Remote Desktop ????

RDP, VNC, NX Fress, X2Go

- XRDP
- VNC
- NX free edition
- X2Go
- Guacamole
- Learning

XRDP

??

```
# Ubuntu 18.04
sudo apt-get install xrdp xfce4
echo xfce4-session >~/.xsession

# 檢查 XRDP 是否已啟動
# 檢查 port 3389 是否開啟
sudo netstat -ltpn

# XRDP 服務啟動/關閉
sudo systemctl stop xrdp-sesman
sudo systemctl start xrdp-sesman
```

> TIP:
>
> - ???? vncserver ??
>
> - ?? port ? 3389????????? /etc/xrdp/xrdp.ini

Windows ??????

1. ?? sesman-Xvnc
2. ?? Ubuntu ?????/??

FAQ

Q: ? Ubuntu 13/14 ???????????
Ans: ???? XRDP ? Gnome ???????????????????? XFACE??????

```
sudo add-apt-repository ppa:xubuntu-dev/xfce-4.10
sudo apt-get update
sudo apt-get install xfce4
```

```
echo xfce4-session >~/.xsession
sudo service xrdp restart
```

Tutorials

- Using Windows to Create and Access a Remote Ubuntu Desktop
- How to Configure Remote Desktop on Ubuntu Server

VNC

Installation

Ubuntu 9/11

- How to Set Up a VNC Server In Ubuntu

```
sudo apt-get install ubuntu-desktop --no-install-recommends
sudo apt-get install  vnc4server
```

?? .vnc/xstartup

```
#!/bin/sh

# Uncomment the following two lines for normal desktop:
# unset SESSION_MANAGER
# exec /etc/X11/xinit/xinitrc

[ -x /etc/vnc/xstartup ] && exec /etc/vnc/xstartup
[ -r $HOME/.Xresources ] && xrdb $HOME/.Xresources
xsetroot -solid grey
vncconfig -iconic &
xterm -geometry 80x24+10+10 -ls -title "$VNCDESKTOP Desktop" &
gnome-session & # support for GNOME
startkde $ #support for KDE
```

Lubuntu

?? .vnc/xstartup

```
/usr/bin/lxsession -s Lubuntu -e LXDE
```

CentOS

CentOS 6?

```
yum groupinstall Desktop
yum install tigervnc tigervnc-server
```

?? VNC ??

```
vncserver
```

?? ~/.vnc/xstartup

```
# 移除註解
unset SESSION_MANAGER
exec /etc/X11/xinit/xinitrc
```

?????????

/etc/sysconfig/vncservers

```
VNCSERVERS="1:root"
VNCSERVERARGS[1]="-geometry 1280x1024"     #這行可不加
```

```
chkconfig vncserver on
```

CentOS 5?

```
# Install
yum install vnc-server

# Set the password for vnc
vncserver
```

/root/.vnc/xstartup

```
xsetroot -solid grey
vncconfig -iconic &
gnome-session &   # 加這行
#xterm -geometry 80x24+10+10 -ls -title "$VNCDESKTOP Desktop" & # 註解這行
#twm & # 註解這行
```

?? vncserver

```
vncserver -kill :1
vncserver
```

??????

```
vncserver -geometry 1280x960
```

KasmVNC

KasmVNC - Linux Web Remote Desktop

- [GitHub] KasmVNC - Modern VNC Server and client, web based and secure

Learning

- How to install and access CentOS remote desktop on VPS
- How to Access Remote Desktop from Browser Using TightVNC

NX free edition

???https://www.nomachine.com/download

??

?? 3 ????

- nxclient_3.5.0-7_i386.deb
- nxnode_3.5.0-7_i386.deb
- nxserver_3.5.0-9_i386.deb

```
sudo dpkg -i nxclient_3.5.0-7_i386.deb
sudo dpkg -i nxnode_3.5.0-7_i386.deb
sudo dpkg -i nxserver_3.5.0-9_i386.deb
```

Windows ???

?? NX Client for Windows

X2Go

??

- ?????
- ?????
- ??????
- ???? SSH ??
- NX-based remote desktop solutions

X2Go Server

```
sudo apt-add-repository ppa:x2go/stable
sudo apt-get update
sudo apt-get install x2goserver x2goserver-xsession
sudo apt-get install x2gomatebindings
sudo apt-get install xfce4 xfce4-terminal
sudo apt-get install gnome-icon-theme tango-icon-theme
```

X2Go Client

```
sudo apt-add-repository ppa:x2go/stable
sudo apt-get update
sudo apt-get install x2goclient
```

Learning

- X2Go - everywhere@home
- How to install X2Goserver on Ubuntu 14.04 as an alternative for VNC
- How to set up remote desktop on Linux VPS using x2go

Guacamole

Apache Guacamole is a clientless remote desktop gateway. It supports standard protocols like VNC, RDP, and SSH.

Home: https://guacamole.apache.org/

- **Access your computers from anywhere**
  Because the Guacamole client is an HTML5 web application, use of your computers is not tied to any one device or location. As long as you have access to a web browser, you have access to your machines.
- **Keep your desktop in the cloud**
  Desktops accessed through Guacamole need not physically exist. With both Guacamole and a desktop operating system hosted in the cloud, you can combine the convenience of Guacamole with the resilience and flexibility of cloud computing.
- **Free and open source**
  Apache Guacamole is and will always be free and open source software. It is licensed under the Apache License, Version 2.0, and is actively maintained by a community of developers that use Guacamole to access their own development environments.
  We feel this sets us apart from other remote desktop solutions, and gives us a distinct advantage.
- **Built on a well-documented API**
  Apache Guacamole is built on its own stack of core APIs which are thoroughly documented, including basic tutorials and conceptual overviews in the online manual. These APIs allow Guacamole to be tightly integrated into other applications, whether they be open source or proprietary.

Installation

With Docker

docker-compose.yml:

```
version: "3"
services:
  guacamole:
    image: jwetzell/guacamole
    container_name: guacamole
    volumes:
      - ./postgres:/config
```

```
    ports:
      - 8880:8080
volumes:
  postgres:
    driver: local
```

Login with the default credentials of:

- username: guacadmin
- password: guacadmin

More available extensions:

- auth-ldap - LDAP Authentication
- auth-duo - Duo two-factor authentication
- auth-header - HTTP header authentication
- auth-cas - CAS Authentication
- auth-openid - OpenID Connect authentication
- auth-totp - TOTP two-factor authentication
- auth-quickconnect - Ad-hoc connections extension

Usage:

```
docker run \
-p 8080:8080 \
-v </path/to/config>:/config \
-e "EXTENSIONS=auth-ldap,auth-duo" \
jwetzell/guacamole
```

Authentications

Google two-factor

With docker-compose

```
version: "3"
services:
  guacamole:
...
    environment:
```

```
      - EXTENSIONS=auth-totp
...
```

SSH

SSH-Key Authentication

```
# Generate the private key and public key
# NOTE: -m PEM is required for Guacamole
ssh-keygen -t rsa -b 4096 -f ~/.ssh/root□guacamole -C "root□guacamole" -m PEM
```

?????

??

??????????? Ctrl + Alt + Shift???? Guacamole ????????????????
Clipboard???????????????????

Learning

- Access Your Computer From Anywhere Via Web Browser using Apache Guacamole
- Install and Use Guacamole Remote Desktop on CentOS 8
- [Video] Guacamole Remote Desktop - Open Source, Self Hosted remote access to your machines in the browser!
- [Video] Meet Guacamole, Your Remote Access Gateway
- [Video] Securely Access any PC or VM Remotely using only a Web Browser with Guacamole

Learning

- 11 Best Tools to Access Remote Linux Desktop
- Get Started With Ubuntu Remote Desktop: What is It & How to Use It
- [GitHub] neko - A self hosted virtual browser that runs in docker and uses WebRTC.
- [Video] Remote Desktop & Access Tools comparison between 4 great open source, self hosted options!

Webtop

Meet Webtops A Linux Desktop Environment In Your Browser

- [Video] Run Linux Desktops in your Browser with Docker and Webtops!

SPICE (Proxmox VE is required)

The SPICE project aims to provide a complete open source solution for remote access to virtual machines in a seamless way so you can play videos, record audio, share usb devices and share folders without complications.

Kasm Workspace

Kasm Workspace Community Edition - Kasm Workspaces CE is a no-cost version of the Professional/Enterprise container streaming platform for individual users, non-profit organizations, and businesses wanting to test the platform. Workspaces CE has nearly all the same features as the paid versions with community based support.