

Ubuntu Linux

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????

???root??

```
sudo su
```

vps

root

root

XD

????

```
dpkg-reconfigure tzdata
```

????

```
vi /etc/locale.gen
zh_TW.UTF-8 mark
locale-gen
```

??????????

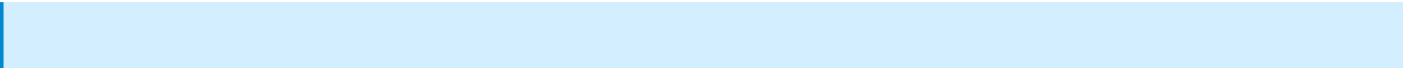
```
apt update
apt dist-upgrade
reboot
```

?????????? root ??

```
sudo su
```

?????

```
apt install nginx php-fpm php-gd php-mbstring php-gd php-xml php-mysql mysql-server mysql-client certbot python3-certbot-nginx
```



Drupal WordPress

php

apt-install php apache2

MySQL

mysql

root mysql

```
mysql -u root
```

mysql

```
ALTER USER 'root'@'localhost' IDENTIFIED WITH caching_sha2_password BY 'yourpassword'; exit;
```

yourpassword

root

my.cnf

```
[client]
default-character-set = utf8mb4

[mysqld]
character-set-server = utf8mb4
max_connections = 600
innodb_read_io_threads = 24
innodb_write_io_threads = 24
expire_logs_days = 7
max_binlog_size = 1G
```

server binlog_size log

? ~/.my.cnf

```
[client]  
password = yourpassword
```

MySQL???????

?????

```
mysqladmin -u root create site
```

?????

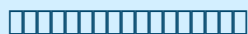
```
mysqladmin -u root drop site
```

?????

```
mysqldump -u root site > site.sql
```

?????

```
mysql -u root site < site.sql
```



phpMyAdmin XD

????????????

```
ufw enable  
ufw allow from xxx.xxx.xxx.xxx (??????IP)  
ufw allow 80/tcp  
ufw allow 'Nginx HTTP'  
ufw allow 'Nginx HTTPS'
```

????????php??

```
add-apt-repository ppa:ondrej/php  
aptitude update
```

????2025 (Ubuntu24.04??)

???root??

```
sudo su
```

root

root

XD

????

```
dpkg-reconfigure tzdata
```

????

```
vi /etc/locale.gen
zh_TW.UTF-8 mark
locale-gen
```

????????????????????

```
apt update
apt dist-upgrade
vi /etc/hostname
reboot
```

?????????? root ??

```
sudo su
```

?????

```
apt install nginx php-fpm php-gd php-mbstring php-gd php-xml php-mysql mysql-server mysql-client certbot python3-certbot-nginx
```

Drupal WordPress

php

apt-get install php apache2

MySQL

mysql

root mysql

```
mysql -u root
```

mysql

```
ALTER USER 'root'@'localhost' IDENTIFIED WITH caching_sha2_password BY 'yourpassword'; exit;
```

yourpassword

root

my.cnf

```
[client]
default-character-set = utf8mb4

[mysqld]
character-set-server = utf8mb4
max_connections = 600
innodb_read_io_threads = 24
innodb_write_io_threads = 24
expire_logs_days = 7
max_binlog_size = 1G
```

server binlog_size log

? ~/.my.cnf ????

```
[client]
password = yourpassword
```

MySQL???????

?????

```
mysqladmin -u root create site
```

?????

```
mysqladmin -u root drop site
```

?????

```
mysqldump -u root site > site.sql
```

?????

```
mysql -u root site < site.sql
```



phpMyAdmin XD

????????????

```
ufw enable
ufw allow from xxx.xxx.xxx.xxx (??????IP)
ufw allow 'Nginx HTTP'
ufw allow 'Nginx HTTPS'
```

????????php??

```
add-apt-repository ppa:ondrej/php
aptitude update
```

```
apt install php7.4-fpm php7.4-gd php7.4-mbstring php7.4-gd php7.4-xml php7.4-mysql
apt install php5.6-fpm php5.6-gd php7.4-mbstring php5.6-gd php5.6-xml php5.6-mysql
```

??Docker

```
sudo apt install -y ca-certificates curl gnupg lsb-release
```

```
sudo mkdir -p /etc/apt/keyrings
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o
/etc/apt/keyrings/docker.gpg
```

```
echo \
  "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.gpg]
https://download.docker.com/linux/ubuntu \
  $(lsb_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
```

```
sudo apt update
sudo apt install -y docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-
plugin
```

??Portainer

```
docker pull portainer/portainer-ce:latest
docker run -d -p 9000:9000 --restart always -v /var/run/docker.sock:/var/run/docker.sock
portainer/portainer-ce:latest
```

Nginx conf

```
server {
    listen 80;
    server_name docker.yoursite.com.tw;

    location / {
        proxy_pass http://127.0.0.1:9000;
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_set_header X-Forwarded-Proto $scheme;
    }
}
```



```
}
```

??????Mysql

```
version: '3.8'
services:
  mysql:
    image: mysql:5.7
    container_name: my_mysql57
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: yourpassword    # 密碼
      TZ: Asia/Taipei
    ports:
      - "43306:3306"
    volumes:
      - ./mysql57_data:/var/lib/mysql

  phpmyadmin:
    image: phpmyadmin/phpmyadmin
    container_name: my_phpmyadmin
    restart: always
    ports:
      - "48081:80"
    environment:
      - PMA_ARBITRARY=1
      - PMA_HOST=mysql
      - PMA_USER=root
      - PMA_PASSWORD=yourpassword    # 密碼
      - UPLOAD_LIMIT=128M    # 上傳限制
    depends_on:
      - mysql
```

Nginx ???(phpmyadmin) (????????????????)

```
server {
    listen 80;
    server_name pma2025.yoursite.com.tw;
```

```
client_max_body_size 128M; # <<< 100MB
```

```
location / {  
    proxy_pass http://127.0.0.1:48081;  
    proxy_set_header Host $host;  
    proxy_set_header X-Real-IP $remote_addr;  
    proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;  
    proxy_set_header X-Forwarded-Proto $scheme;  
}  
}
```

Drupal 6 ☐ port

```
$db_url = 'mysql://root:yourpassword@127.0.0.1:43306/haccp';  
$db_prefix = 'haccp_';
```

????

```
ls
```

```
total 12
```

```
ls -la
```

```
total 12
```

```
Linux 3.10.0-112.el7.x86_64
```

```
ls ~/
```

```
total 12
```

```
total 12
```

```
/home/ ; total 12
```

```
/root/
```

```
mkdir test
```

```
total 4
```

```
mkdir -p test/a
```

```
total 4
```

```
cp a.php b.php
```

```
total 4
```

```
total 12
```

```
copy nginx 12
```

```
cp /etc/nginx/sites-enabled/site1
```

```
/etc/nginx/sites-enabled/site2
```

```
cp -r ~/abc /var/www/
```

```
total 12
```

```
abc 12 /var/www/
```

```
/var/w  tab
```

--	--	--	--

--	--	--	--

linux

```
GG$ rm -rf /
```

□□□□□□□ abc□□ abc.tar.gz

abc.tar.gz

□□□□□ zip□□□□□

 \log

```
cat /var/log/nginx/access.log | more
```



```
crontab -e
```

```
#####
```

```
/etc/init.d/nginx reload
```

```
### nginx##### conf#### nginx -t #####
```

```
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
```

```
##### reload
```

```
/etc/init.d/nginx restart
```

```
####
```

```
##### reload, restart, stop, start #####
Nginx: /etc/init.d/nginx
PHP: /etc/init.d/php7.4-fpm
MySQL: /etc/init.d/mysql
##### cron[] restart#####
```

```
[] shell script[]
```

```
##### 2023[] AI
#####
```

□□□□□□ DNS□□ Cloudflare□□□□□ Cloudflare□□ SSL

```
listen 443 ssl;

    include /etc/letsencrypt/options-ssl-nginx.conf;
    ssl_dhparam /etc/letsencrypt/ssl-dhparams.pem;

    ssl_certificate      /etc/ssl/cert.pem;
    ssl_certificate_key  /etc/ssl/key.pem;
    ssl_client_certificate /etc/ssl/cloudflare.crt;
    ssl_verify_client on;
}

server {
    if ($host = site.com) {
        return 301 https://$host$request_uri;
    }

    server_name site.com;
    listen 80;
    return 404;
```

<https://www.digitalocean.com/community/tutorials/how-to-host-a-website-using-cloudflare-and-nginx-on-ubuntu-20-04>

```
apt install certbot
```

```
certbot -d site.com
```



```
[ ] [ ] [ ] [ ] [ ] [ ] /etc/nginx/sites-enabled/[ ] site.com [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]  
[ ] [ ] [ ] [ ] [ ] [ ] /etc/nginx/nginx.conf
```

```
certbot delete --cert-name site.com
```

SSL

[illegible]

Cloudflare ☐☐☐☐ SSL ☐☐☐☐ A ☐☐☐☐ SSL/TLS ☐☐☐☐ ☒ TLS ☐☐ ☐ 1.2 ☐☐☐☐ A ☐☐☐☐
☐ HTTP ☐☐☐☐☐☐ (HSTS)

```

graph LR
    Mac[Mac] --> subdomain1[subdomain SSL]
    subdomain1 --> subdomain2[subdomain SSL]
    subdomain2 --> Cloudflare[Cloudflare]
    Cloudflare --> Certbot[Certbot]
    Certbot --> subdomain2
  
```


Docker

```
apt install docker docker-compose
```

Docker-compose 

https://hackmd.io/@jimmy801/docker_compose_install

??docker???

```
docker pull portainer/portainer-ce:latest
docker run -d -p 9000:9000 --restart always -v /var/run/docker.sock:/var/run/docker.sock
portainer/portainer-ce:latest
```

??web?????

```
server {
    server_name docker.site.com;

    location ~/ {
        # prevents 502 bad gateway error
        proxy_buffers 8 32k;
        proxy_buffer_size 64k;

        client_max_body_size 75M;

        # redirect all HTTP traffic to localhost:9000;
        proxy_pass http://localhost:9000;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header Host $http_host;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        #proxy_set_header X-NginX-Proxy true;

        # enables WS support
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "upgrade";
    }
}
```

```

    proxy_read_timeout 999999999;
}

}

```

Docker ☐ Docker ☐ IP + port ☐
 VPS ☐ 9000 ☐ port ☐ Nginx Proxy ☐ Docker ☐ port

??WordPress

☐ WordPress ☐ Stacks

```

version: '3.1'

services:

  wordpress:
    image: wordpress:6.0.1-php7.4-apache
    restart: always
    ports:
      - 8001:80
    environment:
      WORDPRESS_DB_HOST: db
      WORDPRESS_DB_USER: exampleuser
      WORDPRESS_DB_PASSWORD: examplepass
      WORDPRESS_DB_NAME: exampledb
    volumes:
      - wordpress:/var/www/html

  db:
    image: mysql:5.7
    restart: always
    environment:
      MYSQL_DATABASE: exampledb
      MYSQL_USER: exampleuser
      MYSQL_PASSWORD: examplepass
      MYSQL_RANDOM_ROOT_PASSWORD: '1'

```

```
volumes:
  - db:/var/lib/mysql
```

```
volumes:
  wordpress:
  db:
```

■■■■■■■

Nginx■■■

```
server {
    server_name demo1.site.com;

    location ~/ {
        # prevents 502 bad gateway error
        proxy_buffers 8 32k;
        proxy_buffer_size 64k;

        client_max_body_size 75M;

        # redirect all HTTP traffic to localhost:8088;
        proxy_pass http://localhost:8001;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header Host $http_host;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        #proxy_set_header X-NginX-Proxy true;

        # enables WS support
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "upgrade";

        proxy_read_timeout 999999999;
    }

}
```

■■■■■■■

<https://demo1.site.com> ■■■■

Docker■■■■■■■

```
docker exec -i -t 8001-wordpress-1 bash
```

[] WordPress[]

```
echo -e "file_uploads = 0\nmemory_limit = 500M\nupload_max_filesize = 500M\npost_max_size = 500M\nmax_execution_time = 600" | tee -a /usr/local/etc/php/conf.d/uploads.ini; /etc/init.d/apache2 restart
```

[][][] docker[]

```
docker cp /4TB/conoha2/www/wp/zfun/wp-content/uploads demo38-wordpress-1:/var/www/html/wp-content/  
docker cp /4TB/conoha2/www/wp/site2/wp-content/themes demo38-wordpress-1:/var/www/html/wp-content/  
docker cp /4TB/conoha2/www/wp/site2/wp-content/uploads demo38-wordpress-1:/var/www/html/wp-content/
```

Docker[] WordPress[]
[] WordPress[] Apache2[]

[] WordPress[] Docker[] XD
[] WordPress[]

clamav

■■■■

```
apt install clamav clamav-daemon
```

■■■■■■■■■■

up_clamav.sh

```
service clamav-freshclam stop
freshclam
service clamav-freshclam start
```

■■■■

■■■■■■■■

clamav_scan.sh

```
clamscan -r --bell -i /var/www/
```

SSH?????

???????????

```
ssh-keygen -t rsa
```

????

```
cat .ssh/id_rsa.pub
```

???? ????????

```
vi .ssh/authorized_keys
```

ssh@ip

GCP ssh

bash

?????mysql???

```
#!/bin/bash

BACKUP_DIR="/root/backup/db"

if [ ! -d "$BACKUP_DIR" ]; then
    mkdir -p $BACKUP_DIR
fi

# 删除旧备份 .gz 文件
rm -f $BACKUP_DIR/*.gz

DATABASES=$(mysql -u root -e "SHOW DATABASES;" | grep -Ev
"(Database|information_schema|performance_schema|mysql)")

for DB in $DATABASES; do
    BACKUP_FILE="$BACKUP_DIR/${DB}_backup_$(date +%Y%m%d').sql"

    MYSQLDUMP_CMD="mysqldump -u root $DB > $BACKUP_FILE"

    echo "开始备份 $DB..."
    eval $MYSQLDUMP_CMD

    if [ $? -eq 0 ]; then
        echo "备份 $DB 成功: $BACKUP_FILE"
        gzip $BACKUP_FILE
        echo "压缩后: $BACKUP_FILE.gz"
        # 限制备份文件大小 MB
        FILE_SIZE=$(du -m "$BACKUP_FILE.gz" | cut -f1)
        echo "文件大小: $FILE_SIZE MB"
    else
        echo "备份 $DB 失败"
    fi
done
```

????

```
#!/bin/bash

rsync -avz --delete --progress --exclude='cache/' --exclude='*demo*' root@ip:/etc/nginx/sites-enabled/ /4TB/conoha1/nginx/
```

????????

```
#!/bin/bash

# 確認
SRC_DIR="/var/www/"
DEST_DIR="/root/gcp/www/"

# 確認
DIR_LIST=("web1" "web2" "web3")

# 確認
for DIR_NAME in "${DIR_LIST[@]}; do
    FILE_NAME="${DEST_DIR}${DIR_NAME}.tar.gz"
    tar zcf "$FILE_NAME" -C "$SRC_DIR" "$DIR_NAME"
    echo "確認 $DIR_NAME へ $FILE_NAME へ"
done

echo "確認完了"
```


VPS??

VPS
XD

ssh

Ubuntu 22.04 VNC

--	--	--	--	--	--

<https://jackfrisht.medium.com/ubuntu-20-04-vnc%E5%AE%89%E8%A3%9D-b8ce6e7dec4a>


 ()

```
sudo apt-get update
sudo apt-get upgrade
```

Ubuntu 22.04 ████ gdm3███ VNC ████ (████████████████████)████
lightdm

Ubuntu 16.04 ☐☐☐☐ lightdm ☐☐☐☐☐☐

```
sudo apt install lightdm ## ubuntu 22.04
sudo dpkg-reconfigure lightdm ## lightdm
```

 x11VNC

```
sudo apt-get install x11vnc -y
```

error

```
sudo apt-get update
```

VNC

```
sudo x11vnc -storepasswd /etc/x11vnc.pass
```

```
sudo chmod 755 /etc/x11vnc.pass
```

rfbport

-forever

```
sudo x11vnc -auth guess -rfbauth /etc/x11vnc.pass -rfbport 5900 -forever -display :0
```

VNC 11

```
sudo gedit /etc/systemd/system/x11vnc.service[Unit]
Description=Start x11vnc at startup.
After=multi-user.target
```

```
[Service]
Type=simple
ExecStart=/usr/bin/x11vnc -auth guess -forever -loop -noxdamage -repeat -rfbauth /etc/x11vnc.pas
[Install]
WantedBy=multi-user.target
```

systemd

```
sudo systemctl daemon-reload

sudo systemctl enable x11vnc

sudo systemctl start x11vnc
```

Step 2. ????????

Nvidia driver
#####

Server ##### x-session ##### xorg.conf #####

ubuntu ##### /etc/X11/xorg.conf##### Xorg -configure
(##### 1920x1080##### Virtual
)

turn to /etc/X11

```
cd /etc/X11sudo gedit xorg.conf## VNC-virtual montior
Section "Device"
    Identifier "Configured Video Device"
EndSectionSection "Monitor"
    Identifier "Configured Monitor"
EndSectionSection "Screen"
    Identifier "Default Screen"
    Monitor "Configured Monitor"
    Device "Configured Video Device"
    SubSection "Display"
        Depth 24
        Virtual 1920 1080
    EndSubSection
EndSection
```

Restart System

```
sudo reboot
```

#####

```
systemctl status sleep.target sleep.target - Sleep
```

|||||

```
systemctl mask sleep.target suspend.target hibernate.target hybrid-sleep.target
```

|||||||

```
systemctl status sleep.target
```

MySQL

```
htop  11  mysqld  1 100%
```

```
mysql -u root
```

--	--	--	--	--

```
SHOW FULL PROCESSLIST;
```

```
| 32892 | root | localhost | NULL | Query | 0 | starting | SHOW FULL PROCESSLIST
```

--	--	--	--

```
KILL 32892;
```

?? Fail2Ban ???????

```
vi /etc/fail2ban/jail.local
```

□□

```
[nginx-http-auth]
enabled = true
filter = nginx-http-auth
action = iptables[name=HTTP, port=http, protocol=tcp]
logpath = /var/log/nginx/error.log
bantime = 3600
findtime = 600
maxretry = 5
```

□□□□□

```
systemctl restart fail2ban
```

□□□□□□ IP

```
fail2ban-client status
```

□□□□

```
[nginx-primary-script]
enabled = true
filter = nginx-primary-script
action = iptables[name=PrimaryScript, port=http, protocol=tcp]
logpath = /var/log/nginx/error.log
maxretry = 3
bantime = 3600
```

□□□□□

```
[Definition]
failregex = .*FastCGI sent in stderr: "Primary script unknown".*request: ".*installer\.php.*"
            .*FastCGI sent in stderr: "Primary script unknown".*request:
            ".*WordPress/installer\.php.*"
```

```

.*FastCGI sent in stderr: "Primary script unknown".*request: ".*phpinfo\.php.*
.*FastCGI sent in stderr: "Primary script unknown".*request: ".*info\.php.*

# 目录遍历
.*GET /wp-admin.*                # WordPress 目录遍历
.*GET /wp-login\.php.*           # WordPress 登录
.*GET /xmlrpc\.php.*             # WordPress XML-RPC 接口
.*GET /phpMyAdmin/.*             # phpMyAdmin 目录
.*GET /pma/.*                   # phpMyAdmin 目录
.*GET /myadmin/.*               # 目录遍历
.*GET /config\.php.*             # 配置文件
.*GET /setup\.php.*             # 安装脚本
.*GET /install\.php.*           # 安装脚本
.*GET /adminer.*                # Adminer 目录

# 漏洞利用
.*GET /shell\.php.*              # 漏洞利用
.*GET /cmd\.php.*               # 漏洞利用
.*GET /console\.php.*           # 漏洞利用
.*GET /backdoor\.php.*          # 漏洞利用
.*GET /wp-content/uploads/shell.* # WordPress 漏洞利用
.*GET /eval-stdin.*             # eval 漏洞

# 其他
.*GET /\env.*                   # Laravel 目录遍历
.*GET /\git/config.*            # Git 目录遍历
.*GET /backup.*                 # 备份文件
.*GET /dump.*                   # 数据库备份
.*GET /debug.*                  # 调试信息
.*GET /error_log.*              # 错误日志

# 其他
.*GET /HNAP1/.*                 # HNAP 接口 (设备管理)
.*GET /boaform/admin/formLogin.* # IOT 设备
.*GET /invoker/JMXInvokerServlet.* # JBoss 接口
.*GET /webdav.*                 # WebDAV 接口
.*GET /manager/html.*           # Tomcat 管理界面

```

IP

```
fail2ban-client set nginx-primary-script banip xxx.xxx.xxx.xxx
```

```
#####
```

```
fail2ban-client set nginx-primary-script unbanip 192.168.1.100
```

```
###  ## /etc/fail2ban/jail.local
```

```
[DEFAULT]
```

```
ignoreip = 127.0.0.1/8 ::1 192.168.1.100
```

```
#####
```

```
systemctl restart fail2ban
```


?????htop Glances

####

```
pip install glances fastapi[all] uvicorn
```

```
glances -w
```

```
which glances /usr/local/bin/glances Glances /usr/local/bin
```

```
/usr/local/bin
```

```
export PATH=$PATH:/usr/local/bin
```

```
cat .bashrc .zshrc
```

```
echo 'export PATH=$PATH:/usr/local/bin' >> ~/.bashrc
source ~/.bashrc
```

?? Monit ????

❏

```
apt install monit
```

❏

```
cp /etc/monit/monitrc /etc/monit/monitrc.bak
```

vi /etc/monit/monitrc

```
set httpd port 2812
    use address 0.0.0.0 # 0.0.0.0
    allow localhost    # 本地 localhost
    allow yourip       # 本机 IP
    allow admin:monit

# NGINX
check process nginx with pidfile /var/run/nginx.pid
    start program = "/bin/systemctl start nginx"
    stop program  = "/bin/systemctl stop nginx"
    if failed port 443 then restart
    if 5 restarts within 5 cycles then timeout

# PHP 7.4-FPM
check process php7.4-fpm with pidfile /run/php/php7.4-fpm.pid
    start program = "/etc/init.d/php7.4-fpm start"
    stop program  = "/etc/init.d/php7.4-fpm stop"
    if failed unixsocket /var/run/php/php7.4-fpm.sock then restart
    if 5 restarts within 5 cycles then timeout

# MySQL
check process mysql with pidfile /var/lib/mysql/zfun-server.pid
    start program = "/etc/init.d/mysql start"
    stop program  = "/etc/init.d/mysql stop"
    if failed host localhost port 3306 protocol mysql then restart
    if 5 restarts within 5 cycles then timeout
```

<http://yourip:2812>

vi /etc/monit/monitrc

```
set mailserver smtp.your-email-provider.com port 587
  username "your-email@example.com" password "your-password"
  using tlsv1
  with timeout 30 seconds

set alert your-email@example.com
```

??log

2024 11 20 2

```
grep '20/Nov/2024:14:' /var/log/nginx/access.log | grep 'https://yoursite.com' | awk '{print $1}' | sort | uniq | wc -l
```

```
zgrep '20/Nov/2024:14:' /var/log/nginx/access.log.2.gz | grep 'https://yoursite.com' | awk '{print $1}' | sort | uniq | wc -l
```

pm2??

--	--	--	--	--	--	--	--	--

pm2

1. ?????????

(1) ??????

```
tar -czf projects_backup.tar.gz /path/to/your/project1 /path/to/your/project2
```

(2) ?? ??

□□ pm2 □□□□□□□□□□

pm2 save

```
~/ .pm2/dump.pm2
```

[illegible]

```
tar -czf pm2_backup.tar.gz ~/.pm2
```

(3) ?????? (??)

- `node -v`
- `.env`

2. ???????

(1) ?? Node.js ? npm

Node.js

```
curl -fsSL https://deb.nodesource.com/setup_18.x | sudo -E bash -
sudo apt install -y nodejs
```

()

(2) ?? pm2

pm2

```
sudo npm install -g pm2
```

3. ????

(1) ??????

```
scp projects_backup.tar.gz user@new-server:/path/to/  
ssh user@new-server  
tar -xzf projects_backup.tar.gz -C /desired/path/
```

(2) ?? ??

pm2_backup.tar.gz

```
scp pm2_backup.tar.gz user@new-server:/path/to/  
ssh user@new-server  
tar -xzf pm2_backup.tar.gz -C ~/
```

--	--	--	--	--	--	--	--	--

pm2 resurrect

4. ?????

(1) ??????

```
pm2 list
```

pm2 logs

(2) ??????

□□ pm2 □□□□□□□□

```
pm2 startup
```

```
pm2 save
```

5. ?? DNS ????????

DNS []

IP

pm2