

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



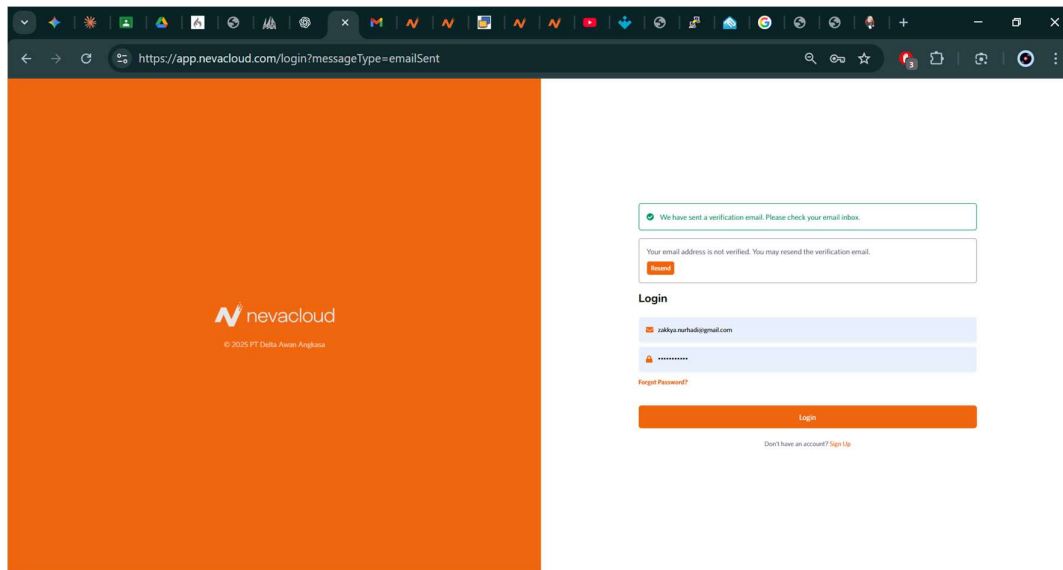
Oleh

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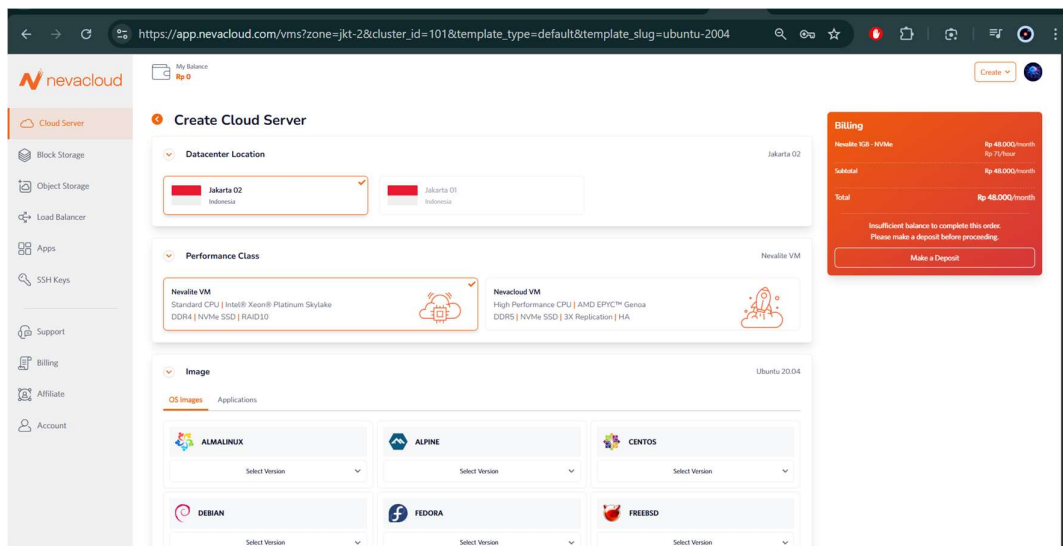
**PROGRAM STUDI MANAJEMEN INFORMATIKA
JURUSAN TEKNOLOGI INFORMASI
POLITEKNIK NEGERI LAMPUNG
2025**

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

1.1 Daftar Nevacloud



1.2 Buat VPS



Select Version

OPENSUSE

Select Version

ROCKYLINUX

Select Version

UBUNTU

Ubuntu 20.04

WINDOWS

Select Version

Existing

Nevalite 1GB - NVMe

Rp 48.000/month

Rp 79/hour

Subtotal

Rp 48.000/month

Total

Rp 48.000/month

Insufficient balance to complete this order.

Please make a deposit before proceeding.

Make a Deposit

Plan

Nevalite 1GB - NVMe

Plan	Pricing	Memory	CPU	Main Storage
<input checked="" type="radio"/> Nevalite 1GB - NVMe	Rp 48.000/month Rp 79/hour	1 GB	1 Core	20 GB
<input type="radio"/> Nevalite 2GB - NVMe	Rp 100.000/month Rp 149/hour	2 GB	2 Core	30 GB
<input type="radio"/> Nevalite 4GB - NVMe	Rp 270.000/month Rp 405/hour	4 GB	3 Core	60 GB
<input type="radio"/> Nevalite 8GB - NVMe	Rp 520.000/month Rp 774/hour	8 GB	4 Core	100 GB
<input type="radio"/> Nevalite 12GB - NVMe	Rp 710.000/month Rp 1065/hour	12 GB	4 Core	150 GB
<input type="radio"/> Nevalite 16GB - NVMe	Rp 910.000/month Rp 1365/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"

AAAAB3NzaC1yc2EAAAADAQABAAQACipVzOwQyKPMl6NETydSyGgBZbXfKlvWz+
QpvoepRvUY2pY4vnXlUz+CemaFxHvrO9GM+Oxfq/dGydYwl4/433nMVRT52zvilz
HQ7NQCWBpwUQWZKC2JaRyiXJuar+apyKQEXr/TGywihVWg4fuRY2rrOWpwuuJwb
RzuiYZ5XJp4TTY3Cd+/uDubi5gAlIVvFdlmiYlnkQSEteOuqAl8Ohy9W2Q9or9nh

PM 8

Add SSH Key

Page | 3

Additional Settings

Automated Snapshots

Automatic and manual snapshot that capture the disk of this server. Snapshots can be restored in few seconds if needed.

Rp 9,600/month

Rp 14/hour

20% of the base cost

Authentication

Please select one or both authentication methods

SSH Keys

A more secure authentication method

PM 8

Create New

Password

Create a root/administrator password to access server

- Minimum length is 8 characters
- Contains at least two letters, one uppercase, one lowercase, and one symbol.

.....

Hostname/Label

The hostname or label of the new cloud server

pm8.io

pm8.id

Billing

Novelty 1GB - NVMe

Rp 48,000/month

Rp 71/hour

Subtotal

Rp 48,000/month

Total

Rp 48,000/month

Order Now

My Balance

Rp 100,000

Create

Cloud Server

Search

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.

More Information

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

My Balance

Rp 100,000

Create

pm8.io

Jakarta 02

running

Launch Console

Summary

Ubuntu 20.04

1 CPU Core

1 GB Memory

20 GB Storage

IP Addresses

IPv4 Address

202.155.157.211

IPv6 Address

2001:df7:5300:18::659

Access

SSH Access

ssh root@202.155.157.211

Public DNS

202-155-157-211.novakloud.net

Plan: Novelty 1GB - NVMe

Location: Jakarta 02

Created: December 8, 2025 2:05 PM

Renewal: Pay as You Go

Monthly Usage: Rp 0

Graph

Access

Disk Volume

Network

Password

Reinstall

Upgrade

Rename

History

Destroy

CPU

100%

50%

0%

12:00 am

1:00 am

2:00 am

3:00 am

4:00 am

5:00 am

6:00 am

7:00 am

8:00 am

9:00 am

10:00 am

11:00 am

12:00 pm

1:00 pm

2:00 pm

3:00 pm

4:00 pm

5:00 pm

6:00 pm

7:00 pm

8:00 pm

9:00 pm

10:00 pm

11:00 pm

12:00 am

Memory

1.5 GB

1 GB

0.5 GB

0 GB

12:00 am

1:00 am

2:00 am

3:00 am

4:00 am

5:00 am

6:00 am

7:00 am

8:00 am

9:00 am

10:00 am

11:00 am

12:00 pm

1:00 pm

2:00 pm

3:00 pm

4:00 pm

5:00 pm

6:00 pm

7:00 pm

8:00 pm

9:00 pm

10:00 pm

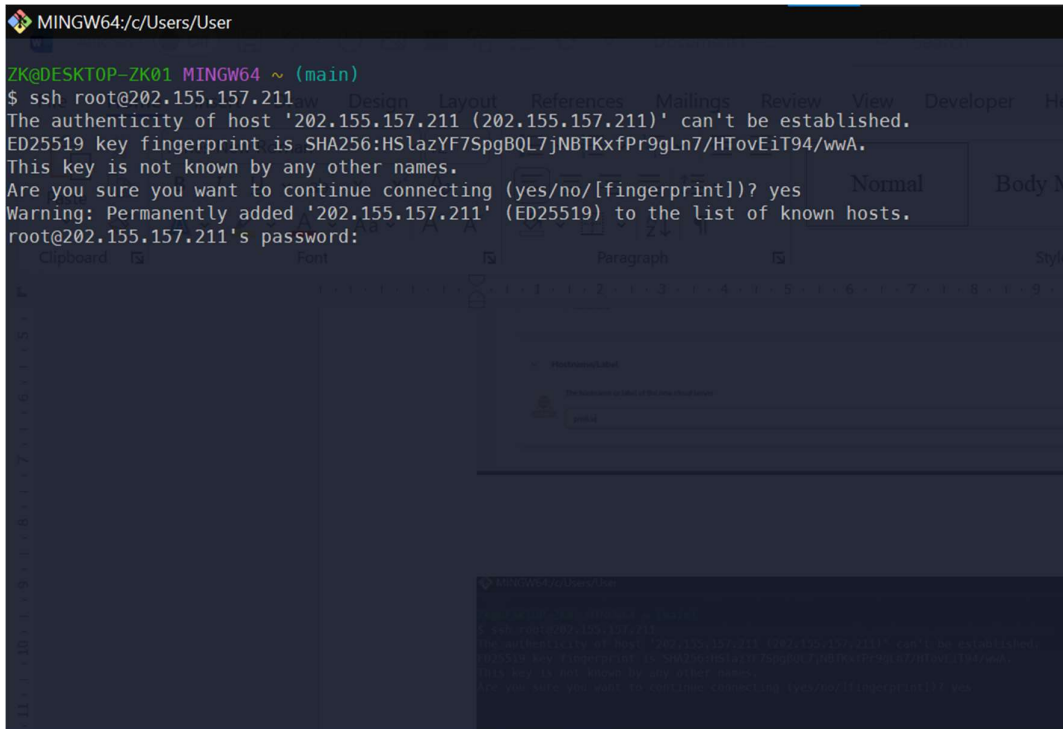
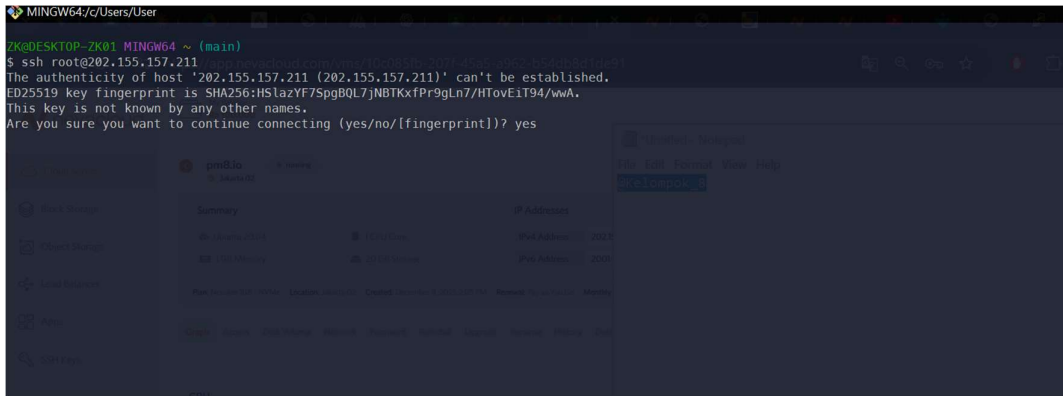
11:00 pm

12:00 am

@Kelompok_8

202.155.157.211

Login ssh



```

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.
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:
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)

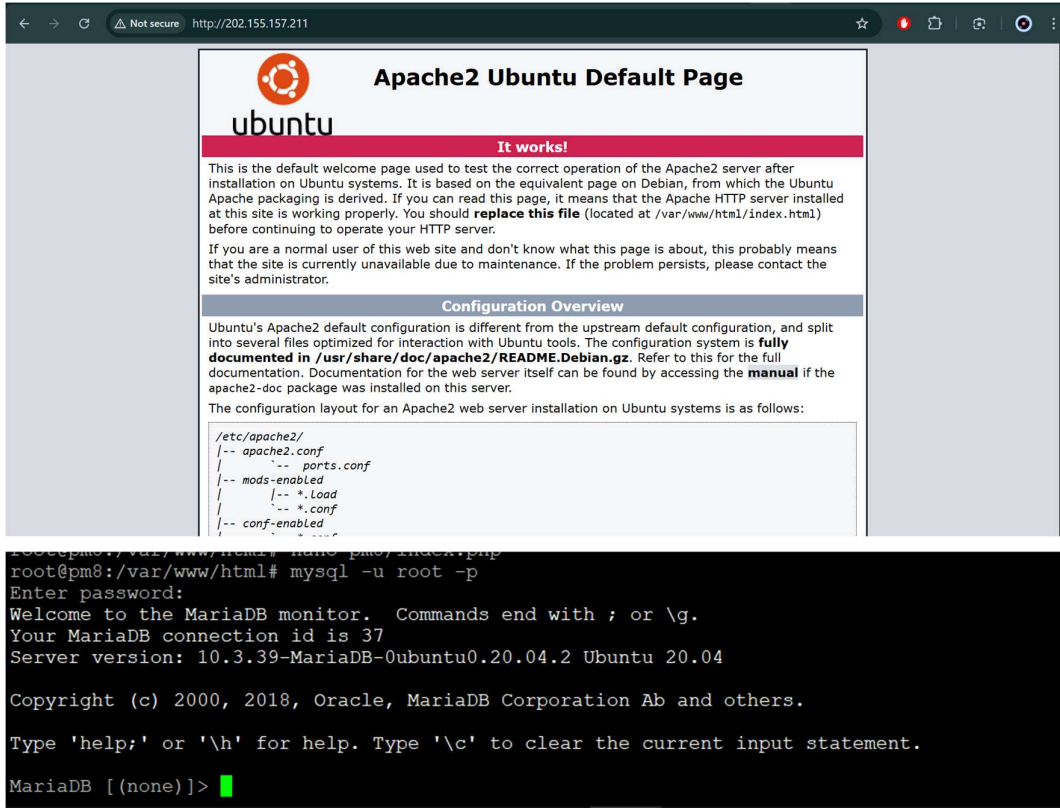
1.3.1 Update ==> sudo apt update && sudo apt upgrade -y

```
root@pm8:~# sudo apt update && sudo apt upgrade -y
Hit:1 http://mirror.nevacloud.com/ubuntu/ubuntu-archi... focal InRelease
Hit:2 http://mirror.nevacloud.com/ubuntu/ubuntu-archi... focal-updates InRelease
Hit:3 http://mirror.nevacloud.com/ubuntu/ubuntu-archi... 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-dnswitls intel-microcode linux-headers-generic jq openssl ruby2.7
libssh-4 libpython3.8-minimal git-man libsystemd0 gcc-10-base
linux-image-generic libsqlite3-0 python3-urllib3 bind9-host libjq dnswitls
sudo libpython3.8 python3.8 open-vm-tools git udev python3-requests libudev1
libsoup2.4-1 systemd-timesyncd libruby2.7 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:
python3-packaging python3-pyparsing ubuntu-pro-client ubuntu-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'
apache2 is already the newest version (2.4.41-4ubuntu3.23).
The following additional packages will be installed:
galera-3 libapache2-mod-php7.4 libioctl-fast-perl libioctl-pm-perl libioconfig-inifiles-perl libldb-mysql-perl libldb-perl libencode-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 libnappyv5 libterm-readkey-perl libtimedate-perl liburi-perl mariadb-client-10.3 mariadb-client-core-10.3 mariadb-common
mariadb-server-10.3 mariadb-server-core-10.3 mysql-common php7.4-cli php7.4-common php7.4-json php7.4-mysql php7.4-readline socat
Suggested packages:
php-pear libclone-perl libldm-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 libioctl-fast-perl libioctl-pm-perl libioconfig-inifiles-perl libldb-mysql-perl libldb-perl
libencode-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 libnappyv5 libterm-readkey-perl libtimedate-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-cli php-common php-json php-mysql php7.4 php7.4-cli
php7.4-common php7.4-json 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 MB of additional disk space will be used.
Get:1 http://mirror.nevacloud.com/ubuntu/ubuntu-archi... focal/main amd64 mysql-common all 5.8+1.0.5ubuntu2 [7,496 B]
Get:2 http://mirror.nevacloud.com/ubuntu/ubuntu-archi... focal-updates/universe amd64 mariadb-common all 1:10.3.39-0ubuntu0.20.04.2 [16.0 kB]
Get:3 http://mirror.nevacloud.com/ubuntu/ubuntu-archi... focal/universe amd64 galera-3 amd64 25.3.29-1 [898 kB]
Get:4 http://mirror.nevacloud.com/ubuntu/ubuntu-archi... focal/main amd64 libldb-perl amd64 1.643-1ubuntu0.1 [730 kB]
Get:5 http://mirror.nevacloud.com/ubuntu/ubuntu-archi... focal/main amd64 libconfig-inifiles-perl all 3.0.00002-1 [40.6 kB]
```


1.3.3 Hasil web dan Mysql



The image shows a web browser window displaying the "Apache2 Ubuntu Default Page". The page has a red header with the Ubuntu logo and the text "Apache2 Ubuntu Default Page". Below the header, there is a section titled "It works!" which states: "This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server." Below this, there is a section titled "Configuration Overview" which states: "Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in /usr/share/doc/apache2/README.Debian.gz**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server." Below this, there is a code block showing the configuration layout for an Apache2 web server installation on Ubuntu systems:


```
/etc/apache2/  
|-- apache2.conf  
|   |-- ports.conf  
|-- mods-enabled  
|   |-- *.Load  
|   |-- *.conf  
|-- conf-enabled  
|-- *.conf
```

Below the browser window, there is a terminal window showing the following commands and output:

```
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-0ubuntu0.20.04.2 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 libapache2-mod-php7.4 (7.4.3-1ubuntu0.20.04.2) ...  
root@pm8:~# cd /var/www/html/  
root@pm8:/var/www/html# ls  
index.html  
root@pm8:/var/www/html# nano index.html
```

```
GNU nano 4.8 pm8/index.php
[OCr]2 html<
<html lang="id">
<head>
  <meta charset="UTF-8">
  <title>Kelompok Kami</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background: #f4f6f9;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      margin: 0;
    }

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

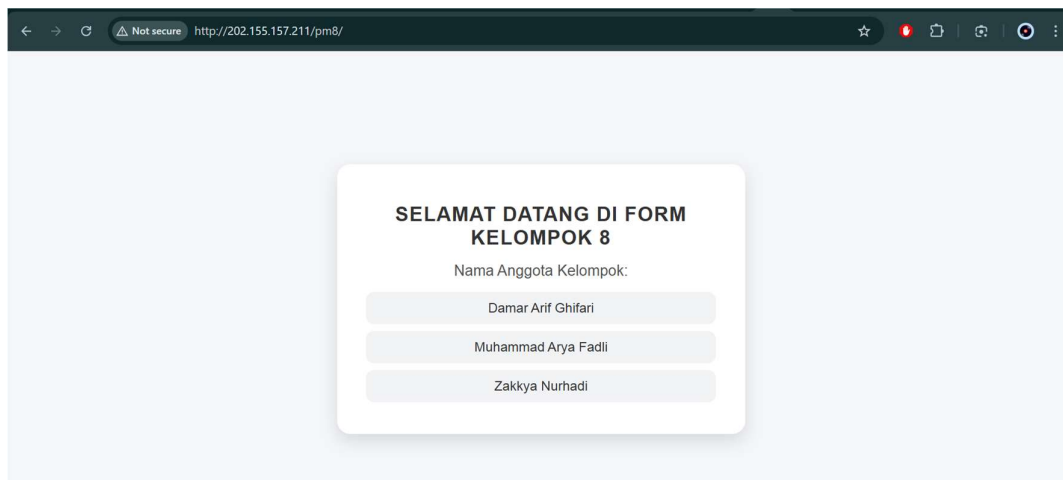
    .card h1 {
      font-size: 24px;
      margin-bottom: 10px;
      color: #333;
      letter-spacing: 1px;
    }

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

    .card ul {

```

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-----
b3B1bnNzaC1rZXktdjEAAAABG5vbmUAAAABbm9uZQAAAAAAAAABAAACFwAAAAAdzc2gtcn
NhAAAAAwEAAQAAAgEA6JQm9aYfIcSydhetxXxB1k30iLHJwS5m9D1OghQbF1RAtEwPUKwJ
NQ9oTcKfNeLUncWyyQV/Ski0ASDZ1lhkp4uI8/Fjr3XHqj810opa4CH35/5tu+RqvhjnS
u0FFPUuzx/2dyiQiCp/wqWTixgEh3Y9cRerR483WMrdT66us/WrMrSvUCYXJvrGZYKXUfT
0ZsyvFS1f70da1DCW/PZHTJD1CQMb34yS/mauA7Qnz4U01mREowmWK8ox2dttb+C41BhFo
5KutsyGZSh7D1QW55F1oA6L+S+xI2ME+Qa/aYxWG4xRI27jfpvF/gKeUgeefYeKFY0Jhd/
lyTO+Be0lgHwe/Nm2g12xKEB4bTEjJ+nnmM7nBd2x+sJyid5/qhtAxxxaQQG8d2q8ve3j
CBvzZYmNGARStjm3uhgEH0Istbcb/OlQK/ITiYET32F6plbckK38/SiG0y9znvDdwUPBOL
BeytLExPayXwwJiA4Mk68UomiF4Vz08L1hntMJZKydzRGPGKfsLKVWTabGbKucbVeIJMR
+SAjKbkucqjH0a1MzYaPZ4jw901DQeQjdpCUMBWtCx32dMTb3wSsQ5zFTnFWa/SgU9i1QJ
nu4dJQo4z6KtgP6+NkviIaWYVp+A26rYu4EOlu0Zr16YbXd2BPlgBUdxLp4LfdgAFxUFyl
0BAbd3cTgcV3CfK1c3BAbd3cTgcV3CfK1c3BAbd3cTgcV3CfK1c3BAbd3cTgcV3CfK1c3

```

gcr/z1m9r3zL0u/rnnv0v0u9y/rk0u/rucneumugz/c0wv/zuntawky+211

1BLDfHREAAAAIcmv8tBv8TgAgM+

-----END OPENSSH PRIVATE KEY-----

☐ Disable exec ?

SSH Servers

SSH Server

Name ?

pm8gw

Hostname ?

202.155.157.211

Username ?

root

Remote Directory ?

/var/www/html

☐ Avoid sending files that have not changed ?

Advanced ▾

Success

Test Configuration

Webhooks

Add webhook

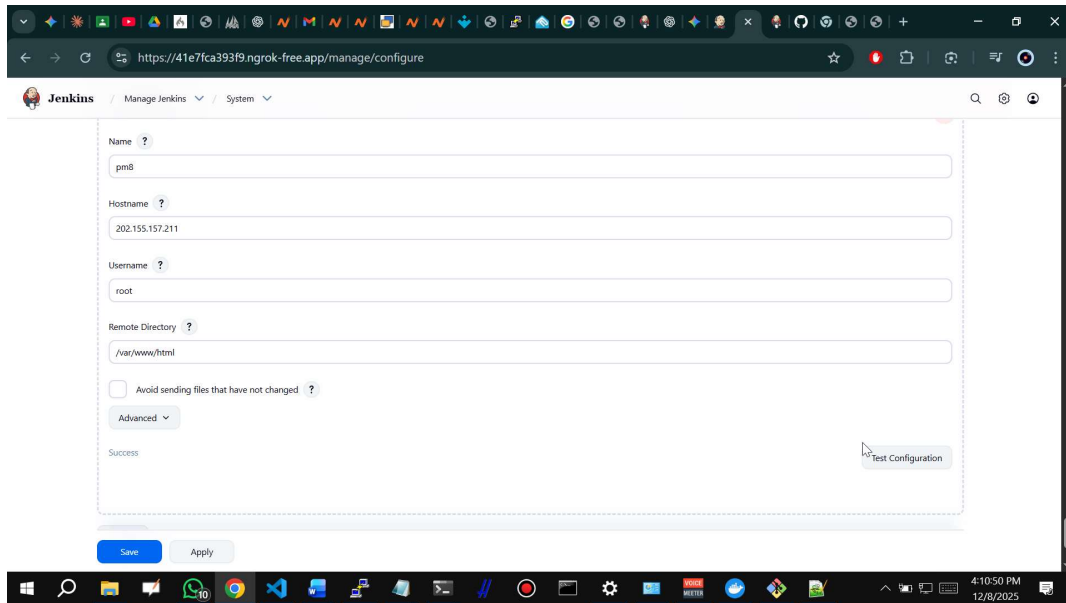
Webhooks allow external services to be notified when certain events happen. When the specified events happen, we'll send a POST request to each of the URLs you provide. [Learn more in our Webhooks Guide.](#)

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

Edit Delete

Last delivery was successful.

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 builds 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 ?

SSH Server

Name ?
pm8

Advanced ▾

Transfers

Transfer Set

Source files ?
**/*

Remove prefix ?

Remote directory ?
/

Exec command ?

HASIL IPNYA

← → ↻ ⚠ Not secure http://202.155.157.211 ☆ 🔍 📄 🔄 📱 ⋮

**SELAMAT DATANG DI FORM
KELOMPOK 8 ZAKKYA NEW**

Nama Anggota Kelompok: PELAPORAN KAMPUS
NEW

Damar Arif Ghifari

Muhammad Arya Fadli

Zakky Nurhadi

Saat edit otomatis deploy