



# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

### Introduction

This document shows how to configure a Linux Ubuntu OS virtual machine to be used as a template with UDS Enterprise 3.5.

During the configuration process, the installation process of the OS (Ubuntu 20.04), the connection or transport protocol (XRDP) and the UDS Actor (agent in charge of communication between the OS and the UDS Server) will be shown.

### Necessary elements

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

- **OS image**

Use an image of Ubuntu 20.04, available in the official Ubuntu repository:

<https://ubuntu.com/download/desktop>

### Ubuntu 20.04.3 LTS

Download the latest [LTS](#) version of Ubuntu, for desktop PCs and laptops. LTS stands for long-term support — which means five years, until April 2025, of free security and maintenance updates, guaranteed.

[Ubuntu 20.04 LTS release notes](#)

Recommended system requirements:

- ✓ 2 GHz dual core processor or better
- ✓ 4 GB system memory
- ✓ 25 GB of free hard drive space
- ✓ Internet access is helpful
- ✓ Either a DVD drive or a USB port for the installer media

[Download](#)

For other versions of Ubuntu Desktop including torrents, the network installer, a list of local mirrors, and past releases [see our alternative downloads](#).

- **XRDP**

The protocol used to connect to the virtual desktops from UDS Enterprise will be XRDP. In addition to remote connection, it will allow you to redirect disk drives, storage drives, remote sound...

The installation process of this version with all its functionalities is difficult and sometimes frustrating. To make this easier, we recommend using a script that automates the entire installation and configuration process. You can download it from the following link:

<http://c-nergy.be/blog/?p=15978>



# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

### ■ UDS Actor

You will need to have the latest stable version of the UDS Actor to be in charge of the reconfiguration of all the virtual desktops generated automatically by the UDS Server.

To download the UDS Actor you will need to validate in the UDS Enterprise login window with a user with administrator permissions.

Display the user menu and access downloads. In this window, you will download the Actor for Linux machines and specifically for distributions based on Debian (.deb).



### ■ Various

It is necessary to have an internet connection to be able to install both the Ubuntu OS and the XRDP connection protocol.

The template network will need to be configured by DHCP, so you will need to have this service in the virtual interface where you connect the machine.



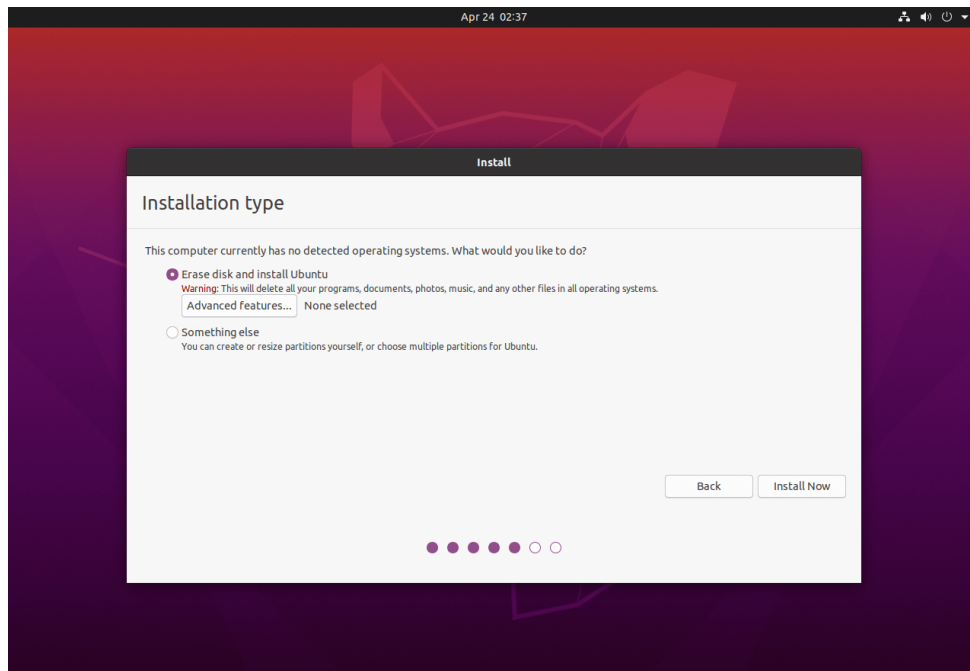
# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

### Installation and configuration

#### 1. Ubuntu 20.04

Once the Ubuntu 20.04 image has been downloaded from the official repository indicated in the previous section, you can proceed to install it:



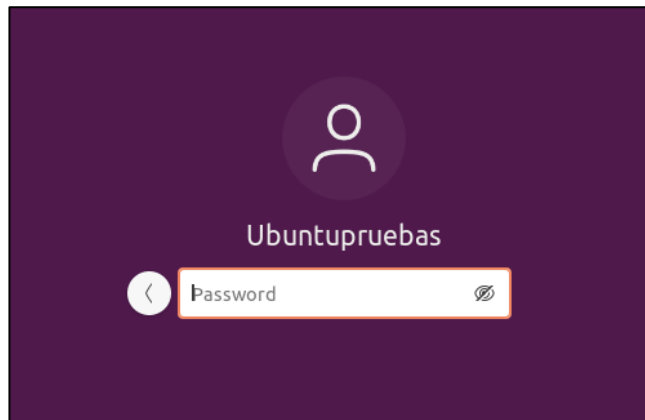
The installation will be carried out with the default values and indicating some resources (disk, vRAM and vCPUs) according to the use you're going to make of the desktop.



# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

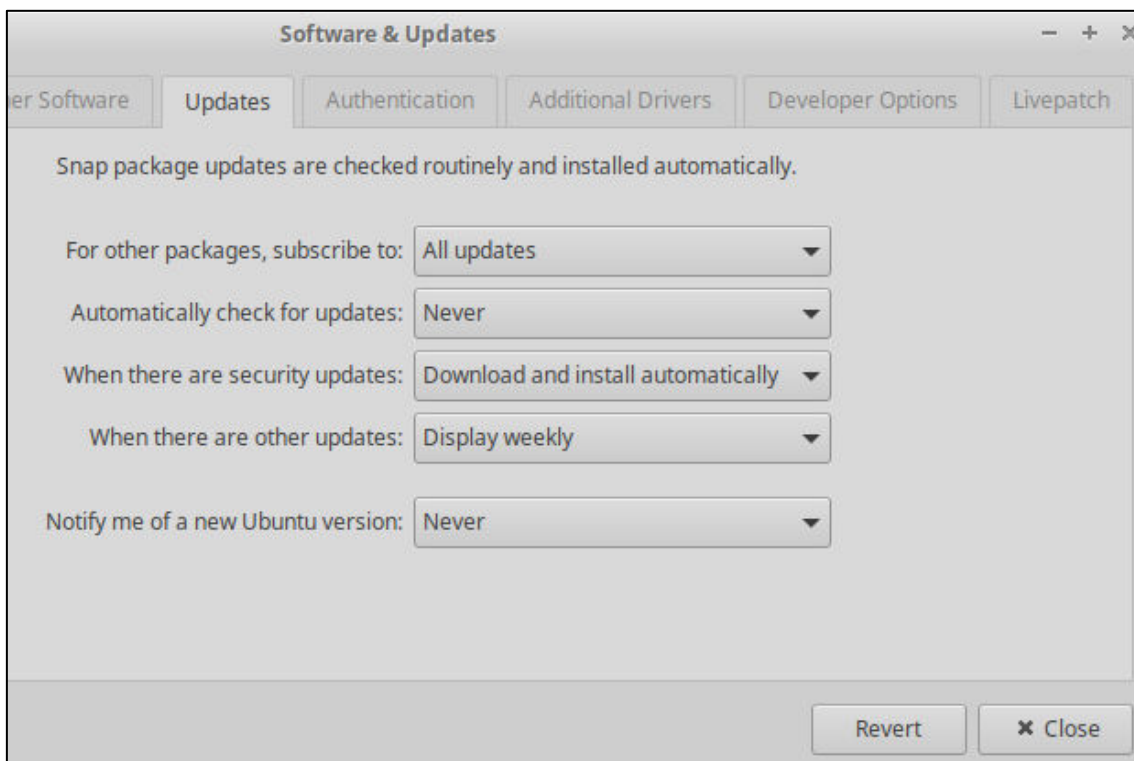
Once the installation is finished, you can access your Ubuntu 20.04 OS.



Once the OS installation is finished, it is important to install the virtual machine drivers corresponding to the virtualization platform. In this example, you will install the “**open tools**”, since the machine will run on the VMware vSphere virtual platform.

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

It is also recommended to disable automatic updates, and if you need to update the OS, do it manually.

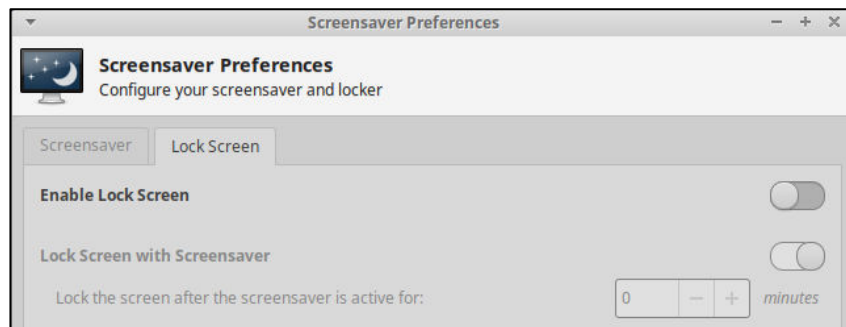




# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

Another recommended action is to disable the screen lock:



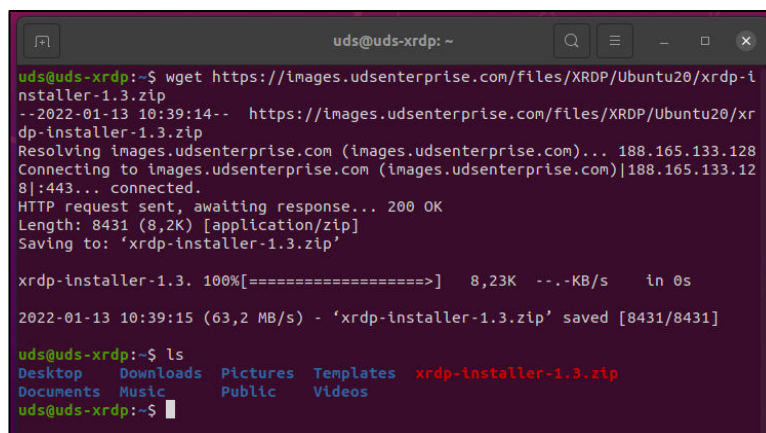
## 2. XRDP

To install XRDP on Ubuntu 20.04, you can use [this script](#) developed by [Griffon's IT Library](#).

With the use of this script, you will configure XRDP so that there is a redirection of units, remote audio, keyboard support...

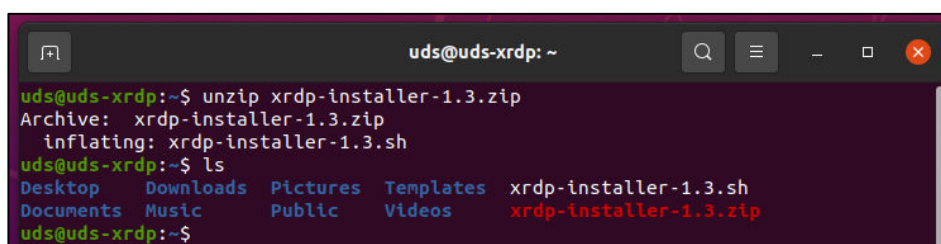
Connect to the Ubuntu 20.04 template machine and download the script:

```
wget https://images.udsenderprise.com/files/XRDP/Ubuntu20/xrdp-installer-1.3.zip
```



Unzip the file to obtain the script:

```
unzip xrdp-installer-1.3.zip
```





# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

Give execution permissions to the script:

```
chmod 755 xrdp-installer-1.3.sh
```

```
uds@uds-xrdp: ~  
uds@uds-xrdp:~$ ls  
Desktop  Downloads  Pictures  Templates  xrdp-installer-1.3.sh  
Documents Music      Public    Videos    xrdp-installer-1.3.zip  
uds@uds-xrdp:~$ chmod 755 xrdp-installer-1.3.sh  
uds@uds-xrdp:~$ ls  
Desktop  Downloads  Pictures  Templates  xrdp-installer-1.3.sh  
Documents Music      Public    Videos    xrdp-installer-1.3.zip  
uds@uds-xrdp:~$
```

Run the script using the -s parameter to enable audio redirection:

```
./xrdp-installer-1.3.sh -s
```

Once the script is finished, **turn off the machine and start it again** (perform this action instead of a restart):

```
!-----!  
! Installation Completed...Please test your xRDP configuration !  
! If Sound option selected, shutdown your machine completely !  
! start it again to have sound working as expected !  
! !  
! Credits : Written by Griffon - October 2021 !  
!           www.c-nergy.be -xrdp-installer-v1.3.sh !  
!           ver 1.3 !  
!-----!  
uds@uds-xrdp:~$ ./xrdp-installer-1.3.sh -s
```

Test the RDP connection to the machine and verify that you can connect correctly and have redirection of units and audio.

In some cases, to be able to redirect the audio it is necessary to execute the following command:

```
pulseaudio -k
```

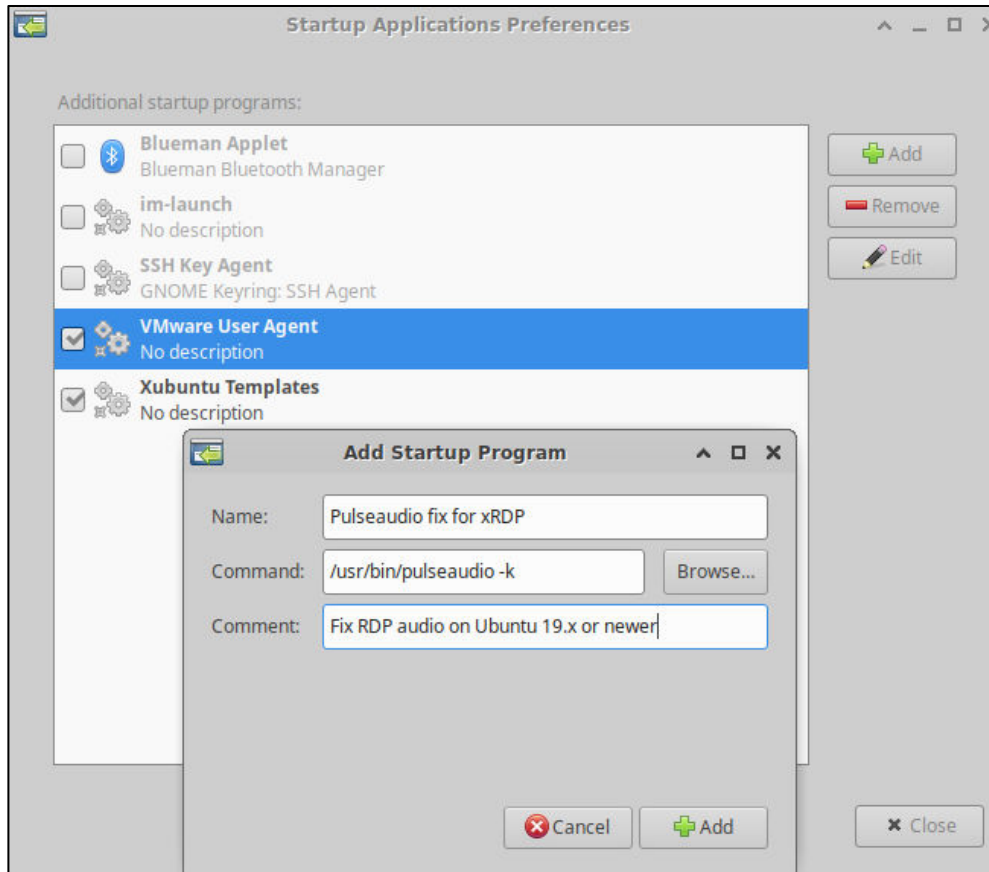




# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

Add it to “**Startup Applications**” (start – settings – startup applications) if you’d like it to run directly when the OS starts:



### 3. UDS Actor

Download the UDS Actor for Debian-based distributions:





# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

Proceed to the installation of the UDS Actor with the command:

```
sudo dpkg -i
```

```
uds@uds-xrdp: ~/Downloads
uds@uds-xrdp:~/Downloads$ ls
udsactor_3.5.0_all.deb
uds@uds-xrdp:~/Downloads$ sudo dpkg -i udsactor_3.5.0_all.deb
```

If the process fails due to missing certain dependencies, execute the following command so that they are installed automatically:

```
sudo apt-get install -f
```

```
uds@uds-xrdp: ~/Downloads
uds@uds-xrdp:~/Downloads$ ls
udsactor_3.5.0_all.deb
uds@uds-xrdp:~/Downloads$ sudo dpkg -i udsactor_3.5.0_all.deb
[sudo] password for uds:
Selecting previously unselected package udsactor.
(Reading database ... 176853 files and directories currently installed.)
Preparing to unpack udsactor_3.5.0_all.deb ...
Unpacking udsactor (3.5.0) ...
dpkg: dependency problems prevent configuration of udsactor:
 udsactor depends on python3-pyqt5 (>= 4.9); however:
  Package python3-pyqt5 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 gnome-menus (3.36.0-1ubuntu1) ...
Processing triggers for desktop-file-utils (0.24-1ubuntu3) ...
Processing triggers for mime-support (3.64ubuntu1) ...
Errors were encountered while processing:
 udsactor
uds@uds-xrdp:~/Downloads$
```

Once the dependencies are installed, the UDS Actor will be installed.

```
Processing triggers for gnome-menus (3.36.0-1ubuntu1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.2) ...
Setting up xscreensaver (5.42-dfsg1-1ubuntu1) ...
Setting up udsactor (3.5.0) ...
Created symlink /etc/systemd/system/multi-user.target.wants/udsactor.service → /lib/systemd/system/udsactor.service.
uds@uds-xrdp:~/Downloads$
```

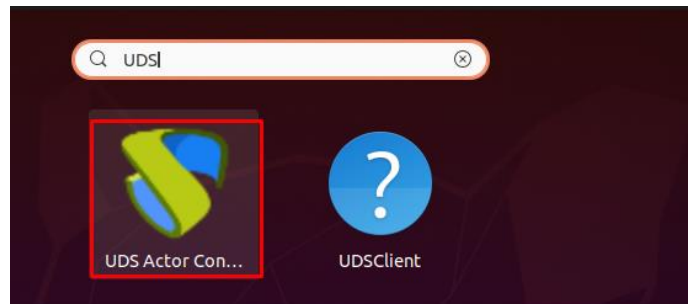




# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

Access the start menu and execute the UDS Actor:



### NOTE:

It is recommended to be connected via console to the machine. To run it in RDP sessions, this command must be executed previously:

```
xhost + && sudo QT_X11_NO_MITSHM=1 /usr/sbin/UDSActorConfig
```

In the **UDS Server** tab, you will register the Actor with the UDS instance indicating the following parameters:

**SSL Validation:** Type of security with which communication with the UDS server will be carried out.

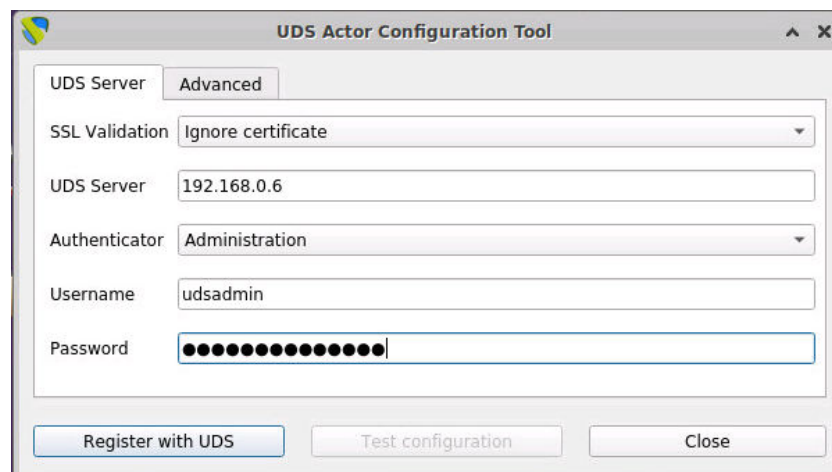
**UDS Server:** Name or IP address of the UDS server.

**Authenticator:** Authenticator to which the administrator user indicated to register the UDS Actor belongs.

The communication with the UDS server must be carried out correctly so that the different authenticators are displayed. At least one must exist registered in the UDS administration (the authenticator “**Administration**” corresponds to the super-user created in the UDS server configuration wizard).

**Username:** The user name with administration permissions in the UDS environment (must belong to the authenticator selected above).

**Password:** The password of the administrator user introduced.





# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

Once these data have been indicated, click on **“Register with UDS”**:

The screenshot shows the 'UDS Server' configuration window with the 'Advanced' tab selected. The fields are: SSL Validation (Ignored), UDS Server (192.168.0.6), Authenticator (Admin), Username (udsadmin), and Password (masked). At the bottom are three buttons: 'Register with UDS', 'Test configuration', and 'Close'. A modal dialog titled 'UDS Registration' is open in the center, displaying an information icon, the text 'Registration with UDS completed.', and an 'OK' button.

You can also carry out a test by clicking on **“Test configuration”** to verify the correct connection with the UDS server at any time:

The screenshot shows the same 'UDS Server' configuration window. A modal dialog titled 'UDS Test' is open in the center, displaying an information icon, the text 'Configuration for 192.168.0.6 seems to be correct.', and an 'OK' button.



# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

In the **Advanced** tab, you can indicate the following advanced parameters:

**Preconnect:** Script that will be executed just before allowing the user to connect to the virtual desktop.

UDS will automatically pass the following parameters that can be used in the script: username, protocol (rdp, nx, pcoip...), IP (IP that UDS has recognized in the client (SRC IP), hostname (SRC Host).

**Runonce:** Script that is executed only once and before the UDS Actor applies its configuration. After its execution, it is deleted from the configuration. Parameters can be passed to it directly.

It is necessary that the virtual desktop is restarted by the script being run. Otherwise, the desktop will never apply the Actor configuration, preventing it from reaching its **“Valid”** status in the UDS administration.

**Postconfig:** Script that is executed when the UDS Actor has finished its configuration. Parameters can be passed to it directly.

The script is executed only once, but unlike the **“Runonce”** mode it doesn't need to restart the virtual desktop. This script is useful to add some *own* element to the configuration carried out by the UDS Actor, such as copying files from the local network, executing configurations, etc...

**Log Level:** Types of records that will be displayed in the UDS Actor log files. These log files (**udsactor.log**) will be located in the path: **/var/log/**

UDS Actor Configuration Tool

UDS Server Advanced

Preconnect  Browse

Runonce  Browse

Postconfig  Browse

Log Level INFO

Register with UDS Test configuration Close

It is very important to bear in mind that to apply the values of the **“Advanced”** tab, it will always be necessary to carry out the registration process afterwards. If you add any script or modify the log level and you have not registered the Actor again, these will not apply.

Once the installation and configuration of the UDS Actor is done, the template machine (gold image) can now be turned off and will be available to be used by UDS to auto-generate virtual desktops.



# UDS Enterprise – Preparing Templates

## Ubuntu 20.04 + XRDP + UDS Actor

### Summary

Once all these steps have been carried out, you will have your Ubuntu 20.04 OS template available for use with UDS Enterprise using the RDP connection protocol.

This mode of installation and configuration will allow the redirection of disk drives and storage drives to the virtual desktop.

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

- From Windows computers with the RDP client: Remote Desktop
- From Linux computers with RDP clients: FreeRDP2

### Support and professional services

Virtual Cable develops and supports UDS Enterprise through a subscription model according to the number of users, including support and updates.

Additionally, Virtual Cable offers professional services to install and configure UDS Enterprise.

For more information, visit [www.udsenderprise.com](http://www.udsenderprise.com) or email us at [info@udsenderprise.com](mailto:info@udsenderprise.com)