Linux Academy

Live! Lab

Remote GUI VNC Setup

Contents

Lab Connection Information

- Labs may take up to five minutes to build
- The IP address of your server is located on the Live! Lab page
- Username: linuxacademy
- Password: 123456
- Root Password: 123456

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Security while accessing remote desktops can often be an overlooked subject. This lab covers the creation and set up of a remote VNC connection, as well as how to secure the connection to the remote server.

Set Up the Desktop GUI

Connect to the provided Ubuntu 14.04 server using the credentials provided on the Live! Lab page. The user should be *linuxacademy*, with a password of *123456*. It is considered best practices to update the server password now. Since we need superuser access for this lab, use `su -` to log in as the *root* user. *root*'s password is *123456*.

Make the *linuxacademy* user a superuser:

```
[linuxacademy@ubuntu]# usermod -G sudo linuxacademy
```

Additionally, add the *linuxacademy* user to the `visudo` file. Run the `visudo` command, and add the following after `# User privilege specification`:

```
[linuxacademy@ubuntu]# linuxacademy    ALL=(ALL:ALL) ALL
```

We want to install the KDE desktop. When working on your own, this can easily be switched to GNOME, Cinnamon, or any other available desktop GUI.

Install KDE:

```
[linuxacademy@ubuntu]# sudo apt-get install kde-plasma-desktop
```

You will be prompted to select which desktop you wish to use by default. Select *kdm*.

No further configurations are needed.

Install VNC

Although there are a variety of VNC options available the VNC server we want to install on our server is the `vnc4server` package – this works with various Debian-based distributions, such as our Ubuntu server.

```
[linuxacademy@ubuntu]# sudo apt-get install vnc4server
```

With a VNC server installed, we still need to set up the local directory structure for our VNC configuration. VNC itself can do this by running the command `vncpasswd`. Run this now.

```
[linuxacademy@ubuntu]# vncpasswd
```

Set your VNC password when prompted.

This creates a server that we can access through the command line, as needed. To keep things simple, we want to create a script that we can execute whenever we need to run a VNC session:

```
[linuxacademy@ubuntu]# echo "vncserver :1 -geometry 1850x950 -depth 24
-localhost &" > ~/vncuser.sh && chmod 755 vncuser.sh
[linuxacademy@ubuntu]# sudo cp vncuser.sh /usr/bin/
```

This script sets the parameters for the VNC server, adds the script to the `vincuser.sh` file, and sets the appropriate file permissions; the second command copies the script to the `/usr/bin/` directory.

Execute the script to create an *xstartup* file:

```
[linuxacademy@ubuntu]# vncuser.sh
```

We still want to further adjust the server's settings, so kill the current VNC server:

```
[linuxacademy@ubuntu]# vncserver -kill :1
```

Open the `.vnc/xstartup` file in your preferred editor. Comment out the final two lines.

```
[ -x /etc/vnc/xstartup ] && exec /etc/vnc/xstartup
[ -r $HOME/.Xresources ] && xrdb $HOME/.Xresources
xsetroot -solid grey
vncconfig -iconic &
# x-terminal-emulator -geometry 80x24+10+10 -ls -title "$VNCDESKTOP
Desktop" &
# x-window-manager &
```

Save and exit.

Run the `vncuser.sh` script again to start the VNC server:

```
[linuxacademy@ubuntu]# vncuser.sh
```

Client Configuration

We now need to configure our local workstation so it can securely access the server through an SSH tunnel.

From your workstation's terminal (use PuTTY or a program such as MobaXTerm for Windows), add the following script to set up the tunnel. Replace `192.51.0.2` with the public IP address of your server and `linuxacademy` with the username you have been working under, if working with a separate user.

```
[user@workstation]# echo "ssh -L 5901:localhost:5901 -N -f -l
linuxacademy  54.197.10.11" > ~/hostsetup.sh
[user@workstation]# chmod 755 ~/hostsetup.sh
```

From the home directory, run the script:

```
[user@workstation]# ./hostsetup.sh
```

Connect

Open your VNC viewer of choice. To log in to the remote server, we want to use *localhost:5901* instead of the given IP address, because we are using the SSH tunnel we created in the previous steps. You will be prompted to input your VNC password that was created when we ran the `vncpasswd` command. Input the password. You're now connected to your remote desktop!