VIRTUAL CABLE

UDS Enterprise 4.0
System Requirements

Index

INTRODUCTION

UDS Enterprise is a cross-platform connection broker for Windows and Linux desktop and application virtualization. It manages user access to virtual desktops, virtual applications and any service registered in the system. It also allows to enable remote access to physical or virtual machines.

UDS Enterprise provides a set of software elements that make up a platform for the automatic management of the life cycle, administration and deployment of VDI and vApp.

This document contains the system requirements that will allow to host a platform with UDS Enterprise, for the correct interaction with the chosen virtualization platform/s.

You will also find a description of the different components of the UDS Enterprise platform, as well as their technical requirements.
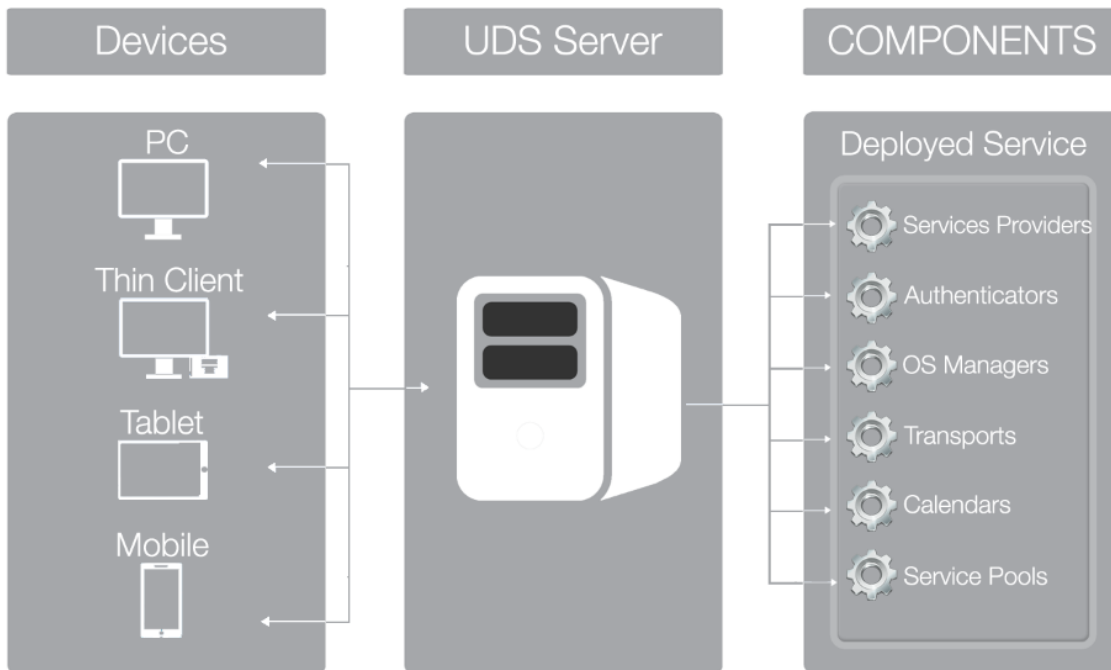
UDS ENTERPRISE COMPONENTS

UDS Enterprise is made up of 5 elements that interact with each other:

- **UDS Sever (Broker):** It is installed as a virtual machine (VM) and is provided in virtual appliance format.

- **UDS Tunnel:** It is installed as a VM and is provided in virtual appliance format.

- **UDS Dbserver**: It is installed as a VM and it is provided in virtual appliance format.

- **UDS Actor:** It is installed as a service in the VM that will be used as a template for the deployment of the desktop groups.

- **UDS Client:** It is installed on the client computer to be able to connect with desktop services (with all connection protocols except HTML5).
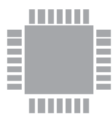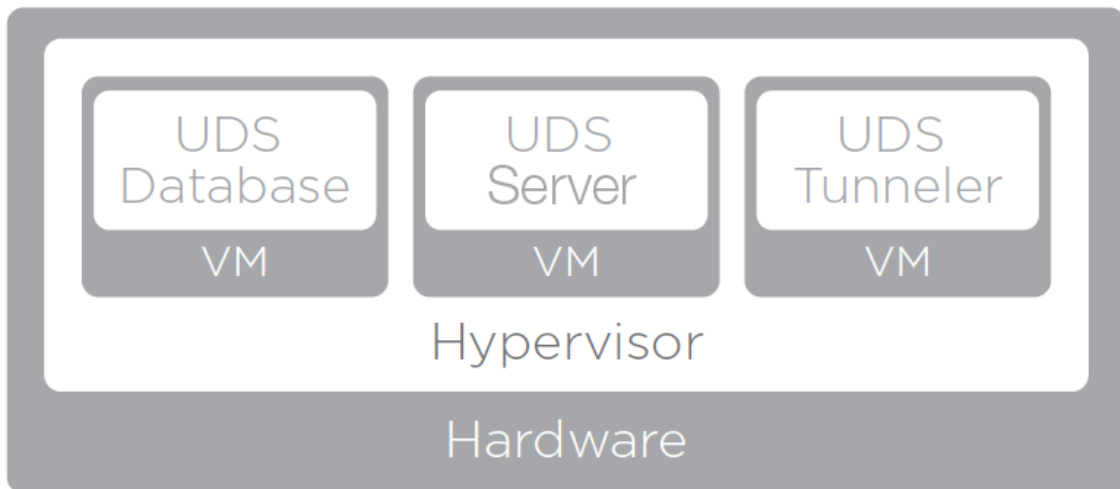
The characteristics and technical requirements of each of them are defined below:

UDS Server

It is the software that mediates between clients and service providers. It is the main piece of UDS Enterprise. It performs the functions of connection Broker to the desktop services allowing the administration and management of the platforms defined as implemented services.

With one UDS server it would be enough for most deployments, although in the case of wanting to have the platform with high availability (Recommended by UDS) it will be necessary to deploy 2 UDS Server.

From UDS Enterprise it is always recommended to monitor these elements automatically or manually in order to preserve their availability and performance.

Virtual Appliance with the following features:

- Virtual disk: 16 GB

- Memory: 4 GB

- CPU: 4 vCPU

- Network: 1 vNIC

Requirements:

- 1 IP address

- DNS IP

- Network mask

- IP Gateway

- Domain name

- IP of the database

- Port and name of the database instance

- Database username and password

- Activation code

UDS Tunnel

This software is responsible for establishing secure connections to desktop services through the WAN and providing HTML5 access to services.

The UDS Tunnel allows you to connect from any device/browser/client to desktop services through an SSH tunnel without having previously installed any type of software. In addition, it enables RDP access to desktop services through HTML5.

The number of Tunnelers will depend on the number of users we have on the platform, the type of use they make of the resource and the connection protocol used, since as we know HTML5 connections are maintained by the Tunnel.

It will always be advisable to have at least 2 Tunnel UDS, in order to provide the platform with High Availability.

From UDS Enterprise it is always recommended to monitor these elements automatically or manually in order to preserve their availability and performance.

Virtual Appliance with the following features:

- Virtual disk: 20 GB

- Memory: 4 GB

- CPU: 4 vCPU

- Network: 1 vNIC

Requirements:

- 1 IP address

- DNS IP

- Network mask

- IP Gateway

- Domain name

  IP UDS Server

UDS Dbserver*

It is the component that is responsible for storing all the data of the UDS system, such as service providers, authenticators, connectivity, etc... and all the information that will make possible the generation of statistics.

Currently, the MySQL database manager version 8.0.1 or higher and MariaDB version 10.6.1 or higher are supported.

It is necessary to have a MySQL database at the time of installation, properly configured with a valid instance and a user with permissions.

From UDS Enterprise it is always recommended to monitor these elements automatically or manually in order to preserve their availability and performance

IMPORTANT!

If you do not have such a database manager, Virtual Cable can provide this component as a virtual appliance. This component is not included in the UDS Enterprise support.

Virtual Appliance with the following features:

- Virtual Disk: 24 GB

- Memory: 3 GB

- CPU: 2 vCPUs

- Network: 1 vNIC

Requirements:

- 1 IP address

- DNS IP

- Network mask

- IP Gateway

- Domain name

- Database instance name

- User with permissions on the instance

UDS Actor

It is the software that performs the communication and interface functions for the transmission of data (virtual desktop status, machine name...) and commands between the Broker and the desktop services managed by UDS Enterprise.

It is installed as a service on the virtual machine to be used as a template (gold image) to generate virtual desktops, on Windows RDS application servers and on static machines (physical or virtual) to control user sessions.

The supported operating system are:

- Windows 11
- Windows 10
- Windows 8.1
- Windows 8
- Windows Server 2022
- Windows Server 2019
- Windows Server 2016
- Windows server 2012 R2
- Linux (Debian, Ubuntu, CentOS, Fedora, OpenSuse, etc…)

Requirements:

- .Net Framework 3.5 SP1 (Windows machines)
- Python 3.9 (Linux machines)
- IP UDS Server
- User with administrator permissions in UDS
- Administrator user password

UDS Client

It is the software that makes the call to the connection protocol to connect to desktop services configured in UDS.

It is installed on the client computer to be able to connect to desktop services.

The supported operating system are:

- Windows 11

- Windows 10

- Windows 8.1

- Windows 8

- Windows 7

- Windows 2022

- Windows 2019

- Windows 2016

- Windows server 2012 R2

- Linux (Debian, Ubuntu, CentOS, Fedora, OpenSuse, etc…)

- MAC OS (Versions 14 and 15)

UDS ENTERPRISE PLATFORM REQUIREMENTS

The UDS Enterprise components can be hosted on different virtualization platforms.

Although the UDS Enterprise components are hosted on a single virtual platform, UDS Enterprise is capable of managing the deployment of virtual desktops on multiple virtual platforms that are completely independent of the virtual platform where UDS Enterprise is hosted.

The contents of this section describe the requirements to install UDS Enterprise on different virtualization platforms and the requirements of the virtual platform on which the software will be installed.

Infrastructure requirements

The infrastructure requirements necessary for UDS Enterprise to be deployed are:

- **Virtualization platform.** It will be in charge of hosting the generated virtual desktops and running the servers that make up UDS.

  - User and Password of the virtualization platform manager with administrator permissions.

- **DNS server.** This service is necessary both for the proper functioning of the virtual platform and for the UDS platform to be deployed.

- **DHCP server.** You need a DHCP server that allows you to assign IP addresses to the virtual desktop groups automatically created by UDS.

VMware vSphere Virtual Platform Requirements

UDS Enterprise can be deployed on VMware vSphere 6.5 or higher.

To know the requirements of a VMware vSphere platform, you can consult the manufacturer's documentation.

The VMware platform on which UDS will be deployed must meet the following requirements:

Configuration requirements

- At least one VMware ESXi server with a valid license is required to host the UDS servers and generate the virtual desktops.

- The vSphere platform must be managed by a vCenter with a valid license.

- For UDS Enterprise to be installed and to send requests to vCenter and for them to be executed, it is necessary to have the credentials of a user with administrative permissions on the VMware vSphere platform on which the virtual desktops will be deployed.

- It is necessary to have defined at least one Virtual Machine Port Group to which the virtual servers of the UDS platform will be connected.

- It is necessary to have defined at least one Virtual Machine Port Group to which the different virtual desktops managed by UDS will be connected.

- It is necessary to have at least one folder in the "virtual machines and templates" view.

- At least 60 GB of free disk space is required to host the virtual servers that make up UDS.

- At least 11 GB of free RAM is necessary to host the virtual servers that make up UDS.

Network requirements

For the UDS network configuration it is necessary to have the following elements available and defined:

- Save at least 3 IP addresses within the same range:
  - ✓ 1 IP for the UDS Broker.
  - ✓ 1 IP for the MySQL database.
  - ✓ 1 IP for the Tunnel (in case this is necessary).

- It will also be necessary to have available:
  - ✓ Network masks.
  - ✓ IP address of the DNS server.
  - ✓ Gateway IP address.
  - ✓ Domain Name (if any).
  - ✓ vCenter IP address.

Network connections

It is necessary to have the following communication ports enabled between the different elements that make up the UDS Enterprise platform:

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	vCenter	443
UDS Server	Authenticator	389, 636, XXX
UDS Server	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Server	UDS Tunnel	443
UDS Server (Actor)	Virtual desktops	43910
Virtual desktops	UDS Server (Actor)	443
UDS Tunnel	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Tunnel	UDS Server	443
Users	UDS Server	443
Users (LAN)	Virtual desktops	3389 (RDP), 22 (NX), XXX
Users	UDS Tunnel	443
Users	UDS Tunnel (HTML5)	10443

oVirt Virtual Platform Requirements

UDS can be deployed on oVirt platforms from version 4.

The oVirt platform on which UDS will be deployed must meet the following requirements:

Configuration requirements

- At least one oVirt node server is needed to host the UDS servers and generate the virtual desktops.

- The oVirt platform must be managed by an oVirt Engine.

- For UDS to be installed and to send requests to oVirt Engine and for them to be executed, it is necessary to have the credentials of a user with administration permissions on the oVirt platform on which the virtual desktops will be deployed.

- It is necessary to have at least one cluster defined to create and configure the different virtual desktops managed by UDS.

- It is necessary to have defined at least one "Logical network" to which the virtual servers of the UDS platform will be connected.

- It is necessary to have defined at least one "Logical Network" to which the different virtual desktops managed by UDS will be connected.

- At least 60 GB of free disk space is required to host the virtual servers that make up UDS.

- At least 11 GB of free RAM is necessary to host the virtual servers that make up UDS.

Network requirements

To configure UDS network it is necessary to have the following elements available and defined:

- Save at least 3 IP addresses within the same range:
  - ✓ 1 IP for the UDS Broker.
  - ✓ 1 IP for the MySQL database.
  - ✓ 1 IP for the Tunnel (in case this is necessary).

- It will also be necessary to have available:
  - ✓ Network masks.
  - ✓ IP address of the DNS server.
  - ✓ Gateway IP address.
  - ✓ Domain Name (if any).
  - ✓ oVirt Engine IP address.

Network connections

It is necessary to have the following communication ports enabled between the different elements that make up the UDS Enterprise platform:

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	oVirt Engine	443
UDS Server	Authenticator	389, 636, XXX
UDS Server	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Server	UDS Tunnel	443
UDS Server (Actor)	Virtual desktops	43910
Virtual desktops	UDS Server (Actor)	443
UDS Tunnel	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Tunnel	UDS Server	443
Users	UDS Server	443
Users (LAN)	Virtual desktops	3389 (RDP), 22 (NX), XXX
Users	UDS Tunnel	443
Users	UDS Tunnel (HTML5)	10443

REHV Virtual Platform Requirements

UDS Enterprise can be deployed on Red Hat Enterprise Virtualization version 4.

The RHEV platform on which UDS will be deployed must meet the following requirements:

Configuration requirements

- At least one RHEV server is needed to host the UDS servers and generate the virtual desktops.

- The RHEV platform must be managed by a RHEV Manager server.

- In order for UDS to be installed and to send requests to RHEV Manager and for these to be executed, it is necessary to have the credentials of a user with administration permissions on the RHEV platform on which the virtual desktops will be deployed.

- It is necessary to have at least one cluster defined to create and configure the different virtual desktops managed by UDS.

- It is necessary to have defined at least one "Logical Network" to which the virtual servers of the UDS platform will be connected.

- It is necessary to have defined at least one "Logical Network" to which the different virtual desktops managed by UDS will be connected.

- At least 60 GB of free disk space is required to host the virtual servers that make up UDS.

- At least 11 GB of free RAM is necessary to host the virtual servers that make up UDS.

Network requirements

To configure UDS network it is necessary to have the following elements available and defined:

- Save at least 3 IP addresses within the same range:
  - ✓ 1 IP for the UDS Broker.
  - ✓ 1 IP for the MySQL database.
  - ✓ 1 IP for the Tunnel (in case this is necessary).

- It will also be necessary to have available:
  - ✓ Network masks.
  - ✓ IP address of the DNS server.
  - ✓ Gateway IP address.
  - ✓ Domain Name (if any).
  - ✓ RHEV Manager IP address.

Network connections

It is necessary to have the following communication ports enabled between the different elements that make up the UDS Enterprise platform:

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	RHEV Manager	443
UDS Server	Authenticator	389, 636, XXX
UDS Server	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Server	UDS Tunnel	443
UDS Server (Actor)	Virtual desktops	43910
Virtual desktops	UDS Server (Actor)	443
UDS Tunnel	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Tunnel	UDS Server	443
Users	UDS Server	443
Users (LAN)	Virtual desktop	3389 (RDP), 22 (NX), XXX
Users	UDS Tunnel	443
Users	UDS Tunnel (HTML5)	10443

Hyper-V Virtual Platform Requirements

UDS Enterprise can be deployed on Microsoft Hyper-V version 3.

The Microsoft Hyper-V platform on which UDS will be deployed must meet the following requirements:

Configuration requirements

- At least one Microsoft Hyper-V server with a valid license is required to host the UDS servers and generate the virtual desktops.

- At least one Microsoft Hyper-V server with a valid license is required to host the UDS servers and generate the virtual desktops.

- It is necessary to have defined at least one Virtual Switch to which the virtual servers of the UDS platform will be connected.

- It is necessary to have at least one Virtual Switch defined to which the different virtual desktops managed by UDS will be connected.

- It is necessary to have the credentials of a user with administration permissions on the Microsoft Hyper-V platform on which the virtual desktops will be deployed.

- At least 34 GB of free disk space is required to host the virtual servers that make up UDS.

- At least 5 GB of free RAM is necessary to host the virtual servers that make up UDS.

- The machines used as template machines (Gold Image) must be of the type: Generation 1.

- For the correct operation of Microsoft Hyper-V with UDS it is necessary to execute the following script (as administrator) on all Hyper-V hosts that will be used by UDS (even if they are part of a Hyper-V cluster):

```
Invoke-Expression ((New-Object
System.Net.Webclient).DownloadString('http://images.udsenterprise.com/files
/hyperv/EnableRemoting.ps1'))
```

Network requirements

To configure UDS network it is necessary to have the following elements available and defined:

- Save at least 3 IP addresses within the same range:
  - ✓ 1 IP for the UDS Broker.
  - ✓ 1 IP for the MySQL database.
  - ✓ 1 IP for the Tunnel (in case this is necessary).

- It will also be necessary to have available:
  - ✓ Network masks.
  - ✓ IP address of the DNS server.
  - ✓ Gateway IP address.
  - ✓ Domain Name (if any).
  - ✓ Hyper-V server IP address.

Network connections

It is necessary to have the following communication ports enabled between the different elements that make up the UDS Enterprise platform:

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	Hyper-V	443
UDS Server	Authenticator	389, 636, XXX
UDS Server	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Server	UDS Tunnel	443
UDS Server (Actor)	Virtual desktops	43910
Virtual desktops	UDS Server (Actor)	443
UDS Tunnel	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Tunnel	UDS Server	443
Users	UDS Server	443
Users (LAN)	Virtual desktops	3389 (RDP), 22 (NX), XXX
Users	UDS Tunnel	443
Users	UDS Tunnel (HTML5)	10443

XenServer/XCP-ng Virtual Platform Requirements

UDS Enterprise can be deployed on XenServer/XCP-ng version 7.

The XenServer/XCP-ng platform on which UDS will be deployed must meet the following requirements:

Configuration requirements

- At least one XenServer/XCP-ng server is required to host the UDS servers and generate the virtual desktops.

- In order for UDS to be installed and to send requests to XenServer/XCP-ng and for them to be executed, it is necessary to have the credentials of a user with administration permissions on the XenServer/XCP-ng platform where virtual desktops are going to be deployed.

- It is necessary to have defined at least one network to which the virtual servers of the UDS platform will be connected.

- It is necessary to have defined at least one network to which the different virtual desktops managed by UDS will be connected.

- At least 60 GB of free disk space is required to host the virtual servers that make up UDS.

- At least 11 GB of free RAM is necessary to host the virtual servers that make up UDS.

Network requirements

To configure UDS network it is necessary to have the following elements available and defined:

- Save at least 3 IP addresses within the same range:
  - ✓ 1 IP for the UDS Broker.
  - ✓ 1 IP for the MySQL database.
  - ✓ 1 IP for the Tunnel (in case this is necessary).

- It will also be necessary to have available:
  - ✓ Network masks.
  - ✓ IP address of the DNS server.
  - ✓ Gateway IP address.
  - ✓ Domain Name (if any).
  - ✓ IP address of the XenServer/XCP-ng master.

Network connections

It is necessary to have the following communication ports enabled between the different elements that make up the UDS Enterprise platform:

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	XenServer/XCP-ng	443
UDS Server	Authenticator	389, 636, XXX
UDS Server	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Server	UDS Tunnel	443
UDS Server (Actor)	Virtual desktops	43910
Virtual desktops	UDS Server (Actor)	443
UDS Tunnel	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Tunnel	UDS Server	443
Users	UDS Server	443
Users (LAN)	Virtual desktops	3389 (RDP), 22 (NX), XXX
Users	UDS Tunnel	443
Users	UDS Tunnel (HTML5)	10443

Nutanix Acropolis Virtual Platform Requirements

UDS Enterprise can be deployed on Nutanix Acropolis platforms.

The Nutanix Acropolis platform on which UDS will be deployed must meet the following requirements:

Configuration requirements

- For UDS Enterprise to be installed and to send requests to Acropolis and for these to be executed, it is necessary to have the credentials of a user with administration permissions on the Acropolis platform on which the virtual desktops will be deployed.

- It is necessary to have defined at least one network to which the virtual servers of the UDS platform will be connected.

- It is necessary to have defined at least one network to which the different virtual desktops managed by UDS will be connected.

- At least 60 GB of free disk space is required to host the virtual servers that make up UDS.

- At least 11 GB of free RAM is necessary to host the virtual servers that make up UDS.

Network requirements

To configure UDS network it is necessary to have the following elements available and defined:

- Reserve at least 3 IP addresses within the same range:
  - ✓ 1 IP for the UDS Broker.
  - ✓ 1 IP for the MySQL database.
  - ✓ 1 IP for the Tunnel (in case this is necessary).

- It will also be necessary to have available:
  - ✓ Network masks.
  - ✓ IP address of the DNS server.
  - ✓ Gateway IP address.
  - ✓ Domain Name (if any).
  - ✓ Acropolis IP address.

Network connections

It is necessary to have the following communication ports enabled between the different elements that make up the UDS Enterprise platform:

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	Acropolis	443
UDS Server	Authenticator	389, 636, XXX
UDS Server	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Server	UDS Tunnel	443
UDS Server (Actor)	Virtual desktops	43910
Virtual desktops	UDS Server (Actor)	443
UDS Tunnel	Virtual desktops	3389 (RDP), 22 (NX), XXX
UDS Tunnel	UDS Server	443
Users	UDS Server	443
Users (LAN)	Virtual desktops	3389 (RDP), 22 (NX), XXX
Users	UDS Tunnel	443
Users	UDS Tunnel (HTML5)	10443

PLATFORM SIZING

For the correct installation of the UDS platform, it is advisable to have the following elements prepared during the installation process.

- **Virtual desktop and templates**. Different aspects must be taken into account in order to provide a good dimensioning to the platform:
    - **Type of hypervisor used.**
    - **Storage.**
    - **Available bandwidth.**
    - **The number of users and the type of connections they will make**:
      it will be necessary to remember that, if the **HTML5 connection protocol** is used, these connections will be maintained through the **UDS Tunneler**, so this appliance will have specific resources depending on the number of concurrent connections.
    - **Type of user that will use VDI**: office automation use, high graphically demand services…
    - **Hardware of the deployed VDIs**.

- **Application servers**. You must have Windows servers with the RDS role installed and configured to deliver application sessions to users.

The minimum requirements for each of the applications must be considered, and if they are not known, the manufacturers of said applications must be contacted.

UDS Enterprise only provides the minimum requirements of the Appliances (**UDS Server, Tunnel and Database**) the sizing of the other components that will be deployed will have to be discussed directly with the manufacturers of the hypervisors and the hardware/software deployed on the platform to be able to know the minimum and recommended requirements necessary

UDS ENTERPRISE, THE SOFTWARE VDI OF VIRTUAL CABLE

About UDS Enterprise

UDS Enterprise 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.