

**LAPORAN PRAKTIKUM  
SESI #15  
KEAMANAN SISTEM INFORMASI**



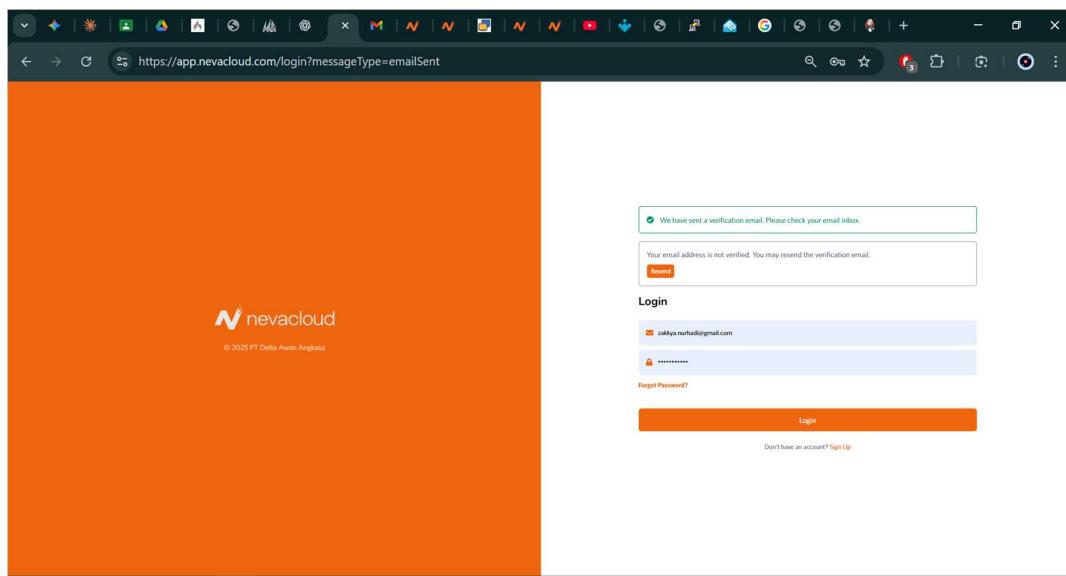
Oleh

Damar Arif Ghifari	23753012
Muhammad Arya Fadli	23753024
Zakky Nurhadi	23753041

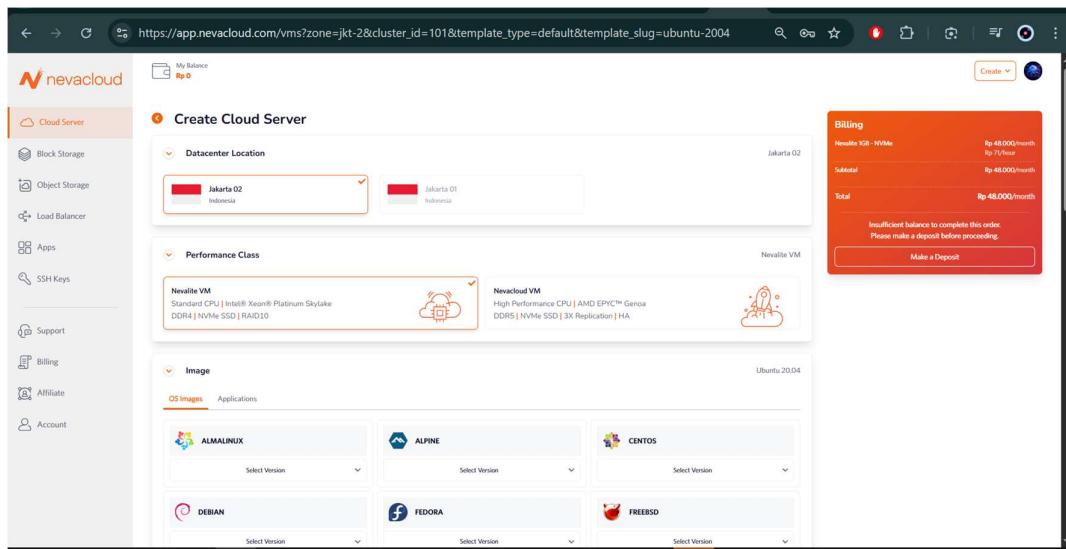
**PROGRAM STUDI MANAJEMEN INFORMATIKA  
JURUSAN TEKNOLOGI INFORMASI  
POLITEKNIK NEGERI LAMPUNG  
2025**

LINK Github: <https://github.com/zakkyanurhadi/pm8.git>

## 1.1 Daftar Nevacloud



## 1.2 Buat VPS



The screenshot shows a multi-step process for creating a new server instance.

**Step 1: OS Selection**

- OpenSUSE:** Select Version dropdown.
- ROCKYLinux:** Select Version dropdown.
- Ubuntu:** Select Version dropdown, currently set to "Ubuntu 20.04".

**Step 2: Billing Summary**

Item	Cost
Nevalite 1GB - NVMe	Rp 48,000/month Rp 72/hour
<b>Subtotal</b>	Rp 48,000/month
<b>Total</b>	<b>Rp 48,000/month</b>

Message: Insufficient balance to complete this order. Please make a deposit before proceeding.

**Step 3: Plan Selection**

Plan	Pricing	Memory	CPU	Main Storage
<input checked="" type="radio"/> Nevalite 1GB - NVMe	Rp 48,000/month Rp 72/hour	1 GB	1 Core	20 GB
<input type="radio"/> Nevalite 2GB - NVMe	Rp 100,000/month Rp 100/hour	2 GB	2 Core	30 GB
<input type="radio"/> Nevalite 4GB - NVMe	Rp 270,000/month Rp 450/hour	4 GB	3 Core	60 GB
<input type="radio"/> Nevalite 8GB - NVMe	Rp 520,000/month Rp 700/hour	8 GB	4 Core	100 GB
<input type="radio"/> Nevalite 12GB - NVMe	Rp 710,000/month Rp 1,000/hour	12 GB	4 Core	150 GB
<input type="radio"/> Nevalite 16GB - NVMe	Rp 970,000/month Rp 1,500/hour	16 GB	6 Core	200 GB

**Create New SSH Key**

SSH Public Key to access cloud servers without password.  
If you don't have one, learn how to [Generate SSH Keys](#).

```
---- BEGIN SSH2 PUBLIC KEY ----
Comment: "rsa-key-20251208"
AAAAB3NzaC1yc2EAAAQABAAQACQcipVzOwQyKPMi6NETydSyGgBZbXfKlvWz+
QpvoepRvUY2pY4vnXIUz+CemaFxHvrO9GM+Oxfq+dGydYwl4/433nMVRT52zvilz
HQ7NQCWBpwUQWZKC2JaRyiXjuuar+apyKQEXr/TGywihvWg4fuRY2rrOWpwuuJwb
RzuiYZ5XJp4TTY3Cd+/uDubl5gAllVvFdmiYlnkQSEteOuqAl8Ohy9W2Q9or9nh
```

PM 8

**Add SSH Key**

**Additional Settings**

**Authentication**

**Hostname/Label**

**Billing**

Plan	Price
Nevalte 1GB - NVMe	Rp 48,000/month Rp 7V/hour 20% of the base cost
<b>Total</b>	<b>Rp 48,000/month</b>

**Cloud Server**

You have reached the quota of the maximum number of cloud servers or account balance has fallen below the minimum threshold. Please make a deposit into account balance to create more cloud servers.

Instance	IP Address	Location	Plan	Created	Status
pm8.io	202.155.157.211	Jakarta 02	Nevalte 1GB - NVMe	6 minutes ago	running

**pm8.io** (Ubuntu 20.04, 1 CPU Core, 1 GB Memory, 20 GB Storage)

**Access**

- SSH Access: ssh root@202.155.157.211
- Public DNS: 202.155.157.211.nevacloud.net

**Summary**

**IP Addresses**

Type	Address
IPv4 Address	202.155.157.211
IPv6 Address	2001:df75:300:18:659

**Access**

**Graph**

**CPU**

**Memory**

@Kelompok\_8

202.155.157.211

Login ssh

```

MINGW64:/c/Users/User
ZK@DESKTOP-ZK01 MINGW64 ~ (main)
$ ssh root@202.155.157.211
The authenticity of host '202.155.157.211 (202.155.157.211)' can't be established.
ED25519 key fingerprint is SHA256:HSlazYF7SpgBQL7jNBTKxfPr9gLn7/HTovEiT94/wwA.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes

```

pm8.io

Summary IP Addresses

IP Address 202.155.157.211

IP Address 200.155.157.200

File Edit Format View Help

like1campol\_8

Block Storage Network Local Storage Local Balance CPU

Raw, Journal, RAM, Locations, Available Created: December 8, 2022, Last Modified: Rewritten: No, Available: Memory

File Insert Table References Mailings Review View Developer Help

The authenticity of host '202.155.157.211 (202.155.157.211)' can't be established.

ED25519 key fingerprint is SHA256:HSlazYF7SpgBQL7jNBTKxfPr9gLn7/HTovEiT94/wwA.

This key is not known by any other names.

Are you sure you want to continue connecting (yes/no/[fingerprint])? yes

Normal

Warning: Permanently added '202.155.157.211' (ED25519) to the list of known hosts.

root@202.155.157.211's password:

Clipboard Font Paragraph Style

Body

Hostnames Label

pm8.io

```

MINGW64:/c/Users/User
ZK@DESKTOP-ZK01 MINGW64 ~ (main)
$ ssh root@202.155.157.211
The authenticity of host '202.155.157.211 (202.155.157.211)' can't be established.
ED25519 key fingerprint is SHA256:HSlazYF7SpgBQL7jNBTKxfPr9gLn7/HTovEiT94/wwA.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes

```

```
root@pm8: ~
$ ssh root@202.155.157.211
The authenticity of host '202.155.157.211 (202.155.157.211)' can't be established.
ED25519 key fingerprint is SHA256:HSlazYF7SpgBQL7jNBTKxfPr9gLn7/HTovEiT94/wwA.  Develop
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '202.155.157.211' (ED25519) to the list of known hosts.
root@202.155.157.211's password: x  A  B  C  D  E  F  G  H  I  J  K  L  M  N  O  P  Q  R  S  T  U  V  W  X  Y  Z  Normal
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.4.0-144-generic x86_64)

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

System information disabled due to load higher than 1.0

 * Ubuntu 20.04 LTS Focal Fossa has reached its end of standard support on 31 Ma
For more details see:
https://ubuntu.com/20-04

 * Introducing Expanded Security Maintenance for Applications.
Receive updates to over 25,000 software packages with your
Ubuntu Pro subscription. Free for personal use.

https://ubuntu.com/pro

Expanded Security Maintenance for Infrastructure is not enabled.

0 updates can be applied immediately.

20 additional security updates can be applied with ESM Infra.
Learn more about enabling ESM Infra service for Ubuntu 20.04 at
https://ubuntu.com/20-04

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

Powered by Nevacloud.com

root@pm8:~# |
```

## 1.3 Install LAMP (Linux, Apache, Mysql, PHP)

### 1.3.1 Update ==> sudo apt update && sudo apt upgrade -y

```
root@pm8:~# sudo apt update && sudo apt upgrade -y
Hit:1 http://mirror.nevawcloud.com/ubuntu/ubuntu-archive focal InRelease
Hit:2 http://mirror.nevawcloud.com/ubuntu/ubuntu-archive focal-updates InRelease
Hit:3 http://mirror.nevawcloud.com/ubuntu/ubuntu-archive focal-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu focal-security InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
4 packages can be upgraded. Run 'apt list --upgradable' to see them.
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following security updates require Ubuntu Pro with 'esm-infra' enabled:
  bind9-dnsutils intel-microcode linux-headers-generic jq openssl ruby2.7
  libssh-4 libpython3.8-minimal git-man libsystemd-gcc-10-base
  linux-image-generic libsqlite3-0 python3-urllib3 bind9-host libjq1 dnsutils
  sudo libpython3.8 python3-open-vm-tools git udev python3-requests libudevel
  libssoup2.4-1 systemd-timesyncd librsvg2.7 python3.8-minimal systemd-sysv
  libpam-systemd systemd libnss-systemd libgcc-s1 libxml2 libpython3.8-stdlib
  libgnutls30 libssl1.1 libstdc++6 linux-generic bind9-libs libxslt1.1
Learn more about Ubuntu Pro at https://ubuntu.com/pro
The following NEW packages will be installed:
  libpython3.8-pp0 libpython3-parsing libpython3-pro-client libpython3-pro-client-l10n
The following packages will be upgraded:
  python3-update-manager sosreport ubuntu-advantage-tools update-manager-core
4 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
Need to get 761 kB of archives.
```

### 1.3.2 sudo apt install apache2 php php-mysql php-common php-cli php-json php-common php-opcache libapache2-mod-php mariadb-server

```
Last login: Mon Dec  8 14:12:09 2025 from 103.151.63.3
root@pm8:~# sudo apt install apache2 php php-mysql php-common php-cli php-json php-common php-opcache libapache2-mod-php mariadb-server -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
Note: selecting 'php7.4-opcache' instead of 'php-opcache'
You might also want to install the newest version (2.4.41,Ubuntu3.23).
The following additional packages will be installed:
  galera-3 libapache2-mod-php7.4 libcgip-fast-perl libconfig-inifiles-perl libdbd-mysql-perl libdbi-perl libcode-locale-perl libfcgi-perl
  libhtml-parser-perl libhtml-tagset-perl libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl liblwp-mediatypes-perl
  libmysqlclient21 libsnappyv5 libterm-readkey-perl libtimschedule-perl liburi-perl mariadb-client-10.3 mariadb-client-core-10.3
  mariadb-server-10.3 mariadb-server-core-10.3 mysql-common php7.4 php7.4-cli php7.4-common php7.4-jdbc php7.4-mysql php7.4-readline socat
Suggested packages:
  php5-apache libclone-perl libltdbm-perl libnet-daemon-perl libsql-statement-perl libdata-dump-perl libipc-sharedcache-perl libwww-perl mailx mariadb-test
  tinyca
The following NEW packages will be installed:
  galera-3 libapache2-mod-php libapache2-mod-php7.4 libcgip-fast-perl libconfig-inifiles-perl libdbd-mysql-perl libdbi-perl
  libcode-locale-perl libfcgi-perl libhtml-tagset-perl libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libmysqlclient21 libsnappyv5 libterm-readkey-perl libtimschedule-perl liburi-perl mariadb-client-10.3 mariadb-client-core-10.3
  mariadb-common mariadb-server mariadb-server-10.3 mariadb-server-core-10.3 mysql-common php php-common php-json php-mysql php7.4 php7.4-cli
  php7.4-common php7.4-jdbc php7.4-mysql php7.4-opcache php7.4-readline socat
0 upgraded, 42 newly installed, 0 to remove and 0 not upgraded.
Need to get 25.7 MB of archives.
After this operation, 194 MiB of additional disk space will be used.
Get:1 http://mirror.nevawcloud.com/ubuntu/ubuntu-archive focal/main amd64 mysql-common all 5.8+1.0.5ubuntu2 [7,496 B]
Get:2 http://mirror.nevawcloud.com/ubuntu/ubuntu-archive focal-updates/universe amd64 mariadb-common all 1:10.3.39-0ubuntu0.20.04.2 [16.0 kB]
Get:3 http://mirror.nevawcloud.com/ubuntu/ubuntu-archive focal/universe amd64 galera-3 amd64 25.3.29-1 [898 kB]
Get:4 http://mirror.nevawcloud.com/ubuntu/ubuntu-archive focal-updates/main amd64 libdbi-perl amd64 1.643-lubuntu0.1 [730 kB]
Get:5 http://mirror.nevawcloud.com/ubuntu/ubuntu-archive focal/main amd64 libconfig-inifiles-perl all 3.0.00002-1 [40.6 kB]
```

### 1.3.3 Hasil web dan Mysql

The screenshot shows a web browser window with the URL <http://202.155.157.211>. The page title is "Apache2 Ubuntu Default Page" with the Ubuntu logo. A red banner at the top says "It works!". Below it, there is a message about the default welcome page and configuration overview. The terminal window below shows the MySQL monitor with a connection to root@pm8, version 10.3.39-MariaDB-Ubuntu0.20.04.2 Ubuntu 20.04.

```
root@pm8:/var/www/html# nano index.php
root@pm8:/var/www/html# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 37
Server version: 10.3.39-MariaDB-Ubuntu0.20.04.2 Ubuntu 20.04

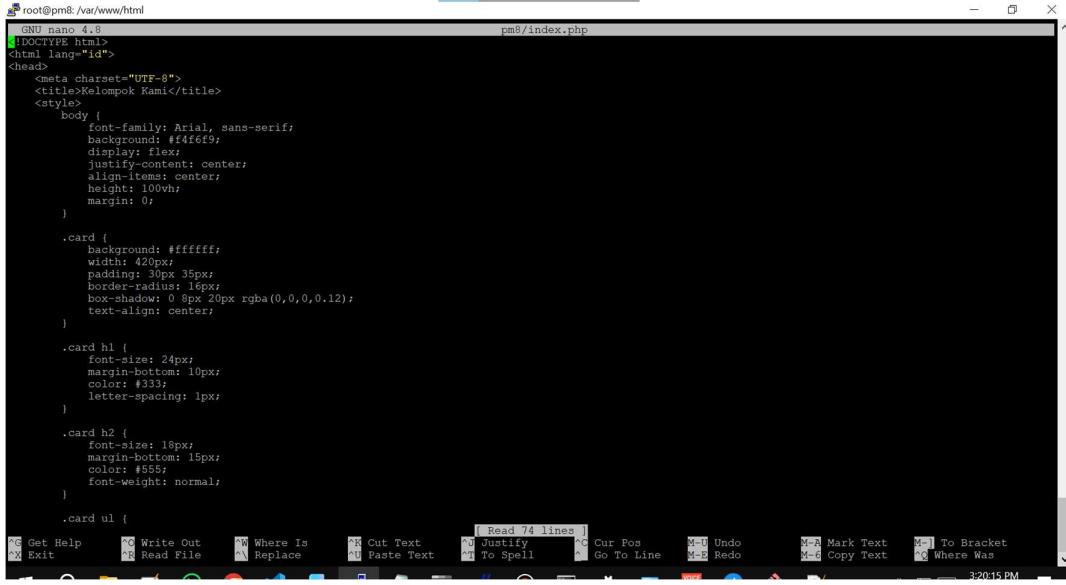
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> 
```

### 1.3.4 Edit dan menambah folder

```
Processing triggers for libapaci
root@pm8:~# cd /var/www/html/
root@pm8:/var/www/html# ls
index.html
root@pm8:/var/www/html# nano i
```



```

root@pm8:/var/www/html
GNU nano 4.8
[DOC TYPE html]
<html lang="id">
<head>
<meta charset="UTF-8">
<title>Kelompok Kami</title>
<style>
body {
    font-family: Arial, sans-serif;
    background-color: #f1f6f9;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
    margin: 0;
}

.card {
    background-color: #ffffff;
    width: 420px;
    padding: 30px 35px;
    border-radius: 16px;
    box-shadow: 0 8px 20px rgba(0,0,0,0.12);
    text-align: center;
}

.card h1 {
    font-size: 24px;
    margin-bottom: 10px;
    color: #333;
    letter-spacing: 1px;
}

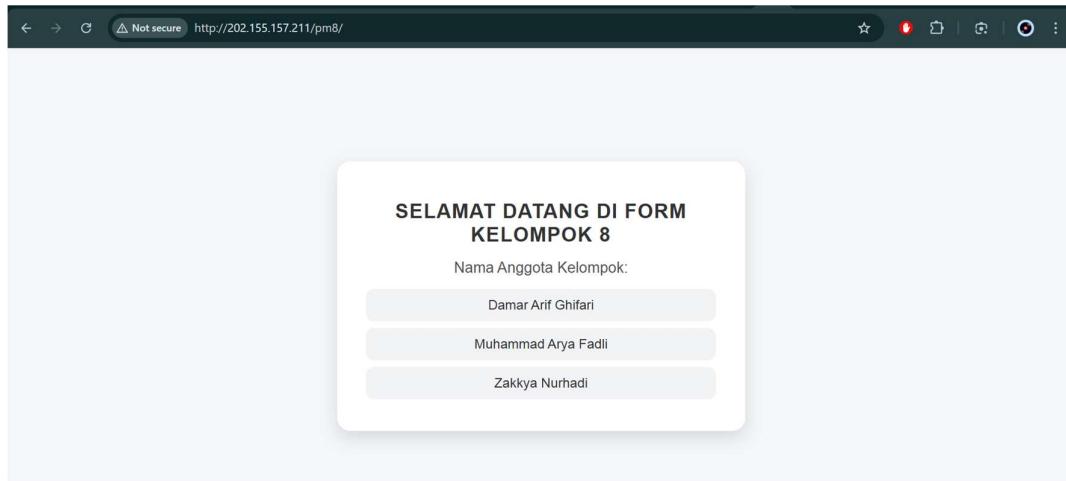
.card h2 {
    font-size: 18px;
    margin-bottom: 15px;
    color: #555;
    font-weight: normal;
}

.card ul {
    list-style-type: none;
    padding: 0;
}

```

Get Help    Write Out    Where Is    Cut Text    Justify    Cur Pos    Undo    Mark Text    To Bracket  
 Exit    Read File    Replace    Paste Text    To Spell    Go To Line    Redo    Copy Text    Where Was

Hasil website



## 1.4 Tugas Inti ==> Mengintegrasikan antara Github, Jenkins, dan VPS Cloud.

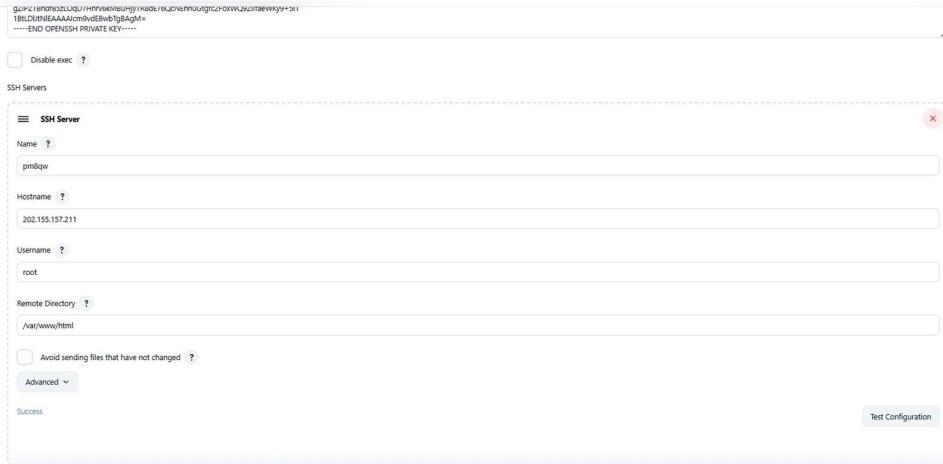
**4.1 Buat mekanisme otomasi jika ada perubahan code, push ke github dan secara otomatis jenkins akan mengirimkan code github tadi ke VPS Cloud menggunakan mekanisme "Publish Over SSH" ==> dokumentasinya ada disini ==> <https://plugins.jenkins.io/publish-over-ssh/>**

Konfigurasi Publish Over SSH

```

root@pm8:/var/www/html/var/www/html# ls
index.php
root@pm8:/var/www/html/var/www/html# cd ..
root@pm8:/var/www/html/var/www# cd ..
root@pm8:/var/www/html/var# cd ..
root@pm8:/var/www/html# ls
index.html index.php pm8 var
root@pm8:/var/www/html# rm index.html
root@pm8:/var/www/html# ssh-keygen -t rsa -b 4096^C
root@pm8:/var/www/html# cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys^C
root@pm8:/var/www/html# cat ~/.ssh/id_rsa.pub^C
root@pm8:/var/www/html# chmod 600 ~/.ssh/authorized_keys^C
root@pm8:/var/www/html# cat ~/.ssh/id_rsa
-----BEGIN OPENSSH PRIVATE KEY-----
b3BlnNzaClrXktdjEAAAABG5vbmuAAAAEb9uZQAAAAAAAABAAACFwAAAAdzc2gtcn
NhAAAAAwEAAQAAgEA6Jqm9aYfIcSydhetxXb1k3O1LHJwS5m9Dl0ghQbF1RAteEwPUKwJ
NQ9oTcKfNeLUncWyyqV/Ski0ASDZl1hlp4uI8/Fjz3XHQj810opa4CH35/5tu+RqvhjnS
u0FPFUuzx/2dyiQiCp/wqWTixgEh3Y9cReR483WMrdfT66us/WrM+rSvUCYXJvrGZYKXUFT
0zsyFSif70dA7DCW/PZHtJD1CQMbz34yS/mau7QnZ4U01mReowmWK8ox2dttb+C41BhFo
5KutsyGZSh7DlQW55f1oA6L+S+xi2ME+Qa/aYxWG4xR127jfpvF/qKeUgeefYeKFYOJhd/
lyTO+BeOlgiHwe/NmZg12xKEB4bTEjJ+nnmM7nBd2x+sJyid5/qhtAxxxQQG8d2q8ve3j
CBvzZYmNGArStjm3uhgEH0IStbcb/01QK/1TiyeT32F6plbckK38/Sig0y9zvnDDwUPBOL
BeytLExPAyXwvJia4Mk68U0miF4Vz08L1hntMJZKydzRGPKfsLKvWTabGbKucbVeIJMR
+SAjKbkuqjHoalMzYaPZ4jw901DQeQjdpcXUmBwtCx32dMTb3wSsQ5zFTnPwa/SgU9i1QJ
nu4dJQo4z6KtpP6+NkvilaWYVp+A26ryu4EOlu0Zr16Ybx2BP1gBUdxLp4LfdgAFxFy1
0AAAadActaqV3CKK1caAAAHe3NcLXJz+YQAAAAGfA6J0m9aYfIcSydhetxXb1k3O1LHJwS5m
-----END OPENSSH PRIVATE KEY-----

```



Webhooks

Add webhook

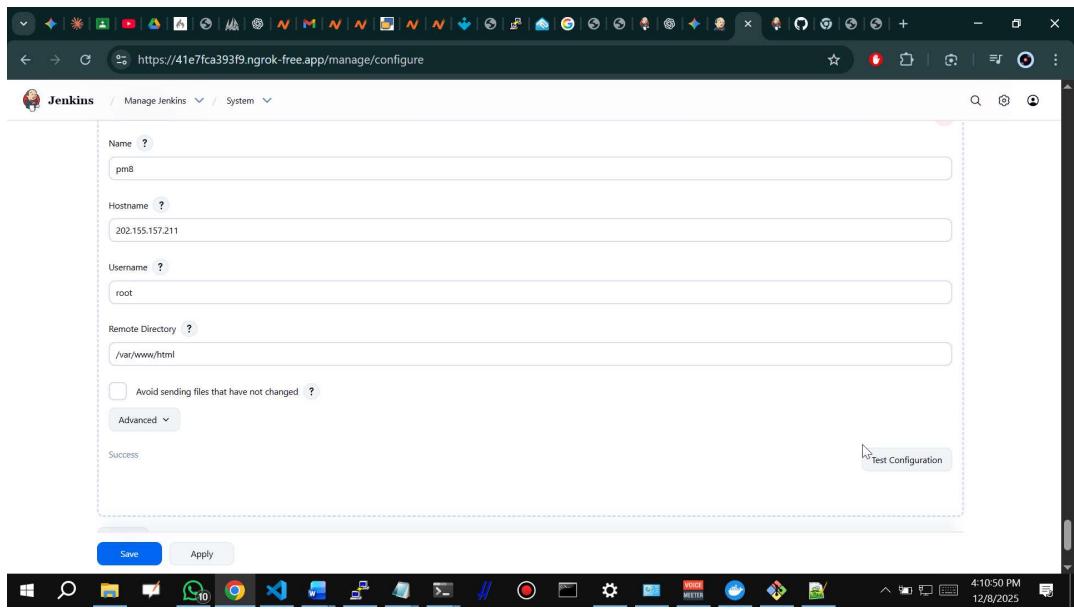
Webhooks allow external services to be notified when certain events happen. When the specified events happen, we'll send POST request to each of the URLs you provide. Learn more in our [Webhooks Guide](#).

https://41e7fca393f9.ngrok-free.ap... (push)

Last delivery was successful.

Edit Delete

4.2 Arahkan remote directory pada pengaturan di jenkins ke ==> /var/www/html  
(agar tampilan web langsung berubah)



Source Code Management

Connect and manage your code repository to automatically pull the latest code for your builds.

None

Git [?](#)

Repositories [?](#)

Repository URL: <https://github.com/zakkyanurhadi/pm8.git>

Credentials: - none - [+](#) Add

Advanced [▼](#)

+ Add Repository

triggers

Set up automated actions that start your build based on specific events, like code changes or scheduled times.

Trigger builders remotely (e.g., from scripts) [?](#)

Build after other projects are built [?](#)

Build periodically [?](#)

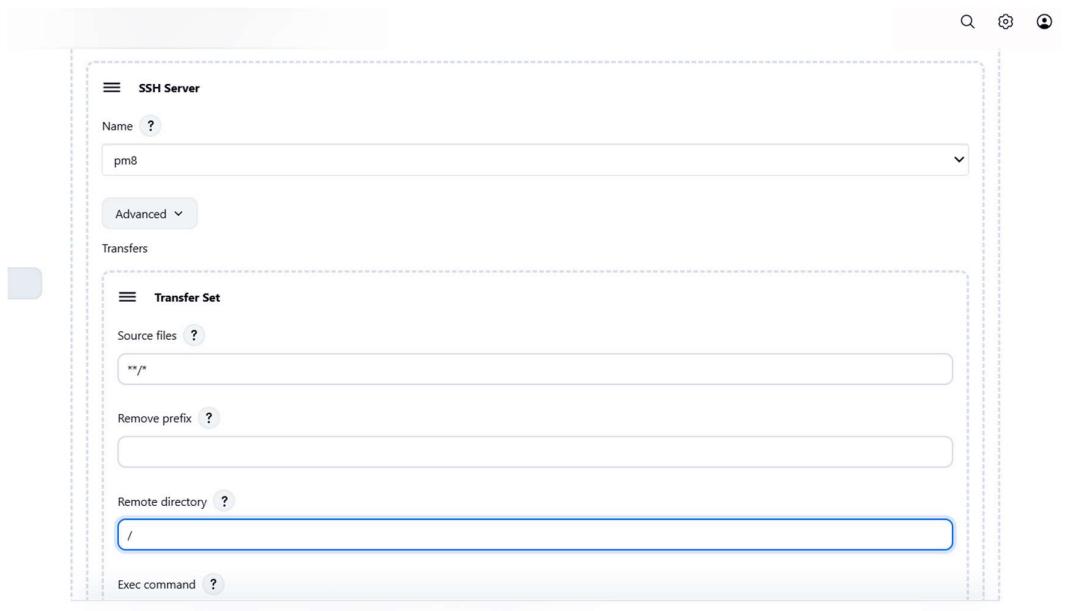
GitHub hook trigger for GITScm polling [?](#)

Poll SCM [?](#)

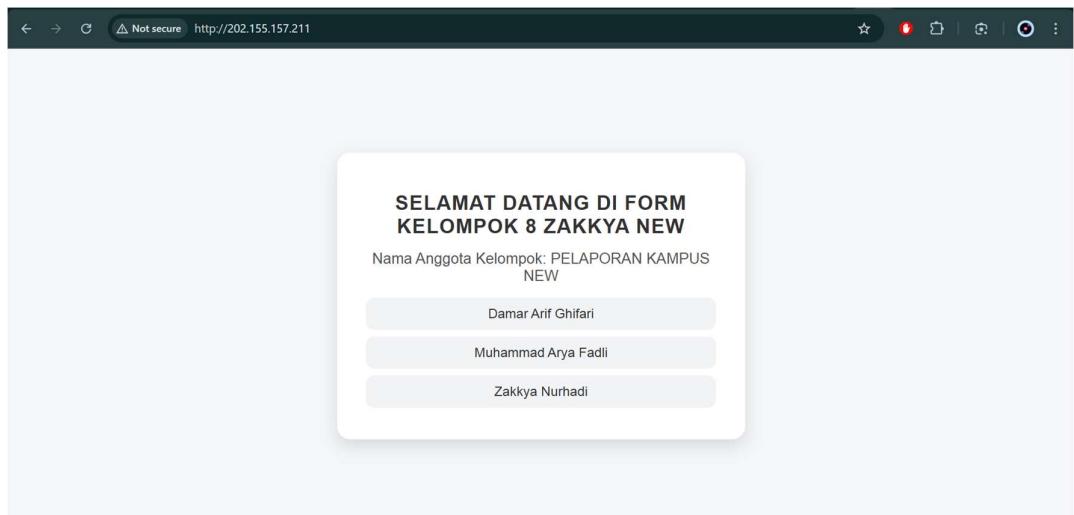
Schedule: \* \* \* \* \*

**⚠️** Do you really mean "every minute" when you say "\* \* \* \* \*"? Perhaps you meant "H \* \* \* \*" to poll once per hour  
Would last have run at Monday, December 8, 2025 at 9:33:00 AM Coordinated Universal Time; would next run at Monday, December 8, 2025 at 9:34:00 AM Coordinated Universal Time.

Ignore post-commit hooks [?](#)



## HASIL IPNYA



Saat edit otomatis deploy