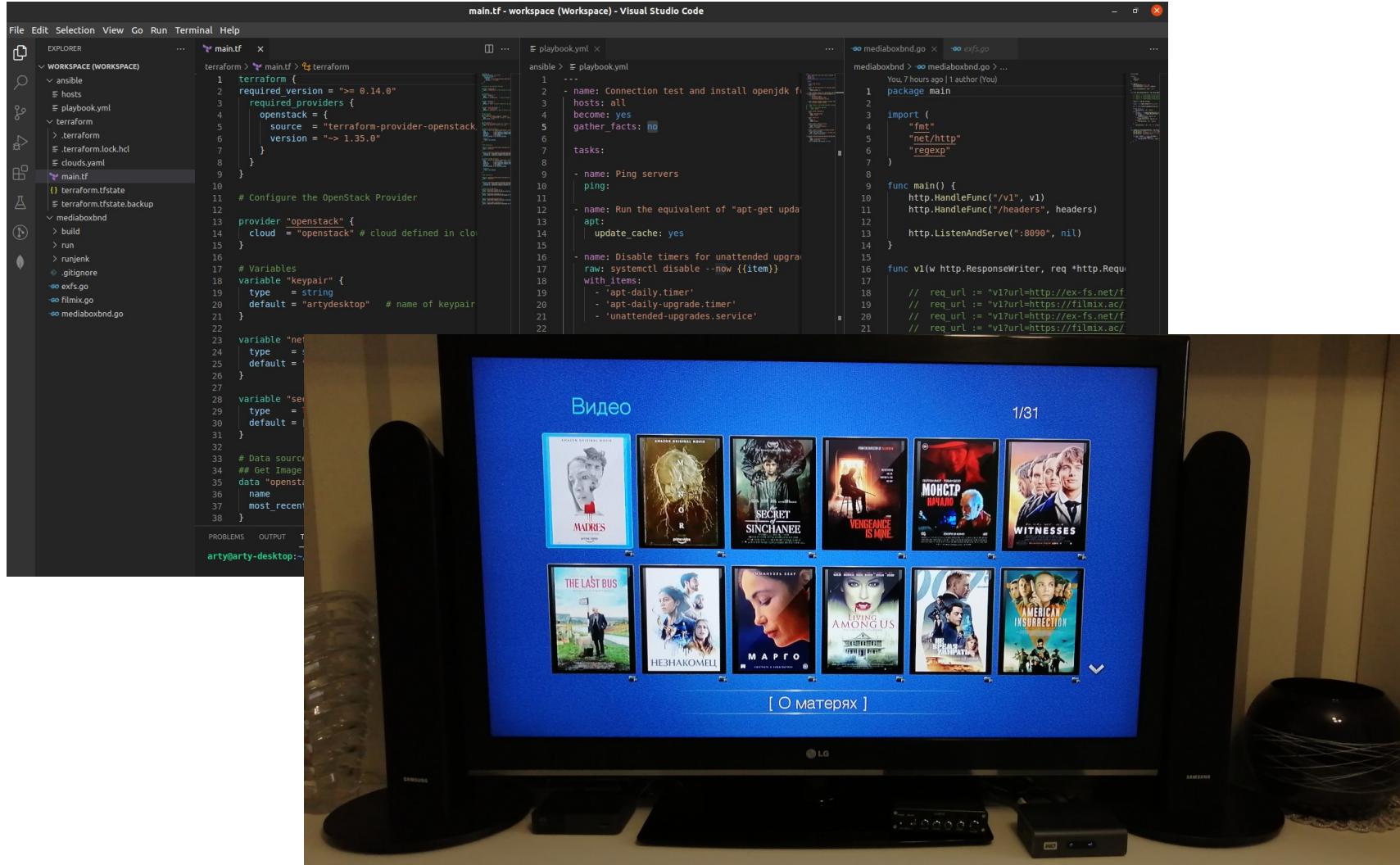


The build log for `servertestjob #18` shows the following output:

```
Started by GitHub push by Artyhub
Running as SYSTEM
Собирается удаленно на NodeTest (ubuntu servertest) в рабочем пространстве /home/ubuntu/jenkins/workspace/servertestjob
The recommended git tool is: NONE
using credential arty-desktop-for_hub_key
> git rev-parse --resolve-git-dir /home/ubuntu/jenkins/workspace/servertestjob/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url git@github.com:Artyhub/mediaboxbnd.git # timeout=10
Fetching upstream changes from git@github.com:Artyhub/mediaboxbnd.git
> git --version # timeout=10
> git --version # 'git' version 2.25.1'
using GIT_SSH to set credentials
> git fetch --tags --force --progress -- git@github.com:Artyhub/mediaboxbnd.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/test^{commit} # timeout=10
Checking out Revision 69e1334e8aa2ef90d753d4bc4aeecea85b9c5eba (refs/remotes/origin/test)
> git config core.sparsecheckout # timeout=10
> git checkout -f 69e1334e8aa2ef90d753d4bc4aeecea85b9c5eba # timeout=10
Commit message: "Ver 1.7 test"
> git rev-list --no-walk 0a4e8b8d6503814e9809669f15eb8f201c23c136 # timeout=10
[servertestjob] $ /bin/sh -xe /tmp/jenkins5529280246803381050.sh
+ echo --servertest-
--servertest-
+ go version
go version go1.16.3 linux/amd64
+ go env -w GO111MODULE=auto
+ pwd
/home/ubuntu/jenkins/workspace/servertestjob
+ hostname
servertest
+ go get -u golang.org/x/text
+ go build -o build/mediaboxbnd exfs.go filmix.go mediaboxbnd.go
+ echo 18
18
SSH: Connecting from host [servertest]
SSH: Connecting with configuration [Slave server] ...
SSH: EXEC: completed after 227 ms
SSH: Disconnecting configuration [Slave server] ...
SSH: Transferred 2 file(s)
Finished: SUCCESS
```

Workflow

Final result on WDTV Live media player.



Addon

Performance comparison of the implementation: OpenStack vs AWS. (So make the same infrastructure using AWS).

```
main.tf - workspace_aws (Workspace) - Visual Studio Code
File Edit Selection View Go Run Terminal Help
File Explorer ...
WORKSPACE_AWS (WORKSPACE)
  terraformaws ...
    main.tf ...
      main.tf terraform
        terraformaws > main.tf > resource "aws_key_pair" "deployer"
          provider "aws" {
            region = "eu-central-1"
          }
          resource "aws_instance" "server" {
            ami = "ami-05f7491af5ccf733a" # Need exactly this for free tier
            instance_type = "t2.micro"
            vpc_security_group_ids = [ aws_security_group.my_server.id ]
            key_name = aws_key_pair.deployer.key_name
            tags = {
              Name = "servertest"
            }
          }
          resource "aws_instance" "server2" {
            ami = "ami-05f7491af5ccf733a" # Need exactly this for free tier
          }
        
```

AWS Services ▾

New EC2 Experience Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances New

Dedicated Hosts

Capacity Reservations

Outputs:

```
serverstage_public_ip = "18.196.174.184"
servertest_public_ip = "3.127.234.63"
```

OUTLINE

TERRAFORM MODULE CALLS

Instances (2) Info

Filter Instances

Name	Instance ID	Instance state	Instance type	Status check	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPV
servertest	i-0971cc3bd7f0594e8	Running	t2.micro	2/2 checks passed	eu-central-1b	ec2-3-127-234-63.eu.c...	3.127.234.63	-	-
serverstage	i-0d54a3846a37d7250	Running	t2.micro	2/2 checks passed	eu-central-1c	ec2-18-196-174-184.eu...	18.196.174.184	-	-

Select an instance above

This site can't be reached

3.127.234.63 refused to connect.

Try

- ✓ Checking the connection
- ✓ Checking the proxy and the firewall

ERR_CONNECTION_REFUSED

Check your internet connection.

Check any cables and reboot any routers, modems, or other network devices you may be using.

+ cpu performance better on AWS so build time is better.

+ high availability and durability level for AWS.

- instances from eu region dont have full acces to media from ua/ru region.

- billing.

Thank you!