



UDS Enterprise – Preparing Templates

Xubuntu 16.04 + NX 3.5.0-* + UDS Actor

Introduction

This document shows how to configure an Ubuntu OS virtual machine to be used as a template with UDS Enterprise.

During the procedure, we will show you the installation process of the OS (Ubuntu 16.04 in its minimal installation + XFCE), the connection or transport protocol (NX 3.5) and the UDS Actor (agent responsible for the communication between the OS and the UDS Server).

Necessary Elements

To configure the different elements that will make up the template to be used with UDS Enterprise, we will need the following:

- **OS image**

We will use a minimal image of Ubuntu 16.04, available from the official Ubuntu repository:

<https://help.ubuntu.com/community/Installation/MinimalCD>

64-bit PC (amd64, x86_64) (Recommended)

1. Ubuntu 17.04 "Zesty Zapus" 58MB (MD5: 6bd80e10bf223a04d3aafe0f997d046b)
2. Ubuntu 16.10 "Yakkety Yak" 55MB (MD5: 8a696da2b30bc335fab1e4a0aac735d)
3. Ubuntu 16.04 LTS "Xenial Xerus" 54MB (MD5: fe495d34188a9568c8d166efc589)
4. Ubuntu 14.04 LTS "Trusty Tahr" 37MB (MD5: 7297321c2fa6424417a548c85edd)

- **NX 3.5**

The protocol used to connect to virtual desktops from UDS Enterprise will be NX 3.5.

The UDS Enterprise team has created scripts that automate the entire installation process, two for the server side (32bit and 64bit), to be installed in this template, and two others for the client side (32bit and 64bit) to be installed on the connection client that will access the desktop.

These scripts can be downloaded from this repository:

<http://images.udsenderprise.com/files/NX%203.5/Scripts%20NX%203.5/>



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Index of /files/NX 3.5/Scripts NX 3.5

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
Parent Directory		-	
NXclient 32bit.sh	2017-09-22 14:36	476	
NXclient 64bit.sh	2017-09-22 14:36	478	
NXserver 32bit.sh	2017-09-22 14:36	1.7K	
NXserver 64bit.sh	2017-09-22 14:36	1.7K	

■ UDS Actor

We will need to have the latest stable version of the UDS Actor to handle the reconfiguration of all virtual desktops automatically generated by the UDS Server.

To download the UDS Actor we will need to validate in the UDS login window with a user with administrator permissions. Then, we will display the user's menu and access downloads. In this window, we will download the Actor for Linux machines and specifically for distributions based on Debian (.deb).

Downloads	
This page contains a list of downloadables provided by different modules	
udsactor_2.2.1_all.deb	UDS Actor for Debian, Ubuntu, ... Linux machines (Requires python >= 3.5)
udsactor_2.2.0_legacy.deb	Legacy UDS Actor for Debian, Ubuntu, ... Linux machines (Requires python 2.7)
udsactor-opensuse-2.2.1-1.noarch.rpm	UDS Actor for openSUSE, ... Linux machines (Requires python 2.7)
udsactor-2.2.1-1.noarch.rpm	UDS Actor for Centos, Fedora, RH, ... Linux machines (Requires python 2.7)
RDSActorSetup-2.2.1.exe	RDS UDS Actor (for remote apps on Windows Server 2012 and 2016)
UDSActorSetup-2.2.1.exe	UDS Actor for windows machines

■ Miscellaneous

It is necessary to have Internet access in order to install both, the Ubuntu OS and NX 3.5 connection protocol.

It will be necessary to configure the template network by DHCP, so we will need to have this service in the virtual interface where we connect the machine.



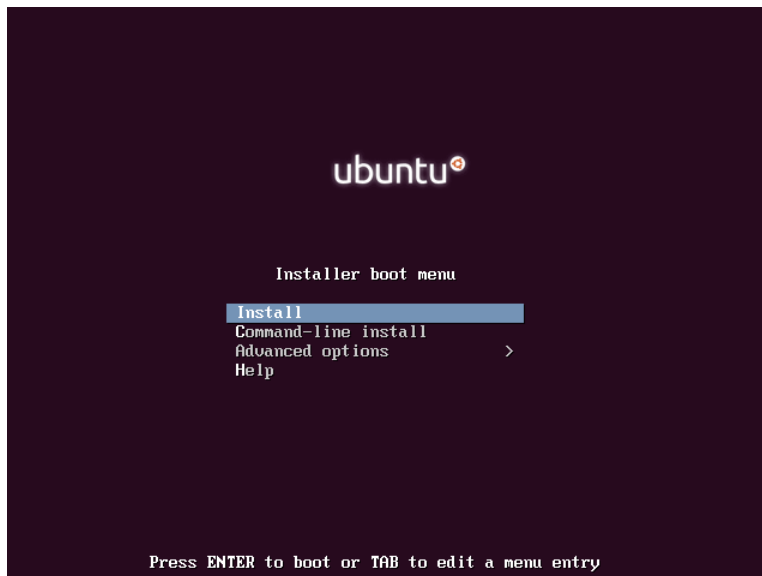
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Installation and configuration

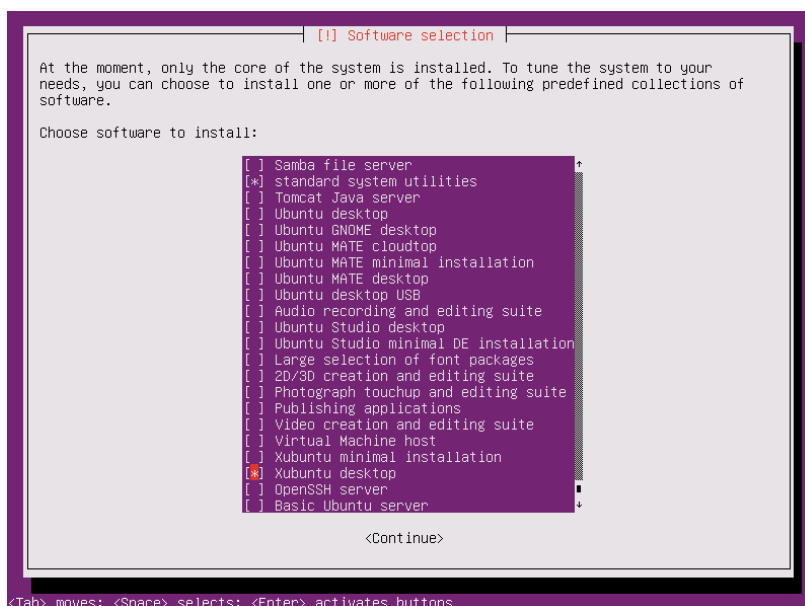
1. Xubuntu 16.04

Once downloaded the minimal image of Ubuntu 16.04 (54 MB) from the official repository indicated in the previous section, we proceed to perform its installation:



The installation will be done with the default values and indicate some resources (disk, vRAM and vCPUs) according to the use.

When we get to the part of the installation wizard where we are asked to select the programs to install, we will mark "**Xubuntu desktop**". This option will install and configure the XFCE desktop environment on our Ubuntu machine.



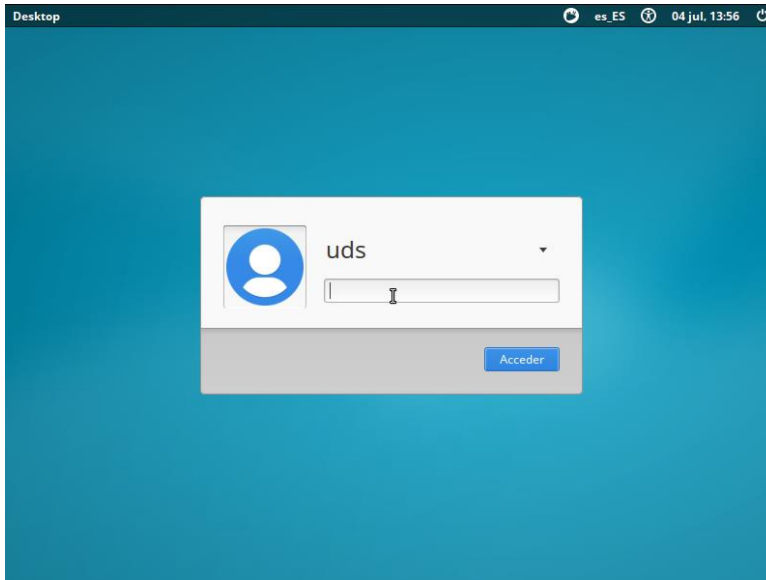


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We leave the rest of the indicated fields as they are by default.

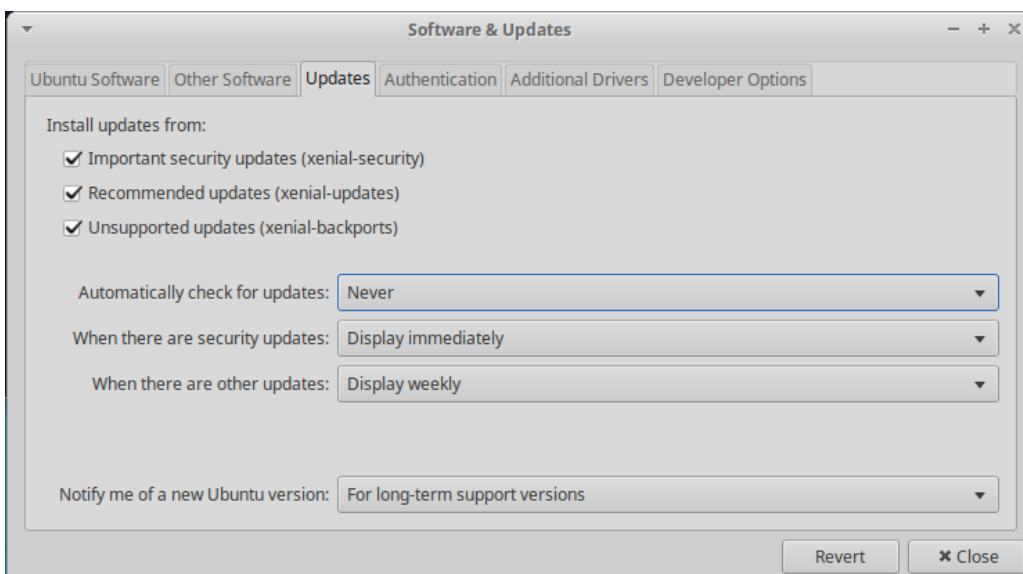
Once the installation is complete, we will be able to access our Ubuntu 16.04 + XFCE (Xubuntu 16.04).



It is important that, once the installation of the OS is achieved, you install the virtual machine drivers corresponding to the virtualization platform. In this example, we will install the "**open tools**", since the machine will run on the virtual platform VMware vSphere.

```
uds@desktop:~$ sudo apt-get install open-vm-tools
```

It is also recommended to disable automatic updates and in case you need to update the OS you perform it manually.





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2. NX 3.5 Server

After completing the previous steps, we will install NX 3.5 (Server part).

- For 32-bit OS we select and download the following script:

```
wget http://images.udsenderprise.com/files/NX%203.5/Scripts%20NX%203.5/NXServer_32bit.sh
```

- For 64-bit OS we select and download the following script:

```
wget http://images.udsenderprise.com/files/NX%203.5/Scripts%20NX%203.5/NXServer_64bit.sh
```

Locate the script and proceed with its execution:

- For 32-bit:

```
root@uds:/home/uds# sudo sh NXserver_32bit.sh
```

- For 64-bit

```
root@uds:/home/uds# sudo sh NXserver_64bit.sh
```

During the installation process, other necessary components will automatically be added. The estimated time it takes for this installation is 3 to 4 minutes.

During the installation process the following tasks are performed:

- Update system cache
- Install **OpenSSH Server**
- Download the packages **nxclient_3.5.0-7_<arch>.deb, nxnode_3.5.0-9_<arch>.deb, nxServer_3.5.0-11_<arch>.deb**
- Install the downloaded packages
- Edit the file **/usr/NX/etc/node.cfg** and set the default outputs to “startxfce4” for **GNOME** and **KDE**
- Install ssh
- Configure the file **/etc/ssh/sshd_config** to disable ssh-dss by default

Once the whole process is finished, we will check the connection to our Server from an NX client.

3. NX 3.5 Client

This element does not need to be installed in the template, we will need to install it in our client for remote access to desktops that will be deployed from the template.

To install the NX3.5 client on computers, you need to download and run the corresponding script (Linux 32-bit or 64-bit), or download the executable for Windows machines and follow the basic installation steps.



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Download the script and execute it:

Linux:

- 32-bit:

```
wget http://images.udsenderprise.com/files/NX%203.5/Scripts%20NX%203.5/NXclient_32bit.sh
```

```
root@uds:/home/uds# sudo sh NXclient_32bit.sh
```

- 64-bit:

```
wget http://images.udsenderprise.com/files/NX%203.5/Scripts%20NX%203.5/NXclient_64bit.sh
```

```
root@uds:/home/uds# sudo sh NXclient_64bit.sh
```

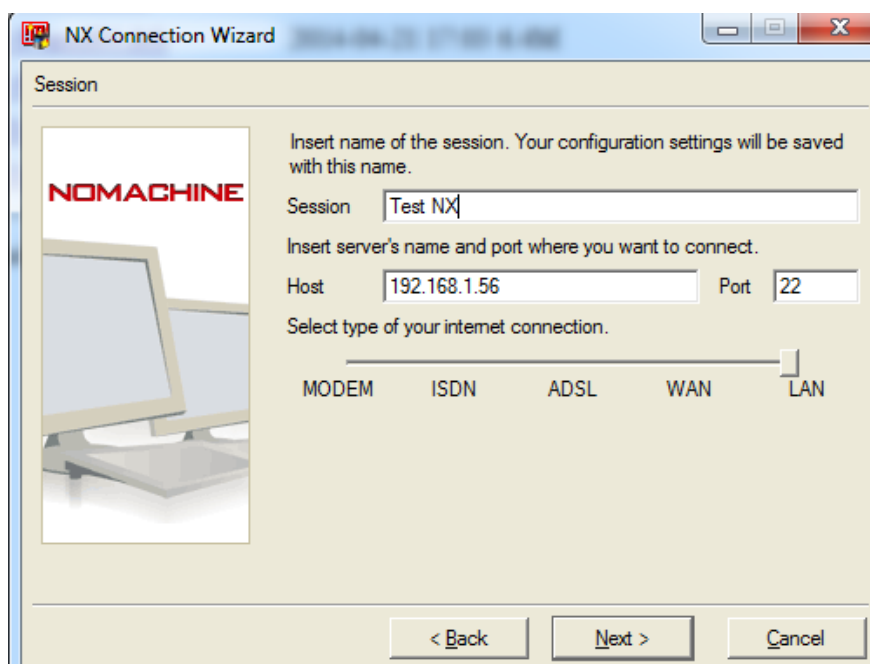
Windows: Download and install the executable [nxclient-3.5.0-9.exe](#)

Once the installation is complete, we execute the NX client from our connection client to the NX Server (installed in our template).

We indicate the user credentials of the NX Server (installed in our template).

And in the section “**configure**” we indicate:

- Name or IP of the Server NX (Template)
- Port
- Connection speed
- Connection and Desktop type

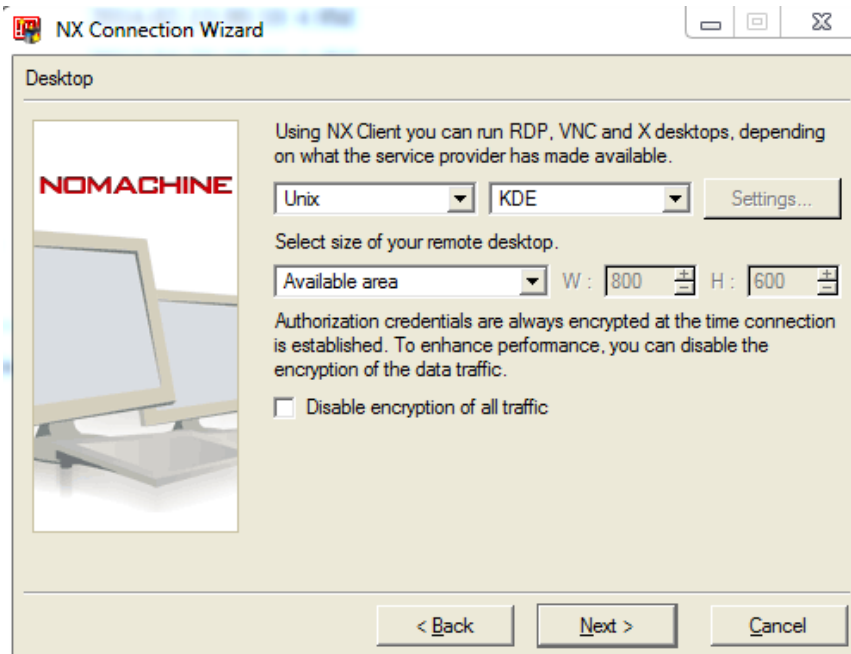




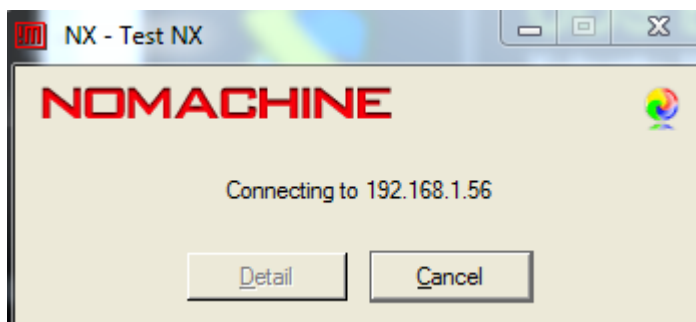
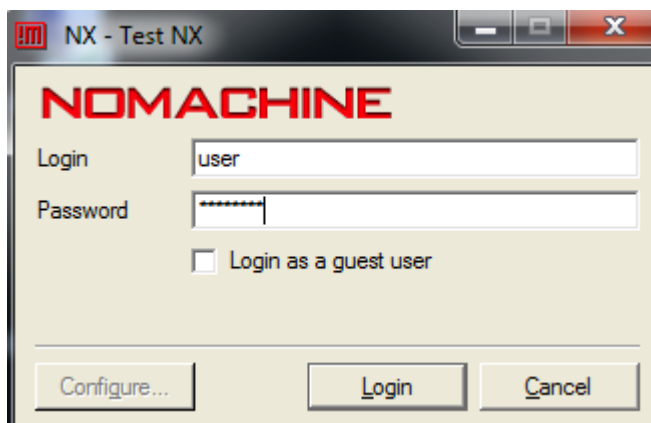
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- We select Unix and we can choose between GNOME or KDE
- Remote desktop display size



This will allow us to create a shortcut, which will prompt us for user credentials of the remote machine (template).

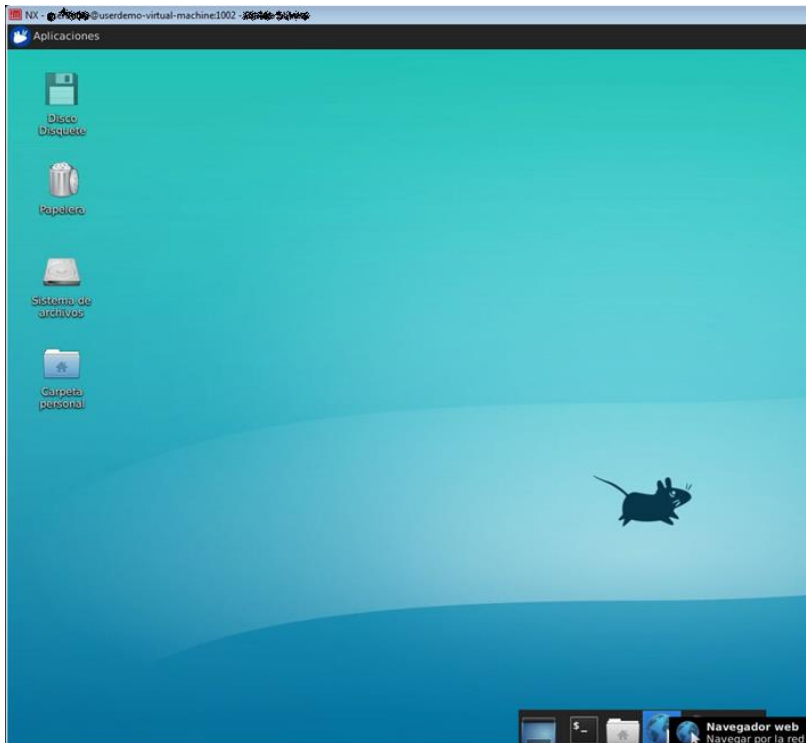




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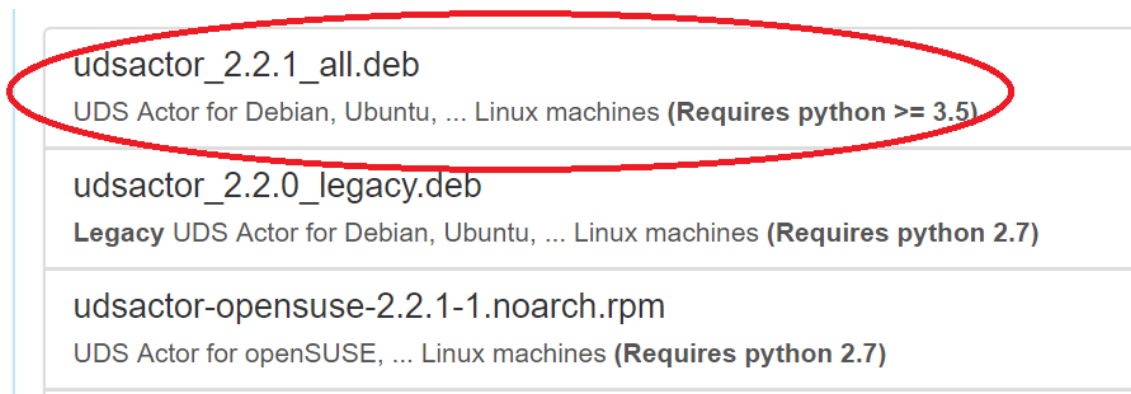
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Wait for the connection to be established:



4. UDS Actor

Download the UDS Actor for **Debian-based distributions**.



We proceed to install the UDS Actor with the command: **dpkg -i**

```
root@ubuntu:/home/test/Downloads# ls
udsactor_2.2.1_all.deb
root@ubuntu:/home/test/Downloads#
```




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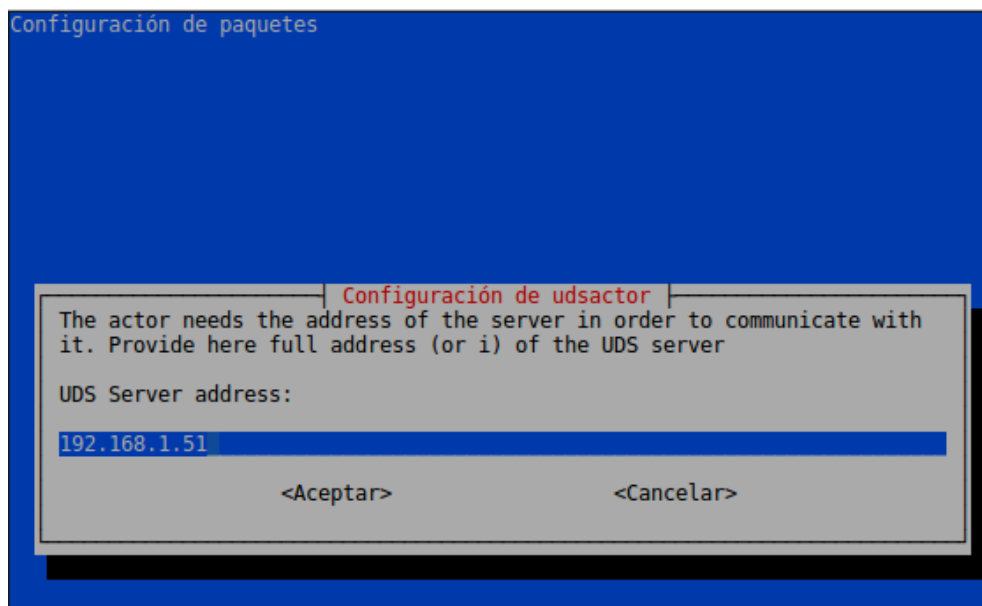
The process will fail due to missing dependencies, so we will execute the command: **apt-get install -f** to be installed automatically.

```
dpkg: dependency problems prevent configuration of udsactor:
 udsactor depends on python-requests (>= 0.8.2); however:
   Package python-requests is not installed.
 udsactor depends on python-qt4 (>= 4.9); however:
   Package python-qt4 is not installed.
 udsactor depends on python-six (>= 1.1); however:
   Package python-six is not installed.
 udsactor depends on python-prctl (>= 1.1.1); however:
   Package python-prctl is not installed.
 udsactor depends on xscreensaver; however:
   Package xscreensaver is not installed.

dpkg: error processing package udsactor (--install):
 dependency problems - leaving unconfigured
Processing triggers for ureadahead (0.100.0-19) ...
Processing triggers for systemd (232-21ubuntu2) ...
Processing triggers for bamfdaemon (0.5.3+17.04.20170406-0ubuntu1) ...
Rebuilding /usr/share/applications/bamf-2.index...
Processing triggers for gnome-menus (3.13.3-6ubuntu5) ...
Processing triggers for desktop-file-utils (0.23-1ubuntu2) ...
Processing triggers for mime-support (3.60ubuntu1) ...
Errors were encountered while processing:
 udsactor
root@ubuntu:/home/user/Downloads# apt-get install -f
```

Once these dependencies are installed, the UDS Actor setup wizard will be launched automatically.

The first task is to enter the IP address or UDS Server name (broker):

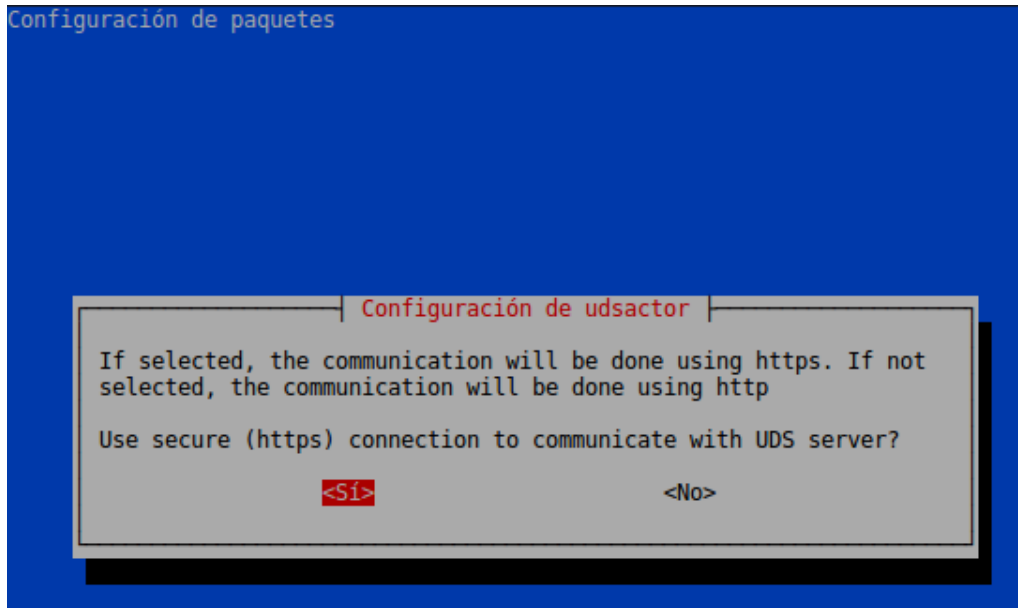




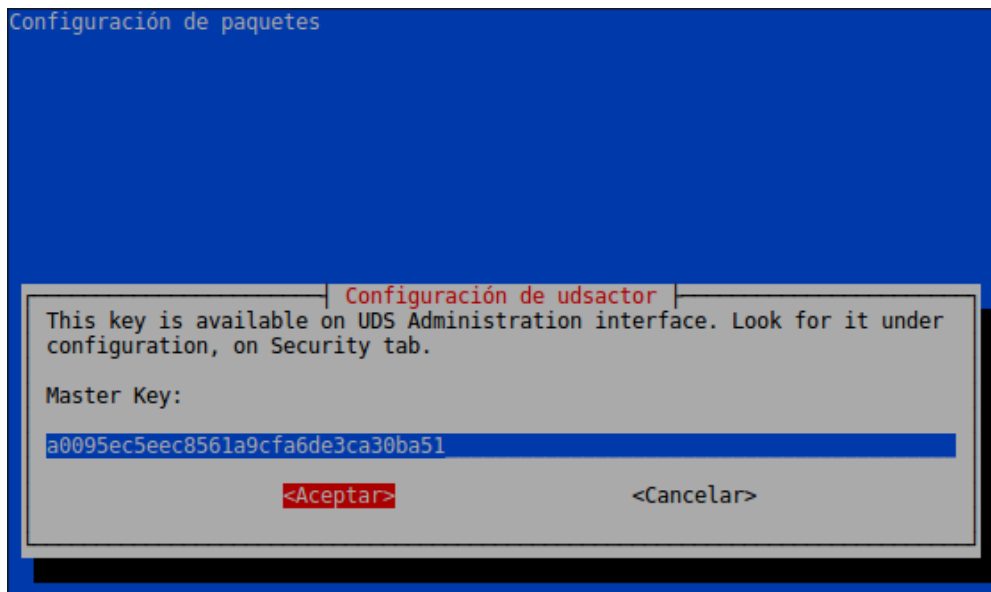
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We will indicate if we want to use a secure connection with UDS Server:



We add the "Master key" that we obtain by accessing the UDS Server web page (entering control panel, **Tools menu - Configuration**, tab "Security").



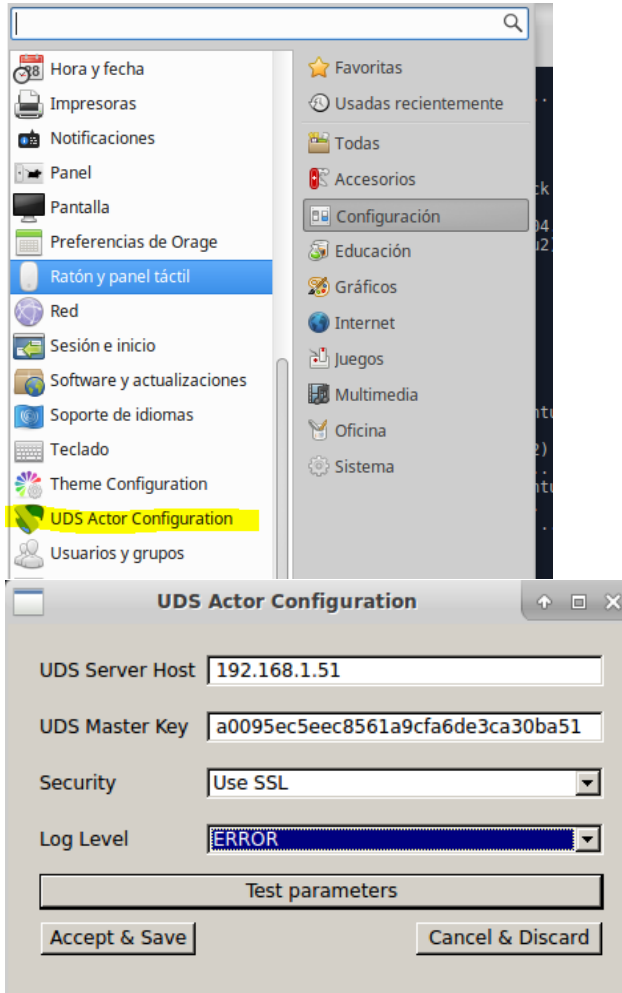
We have finished configuring the UDS Actor.



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The next step will validate that we have communication with the UDS Server through the **ports 80/443**, and that the indicated "**Master Key**" is valid. We open the Actor configuration and perform a connection test:



In case we need to modify some parameters, we can do it from this window or also editing the file: `/etc/udsActor/udsActor.cfg`

```
uds@Desktop:/etc$ sudo su
root@Desktop:/etc# vi /etc/udsactor/udsactor.cfg
```

```
[uds]
logLevel = 30000
ssl = True
host = 192.168.1.51
masterKey = a0095ec5eec8561a9cfa6de3ca30ba51
```



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Summary

Once all these steps have been completed, we will have our OS Xubuntu 16.04 available for use with UDS Enterprise using the NX 3.5 connection protocol.

From this template, UDS Enterprise will automatically generate virtual desktops, which can be accessed from Windows and Linux connection clients.

Support and Professional Services

VirtualCable markets UDS Enterprise through a subscription model, including support and updates, depending on the number of users.

In addition, VirtualCable offers professional services to install and configure UDS Enterprise and other virtualization technologies.

For more information, visit www.udsenderprise.com or send us an email to info@udsenderprise.com