

UDS Enterprise 4.0 - Preparing templates Windows 11 + RDP + UDS Actor



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Introduction

This document shows how to configure a Windows 11 OS virtual machine to be used as a template with UDS Enterprise 4.0.

During the procedure, the installation process of the Windows 11 OS will be shown, how to enable the RDP protocol and the configuration of the UDS Actor (agent in charge of 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 be using a Microsoft Windows 11 image.

• RDP

The protocol used to connect to the virtual desktops from UDS Enterprise will be RDP. It will allow us, in addition to making the remote connection, the redirection of disk units / storage drives, local printers, smart cards, various monitors, etc...

This protocol already comes by default in this OS and we will only have to enable it to be used by UDS Enterprise.

• Actor UDS

It will be needed to have the latest stable version of the UDS Actor to take care of the reconfiguration of all the virtual desktops automatically generated by the UDS Server.

To download the UDS Actor we will need to validate ourselves in the UDS login window with a user with administrator permissions. We will display the user menu and access the downloads. In this window we will download the Actor for Windows machines (.exe).

| ٢ | udsactor_4.0.0_all.deb UDS Actor for Debian, Ubuntu, Linux machines (Requires python >= 3.6) | ſ | <u>)</u> | udsactor-4.0.0-1.noarch.rpm UDS Actor for Centos, Fedora, RH, Suse, Linux machines (Requires python >= 3.6) |
|---|--|---|----------|--|
| ٢ | UDS Actor for Debian based Linux machines. Used ONLY for static machines. (Requires python >= 3.6) | ſ | <u>)</u> | udsactor-unmanaged-4.0.0-1.noarch.rpm UDS Actor for Centos, Fedora, RH, Suse, Linux machines. Used ONLY for static machines. (Requires python > 3.6) |
| | UDSRDSServerSetup-4.0.0.exe UDS RDS Server (for remote apps on Windows Server) | | | RDSActorSetup-4.0.0.exe RDS UDS Actor (legacy, use UDS RDS Server instead) |
| | UDSActorSetup-4.0.0.exe UDS Actor for windows machines | | | UDSActorUnmanagedSetup-4.0.0.exe UDS Actor for Unmanaged windows machines. Used ONLY for static machines. |

Downloads

• Others

It is recommended to update the OS after its installation is complete. After said update, automatic updates must be disabled to prevent the generated virtual desktops from executing this process. This task is recommended especially with the use of non-persistent desktops.

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

The template must never be added to an Active Directory domain. In case you need virtual desktops included in an AD domain, the configuration will be done from the control panel of the UDS Server (OS Manager).

The auto-login of a user cannot be configured in the template. A user should always be prompted for credentials (there are different ways to authenticate to virtual desktops, all of which are available in the service transport).

Installation and configuration

1. Microsoft Windows 11

Proceed to the installation of the Windows 11 OS:

| 🖆 Windows Setup | - • • |
|---|-------|
| <mark>⊣_</mark> Windows [•] | |
| Languag <u>e</u> to install: English (United Kingdom) | |
| Time and currency format: Spanish (Spain, International Sort) | - |
| <u>K</u> eyboard or input method: <mark>Spanish</mark> | • |
| Enter your language and other preferences and click "Next" to continue. © 2020 Microsoft Corporation. All rights reserved. | Next |

The installation will be carried out with the default values and indicating some resources (disk, vRAM and vCPUs) according to the use that we are going to give to the desktop.

Continue with all the steps of the default installation until it is finished and we have the virtual machine ready to start and install the UDS Actor.

Once the OS installation is finished, it is important to install the virtual machine drivers corresponding to the virtualization platform. In this example we will install the "VMware Tools", since the machine will run on the VMware vSphere virtual platform.

| 👼 Instala | ción de VMware Tools | | 8 | | |
|--|----------------------|---|----|--|--|
| You must restart your system for the configuration changes made to VMware Tools to take effect. Click Y to restart now or No if you plan to manually restart later. | | | | | |
| | Sí | 3 | No | | |

After installing the VMware Tools and restarting the VM, we can now enable the RDP connection protocol and configure the UDS Actor.

2. RDP

In order to connect to the virtual desktop, we must enable the remote desktop connection (RDP) in the template.



| \leftarrow Settings | | × |
|---|---|----|
| Q uds Local Account | System > Remote Desktop | |
| Find a setting | Remote Desktop Connect to and use this PC from another device using the Remote Desktop app | ~ |
| System Bluetooth & devices | PC name Use this name to connect to this PC from another device | vc |
| Network & internet Personalisation | Remote Desktop users Select who can remotely access this PC | ß |

Enable: "*Enable Remote Desktop*" and in the advanced options we will review the section: "*Require computers to use Network Level Authentication to connect*".

| Syst | tem > Remote Desktop | |
|------|--|------|
| >< | Remote Desktop Connect to and use this PC from another device using the Remote Desktop app | • • |
| | Require devices to use Network Level Authentication to connect (Recommended) | |
| | Remote Desktop port | 3389 |

If we enable the option "*Require computers to use Network Level Authentication to connect*", we will have to send the machine valid credentials, otherwise, the connection will not be made satisfactorily.

If we are also going to use a connection via HTML5, in some cases it will be necessary to modify the following section of the registry:

https://www2.udsenterprise.com/en/wiki/Troubleshooting/Windows/Windows10-HTML5/

| 퉳 Conexió | n a Escritorio remoto | _ | Escribir las credenciales |
|---------------|-------------------------------|------------------|--|
| Equipo: | Escritorio remoto Conexión | | Estas credenciales se usarán para conectarse a 192.168.181.147. user |
| Usuario: | Ninguno especificado | | Dominio: MicrosoftAccount |
| Se solicitará | n credenciales al conectarse. | | Recordar cuenta |
| 💽 Mostrar | opciones | <u>C</u> onectar | Más opciones |

Once verified, you can move on to the installation of the UDS Actor.

3. Actor UDS

Access the UDS server and validate ourselves with a user with administrator permissions. In the user menu we select "Downloads" to access the downloads of the UDS Actor.

| 🛨 UDS Client | i About | sh v udsadmin |
|--------------|---------|--------------------------|
| | | Dashboard |
| | | Downloads |
| | ~ | ➔ Logout |

Download the UDS Actor for Windows machines corresponding to machines with Windows OS:

| UDSRDSServerSetup-4.0.0.exe UDS RDS Server (for remote apps on Windows Server) |
|---|
| UDSActorSetup-4.0.0.exe UDS Actor for windows machines |

Once the Actor is downloaded, we start the installation.



Accept the license agreement:

| 💎 UDS Enterprise Actor Setup 🦳 🗌 | \times |
|--|----------|
| License Agreement | |
| Please review the license terms before installing UDS Enterprise Actor. | <u></u> |
| Press Page Down to see the rest of the agreement. | |
| Copyright (c) 2012-2022 Virtual Cable S.L.U. All rights reserved. | ^ |
| Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: | |
| * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. | ¥ |
| If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install UDS Enterprise Actor. | 2 |
| UDS Enterprise | |
| < Back I Agree Car | ncel |

Select the installation path of the UDS Actor:

| 😽 UDS Enterprise Actor Setup | _ | | × |
|---|--------------------|-----------|----------|
| Choose Install Location | | | |
| Choose the folder in which to install UDS Enterprise Actor. | | | <u>\</u> |
| Setup will install UDS Enterprise Actor in the following folder. To install i click Browse and select another folder. Click Install to start the installat | n a differ ion. | ent folde | r, |
| | | | |
| Destination Folder | | | |
| C:\Program Files\UDSActor | Brov | vse | |
| Space required: 77.0 MB | | | |
| Space available: 181.6 GB | | | |
| UDS Enterprise | | | |
| < Back Ins | tall | Car | ncel |

Click on "Install" to proceed with the installation:

| 😵 UDS Enterprise Actor Setup | | | _ | | \times |
|-----------------------------------|--------|------|---|-----|----------|
| Installation Complete | | | | | |
| Setup was completed successfully. | | | | | <u></u> |
| Completed | | | | | |
| | | | | | |
| Show details | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| UDS Enterprise | | | | | |
| | < Back | Next | > | Car | ncel |

Once the installation is done, proceed to the configuration of the UDS Actor:

| 😵 UDS Enterprise Actor Setup | – – × |
|------------------------------|---|
| | Completing UDS Enterprise Actor Setup |
| | UDS Enterprise Actor has been installed on your computer. |
| | Click Finish to close Setup. |
| | Run UDS Enterprise Actor |
| | < Back Finish Cancel |

In the UDS Server tab we will register the Actor with the UDS instance indicating the following parameters:

SSL Validation:Type of security with which the 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.

It is necessary that the communication with the UDS server be carried out correctly so that the different authenticators are displayed. There must be at least one registered in the UDS administration (the "Administration" authenticator corresponds to the super-user created in the UDS server configuration wizard).

username:Username with administration permissions in the UDS environment (must belong to the authenticator selected above).

Password:Password of the administrator user used.

| 💎 UDS Actor Confi | guration Tool | ? | × |
|--|--------------------|---|--------|
| UDS Server | Advanced | | |
| SSL Validation | Ignore certificate | | \sim |
| UDS Server | 192.168.0.6 | | |
| Authenticator | Administration | | ~ |
| Username | udsadmin | | |
| Password | •••••• | | |
| | | | |
| Register with UDS Test configuration Close | | | |

Once these data have been indicated, we will click on "Register with UDS":

| 😵 UDS Actor Configuration Tool | ? | \times |
|--|------|----------|
| UDS Server Advanced | | |
| SSL Validation Ignore certificate | | ~ |
| UDS Server UDS Registration × | | |
| Authenticator Registration with UDS completed. | | ~ |
| Username OK | | |
| Password | | |
| | | |
| | | |
| Register with UDS Test configuration C | lose | |

We can also carry out a test by clicking on "Test configuration" to verify the correct connection with the UDS server at any time:

| 💎 UDS Actor Con | figuration Tool | | | ? | × |
|-----------------|--------------------|---------------------------------|----------|-----|---|
| UDS Server | Advanced | | | | |
| SSL Validation | Ignore certificate | | | | ~ |
| UDS Server | : 💎 UDS Test | | × | | |
| Authenticator | Configurati | ion for 192.168.0.6 seems to be | correct. | | ~ |
| Username | 1 | | ок | | |
| Password | | | | | |
| | | | | | |
| Register w | ith UDS | Test configuration | C | ose | |

In the "Advanced" tab we 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, which 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 directly to it.

It is necessary that the script that is executed finishes by restarting the virtual desktop. Otherwise, the desktop will never apply the Actor configuration, preventing reaching the "Valid" status in the UDS administration.

post config: script that is executed when the UDS Actor has finished its configuration. Parameters can be passed directly to it.

The script runs only once, but unlike Runonce mode you don't need to restart the virtual desktop. This script is useful to add some element of your own 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 shown in the log files of the UDS Actor. These log files (udsactor.log) will be located in the following paths: %temp% (path to temporary user files) and C:\Windows\Temp (path to temporary OS files).



| 😵 UDS Actor C | onfiguration Tool | | ? × |
|---------------|-------------------|--------------------|--------|
| UDS Server | Advanced | | |
| Preconnect | | | Browse |
| Runonce | | | Browse |
| Postconfig | | | Browse |
| Log Level | ERROR | | ~ |
| | | | |
| | | | |
| 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, since if we add a script or modify the log level and we have not registered the Actor again, these will not be registered. Will apply.

Once the UDS Actor has been installed and configured, the template machine (gold image) can now be turned off and will be available to be used by UDS to auto-generate virtual desktops.

Summary

Once all these steps have been completed, we will have our Windows 11 OS template available for use with UDS Enterprise using the RDP connection protocol.

It is recommended to carry out certain optimization tasks in the template before proceeding to its publication, among them we highlight:

- Disable unnecessary services (also during VM startup).
- Disable automatic Windows updates, antivirus, etc...
- Disable computer sleep due to inactivity.
- In case of using AD roaming profiles, make a custom configuration (folder redirection, disk quotas, etc...).

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

- From Windows computers with the client: Remote Desktop.
- From Linux computers with the client: FreeRDP.
- From macOS computers with clients: FreeRDP and Microsoft Remote Desktop.

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About UDS Enterprise

<u>UDS Enterprise</u> is a new software concept for creating a **fully customized virtualization** platform **for the workplace**. It provides **secure 24x7 access** from **any location and device** to all applications and software of an organization or educational center.

It allows you to combine Windows and Linux **desktop and application virtualization** in a single console, as well **as remote access** to Windows, Linux and macOS computers. Its Open Source base guarantees **compatibility with any third-party technology**. It can be deployed on premise, in a public, private, hybrid or **multicloud**. You can even combine several environments at the same time and perform automatic and **intelligent overflows** to optimize performance and efficiency. All with a **single subscription**.

About Virtual Cable

Virtual Cable is a company specialized in the digital **transformation of the workplace**. The company develops, supports and markets UDS Enterprise. It has recently been recognized as an **IDC Innovator in Virtual Client Computing** worldwide. Its team of experts has designed digital **workplace solutions** (VDI, vApp and remote access to physical computers) tailored to each sector to provide a unique user experience fully adapted to the needs of each user profile. Virtual Cable professionals have **more than 30 years** of experience in IT and software development and more than 15 years in virtualization technologies. **Everyday millions of Windows and Linux virtual desktops** are deployed with UDS Enterprise around the world.