VIRTUAL CABLE

UDS Enterprise 3.6 Installation, Administration and User Guide

Index

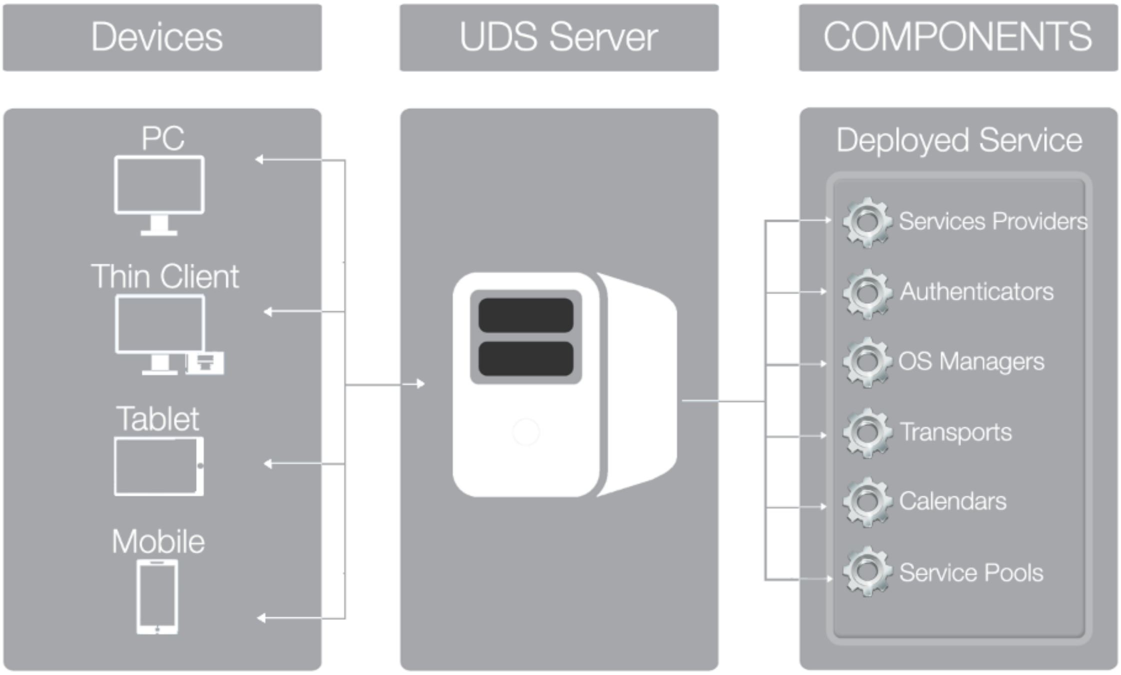
1 INTRODUCTION

UDS Enterprise is a VDI connection broker that manages user access to different services: virtual desktops, virtual application sessions, remote computer sessions, etc...

UDS Enterprise offers a set of software elements that make up a platform for managing.

The life cycle, administration and deployment of desktop services

This document contains the basic instructions for installing the UDS Enterprise software elements on a virtual infrastructure and the procedures for proper administration and management of the different deployed services



1.1 Enterprise Evaluation edition

There are different versions of the UDS software, each one oriented to different uses and scenarios:

- **UDS Enterprise**: Ideal for VDI environments of any size. It allows having technical support for any doubt or issue with the software and updates to new versions. Requires subscription purchase.
- **UDS Enterprise Evaluation Edition**: Designed to carry out pilots, PoCs and in general tests with a limited duration (60 days). By default, 5 users, expandable upon request.
  No subscription purchase required.

The UDS software uses a Database to store configuration parameters related to the system. For this purpose, UDS is compatible with MySQL as of version 5.6.

In the UDS Enterprise edition, said Database is external. In case of not having a Database, Virtual Cable will supply one in virtual appliance format, not being included within the UDS software support.

UDS Enterprise Evaluation edition also support an external Database, although to facilitate its deployment it is possible to enable an internal one.

NOTE: If an internal Database is used, migrations to new versions will not be possible.

The main differences between the available UDS versions are shown in the following

	Enterprise	**Evaluation**
Nº users	Up to Unlimited	5
Duration	Unlimited	60 days
Database?	External is required	External/Internal
WAN Tunner for conections?	Yes	Yes
Support?	Yes	No
Premium Support?	Yes	No

1.2 Characterístics

Among the main characteristics of UDS Enterprise, it is worth highlighting:

- Very easy deployment, installation, and administration
- Automated deployment of virtual desktops and management of access to remote desktop sessions
- Virtualization of Windows application sessions for users of Windows / Linux environments using Remote Desktop Services (RDS)
- Virtualization of Linux application sessions for users of Windows / Linux environments using X2Go
- Multi-hypervisor, being able to migrate the platform to more efficient solutions (currently it is compatible with VMware vSphere, KVM RHV/oVirt, Microsoft Hyper-V, Citrix XenServer, vCloud, Microsoft Azure, AWS Amazon, OpenGnsys, OpenNebula, OpenStack, Proxmox and Nutanix Acropolis)
- Multi-authenticator. It allows defining users and user groups from differen texternal sources and with virtually unlimited configurations
- Authentication system using multiple connectors, e.g.: Active Directory, eDirectory, Azure AD, OpenLDAP, SAML, LDAP, CAS, Internal authentication system, Device authentication system, IP...
- Generation of reports on the status and use of the platform
- Tasks scheduling system (service deployment, user access control, etc ...) through calendars
- Secure WAN access for desktops and virtual applications using an SSL Tunnel included in the subscription
- Complete customization of the login portal and user services pages
- Product roadmap based on customer and community requests
- Subscription cost model that entitles support, new UDS Enterprise versions, updates, and patches
- Subscription model not redistributable by number of users up to unlimited users

1.3 Platform architecture with UDS Enterprise

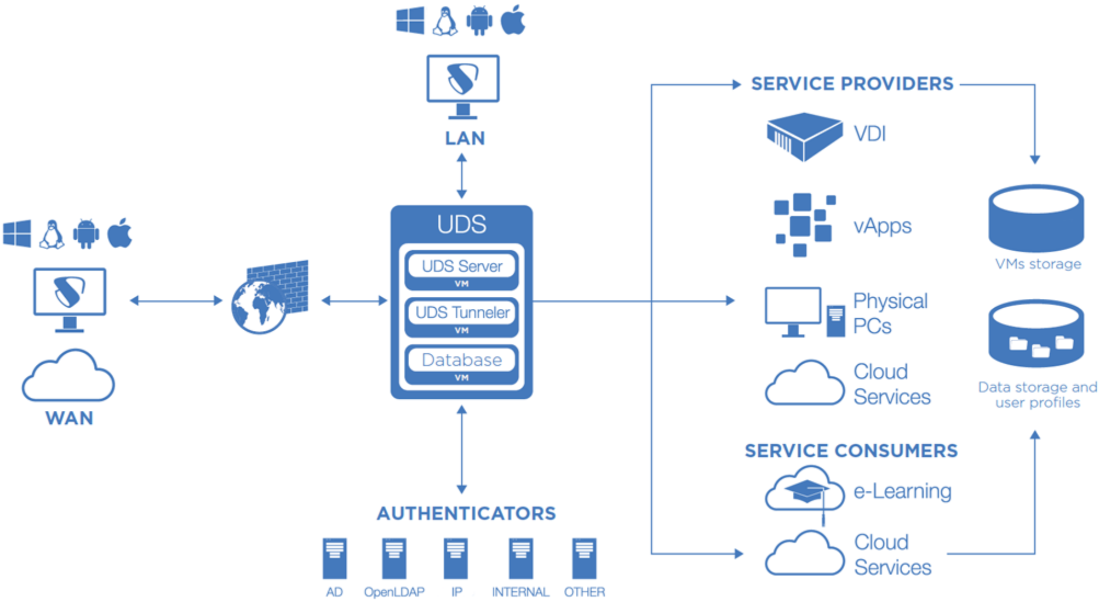
The optimal design of a desktop services platform is a critical part of achieving all the benefits that an architecture can provide. Each layer that makes up this architecture must be designed in such a way that it fulfils its function without penalizing the rest.

The main elements that make up an architecture with UDS Enterprise are:

- **Connection clients:** These are devices for accessing virtual desktops and applications, such as thin clients, zero clients, PCs, etc... It is important to identify whether access to the desktops will be made from a LAN or from a WAN
- **UDS Servers:** They consist of a Database to store all the data related to the environment, a connection broker that will manage the life cycle of desktop services and communication with hypervisors and other service providers; and a tunnel server to allow secure access from the outside. All these elements are served in virtual appliance format
- **Authenticator/s:** Active Directory, OpenLDAP, eDirectory servers, etc... Through their integration with UDS Enterprise they will control user access to desktop services. Depending on the environment, you can have from one to an unlimited number of authenticators
- **Service Providers**
  - **Hypervisor Platform:** : In charge of executing the tasks of creating, turning on and eliminating the virtual desktops managed by the broker. UDS Enterprise integrates with Microsoft Hyper-V, VMware vSphere, KVM (oVirt, RHV, Proxmox, OpenStack and OpenNebula), Citrix XenServer and Nutanix Acropolis hypervisors
  - **RDS Aplications:** In charge of providing the Windows application sessions that will be managed by UDS Enterprise
- **Storage:** They will host the servers, virtual and remote desktops, applicationsor/and other services of the platform. Choosing the type of storage is an important part of the design. Depending on the needs that users demand in desktop services, you must select the most appropriate type in terms of performance

When you have a clear idea of the architecture design, you can start scaling the platform, considering the number of users who will access it.

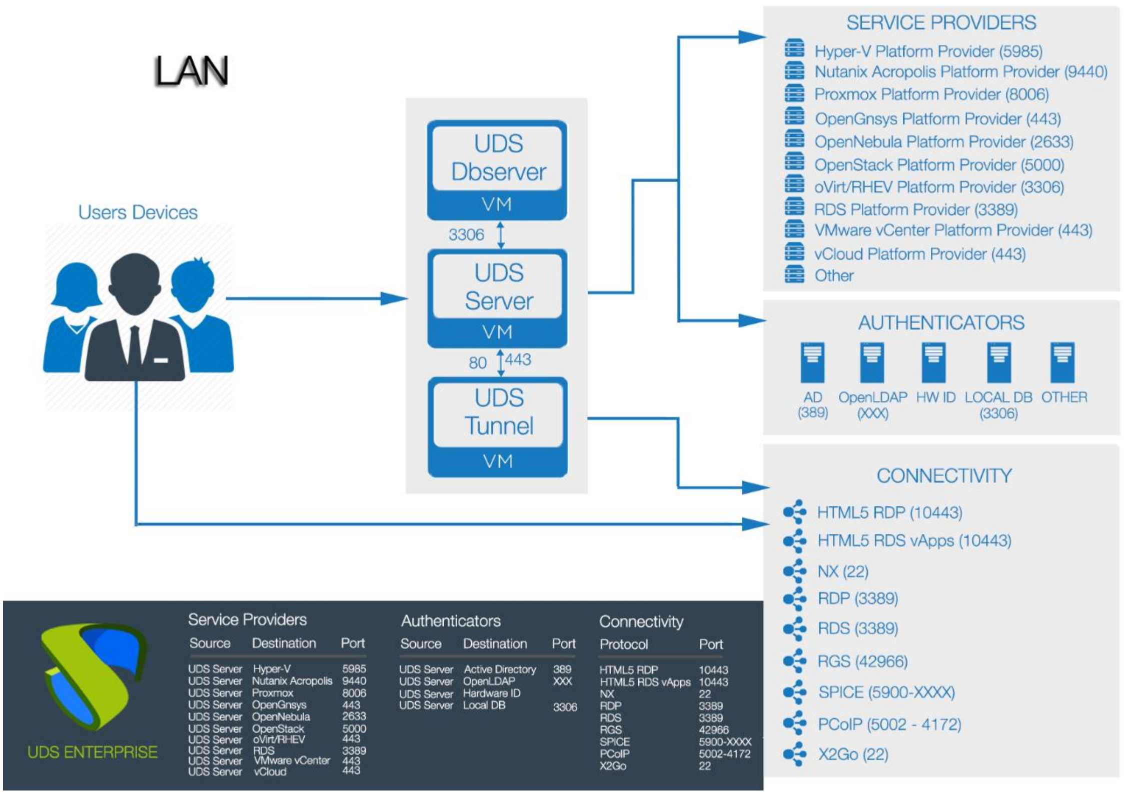
In the following image you can see an example of a VDI architecture with UDS Enterprise:



1.3.1 Architecture of the network

UDS Enterprise can be configured to be accessible by users located on a local network or users from a WAN (internet) without the need for VPN or LAN_extension.

Example of deployment of desktop services and virtual applications for user access through a LAN (drop-down to users who access from a VPN or LAN_extension):


LAN
Users Devices
UDS Dbserver VM
3306
UDS Server VM
80
443
UDS Tunnel VM
SERVICE PROVIDERS
Hyper-V Platform Provider (5985)
Nutanix Acropolis Platform Provider (9440)
Proxmox Platform Provider (8006)
OpenGnsys Platform Provider (443)
OpenNebula Platform Provider (2633)
OpenStack Platform Provider (5000)
oVirt/RHEV Platform Provider (3306)
RDS Platform Provider (3389)
VMware vCenter Platform Provider (443)
vCloud Platform Provider (443)
Other
AUTHENTICATORS
AD (389)
OpenLDAP (XXX)
HW ID
LOCAL DB (3306)
OTHER
CONNECTIVITY
HTML5 RDP (10443)
HTML5 RDS vApps (10443)
NX (22)
RDP (3389)
RDS (3389)
RGS (42966)
SPICE (5900-XXXX)
PCoIP (5002 - 4172)
X2Go (22)
UDS ENTERPRISE

Service Providers

Source	Destination	Port
UDS Server	Hyper-V	5985
UDS Server	Nutanix Acropolis	9440
UDS Server	Proxmox	8006
UDS Server	OpenGnsys	443
UDS Server	OpenNebula	2633
UDS Server	OpenStack	5000
UDS Server	oVirt/RHEV	443
UDS Server	RDS	3389
UDS Server	VMware vCenter	443
UDS Server	vCloud	443

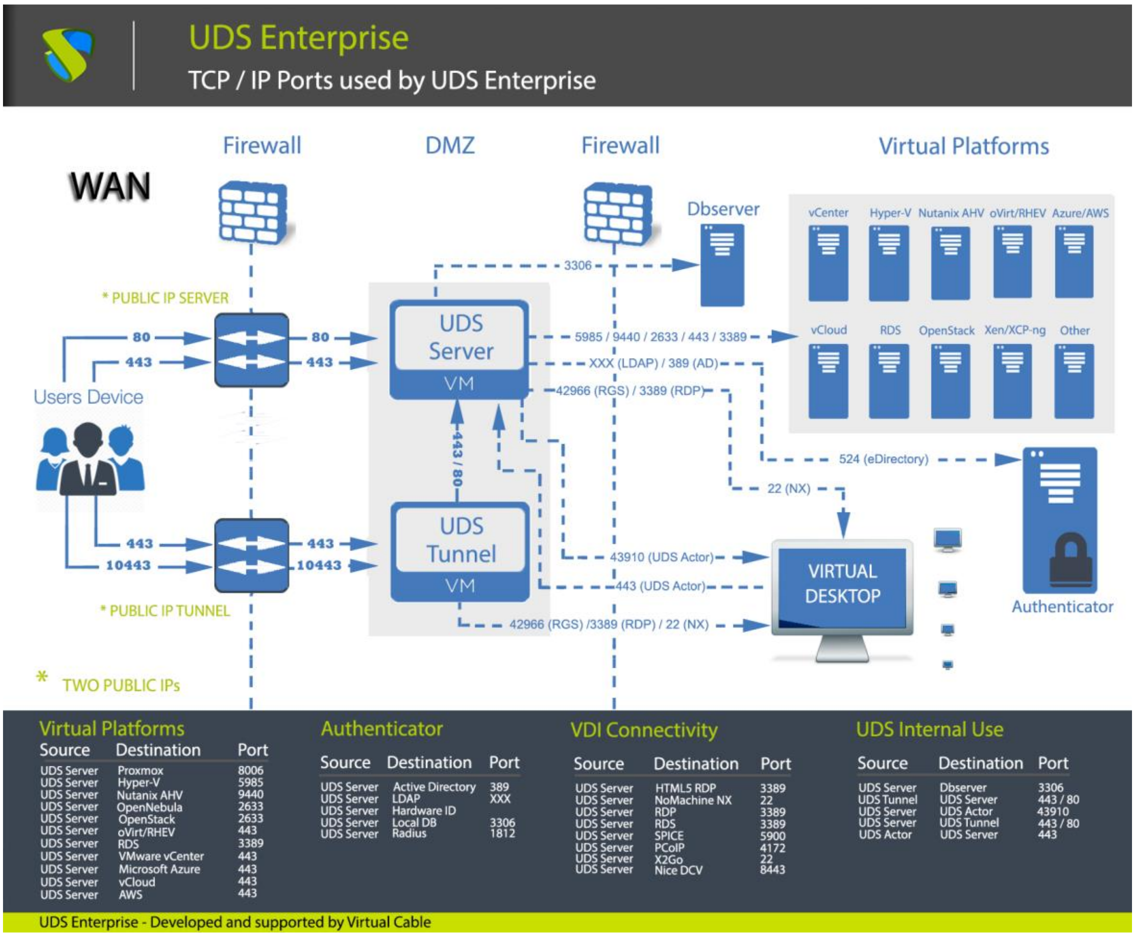
Authenticators

Source	Destination	Port
UDS Server	Active Directory	389
UDS Server	OpenLDAP	XXX
UDS Server	Hardware ID	
UDS Server	Local DB	3306

Connectivity

Protocol	Port
HTML5 RDP	10443
HTML5 RDS vApps	10443
NX	22
RDP	3389
RDS	3389
RGS	42966
SPICE	5900-XXXX
PCoIP	5002-4172
X2Go	22

Example of deployment of desktop services and virtual applications for user access through a WAN (internet).



Virtual Platforms

Source	Destination	Port
UDS Server	Proxmox	8006
UDS Server	Hyper-V	5985
UDS Server	Nutanix AHV	9440
UDS Server	OpenNebula	2633
UDS Server	OpenStack	2633
UDS Server	oVirt/RHEV	443
UDS Server	RDS	3389
UDS Server	VMware vCenter	443
UDS Server	Microsoft Azure	443
UDS Server	vCloud	443
UDS Server	AWS	443

Authenticator

Source	Destination	Port
UDS Server	Active Directory	389
UDS Server	LDAP	XXX
UDS Server	Hardware ID	
UDS Server	Local DB	3306
UDS Server	Radius	1812

VDI Connectivity

Source	Destination	Port
UDS Server	HTML5 RDP	3389
UDS Server	NoMachine NX	22
UDS Server	RDP	3389
UDS Server	RDS	3389
UDS Server	SPICE	5900
UDS Server	PCoIP	4172
UDS Server	X2Go	22
UDS Server	Nice DCV	8443

UDS Internal Use

Source	Destination	Port
UDS Server	Dbserver	3306
UDS Tunnel	UDS Server	443 / 80
UDS Server	UDS Actor	43910
UDS Server	UDS Tunnel	443 / 80
UDS Actor	UDS Server	443

UDS Enterprise - Developed and supported by Virtual Cable

To publish UDS on the internet and for its services to be accessible by users, two public IP addresses will be needed, one for UDS server and one for UDS Tunnel (it is possible to carry out this process with a single public IP address by changing the default ports and configuring an internal NAT).

Safe Employment Procedure:

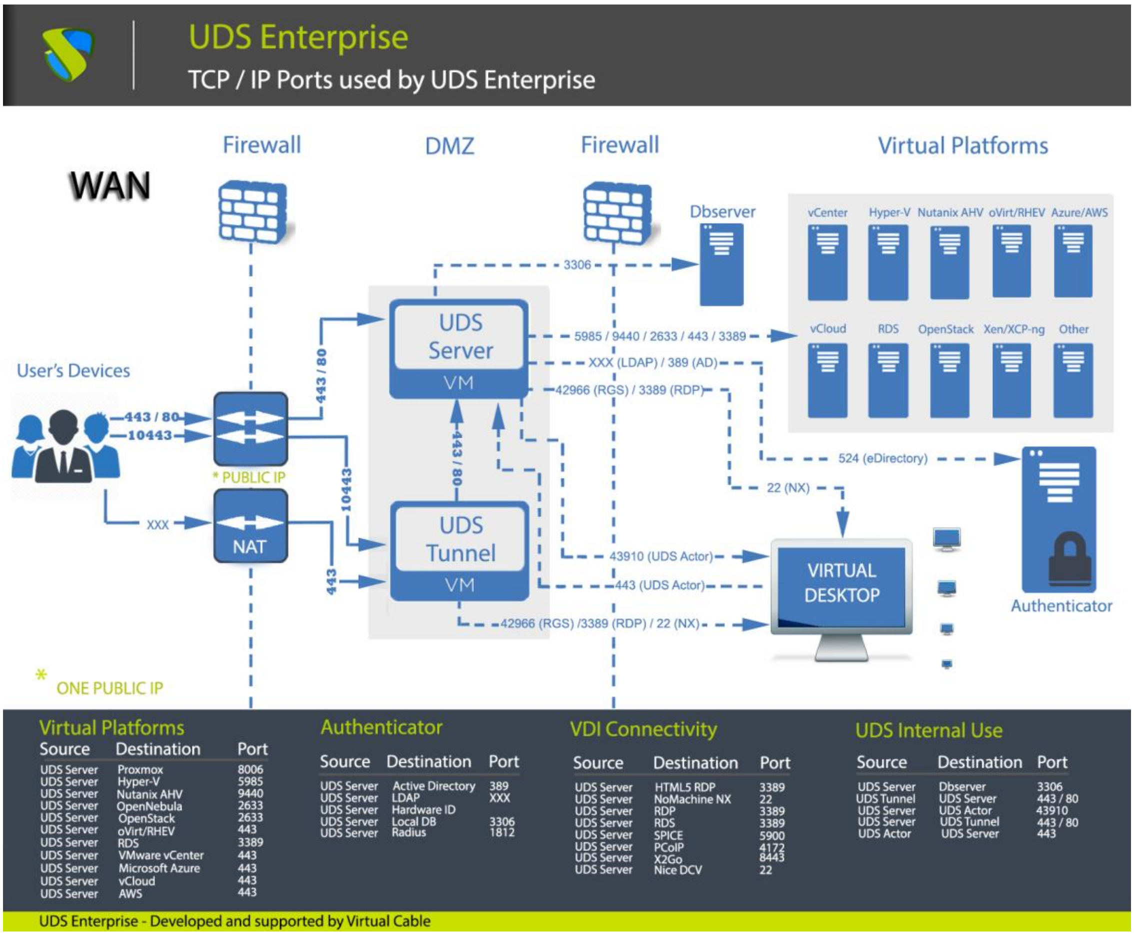
It is recommended to open only the ports that are strictly necessary for the correct functioning of UDS Enterprise in the communication between its components.

It is recommended to install UDS Server and UDS Tunnel in the DMZ and UDS DbServer should be in the server zone. All these zones must be delimited by firewalls.

In the case of access to the UDS Server from the WAN, the use of port 443 is recommended to force the use of HTTPS in the UDS web portal.

The use of HTTPS requires the use of valid web certificates, it is the responsibility of the client to provide and install said certificates.

Example with 1 unique public IP:



UDS Enterprise

TCP / IP Ports used by UDS Enterprise

Virtual Platforms

Source	Destination	Port
UDS Server	Proxmox	8006
UDS Server	Hyper-V	5985
UDS Server	Nutanix AHV	9440
UDS Server	OpenNebula	2633
UDS Server	OpenStack	2633
UDS Server	oVirt/RHEV	443
UDS Server	RDS	3389
UDS Server	VMware vCenter	443
UDS Server	Microsoft Azure	443
UDS Server	vCloud	443
UDS Server	AWS	443

Authenticator

Source	Destination	Port
UDS Server	Active Directory	389
UDS Server	LDAP	XXX
UDS Server	Hardware ID	
UDS Server	Local DB	3306
UDS Server	Radius	1812

VDI Connectivity

Source	Destination	Port
UDS Server	HTML5 RDP	3389
UDS Server	NoMachine NX	22
UDS Server	RDP	3389
UDS Server	RDS	3389
UDS Server	SPICE	5900
UDS Server	PCoIP	4172
UDS Server	X2Go	8443
UDS Server	Nice DCV	22

UDS Internal Use

Source	Destination	Port
UDS Server	Dbserver	3306
UDS Tunnel	UDS Server	443 / 80
UDS Server	UDS Actor	43910
UDS Server	UDS Tunnel	443 / 80
UDS Actor	UDS Server	443

UDS Enterprise - Developed and supported by Virtual Cable

Safe Employment Procedure:

It is recommended to open only the ports that are strictly necessary for the correct functioning of UDS Enterprise in the communication between its components.

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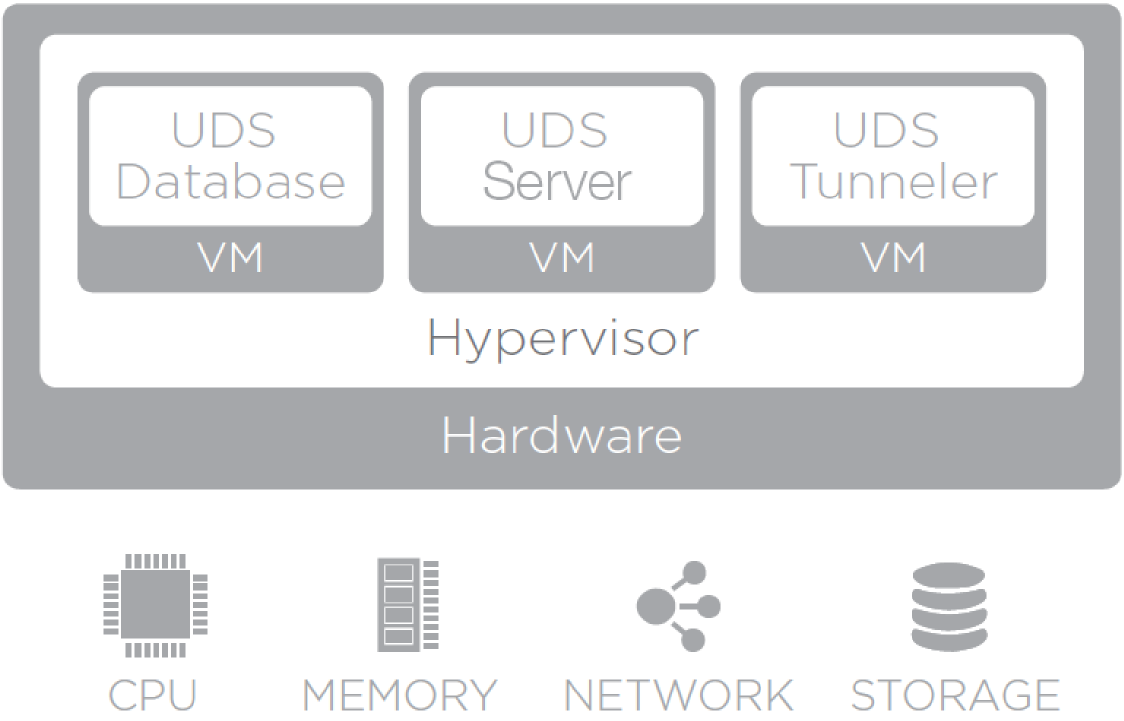
In the case of access to the UDS Server from the WAN, the use of port 443 is recommended to force the use of HTTPS in the UDS web portal.

The use of HTTPS requires the use of valid web certificates, it is the responsibility of the client to provide and install said certificates.

1.4 UDS Enterprise components

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

- **UDS Server:** It is installed as a virtual machine (VM) and is provided in virtual appliance format
- **UDS Tunnel:** It is installed as a VM and it is provided in virtual appliance format
- **UDS Dbserver:** It is installed as a VM and is provided in virtual appliance format (Optional for UDS Free & Evaluation Edition)
- **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 and in the RDS application servers to provide virtualized applications
- **UDS Client:** It is installed on the client computer to be able to connect with desktop services (with the HTML5 connection type it is not necessary)



The features and technical requirements of each of them are defined below:

1.4.1 UDS Server

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

Virtual Appliance with the following features:

- Virtual Hard drivel: 8 GB
- Memory: 2 GB
- CPU: 2 vCPU
- Network: 1 vNIC

Requirements:

- 1 IP Address
- IP DNS
- Network Mask
- IP Gateway
- Domain name
- Database IP
- DATABASE port and instance name
- User and password of DATABASE user
- Activation code (Enterprise, Free o Evaluation)

Secure use procedure: Passwords must be of sufficient length and include uppercase, lowercase, numbers, and special characters.

1.4.2 UDS Tunnel

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

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.
Additionally, it enables RDP access to desktop services through HTML5.

Virtual Appliance with the following features:

- Hard drive: 14 GB
- Memory: 2 GB
- CPU: 2 vCPU
- Network: 1 vNIC

Requirements:

- 1 IP Direction
- IP DNS
- Network Mask
- IP Gateway
- Domanin Name
- IP UDS Server

1.4.3 UDS Dbserver

It is the component responsible for storing all the data of the UDS system: service providers, authenticators, connectivity, etc... and all the information that will make it possible to generate statistics and reports

The MySQL Database manager is supported as of version 5.7 and MariaDB 10.5.

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

IMPORTANT!

If you do not have such a Database manager, Virtual Cable can provide this component as a virtual appliance. This component is not supported by the UDS Enterprise team.

Virtual Appliance with the following features:

- Hard Drive: 10 GB
- Memory: 1 GB
- CPU: 2 vCPU
- Network: 1 vNIC

Requirements:

- 1 IP address
- DNS IP
- Network mask
- IP Gateway
- Domain name
- Database instance name
- User with instance permission

1.4.4 UDS Actor

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

It is installed as a service on the virtual machine to be used as a template (gold image) to generate groups of desktop services based on Linked Clones and on the Remote Desktop Services (RDS) servers to provide virtualized application sessions.

The supported operating systems to generate virtual desktops are:

- Windows 11
- Windows 10
- Windows 8.1
- Windows 8
- Windows 7
- Windows Server 2022
- Windows Server 2019
- Windows Server 2016
- Windows Server 2012 R2
- Linux (Debian, Ubuntu, CentOS, Fedora, OpenSuse, etc…)

Supported operating systems to generate virtual aplications are:

- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019
- Windows Server 2022

Supported OS to generate Linux are:

- Ubuntu / Debian

Requirements:

- .Net Framework 3.5 SP1 (Windows Machines)
- Python 3.6 (Linux Machines)
- UDS Server IP

1.4.5 UDS Client

It is the software that makes the call to the connection protocol to connect with virtual desktops and applications

It is installed on the client computer from which the connection to desktop services is to be made.

The supported operating systems are:

- Windows 11
- Windows 10
- Windows 8.1
- Windows 8
- Windows 7
- Windows Server 2022
- Windows Server 2019
- Windows Server 2016
- Windows Server 2012 R2
- Linux (Debian, Ubuntu, CentOS, Fedora, OpenSuse, etc…)
- MAC OS (Versions 12 and 13)

2 BEFORE INSTALLING UDS

UDS Enterprise components can be hosted on different virtualization platforms.

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

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

2.1 Installing on VMware vSphere

2.1.1 Virtual platform requirements

UDS Enterprise can be hosted on VMware vSphere 6.5 or above.

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:

- At least one VMware ESXi server with a valid license is needed for hosting the UDS servers and generating the virtual desktops
- The vSphere platform must be administered by a vCenter with a valid license
- For UDS Enterprise to be able to integrate and send requests to vCenter so that they can be executed, it is necessary to have the credentials of a user with administration permissions on the VMware vSphere platform on which the virtual desktops and applications 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
- At least 43 GB of free disk space is necessary 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

2.1.2 Network connectivity

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

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	vCenter	443
UDS Server	Autenticator	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

2.2 Installing on oVirt

2.2.1 Virtual platform requirements

UDS Enterprise can be deployed on oVirt 4.x platforms

The oVirt platform on which UDS will be deployed must meet the following 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 43 GB of free disk space is required to host the virtual servers that make up UDS
- At least 5 GB of free RAM is required to host the virtual servers that make up UDS

2.2.2 Network connectivity

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

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	oVirt-Engine	443
UDS Server	Autenticator	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

2.3 Installing on RHV

2.3.1 Virtual platform requirements

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

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

- At least one RHV server is needed to host the UDS servers and generate the virtual desktops
- The RHV platform must be managed by a RHV-Manager server
- For UDS to be installed and to send requests to RHV-Manager and for them to be executed, it is necessary to have the credentials of a user with administration permissions on the RHV 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
- There must be at least 43 GB of free space on the hard drive to host the virtual servers that make up UDS
- There must be at least 5 GB of free RAM to host the virtual servers that make up UDS

2.3.2 Network connectivity

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

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	RHV-Manager	443
UDS Server	Autenticator	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

2.4 Installing on Microsoft Hyper-V

2.4.1 Virtual platform requirements

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

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

- 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 defined at least one Virtual Switch 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
- There must be at least 43 GB of free space on the hard drive to host the virtual servers that make up UDS
- There must be at least 5 GB of free RAM to host the virtual servers that make up UDS
- The machines that are used as templates machines (Gold Image) must be of the type: Generation 1
- For the correct working 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 no part of Hyper-V cluster):

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

2.4.2 Network connectivity

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

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	Hyper-V	443
UDS Server	Autenticator	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

2.5 Installation on XenServer/XCP-ng

2.5.1 Virtual platform requirements

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

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

- At least one XenServer/XCP-ng server is required to host the UDS servers and generate the virtual desktops
- 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 on which you are going to deploy virtual desktops
- 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
- The storage used to host the virtual desktops must be of type SR
- There must be at least 43 GB of free space on the hard drive to host the virtual servers that make up UDS
- There must be at least 5 GB of free RAM to host the virtual servers that make up UDS

2.5.2 Network connectivity

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

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	XenServer/XCP-ng	443
UDS Server	Autenticator	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

2.6 Installing on Nutanix Acropolis

2.6.1 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:

- For UDS 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 at least one network defined to which the different virtual desktops managed by UDS will be connected

- There must be at least 43 GB of free space on the hard drive to host the virtual servers that make up UDS

- There must be at least 5 GB of free RAM to host the virtual servers that make up UDS

2.6.2 Network connectivity

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

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	Acropolis	443
UDS Server	Autenticator	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

2.7 Installing on OpenStack

2.7.1 Virtual platform requirements

UDS Enterprise can be deployed on OpenStack platforms starting with the Stein version.

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

- For UDS to be installed and to send requests to OpenStack and for these to be executed, it is necessary to have the credentials of a user with administration permissions on the platform
- 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
- There must be at least 43 GB of free space on the hard drive to host the virtual servers that make up UDS
- There must be at least 5 GB of free RAM to host the virtual servers that make up UDS.

2.7.2 Network connectivity

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

Origin	Destination	Port
UDS Server	UDS MySQL	3306
UDS Server	OpenStack	5000
UDS Server	Autenticador	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

2.8 Installing on OpenNebula

2.8.1 Virtual platform requirements

UDS Enterprise can be deployed on OpenNebula 5.x platforms.

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

- For UDS to be installed and to send requests to OpenNebula and for these to be executed, it is necessary to have the credentials of a user with administration permissions on the platform
- 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
- There must be at least 43 GB of free space on the hard drive to host the virtual servers that make up UDS
- There must be at least 5 GB of free RAM to host the virtual servers that make up UDS.

2.8.2 Network connectivity

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

Origen	Destino	Puerto
UDS Server	UDS MySQL	3306
UDS Server	OpenNebula	2633
UDS Server	Autenticator	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

3 INSTALLING UDS ENTERPRISE

At this point, we will detail the installation of the UDS Enterprise components and their requirements. The installation procedure will be the same for the different virtualization platforms (VMware vSphere, Microsoft Hyper-V, Citrix XenServer, etc…) supported by UDS.

3.1 UDS Enterprise environment requirements

3.1.1 Infrastructure requirememts

The infrastructure requirements necessary for UDS to be deployed are:

- **Virtualization Platform.** It will be in charge of hosting the UDS servers, the generated virtual desktops and the application servers.
  - Username and Password of the manager of the virtualization platform with administrator permissions.

Secure use procedure: Passwords must be of sufficient length and include uppercase, lowercase, numbers, and special characters.

- **DNS Server.** This service is necessary for both the proper running of the virtual platform as well as for the UDS virtual platform environment to be deployed.
- **DHCP Server.** A DHCP server that enables to assign IP addresses to the virtual desktop groups created by UDS.

3.1.2 Network requirements

To configure the UDS network, it is necessary to have at least 3 IP addresses (Server, Tunnel and Database).

It is also necessary to have available:

- Network mask
- IP address of the DNS server
- Gatewa IP address
- Domain name (if there is one)
- IP address of the virtualization platform manager

NOTE: If you install UDS Free Edition or UDS Evaluation Edition, you can do it without the Database component. In this case, only 2 IP addresses (Server and Tunnel) will be necessary.

3.2 Installing UDS Enterprise components

3.2.1 UDS Dbserver

Remember that in case of installing UDS Free Edition or UDS Evaluation Edition the Database can be configured internally in the UDS Server component. These editions do not require the installation of an external Database

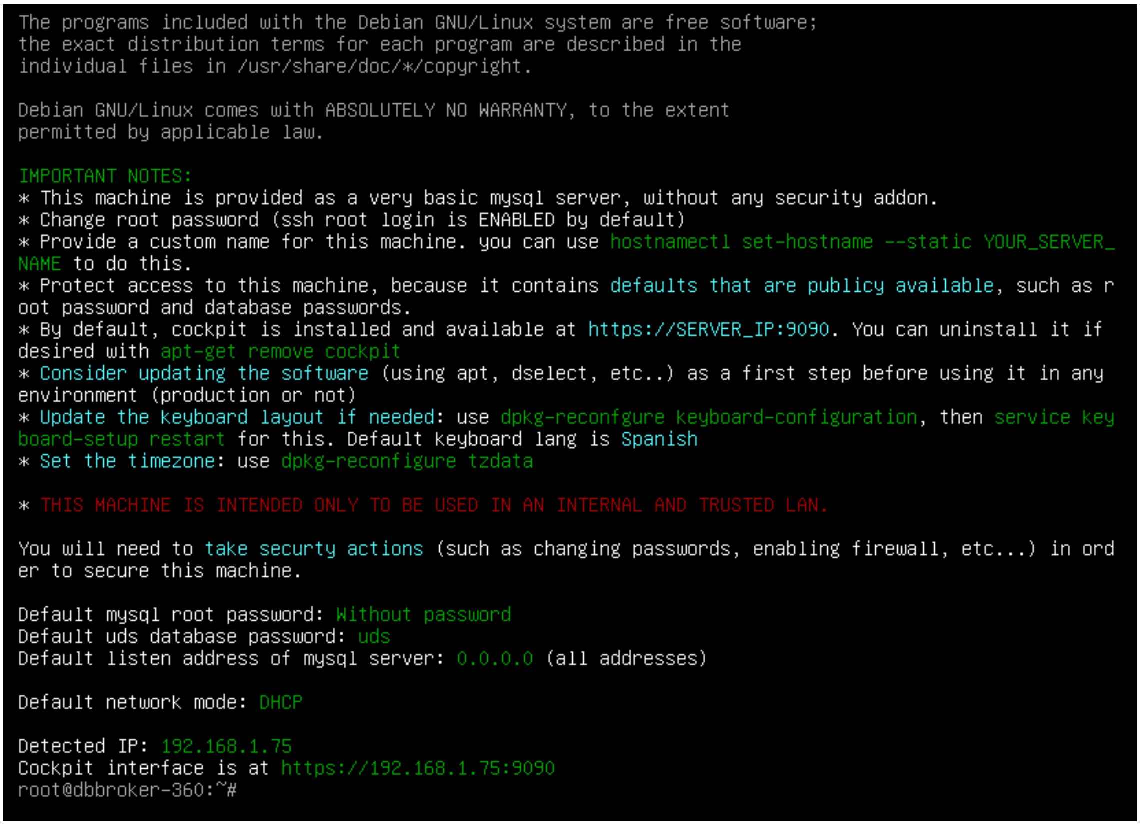
If Virtual Cable provides the UDS Database virtual appliance, the following steps should be followed:

Access MySQL server with the following credentials:

- **User**: root
- **Password**: uds

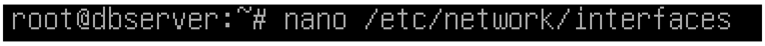
NOTE: It is recommended to modify the default password to give the system greater security. You can use the command: passwd

Secure use procedure: Passwords must be of sufficient length and include uppercase, lowercase, numbers, and special characters.



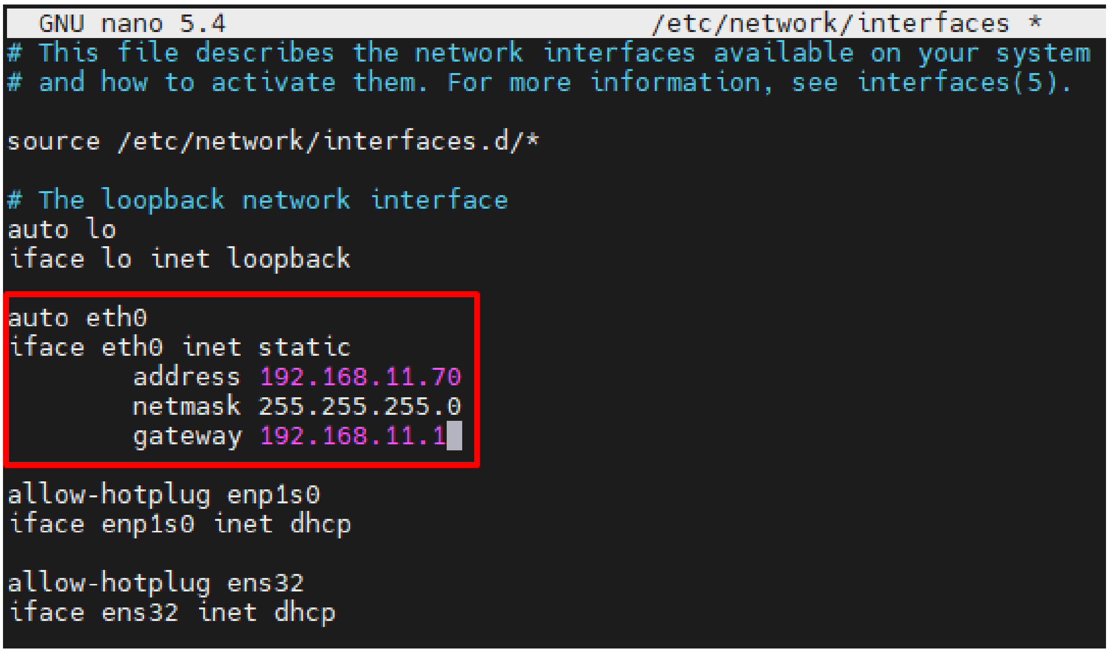
```
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

IMPORTANT NOTES:
* This machine is provided as a very basic mysql server, without any security addon.
* Change root password (ssh root login is ENABLED by default)
* Provide a custom name for this machine. you can use hostnamectl set-hostname --static YOUR_SERVER_
NAME to do this.
* Protect access to this machine, because it contains defaults that are publicy available, such as r
oot password and database passwords.
* By default, cockpit is installed and available at https://SERVER_IP:9090. You can uninstall it if
desired with apt-get remove cockpit
* Consider updating the software (using apt, dselect, etc..) as a first step before using it in any
environment (production or not)
* Update the keyboard layout if needed: use dpkg-reconfgure keyboard-configuration, then service key
board-setup restart for this. Default keyboard lang is Spanish
* Set the timezone: use dpkg-reconfigure tzdata

* THIS MACHINE IS INTENDED ONLY TO BE USED IN AN INTERNAL AND TRUSTED LAN.

You will need to take securty actions (such as changing passwords, enabling firewall, etc...) in ord
er to secure this machine.

Default mysql root password: Without password
Default uds database password: uds
Default listen address of mysql server: 0.0.0.0 (all addresses)

Default network mode: DHCP

Detected IP: 192.168.1.75
Cockpit interface is at https://192.168.1.75:9090
root@dbbroker-360:~#
```

Configure the network parameters of the virtual machine. To do this, the file "***interfaces***" will be modified, and a static IP address will be assigned (by default, the virtual appliance is configured by **DHCP**).



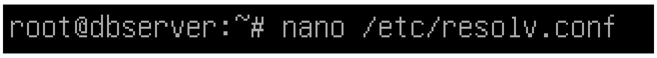
```
root@dbserver:~# nano /etc/network/interfaces
```

Depending on the virtualization platform that you use to host the "Database" component, you must assign the new static IP address to the corresponding network interface (Normally it wil be "eth0"):

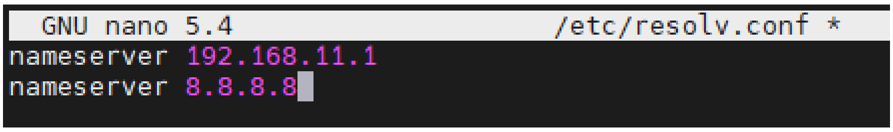


```
  GNU nano 5.4                          /etc/network/interfaces *
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
        address 192.168.11.70
        netmask 255.255.255.0
        gateway 192.168.11.1

allow-hotplug enp1s0
iface enp1s0 inet dhcp

allow-hotplug ens32
iface ens32 inet dhcp
```

It is also necessary to modify the "***resolv.conf***" file in order to configure the DNS server:

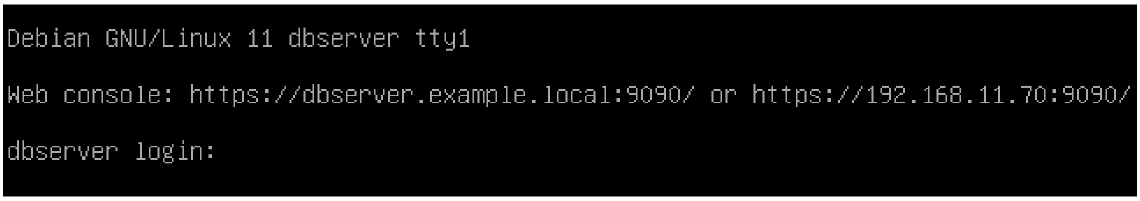


```
root@dbserver:~# nano /etc/resolv.conf
```



```
  GNU nano 5.4                          /etc/resolv.conf *
nameserver 192.168.11.1
nameserver 8.8.8.8
```

Once all the necessary network data has been configured, restart the server and check that all the data have been correctly configured:



```
Debian GNU/Linux 11 dbserver tty1

Web console: https://dbserver.example.local:9090/ or https://192.168.11.70:9090/

dbserver login:
```

Once the server IP data have been configured, it would already be available for use with UDS. By default, the MySQL server has the following Database instance configured ready to use with the UDS server:

- **Instance**: uds
- **User**: uds
- **Password**: uds

NOTE: It is recommended to modify the password to give the system greater security.
To perform this task we can execute the next command in the MySQL console:

```
grant all on database_name.* to 'usuario'@'%' identified by 'new_password';
```

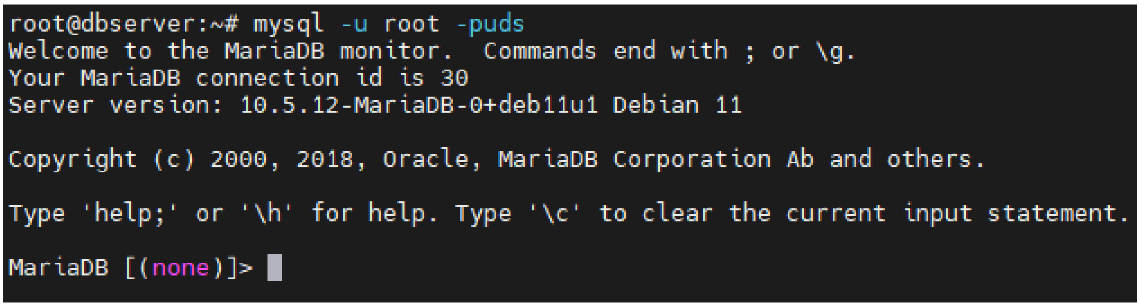
Secure use procedure: Passwords must be of sufficient length and include uppercase, lowercase, numbers, and special characters.

Once these tasks have been completed, the Database will be available for use with the UDS Server component.

If it were necessary to create a new Database instance for UDS, you would carry out the following process:

Access MySQL with these credentials:

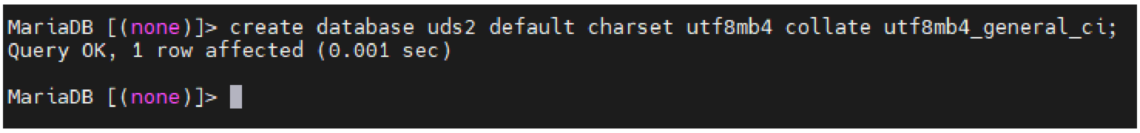
- **Usuario**: root
- **Password**: uds



```
root@dbserver:~# mysql -u root -puds
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 30
Server version: 10.5.12-MariaDB-0+deb11u1 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

The Database is created using the following command:

```
create database database_name default charset utf8mb4 collate utf8mb4_general_ci;
```

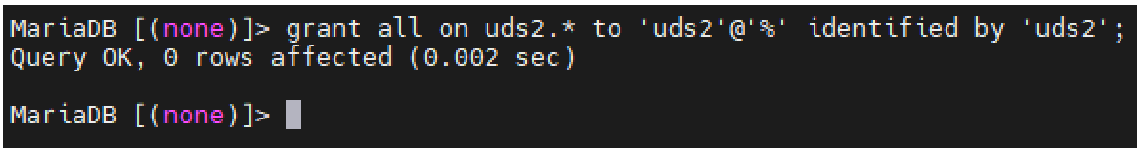


```
MariaDB [(none)]> create database uds2 default charset utf8mb4 collate utf8mb4_general_ci;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]>
```

database_name will be the name of the new Database instance.

Create a user with administrator permissions on the new Database instance using the command:

```
grant all on database_name.* to 'usuario'@'%' identified by 'password';
```



```
MariaDB [(none)]> grant all on uds2.* to 'uds2'@'%' identified by 'uds2';
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> 
```

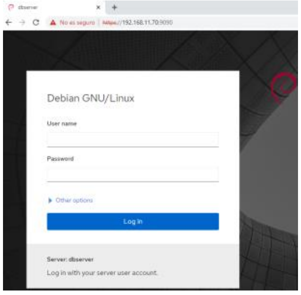
database_name will be the name of the Database instance, ***user*** will be the name of the user with administration permissions on this Database instance and ***password*** the password assigned to the indicated user.

Secure use procedure: Passwords must be of sufficient length and include uppercase, lowercase, numbers, and special characters.

By default, the Database server includes the Cockpit tool, which allows you to manage and monitor certain server components.

To access, we will use the IP address or name of the server with the port: 9090

https://***ip_dbserver***:9090



Server: dbserver

Log in with your server user account.

Secure use procedure:

In general, it is advisable to implement the basic and essential security mechanisms on any server; strong passwords, backup copies, having security solutions, keeping systems updated and modifying the configurations, users and passwords included, by default.

In addition, for a database server, although in the case of UDS Enterprise, we do not store any confidential information, but configuration and registration information, it is important:

- Limit access

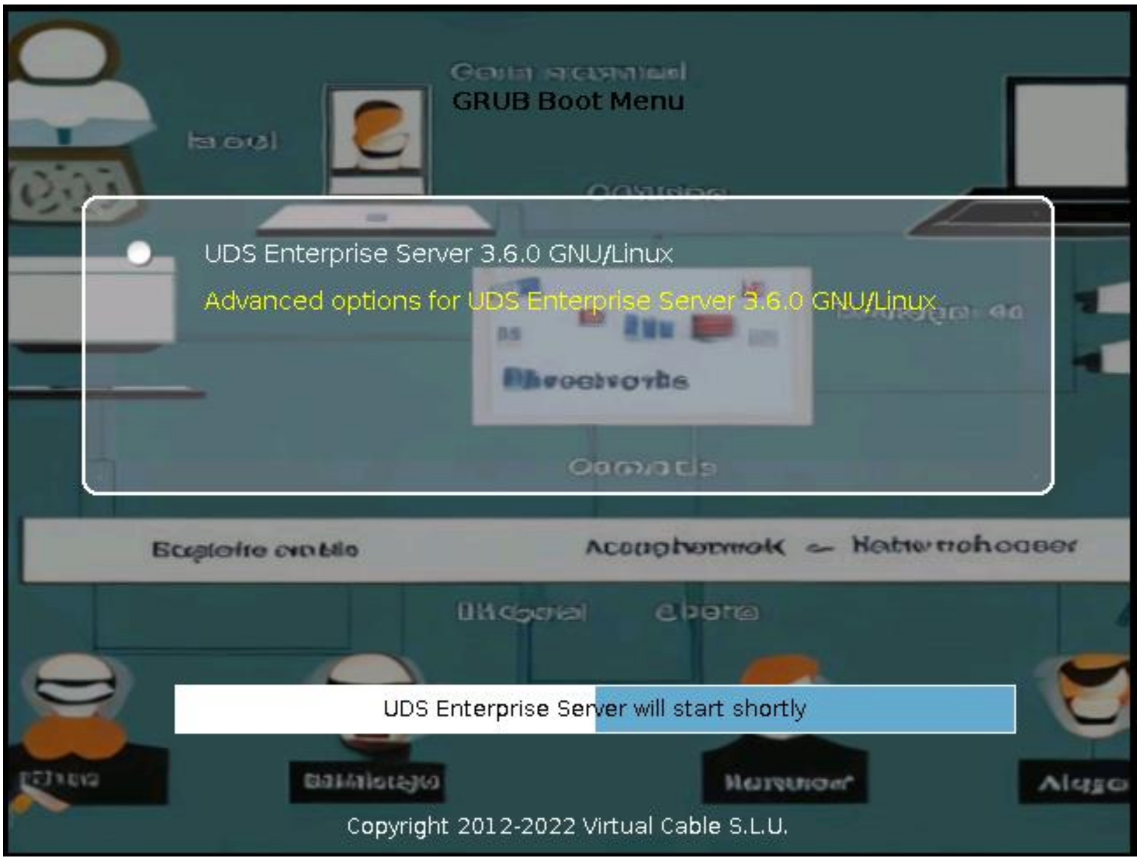
- Encrypt the information

- Monitor activity

It is advised to disable SSH access to this server, so that it is only accessible by console.

3.2.2 UDS Server

Once the UDS Server virtual appliance has been imported to a supported virtualization platform, turn on the virtual machine to proceed with its initial configuration.



GRUB Boot Menu

UDS Enterprise Server 3.6.0 GNU/Linux

Advanced options for UDS Enterprise Server 3.6.0 GNU/Linux

UDS Enterprise Server will start shortly

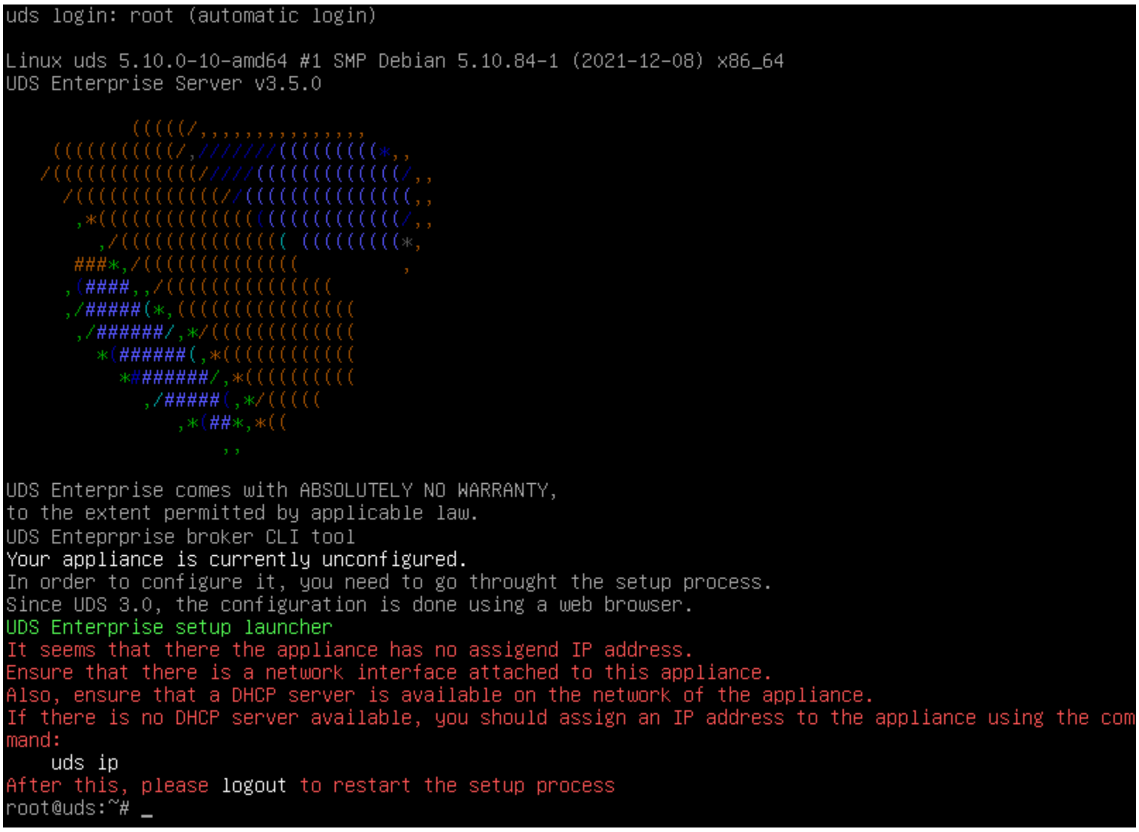
Copyright 2012-2022 Virtual Cable S.L.U.

NOTE: In order to successfully configure a UDS server, it is necessary to have a database server configured with an available instance. If using a database that has already been used with UDS and contains data from a previous UDS version, all data will be migrated for use with the new version (database migrations are only allowed from contiguous versions) .

The UDS Evaluation Edition version allows you not to use the external database, since the system allows you to automatically enable a local database.
already been used with UDS and contains data from a previous version of UDS, all
data will be migrated for use with the new version (Database migrations are only
allowed from contiguous versions).

The UDS Evaluation Edition version allows you to not use the external MySQL Database since the system allows you to automatically enable a local Database.

By default, the virtual appliance UDS Server will take a network configuration via DHCP. In case there is no server on the network that assigns IP addresses, you will have to assign the network data manually:



```
uds login: root (automatic login)

Linux uds 5.10.0-10-amd64 #1 SMP Debian 5.10.84-1 (2021-12-08) x86_64
UDS Enterprise Server v3.5.0

           (((((/,,,,,,,,,,,,,,,
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                   ,,

UDS Enterprise comes with ABSOLUTELY NO WARRANTY,
to the extent permitted by applicable law.
UDS Enteprprise broker CLI tool
Your appliance is currently unconfigured.
In order to configure it, you need to go throught the setup process.
Since UDS 3.0, the configuration is done using a web browser.
UDS Enterprise setup launcher
It seems that there the appliance has no assigend IP address.
Ensure that there is a network interface attached to this appliance.
Also, ensure that a DHCP server is available on the network of the appliance.
If there is no DHCP server available, you should assign an IP address to the appliance using the com
mand:
    uds ip
After this, please logout to restart the setup process
root@uds:~# _
```
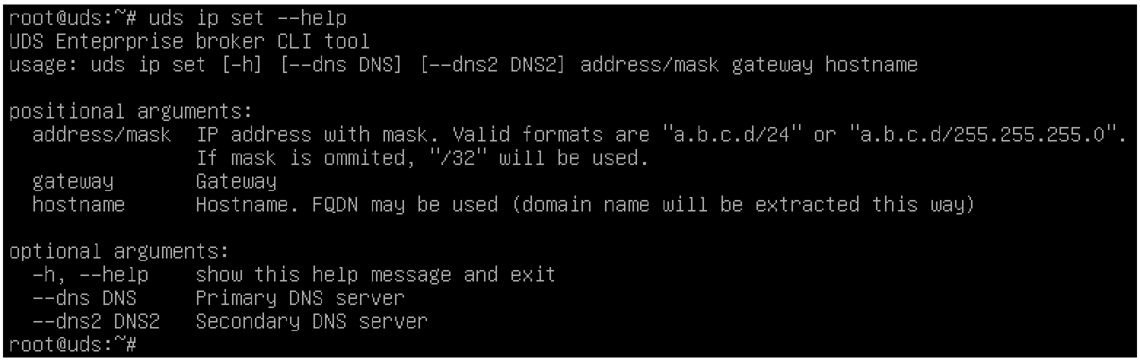

In order to do this, use the command ***uds ip set***

Its configuration options are:

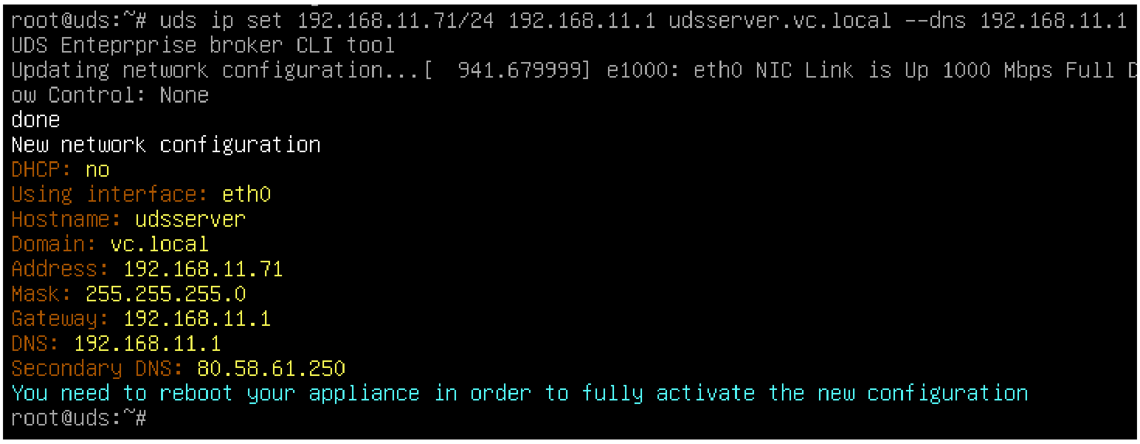


```
root@uds:~# uds ip set --help
UDS Enteprprise broker CLI tool
usage: uds ip set [-h] [--dns DNS] [--dns2 DNS2] address/mask gateway hostname

positional arguments:
  address/mask  IP address with mask. Valid formats are "a.b.c.d/24" or "a.b.c.d/255.255.255.0".
                If mask is ommited, "/32" will be used.
  gateway       Gateway
  hostname      Hostname. FQDN may be used (domain name will be extracted this way)

optional arguments:
  -h, --help    show this help message and exit
  --dns DNS     Primary DNS server
  --dns2 DNS2   Secondary DNS server
root@uds:~#
```

Therefore, you will proceed to the manual configuration of the network data:

```
uds ip set ip_server/mask gateway name_server
```

Additionally, you can indicate the domain (extracted from the server name) and the DNS servers (with the --dns parameter)

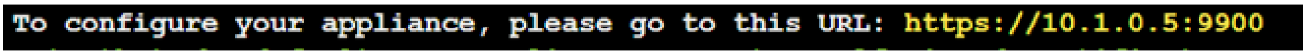


```
root@uds:~# uds ip set 192.168.11.71/24 192.168.11.1 udsserver.vc.local --dns 192.168.11.1
UDS Enteprprise broker CLI tool
Updating network configuration...[  941.679999] e1000: eth0 NIC Link is Up 1000 Mbps Full D
ow Control: None
done
New network configuration
DHCP: no
Using interface: eth0
Hostname: udsserver
Domain: vc.local
Address: 192.168.11.71
Mask: 255.255.255.0
Gateway: 192.168.11.1
DNS: 192.168.11.1
Secondary DNS: 80.58.61.250
You need to reboot your appliance in order to fully activate the new configuration
root@uds:~#
```

Once the IP is configured, restart the server to apply the changes.

If you already have an IP address assigned to the server, either by its manual configuration or by the automatic assignment of a DHCP server, you will proceed to configure the UDS Server component:

To do this, you will access the server's IP address via web browser, indicating port
9900



```
To configure your appliance, please go to this URL: https://10.1.0.5:9900
```

Security note:

To carry out the initial basic configuration, UDS Broker incorporates its own security mechanism.

In order to perform the initial configuration we need two things:

- The "uds setup" command must be running in the broker
- We need to know the value of the Setup Code of our broker.

The “uds setup” command is executed automatically the first time the broker is turned on and can be executed manually at any time from the console.

The “uds setup” command is stopped automatically at the end of the initial configuration or manually by executing “uds setup -s”.

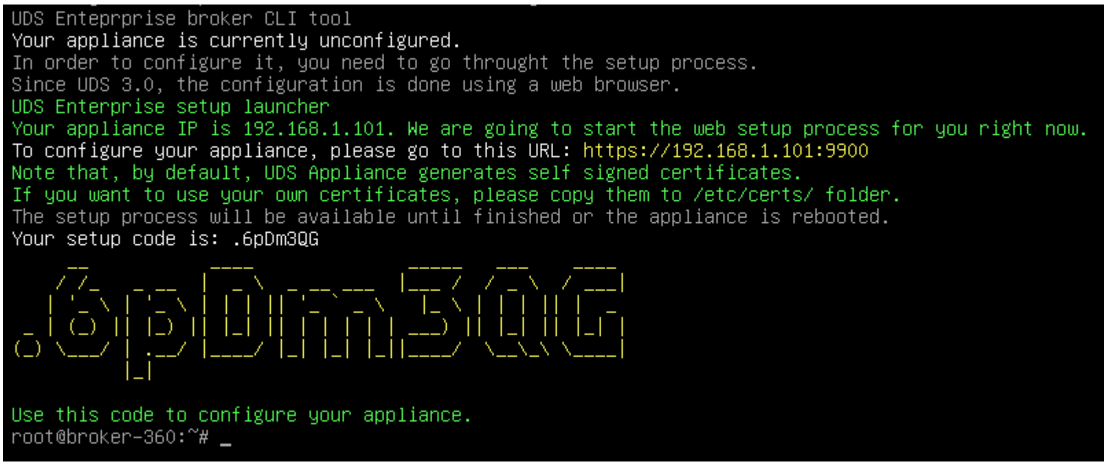
When executing the "uds setup" command, the "Setup Code" of our broker appears on the screen, which will be requested if we want to carry out the basic configuration remotely.

The “Setup Code” is an eight-character token that does NOT circulate at any time through the network, which will be our “One-time pad”.

“One-time pad” is part of an encryption technique that cannot be cracked, but requires the use of a one-time pre-shared key that is no smaller than the message being sent.

In this technique, a plain text is combined with a random secret key, our single-use “One-time pad”.

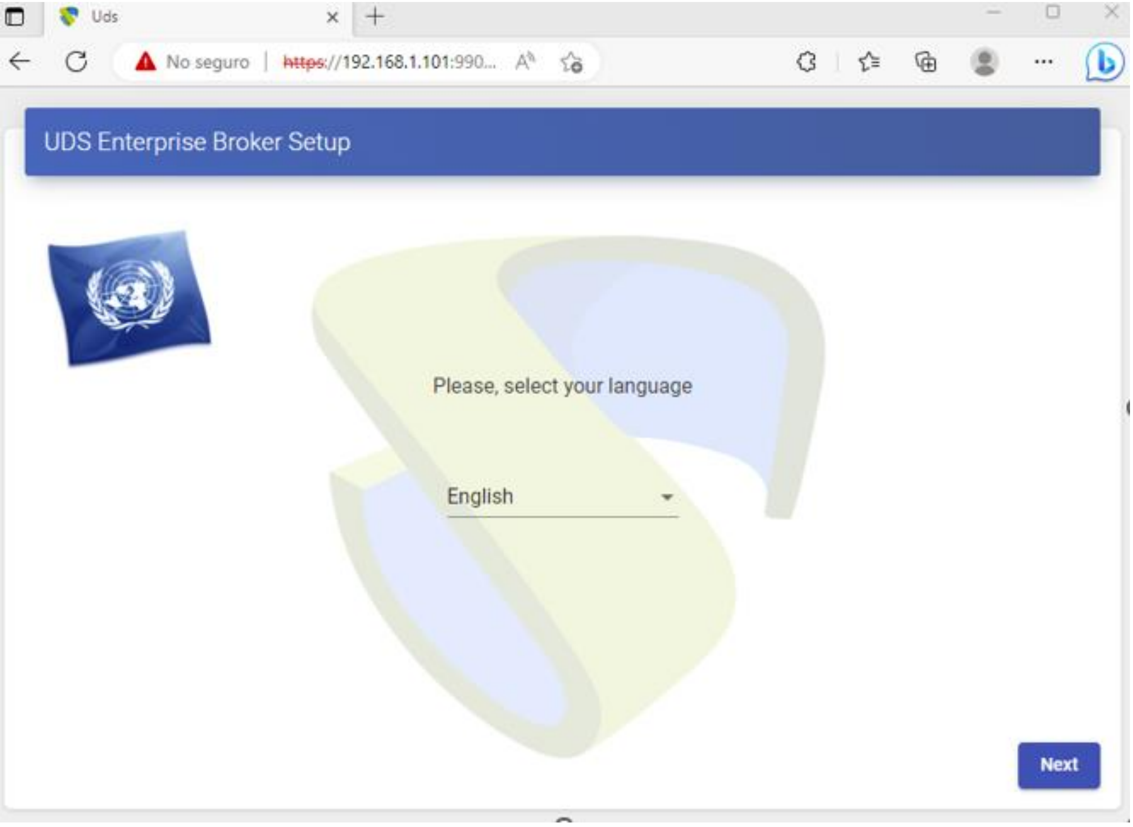
With this token at each end of the connection through a "salt", a set of random bits that we use as part of the key of the cryptographic algorithm, and using a 512 hash function, we obtain a 3,072-byte key, which it is sliced and used by both parties to encrypt and decrypt the information transmitted and received during this initial setup. This key is never used in its entirety or reused in any of its parts.



```
UDS Enteprprise broker CLI tool
Your appliance is currently unconfigured.
In order to configure it, you need to go throught the setup process.
Since UDS 3.0, the configuration is done using a web browser.
UDS Enterprise setup launcher
Your appliance IP is 192.168.1.101. We are going to start the web setup process for you right now.
To configure your appliance, please go to this URL: https://192.168.1.101:9900
Note that, by default, UDS Appliance generates self signed certificates.
If you want to use your own certificates, please copy them to /etc/certs/ folder.
The setup process will be available until finished or the appliance is rebooted.
Your setup code is: .6pDm3QG
     __           ____              _____   ___    ____
    / /_   _ __  |  _ \  _ __ ___  |___ /  / _ \  / ___|
   | '_ \ | '_ \ | | | || '_ ` _ \   |_ \ | | | || |  _
 _ | (_) || |_) || |_| || | | | | | ___) || |_| || |_| |
(_) \___/  | .__/ |____/ |_| |_| |_||____/  \__\_\ \____|
          |_|

Use this code to configure your appliance.
root@broker-360:~# _
```

This "Setup Code" will be requested during the basic initial configuration.

NOTE: The http access should not be used to access the broker's web server, but rather the initial basic configuration application of the server software "uds setup" through https and port 9900.

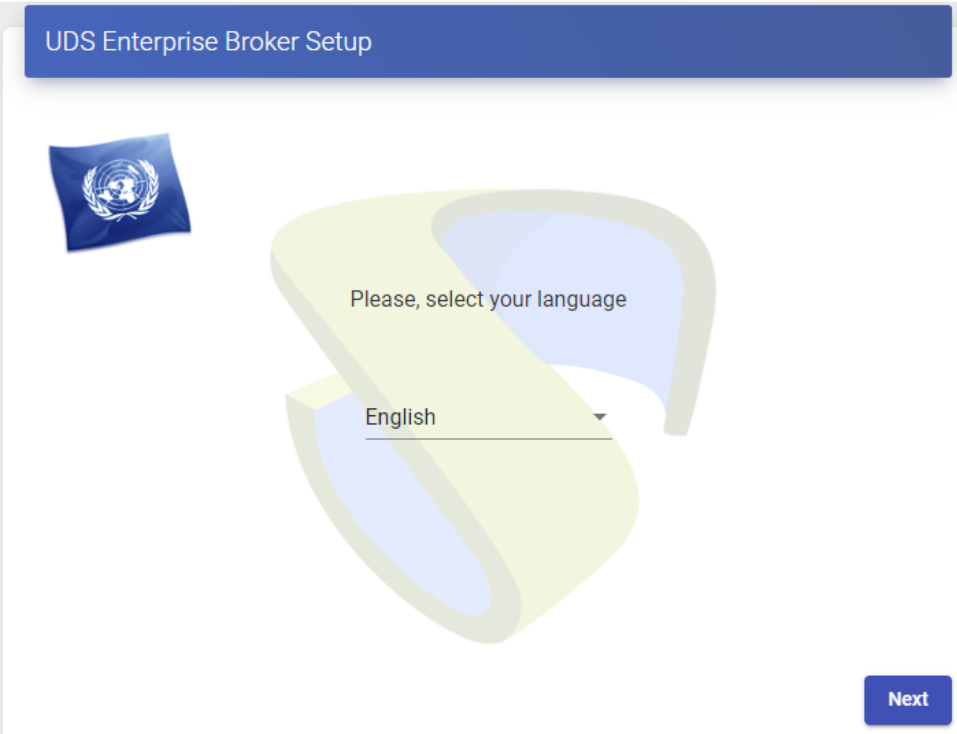


UDS Enterprise Broker Setup

Please, select your language

English

Step 1.- Select the language of the configuration wizard:

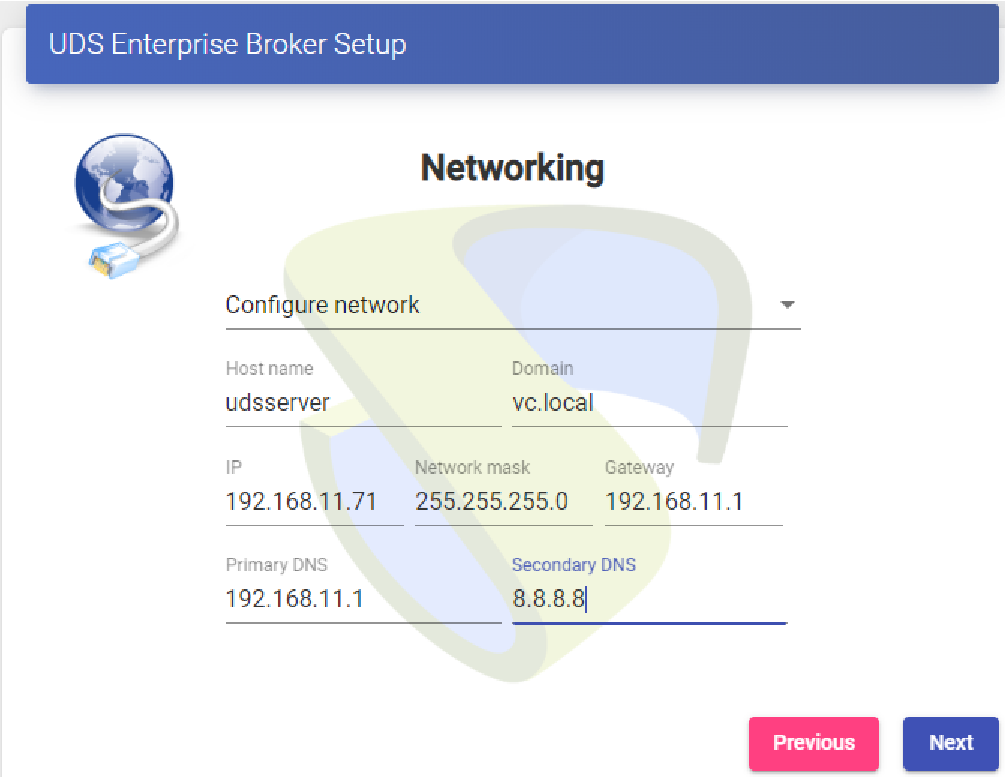


UDS Enterprise Broker Setup

Please, select your language

English

Step 2.- - Indicate the server's name, domain (optional) and server network data:



UDS Enterprise Broker Setup

Networking

Configure network

Host name: udsserver

Domain: vc.local

IP: 192.168.11.71

Network mask: 255.255.255.0

Gateway: 192.168.11.1

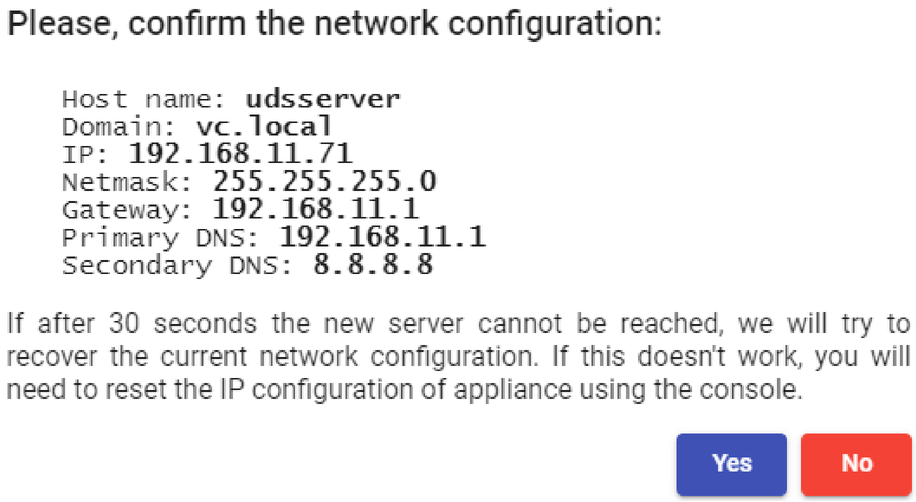
Primary DNS: 192.168.11.1

Secondary DNS: 8.8.8.8

NOTE: If the indicated IP address is different from the one already configured by the server via DHCP or manual configuration, the system will automatically redirect to the new address to continue with the configuration wizard.

NOTE: If all the indicated data are correct and you do not want to modify any data, you can use the option "Skip network config (leave it as is)".

Check that the indicated data are correct and accept:

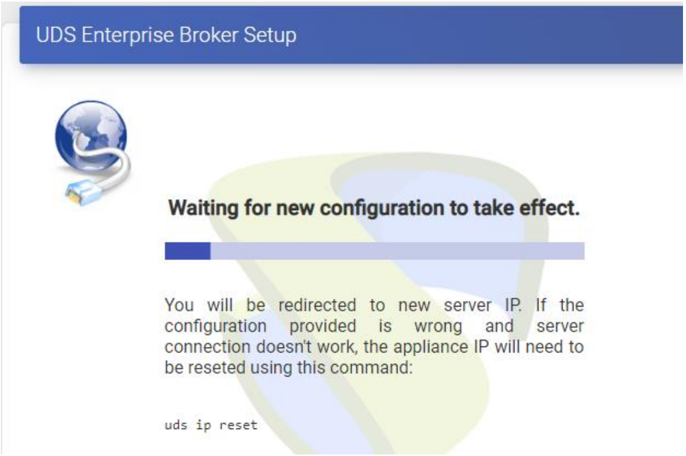


Please, confirm the network configuration:

```
Host name: udsserver
Domain: vc.local
IP: 192.168.11.71
Netmask: 255.255.255.0
Gateway: 192.168.11.1
Primary DNS: 192.168.11.1
Secondary DNS: 8.8.8.8
```

If after 30 seconds the new server cannot be reached, we will try to recover the current network configuration. If this doesn't work, you will need to reset the IP configuration of appliance using the console.

Wait for the configuration of the new network data to finish:



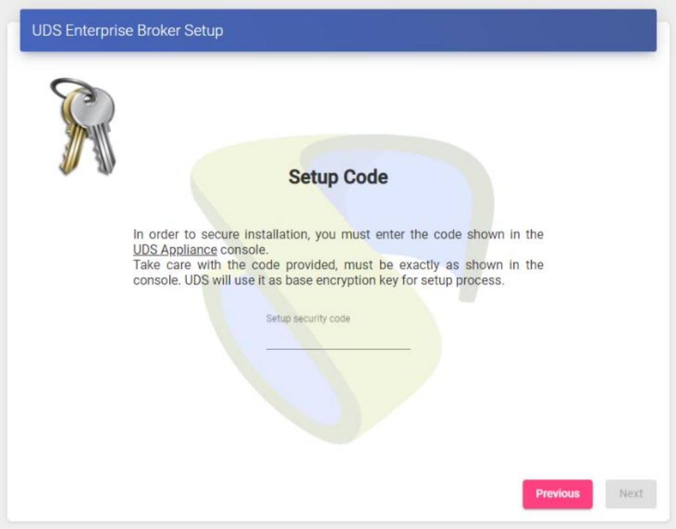
UDS Enterprise Broker Setup

Waiting for new configuration to take effect.

You will be redirected to new server IP. If the configuration provided is wrong and server connection doesn't work, the appliance IP will need to be reseted using this command:

```
uds ip reset
```

Step 3.- Add the security code ("Setup Code") that will appear in the console of our UDS Server appliance and that you saw at the beginning of this procedure:



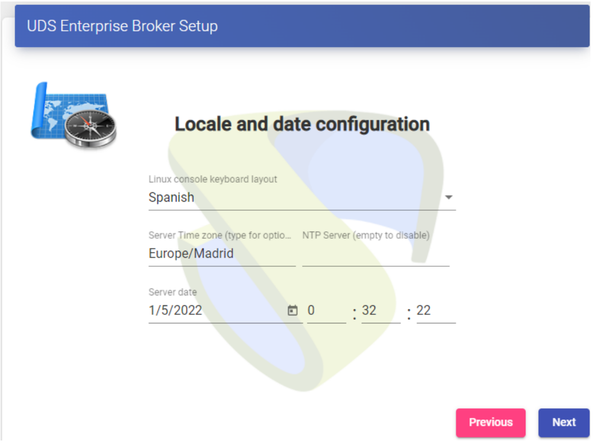
UDS Enterprise Broker Setup

Setup Code

In order to secure installation, you must enter the code shown in the UDS Appliance console.
Take care with the code provided, must be exactly as shown in the console. UDS will use it as base encryption key for setup process.

Setup security code

Step 4.- We configure the keyboard language that the server will have, the time zone and an NTP server (optional):



UDS Enterprise Broker Setup

Locale and date configuration

Linux console keyboard layout: Spanish

Server Time zone (type for optio...: Europe/Madrid

NTP Server (empty to disable):

Server date: 1/5/2022 0 : 32 : 22

Step 5.- Select the type of Database to be used:

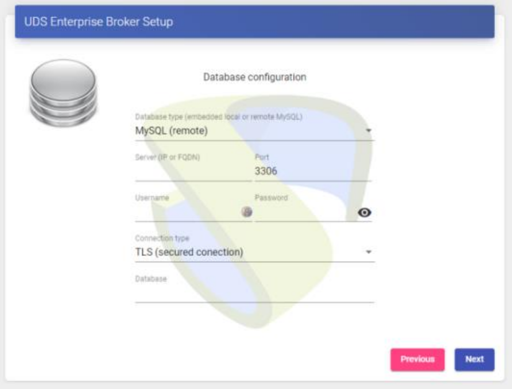
- **MySQL (remote)**: If you select this type, the system will require an external database server (valid and recommended for any edition of UDS).
- **Embedded (local):** If you select this type, the system will enable a local Database on the UDS server. Not recommended for Enterprise Editions

NOTE:
If you select a local Database, you will not be able to update the system with new versions without losing existing data.

In the case of selecting "***MySQL (remote)***", you must indicate the connection data with the Database:

- **Username:** Username with administrative permissions on the Database instance
- **Password:** User password
- **Connection Type:** Type of connection to the database

- **Database:** Name of the Database Instance



UDS Enterprise Broker Setup

Database configuration

Database type (embedded local or remote MySQL): MySQL (remote)

Server (IP or FQDN)

Port: 3306

Username

Password

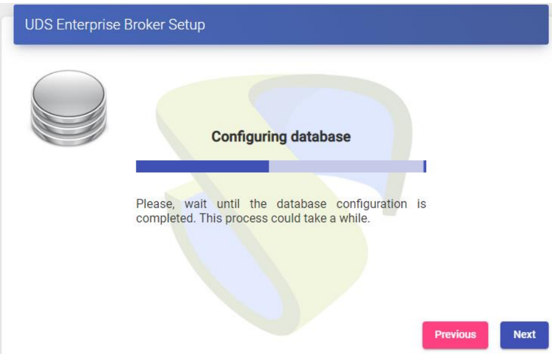
Connection type: TLS (secured conection)

Database

NOTE: If you use the database server provided by UDS, the default data are: Username: uds // Password: uds // Database: uds

Security Procedure: It is advisable to change the username and password of the database, this is done on the database server itself. **Passwords must be of sufficient length and include** uppercase, lowercase, **numbers** and special characters. ***tag.***

We wait for the connection to the database to be configured and continue:



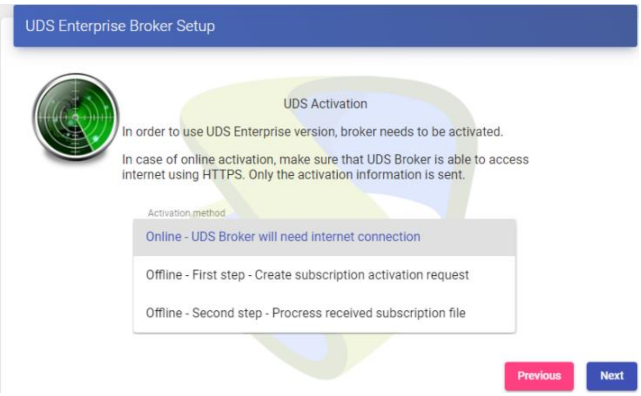
UDS Enterprise Broker Setup

Configuring database

Please, wait until the database configuration is completed. This process could take a while.

Step 5.- Continue with the subscription activation process.

You must select the activation mode:



UDS Enterprise Broker Setup

UDS Activation

In order to use UDS Enterprise version, broker needs to be activated.

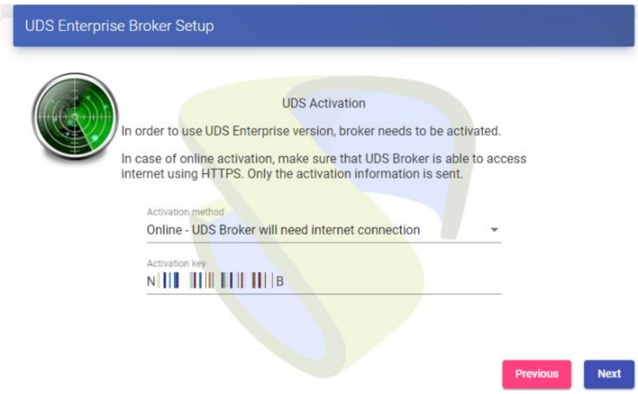
In case of online activation, make sure that UDS Broker is able to access internet using HTTPS. Only the activation information is sent.

Activation method

- Online - UDS Broker will need internet connection
- Offline - First step - Create subscription activation request
- Offline - Second step - Procress received subscription file

- **Online:** To carry out this activation mode, you will need to have a valid serial number and a connection to the UDS activation servers on the internet.

Select the opción ***“Online - UDS Broker will need internet connecion”*** and indicate a valid activation code:



UDS Enterprise Broker Setup

UDS Activation

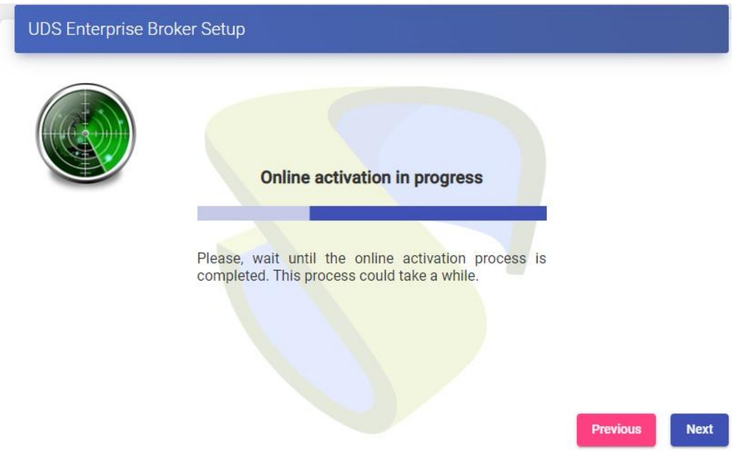
In order to use UDS Enterprise version, broker needs to be activated.

In case of online activation, make sure that UDS Broker is able to access internet using HTTPS. Only the activation information is sent.

Activation method: Online - UDS Broker will need internet connection

Activation key: N[redacted]B

The system will validate the activation code with the UDS central remote servers and, if valid, will continue with the configuration process.

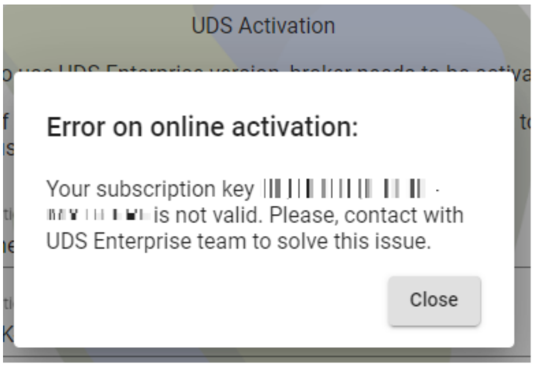


UDS Enterprise Broker Setup

Online activation in progress

Please, wait until the online activation process is completed. This process could take a while.

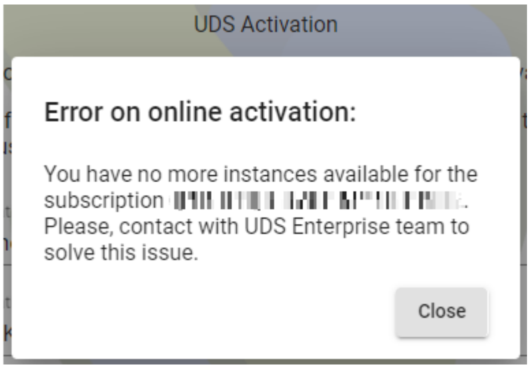
If the activation code is invalid or has no more instances, an activation error will appear and you should contact the UDS Enterprise support team:



UDS Activation

Error on online activation:

Your subscription key [redacted] is not valid. Please, contact with UDS Enterprise team to solve this issue.



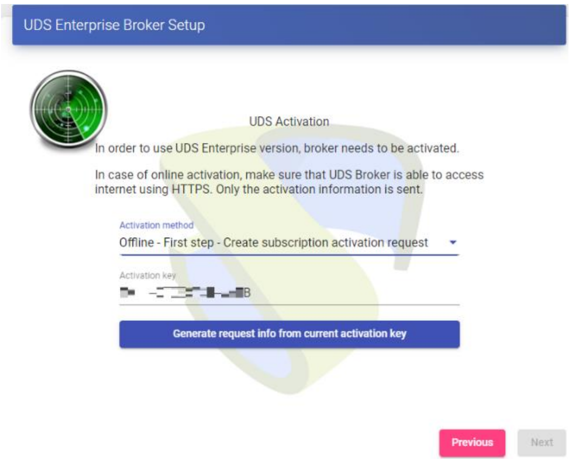
UDS Activation

Error on online activation:

You have no more instances available for the subscription [redacted]. Please, contact with UDS Enterprise team to solve this issue.

- **Offline:** This subscription activation procedure will only have to be performed when the UDS server does not have a direct internet connection to the activation servers.

You first select the option ***"Offline – First step – Create subscription activation request"***, indicate your activation code and click on ***"Generate request info from current activation key":***



UDS Enterprise Broker Setup

UDS Activation

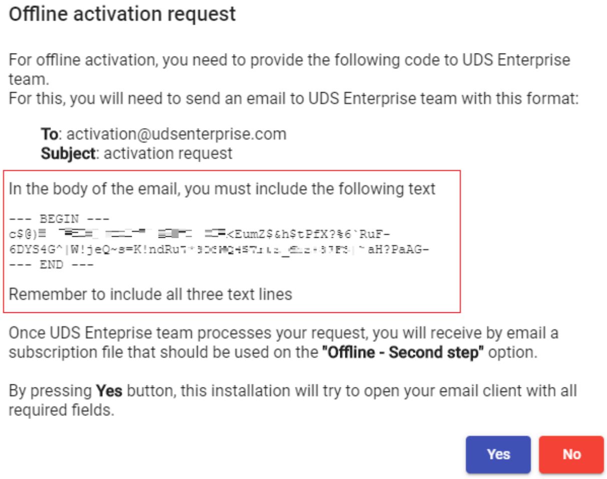
In order to use UDS Enterprise version, broker needs to be activated.

In case of online activation, make sure that UDS Broker is able to access internet using HTTPS. Only the activation information is sent.

Activation method: Offline - First step - Create subscription activation request

Activation key: [redacted]

A new window will automatically open with instructions to carry out the first part of the activation. It will indicate that you must send, via email, a text automatically generated by the system:



Offline activation request

For offline activation, you need to provide the following code to UDS Enterprise team.
For this, you will need to send an email to UDS Enterprise team with this format:

To: activation@udsenterprise.com
Subject: activation request

In the body of the email, you must include the following text

```
--- BEGIN ---
c$@)[redacted]<EumZ$&h$tPfX?%6`RuF-
6DYS4G^|W!jeQ~s=K!ndRu[redacted]aH?PaAG-
--- END ---
```

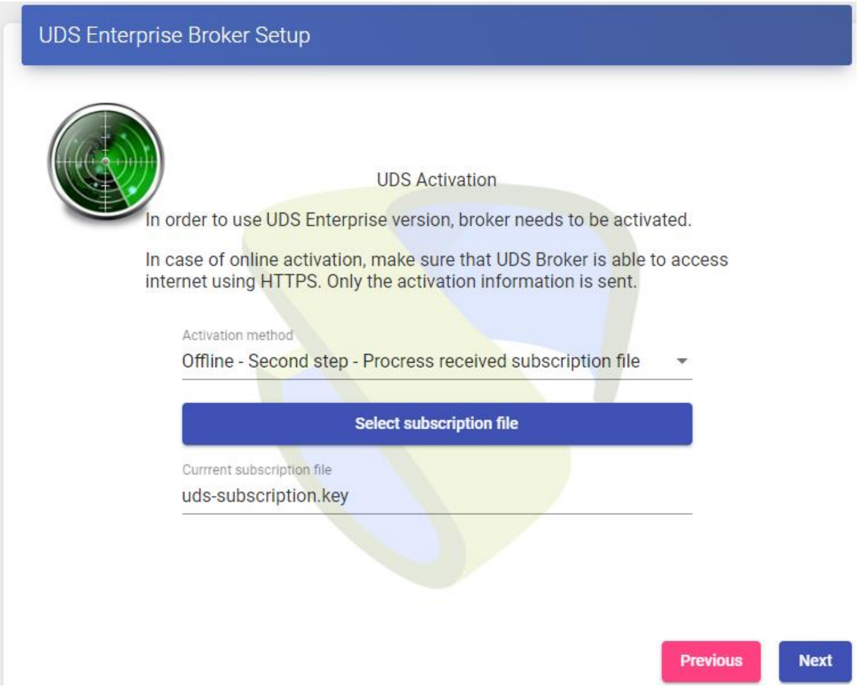
Remember to include all three text lines

Once UDS Enteprise team processes your request, you will receive by email a subscription file that should be used on the **"Offline - Second step"** option.

By pressing **Yes** button, this installation will try to open your email client with all required fields.

Once the response is received from the UDS Enterprise support team (which may take a while, since this request has to be processed and validated), you will receive a file called ***uds-subscription.key.***

Now select the option ***"Offline – Second step – Process received subscription file"***, indicating the file received in ***"Current subscription file"*** and continue with the configuration wizard



UDS Enterprise Broker Setup

UDS Activation

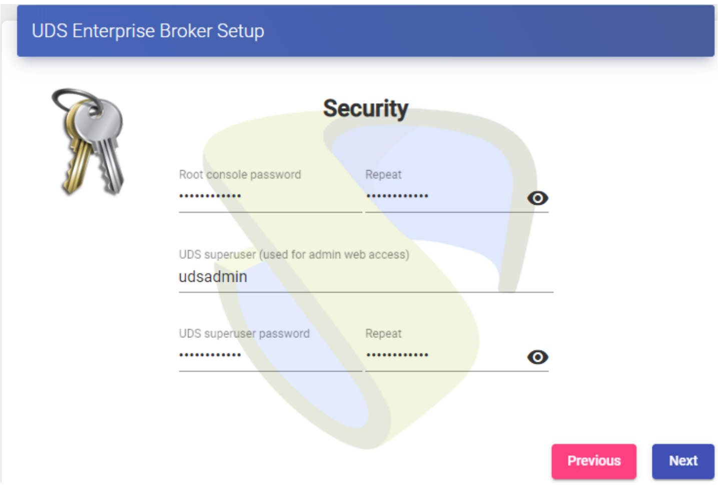
In order to use UDS Enterprise version, broker needs to be activated.

In case of online activation, make sure that UDS Broker is able to access internet using HTTPS. Only the activation information is sent.

Activation method: Offline - Second step - Procress received subscription file

Current subscription file: uds-subscription.key

Step 7.- - Configure the password of the local user root of the UDS server and indicate the name and password of the UDS system administrator user (super-user to access the UDS web administration).



UDS Enterprise Broker Setup

Security

Root console password: ············ Repeat: ············

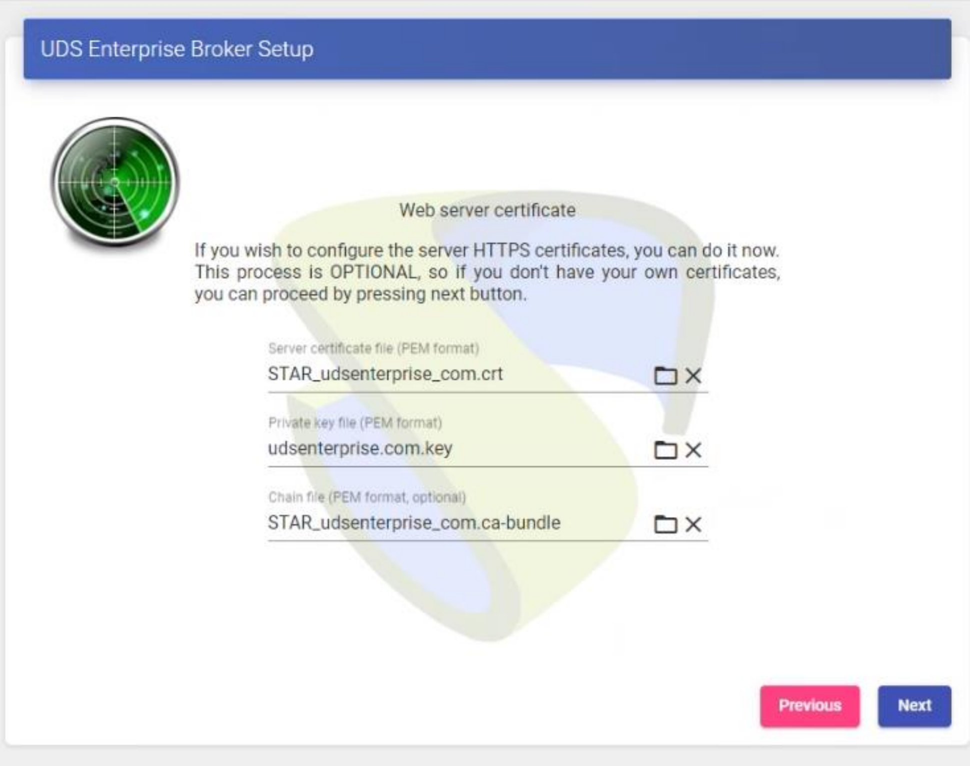
UDS superuser (used for admin web access): udsadmin

UDS superuser password: ············ Repeat: ············

Security Procedure: For a secure installation it is recommended to use passwords with a minimum of 12 characters, uppercase, lowercase, numbers and special characters.

Step 8.- If you have the certificate files, enter them. Otherwise, you can install them after completing the wizard via console.

You need to indicate the certificate file in the "Server certificate" field (.crt, .pem, etc ...), the file with the "Private key" (.key, .pem, etc ...) and optionally you can indicate the certifying entity "Chain file" (.crt, .pem, etc ...).



UDS Enterprise Broker Setup

Web server certificate

If you wish to configure the server HTTPS certificates, you can do it now. This process is OPTIONAL, so if you don't have your own certificates, you can proceed by pressing next button.

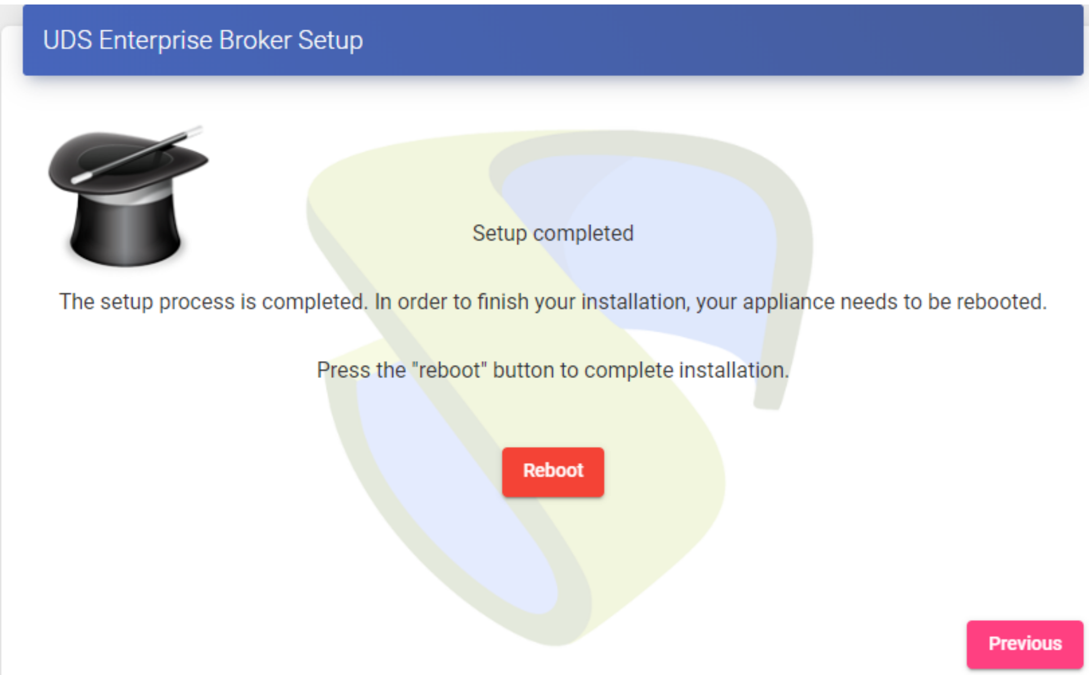
Server certificate file (PEM format): STAR_udsenterprise_com.crt

Private key file (PEM format): udsenterprise.com.key

Chain file (PEM format, optional): STAR_udsenterprise_com.ca-bundle

NOTE: For a totally secure installation, and to be able to make connections via HTTPS, the use of valid certificates on the server will always be recommended, since otherwise anyone who wants to access the web portal will be notified with an error warning that the self-signed certificates of the UDS Server are insecure.

Step 9.- Finish the configuration of the UDS server by clicking on "***Reboot***" so that the server restarts and applies all the indicated configuration.



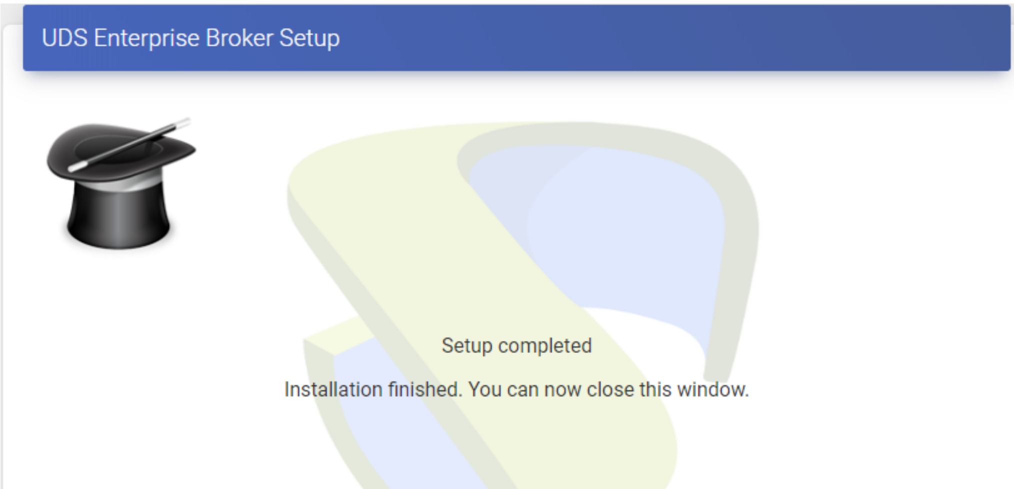
UDS Enterprise Broker Setup

Setup completed

The setup process is completed. In order to finish your installation, your appliance needs to be rebooted.

Press the "reboot" button to complete installation.

You will be able to close the page of the configuration wizard and, once the server has been restarted, it will be accessible from any browser by accessing the IP address or name of the server via http or https:

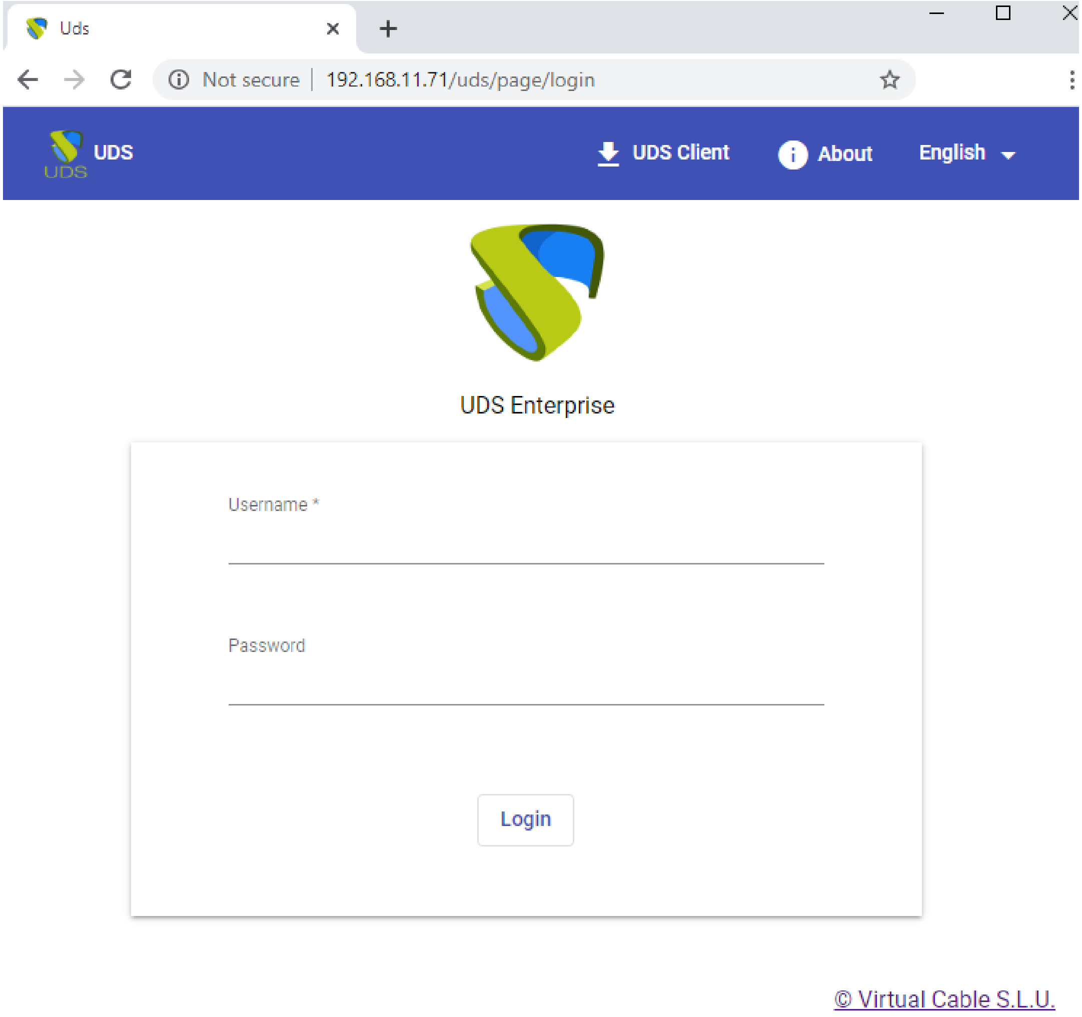


UDS Enterprise Broker Setup

Setup completed

Installation finished. You can now close this window.

UDS Enterprise home page:



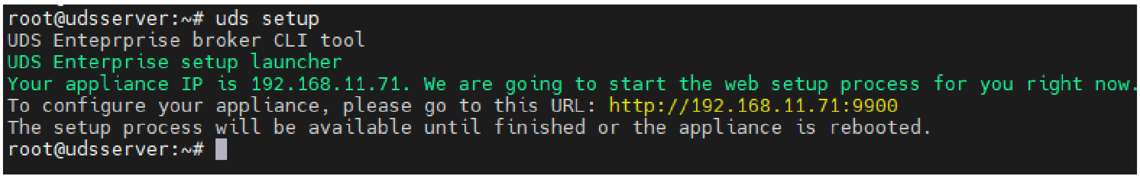
NOTE: Web access can be made by both HTTP and HTTPS, if the latter is not used, there may be a high security risk.

Security procedure: A certificate must have been installed on the broker's server in step 8 of the initial basic installation procedure to proceed with the use of UDS Enterprise securely via HTTPS.

We also recommend that you disable HTTP access or at least redirect HTTP access to HTTPS.

If you need to run the configuration wizard again to modify any data, you will have to validate yourself on the server (with the root user and the password established in step 6) and execute the command:

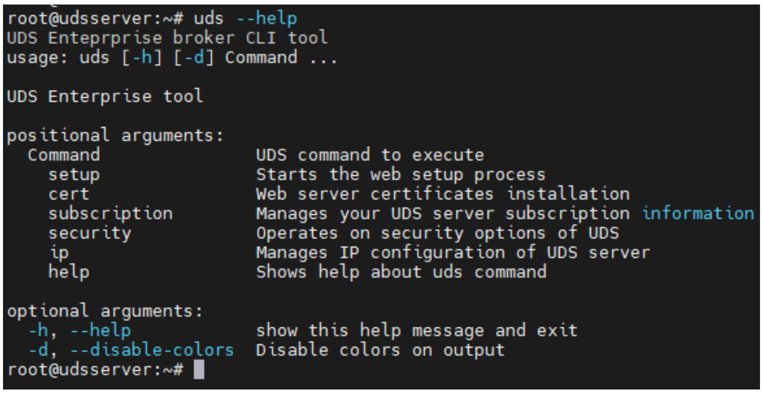
- **uds setup:** Launch the setup wizard



```
root@udsserver:~# uds setup
UDS Enteprprise broker CLI tool
UDS Enterprise setup launcher
Your appliance IP is 192.168.11.71. We are going to start the web setup process for you right now.
To configure your appliance, please go to this URL: http://192.168.11.71:9900
The setup process will be available until finished or the appliance is rebooted.
root@udsserver:~#
```

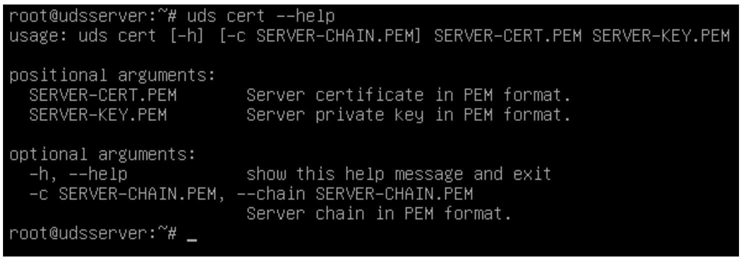
This will re-enable the setup wizard

Additionally, with the command uds you can make other modifications on the server:



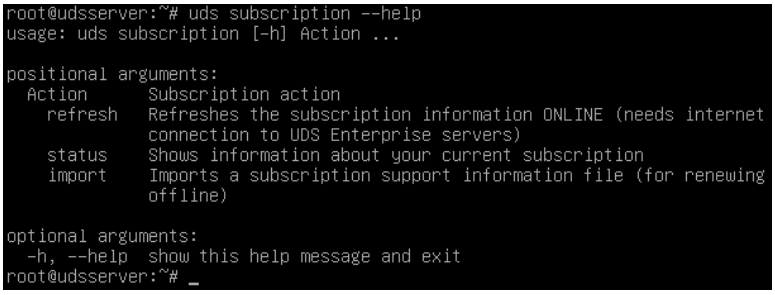
```
root@udsserver:~# uds --help
UDS Enteprprise broker CLI tool
usage: uds [-h] [-d] Command ...

UDS Enterprise tool

positional arguments:
  Command              UDS command to execute
    setup              Starts the web setup process
    cert               Web server certificates installation
    subscription       Manages your UDS server subscription information
    security           Operates on security options of UDS
    ip                 Manages IP configuration of UDS server
    help               Shows help about uds command

optional arguments:
  -h, --help           show this help message and exit
  -d, --disable-colors Disable colors on output
root@udsserver:~#
```

- **uds cert:** It will allow the installation of certificates on the server:



```
root@udsserver:~# uds cert --help
usage: uds cert [-h] [-c SERVER-CHAIN.PEM] SERVER-CERT.PEM SERVER-KEY.PEM

positional arguments:
  SERVER-CERT.PEM      Server certificate in PEM format.
  SERVER-KEY.PEM       Server private key in PEM format.

optional arguments:
  -h, --help           show this help message and exit
  -c SERVER-CHAIN.PEM, --chain SERVER-CHAIN.PEM
                       Server chain in PEM format.
root@udsserver:~# _
```

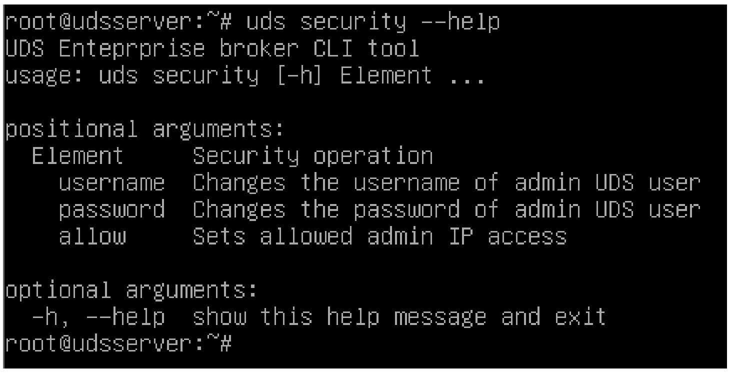
- **uds subscription:** It will allow you to check the type of active subscription on the server and, if necessary, update it:



```
root@udsserver:~# uds subscription --help
usage: uds subscription [-h] Action ...

positional arguments:
  Action      Subscription action
    refresh   Refreshes the subscription information ONLINE (needs internet
              connection to UDS Enterprise servers)
    status    Shows information about your current subscription
    import    Imports a subscription support information file (for renewing
              offline)

optional arguments:
  -h, --help  show this help message and exit
root@udsserver:~# _
```

  - **uds suscription refresh**: Update the data of the subscription used (Internet connection required).
  - **uds suscription status**: Show current subscription information:
  - **uds suscription import**: Import a file to update or activate the UDS Enterprise subscription.

- **uds security:** It will allow to modify the name and password of the super-user to access the web administration of UDS, we can also enable or disable said user:



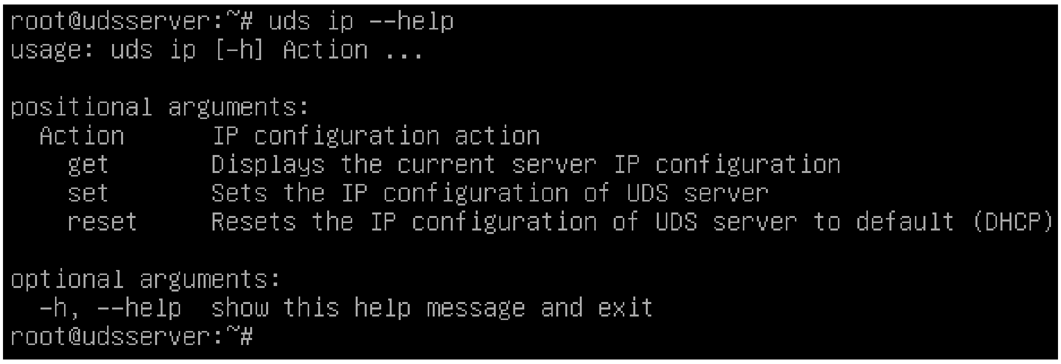
```
root@udsserver:~# uds security --help
UDS Enteprprise broker CLI tool
usage: uds security [-h] Element ...

positional arguments:
  Element     Security operation
    username  Changes the username of admin UDS user
    password  Changes the password of admin UDS user
    allow     Sets allowed admin IP access

optional arguments:
  -h, --help  show this help message and exit
root@udsserver:~#
```

  - **uds security username**: Modify the username of the UDS administrator user.
  - **uds security password**: Modify the password of the UDS administrator user.

Safe use procedure: Passwords must be of sufficient length and include uppercase, lowercase, numbers and special characters.

  - **uds security allow**: Allows you to choose the ips/range that will be able to access the administration.

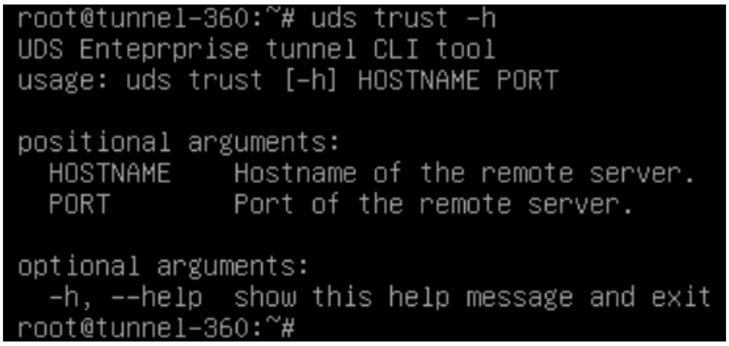
- **uds ip:** It will allow consulting, modifying, and resetting the IP data of the server:



```
root@udsserver:~# uds ip --help
usage: uds ip [-h] Action ...

positional arguments:
  Action      IP configuration action
    get       Displays the current server IP configuration
    set       Sets the IP configuration of UDS server
    reset     Resets the IP configuration of UDS server to default (DHCP)

optional arguments:
  -h, --help  show this help message and exit
root@udsserver:~#
```

  - **uds ip get**: Shows the Ips information of the UDS server.
  - **uds ip set**: Assign the network data of the server manually.
  - **uds ip reset**: Restarts the network information of the UDS Appliance.
  - **uds trust:** Comando que nos permitirá confiar en un certificado de un servidor remoto.

Solo válido para certificados autofirmados.



```
root@tunnel-360:~# uds trust -h
UDS Enteprprise tunnel CLI tool
usage: uds trust [-h] HOSTNAME PORT

positional arguments:
  HOSTNAME    Hostname of the remote server.
  PORT        Port of the remote server.

optional arguments:
  -h, --help  show this help message and exit
root@tunnel-360:~#
```

Safe Employment Procedure:

In general, it is advisable to implement the basic and essential security mechanisms to any server; Strong passwords, backups, have security solutions, keep systems updated and modify configurations, users and passwords included, by default.

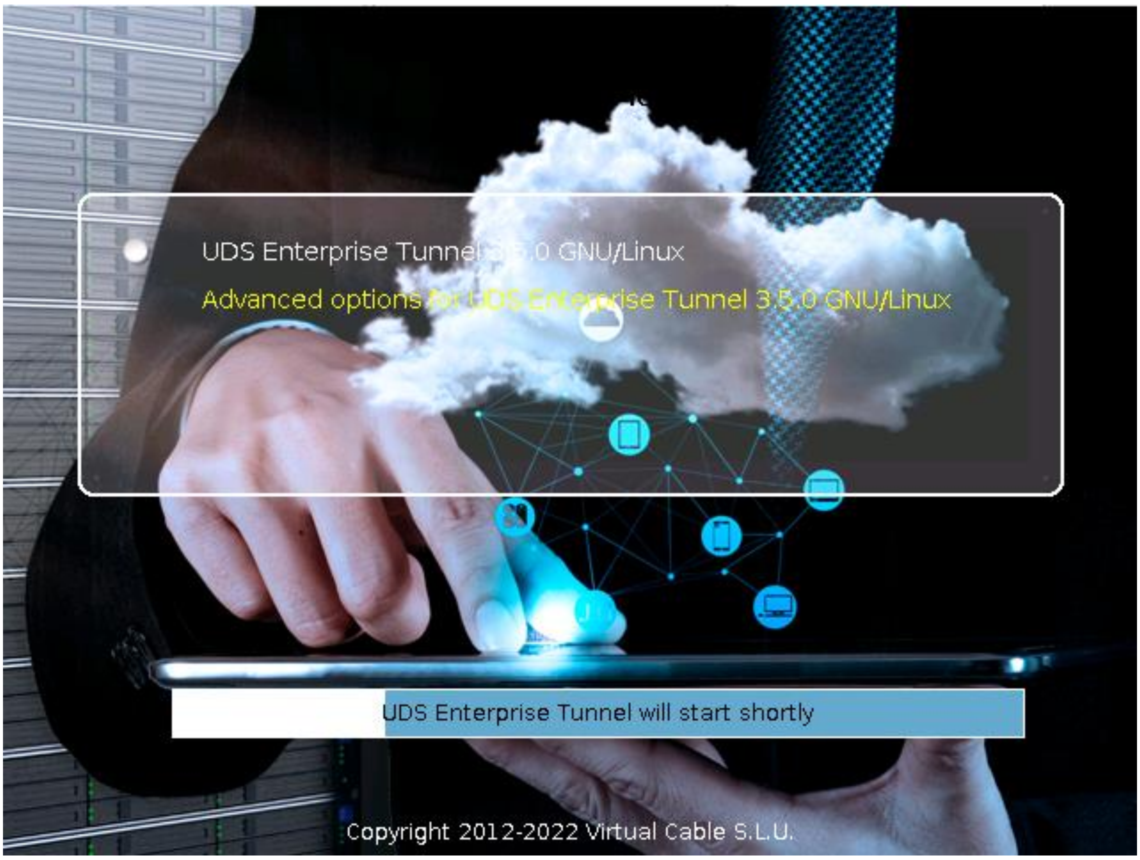
In addition, being a web server, Nginx, it is recommended to apply the following mechanisms:

1. SSL/TLS
   1. Implement SSL certificate
   2. Optimize SSL/TLS
   3. Disable weak SSL/TLS protocols
   4. Disable weak cipher suites
   5. Install Chain Certificate
   6. Securing Diffie-Hellman for TLS
2. Remove "Information Leakage"
3. Web Application Security
   1. Disable unwanted HTTP methods
   2. Avoid clickjacking attacks, injection of x-frames
   3. X-XSS Protection
   4. Implement WAF Mod Security
4. Update the Nginx server

We recommend that you disable SSH access to this server, so that it is only accessible by console.

3.2.3 UDS Tunnel

Once the UDS Tunnel virtual appliance has been imported to a supported virtualization platform, turn on the virtual machine to proceed with its initial configuration.



UDS Enterprise Tunnel 3.5.0 GNU/Linux

Advanced options for UDS Enterprise Tunnel 3.5.0 GNU/Linux

UDS Enterprise Tunnel will start shortly

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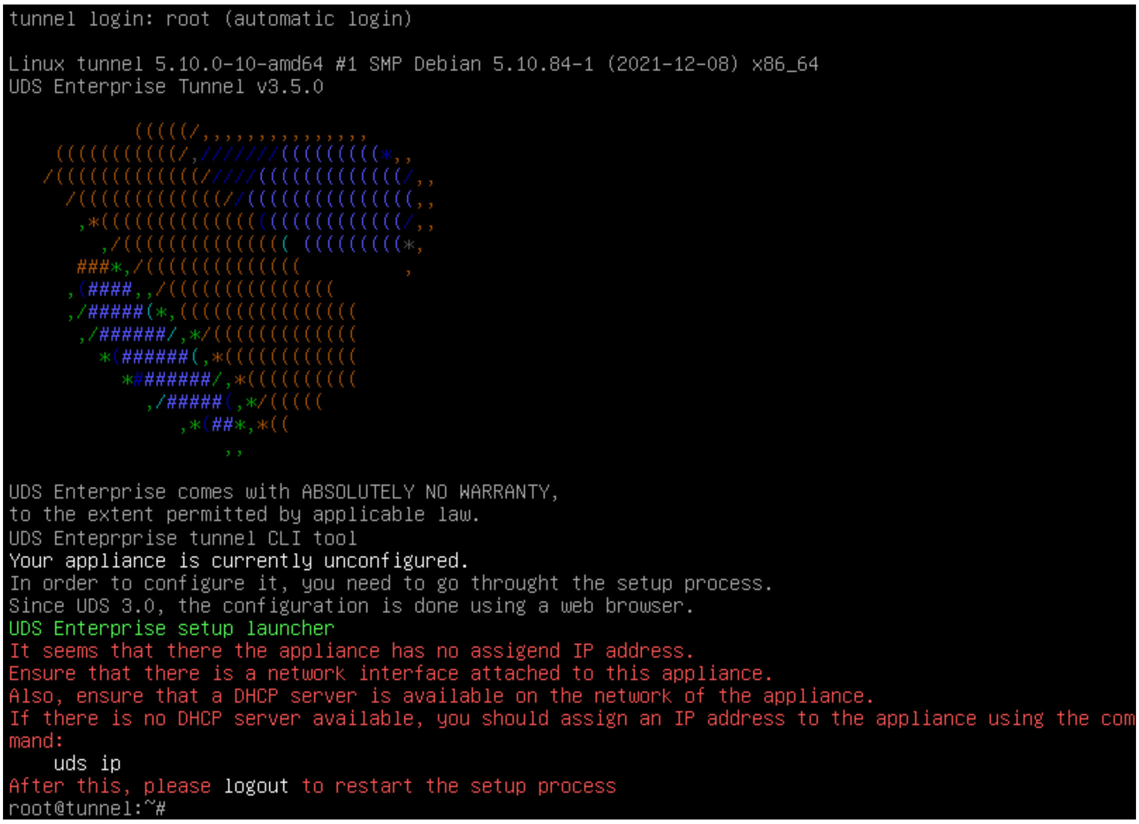
NOTE: In order to successfully configure a UDS Tunnel server, it is necessary to have previously configured a UDS server and know its IP address or name.

By default, the virtual appliance UDS Tunnel will take a network configuration via DHCP. In case there is no server on the network that assigns IP addresses, you will have to assign the network data manually:



```
tunnel login: root (automatic login)

Linux tunnel 5.10.0-10-amd64 #1 SMP Debian 5.10.84-1 (2021-12-08) x86_64
UDS Enterprise Tunnel v3.5.0

           (((((/,,,,,,,,,,,,,,,
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UDS Enterprise comes with ABSOLUTELY NO WARRANTY,
to the extent permitted by applicable law.
UDS Enteprprise tunnel CLI tool
Your appliance is currently unconfigured.
In order to configure it, you need to go throught the setup process.
Since UDS 3.0, the configuration is done using a web browser.
UDS Enterprise setup launcher
It seems that there the appliance has no assigend IP address.
Ensure that there is a network interface attached to this appliance.
Also, ensure that a DHCP server is available on the network of the appliance.
If there is no DHCP server available, you should assign an IP address to the appliance using the com
mand:
    uds ip
After this, please logout to restart the setup process
root@tunnel:~#
```
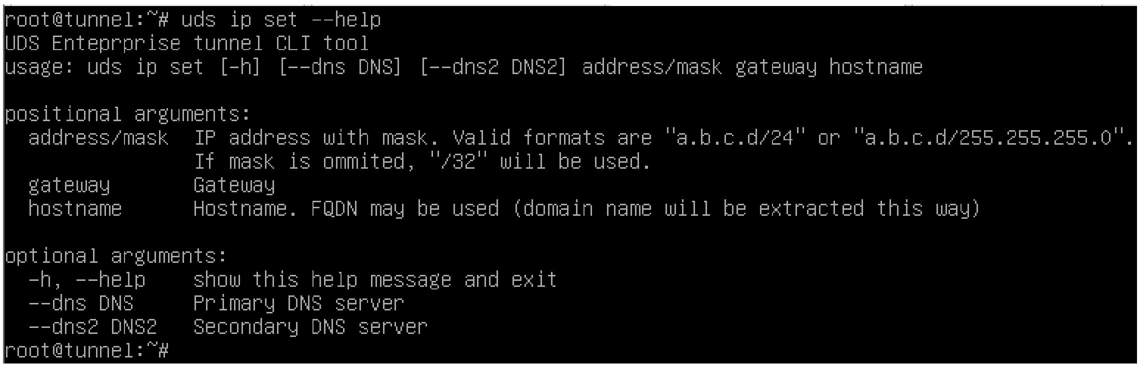

To do this, you will use the command ***uds ip set***

Its configuration options are:

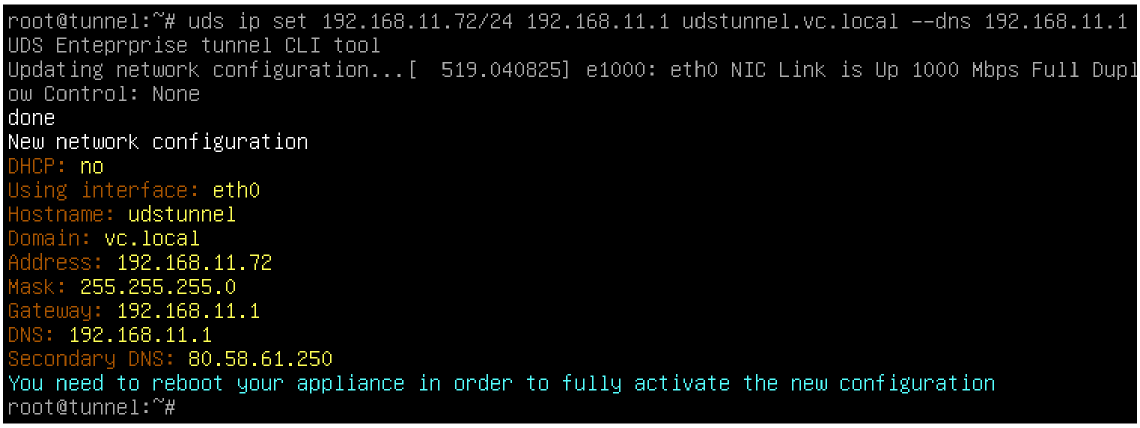


```
root@tunnel:~# uds ip set --help
UDS Enteprprise tunnel CLI tool
usage: uds ip set [-h] [--dns DNS] [--dns2 DNS2] address/mask gateway hostname

positional arguments:
  address/mask  IP address with mask. Valid formats are "a.b.c.d/24" or "a.b.c.d/255.255.255.0".
                If mask is ommited, "/32" will be used.
  gateway       Gateway
  hostname      Hostname. FQDN may be used (domain name will be extracted this way)

optional arguments:
  -h, --help    show this help message and exit
  --dns DNS     Primary DNS server
  --dns2 DNS2   Secondary DNS server
root@tunnel:~#
```

Therefore, you will proceed to the manual configuration of the network data:

`uds ip set` *`ip_server`*`/`*`mask gateway name_server`*

Additionally, we can indicate the domain (extracted from the server name) and the DNS servers (with the --dns parameter)

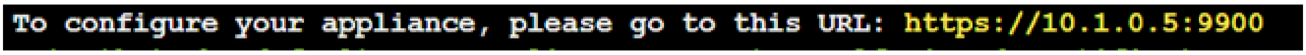


```
root@tunnel:~# uds ip set 192.168.11.72/24 192.168.11.1 udstunnel.vc.local --dns 192.168.11.1
UDS Enteprprise tunnel CLI tool
Updating network configuration...[  519.040825] e1000: eth0 NIC Link is Up 1000 Mbps Full Dupl
ow Control: None
done
New network configuration
DHCP: no
Using interface: eth0
Hostname: udstunnel
Domain: vc.local
Address: 192.168.11.72
Mask: 255.255.255.0
Gateway: 192.168.11.1
DNS: 192.168.11.1
Secondary DNS: 80.58.61.250
You need to reboot your appliance in order to fully activate the new configuration
root@tunnel:~#
```

Once the IP is configured, restart the server to apply the changes.

If you already have an assigned IP address on the server, either due to its manual configuration or the automatic assignment of a DHCP server, you will proceed to configure the UDS Tunnel component.

To do this, you will access the server's IP address via web browser, indicating the port 9900:



```
To configure your appliance, please go to this URL: https://10.1.0.5:9900
```

Security Note:

To perform the initial basic configuration, UDS Tunnel incorporates its own security mechanism.

In order to perform the initial configuration we need two things:

1. The command "uds setup" must be running on the broker
2. We need to know the value of our broker's Setup Code.

The "uds setup" command is executed automatically the first time the broker is turned on and can be executed manually at any time from the console.

The "uds setup" command stops automatically at the end of the initial configuration or manually by executing "uds setup -s".

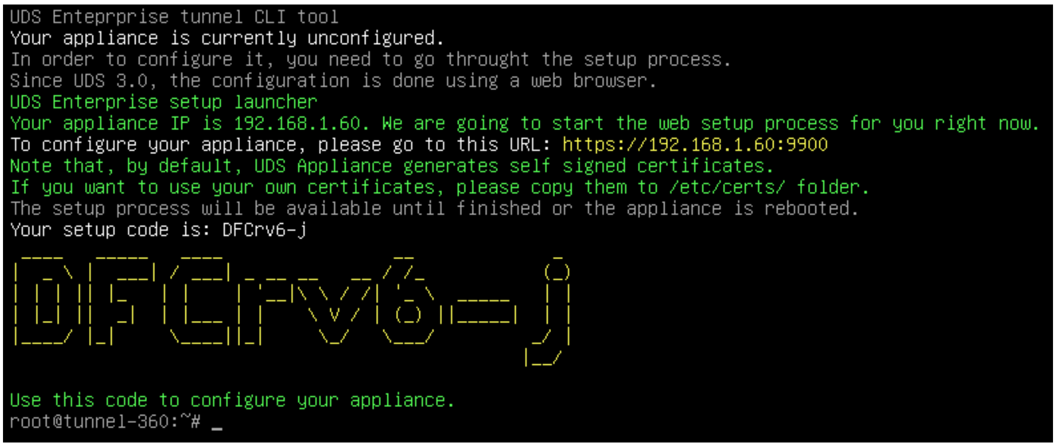
When executing the command "uds setup" the "Setup Code" of our broker appears on the screen, which will be requested if we want to perform the basic configuration remotely.

The "Setup Code" is an eight-character token that does **NOT** circulate at any time on the network, which will be our "One-time pad".

"One-time pad" is part of an encryption technique that cannot be cracked but requires the use of a one-time pre-shared key that is no smaller than the message being sent.

In this technique, a plain text is combined with a random secret key, our one-time "One-time pad".

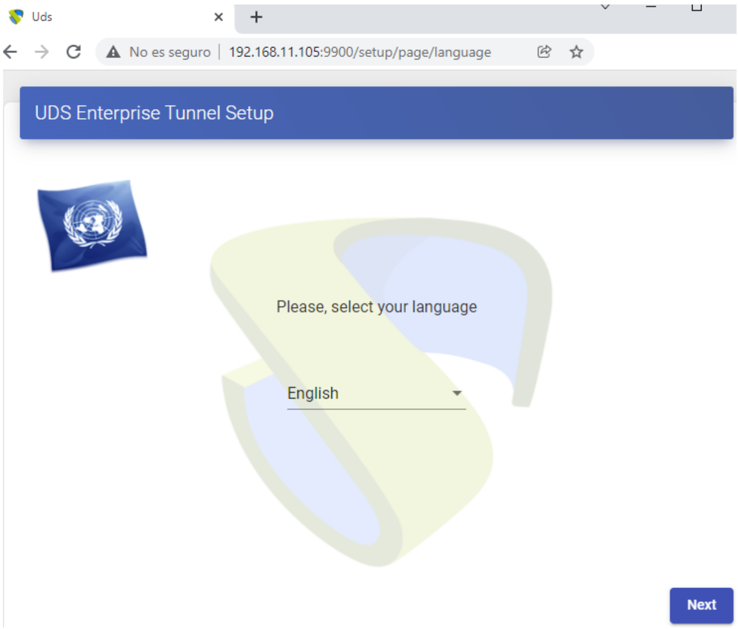
With this token at each end of the connection through a "salt", a set of random bits that we use as part of the key of the cryptographic algorithm, and using a 512 hash function, we obtain a key of 3,072 bytes, which is chopped and used by both parties to encrypt and decrypt the information transmitted and received during this initial configuration. This key is never used in its entirety or reused in any of its parts.



```
UDS Enteprprise tunnel CLI tool
Your appliance is currently unconfigured.
In order to configure it, you need to go throught the setup process.
Since UDS 3.0, the configuration is done using a web browser.
UDS Enterprise setup launcher
Your appliance IP is 192.168.1.60. We are going to start the web setup process for you right now.
To configure your appliance, please go to this URL: https://192.168.1.60:9900
Note that, by default, UDS Appliance generates self signed certificates.
If you want to use your own certificates, please copy them to /etc/certs/ folder.
The setup process will be available until finished or the appliance is rebooted.
Your setup code is: DFCrv6-j
 ____  _____ ____               __         _
|  _ \|  ___/ ___|_ __ __   __ / /_       (_)
| | | | |_ | |   | '__|\ \ / /| '_ \ _____| |
| |_| |  _|| |___| |    \ V / | (_) |_____| |
|____/|_|   \____|_|     \_/   \___/     _/ |
                                        |__/

Use this code to configure your appliance.
root@tunnel-360:~# _
```

This "Setup Code" will be requested during the basic initial configuration.

NOTE: http access should not be used to access the broker's web server, but the initial basic configuration application of the server software "uds setup" via https and port 9900.



Uds

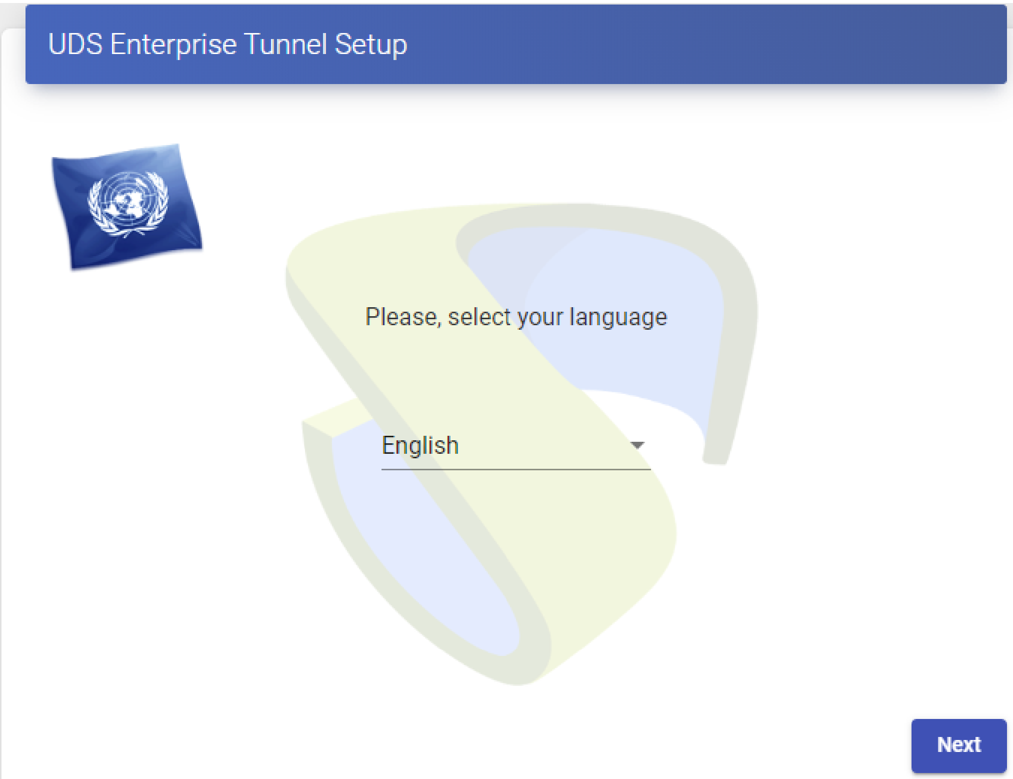
No es seguro | 192.168.11.105:9900/setup/page/language

UDS Enterprise Tunnel Setup

Please, select your language

English

Step 1.- Select the language of the configuration assistant:

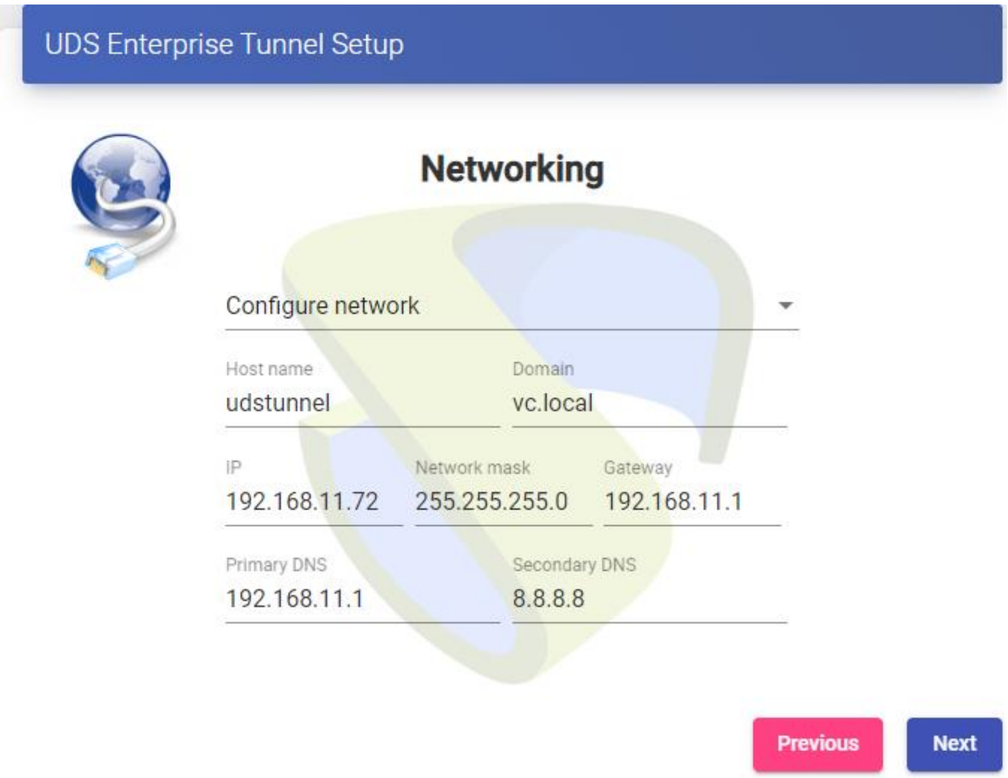


UDS Enterprise Tunnel Setup

Please, select your language

English

Step 2.- - Indicate the name of the server, domain (optional) and network data of the server



UDS Enterprise Tunnel Setup

Networking

Configure network

Host name: udstunnel

Domain: vc.local

IP: 192.168.11.72

Network mask: 255.255.255.0

Gateway: 192.168.11.1

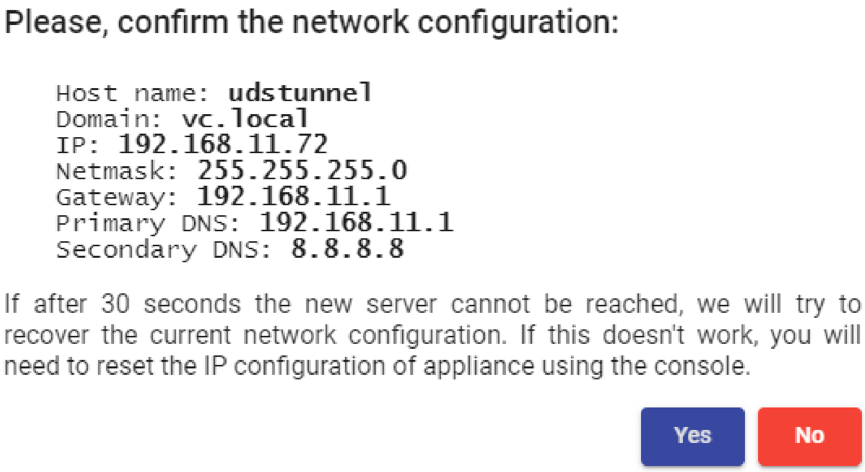
Primary DNS: 192.168.11.1

Secondary DNS: 8.8.8.8

NOTE: If the indicated IP address is different from the one already configured by the DHCP server or via manual configuration, the system will automatically redirect to the new address to continue with the configuration wizard.

NOTE: If all the indicated data are correct and you do not want to modify any data, you can use the option **"Skip network config (leave it as is)"**

Check that the indicated data is correct and accept:

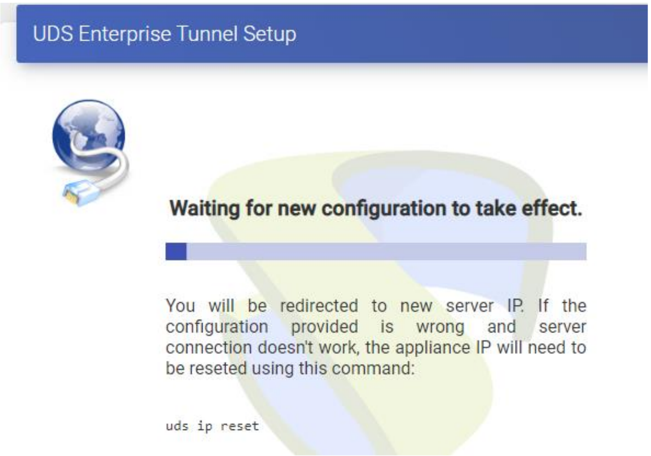


Please, confirm the network configuration:

```
Host name: udstunnel
Domain: vc.local
IP: 192.168.11.72
Netmask: 255.255.255.0
Gateway: 192.168.11.1
Primary DNS: 192.168.11.1
Secondary DNS: 8.8.8.8
```

If after 30 seconds the new server cannot be reached, we will try to recover the current network configuration. If this doesn't work, you will need to reset the IP configuration of appliance using the console.

Wait for the configuration of the new network data to finish:



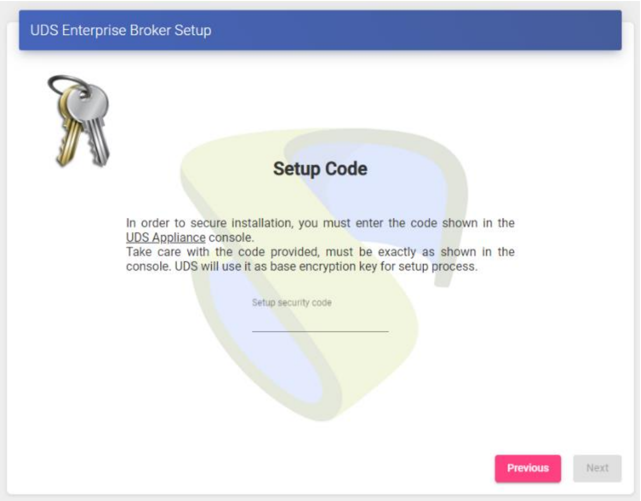
UDS Enterprise Tunnel Setup

Waiting for new configuration to take effect.

You will be redirected to new server IP. If the configuration provided is wrong and server connection doesn't work, the appliance IP will need to be reseted using this command:

```
uds ip reset
```

Step 3.- Configure the keyboard language for the server, the time zone and an NTP server (optional):



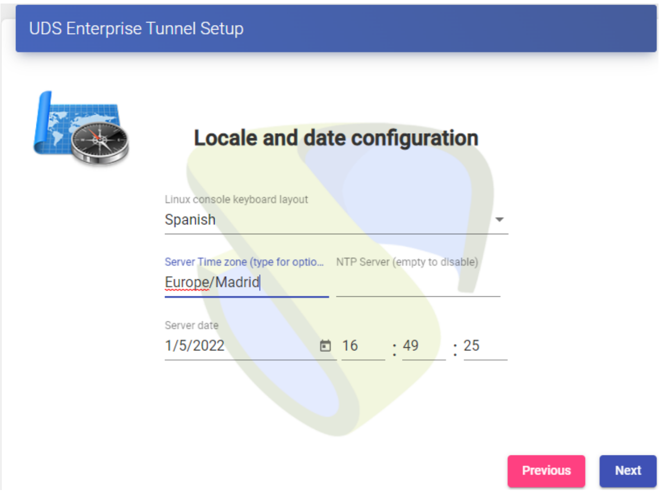
UDS Enterprise Broker Setup

Setup Code

In order to secure installation, you must enter the code shown in the UDS Appliance console.
Take care with the code provided, must be exactly as shown in the console. UDS will use it as base encryption key for setup process.

Setup security code

Step 4.- We configure the keyboard language that the server will have, the time zone and an NTP server (optional):



UDS Enterprise Tunnel Setup

Locale and date configuration

Linux console keyboard layout: Spanish

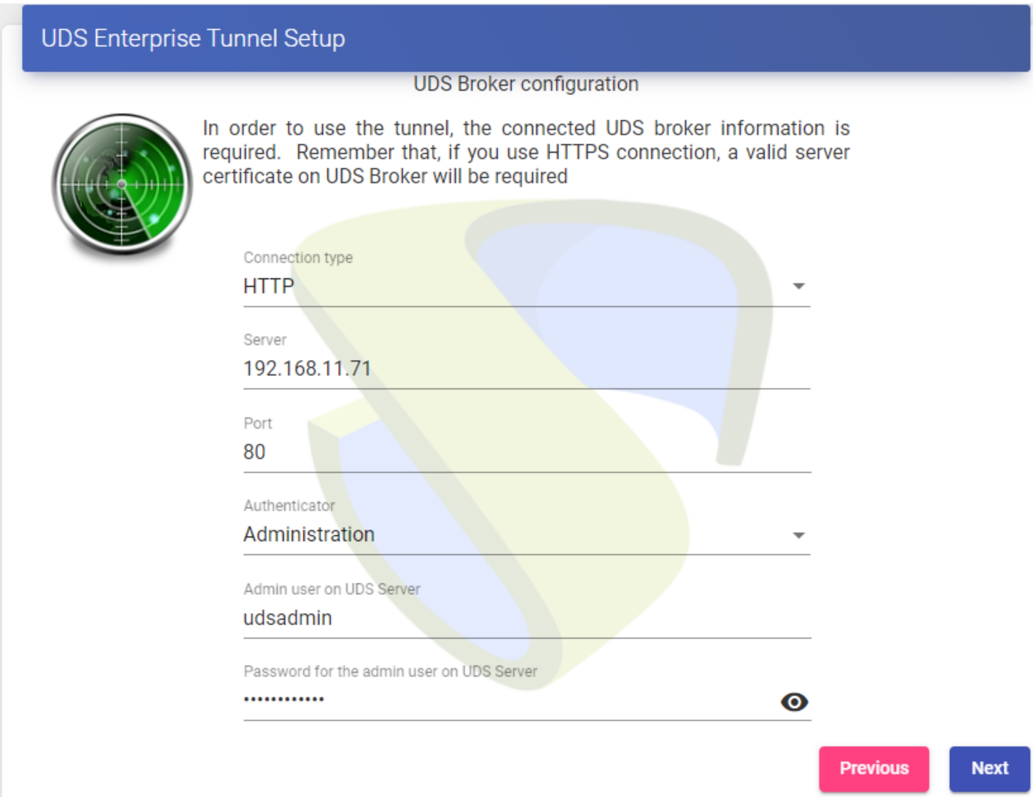
Server Time zone (type for optio...: Europe/Madrid

NTP Server (empty to disable):

Server date: 1/5/2022 16 : 49 : 25

Step 5.- Connect the Tunnel server with the UDS server (Broker) indicating its name or IP address, an existing authenticator, and a user with administration permissions. If the UDS server has a valid certificate installed, you can use "***HTTPS (Secure Connection)***", otherwise, use "***HTTP***".

NOTE: For our tunnel to trust UDS Server certificates, it will be necessary to launch the "uds trust" command in the Tunnel explained on the following page.



UDS Enterprise Tunnel Setup

UDS Broker configuration

In order to use the tunnel, the connected UDS broker information is required. Remember that, if you use HTTPS connection, a valid server certificate on UDS Broker will be required

Connection type: HTTP

Server: 192.168.11.71

Port: 80

Authenticator: Administration

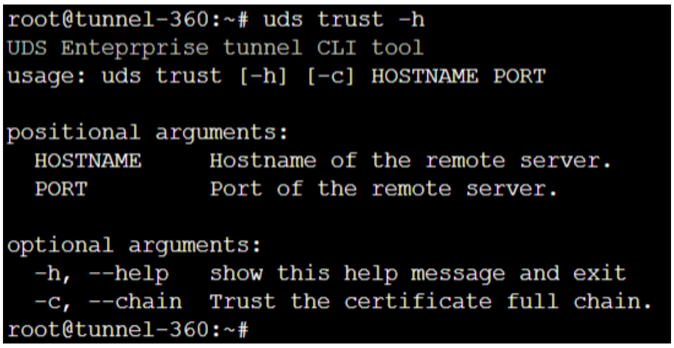
Admin user on UDS Server: udsadmin

Password for the admin user on UDS Server: ••••••••••••

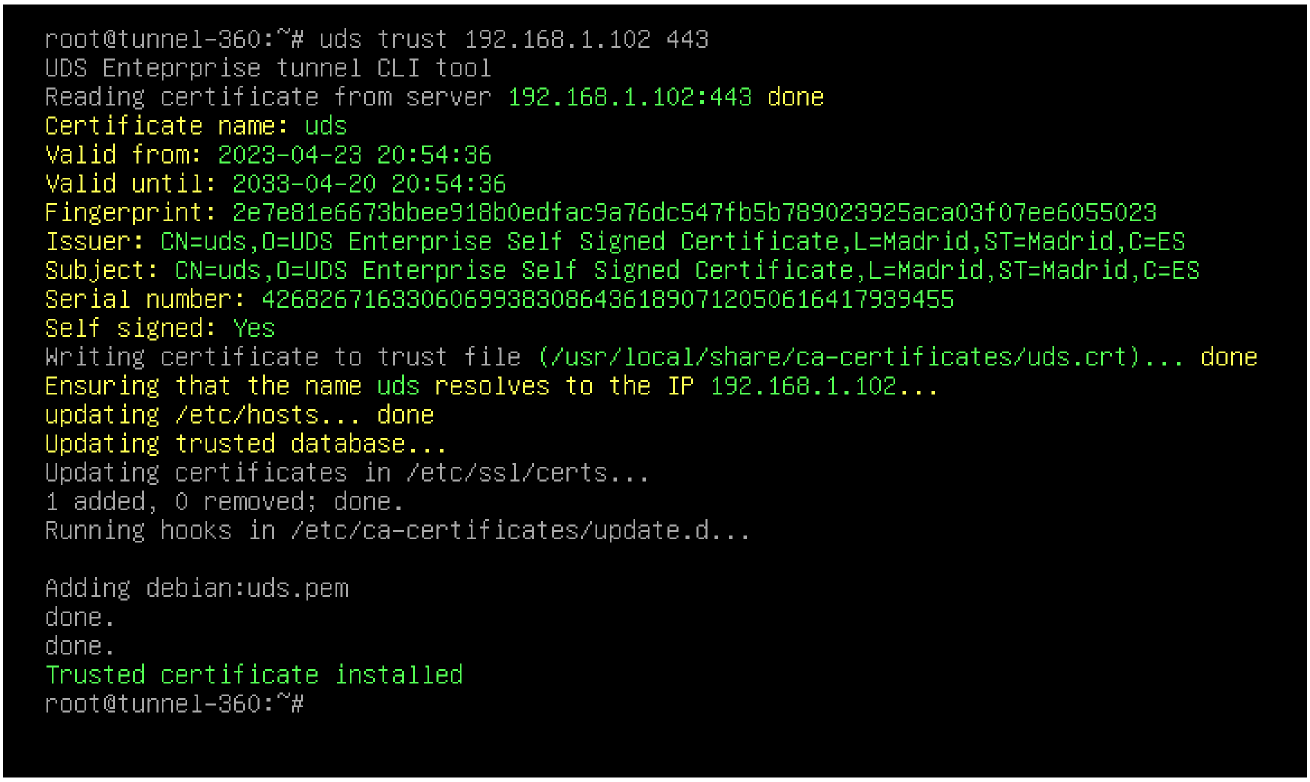
NOTE: If you do not have any authenticator configured in the UDS server, you can use the "Administration" authenticator to which the super-user indicated in step 6 of the UDS server configuration wizard belongs.UDS.

It is important to bear in mind that if you want to use an https connection between these two elements, you must indicate the DNS name of the UDS server (we cannot use the IP address) and you must also have valid certificates installed on the UDS server.

For the UDS Tunnel to trust the UDS Server's self-signed certificate and to validate the connection, we will have to use the command "uds trust"

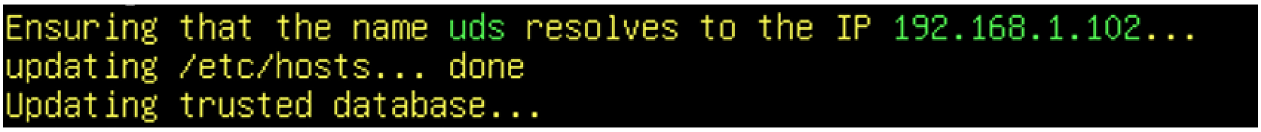


```
root@tunnel-360:~# uds trust -h
UDS Enteprprise tunnel CLI tool
usage: uds trust [-h] [-c] HOSTNAME PORT

positional arguments:
  HOSTNAME      Hostname of the remote server.
  PORT          Port of the remote server.

optional arguments:
  -h, --help    show this help message and exit
  -c, --chain   Trust the certificate full chain.
root@tunnel-360:~#
```



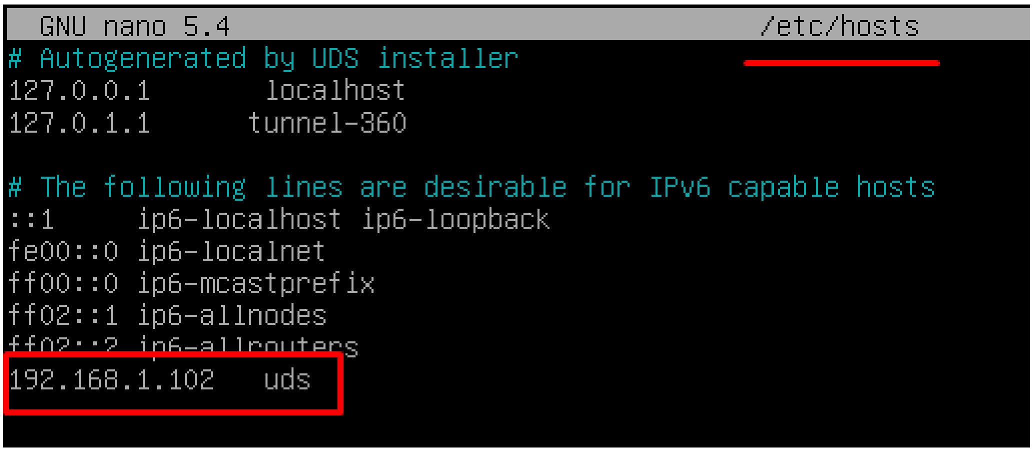
```
root@tunnel-360:~# uds trust 192.168.1.102 443
UDS Enteprprise tunnel CLI tool
Reading certificate from server 192.168.1.102:443 done
Certificate name: uds
Valid from: 2023-04-23 20:54:36
Valid until: 2033-04-20 20:54:36
Fingerprint: 2e7e81e6673bbee918b0edfac9a76dc547fb5b789023925aca03f07ee6055023
Issuer: CN=uds,O=UDS Enterprise Self Signed Certificate,L=Madrid,ST=Madrid,C=ES
Subject: CN=uds,O=UDS Enterprise Self Signed Certificate,L=Madrid,ST=Madrid,C=ES
Serial number: 426826716330606993830864361890712050616417939455
Self signed: Yes
Writing certificate to trust file (/usr/local/share/ca-certificates/uds.crt)... done
Ensuring that the name uds resolves to the IP 192.168.1.102...
updating /etc/hosts... done
Updating trusted database...
Updating certificates in /etc/ssl/certs...
1 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...

Adding debian:uds.pem
done.
done.
Trusted certificate installed
root@tunnel-360:~#
```

Once done we will have to indicate to the UDS Tunnel the name of our UDS Server "uds"



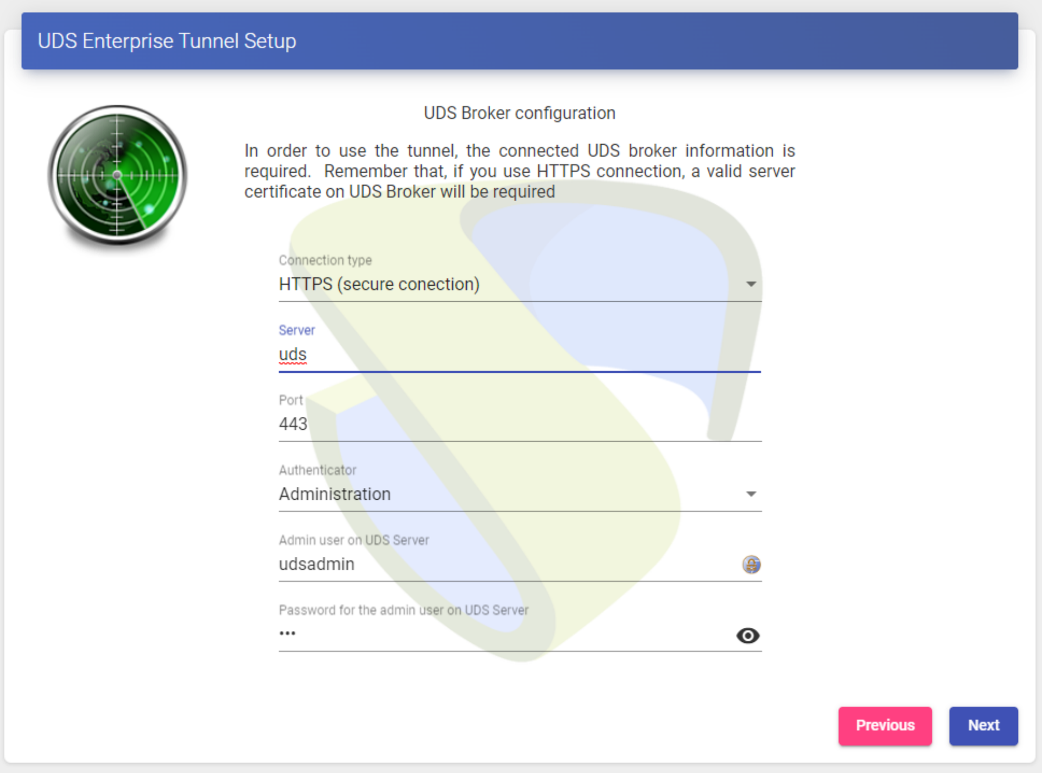
```
Ensuring that the name uds resolves to the IP 192.168.1.102...
updating /etc/hosts... done
Updating trusted database...
```

You will have to check that in the file /etc/hosts appears the name of uds with the correct ip:



```
  GNU nano 5.4                                    /etc/hosts
# Autogenerated by UDS installer
127.0.0.1        localhost
127.0.1.1       tunnel-360

# The following lines are desirable for IPv6 capable hosts
::1       ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
192.168.1.102    uds
```

Once done you can continue with the configuration process



UDS Enterprise Tunnel Setup

UDS Broker configuration

In order to use the tunnel, the connected UDS broker information is required. Remember that, if you use HTTPS connection, a valid server certificate on UDS Broker will be required

Connection type: HTTPS (secure conection)

Server: uds

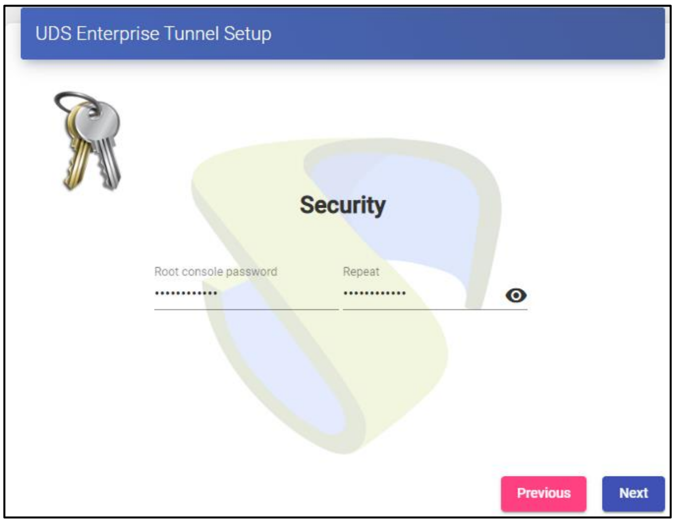
Port: 443

Authenticator: Administration

Admin user on UDS Server: udsadmin

Password for the admin user on UDS Server: •••

Step 6.- Configure the password of the local root user of the Tunnel server:

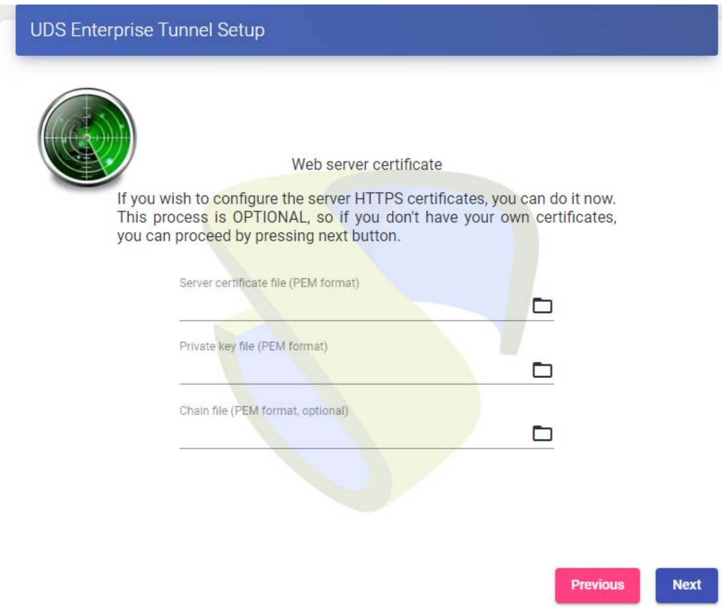


Root console password: ············
Repeat: ············

NOTE: For a totally secure installation it is recommended to use passwords with a minimum of 12 characters, uppercase, lowercase, numbers and special characters

Step 6.- If you have the certificate files, you will indicate them. Otherwise, you can install them after finishing the wizard via console.

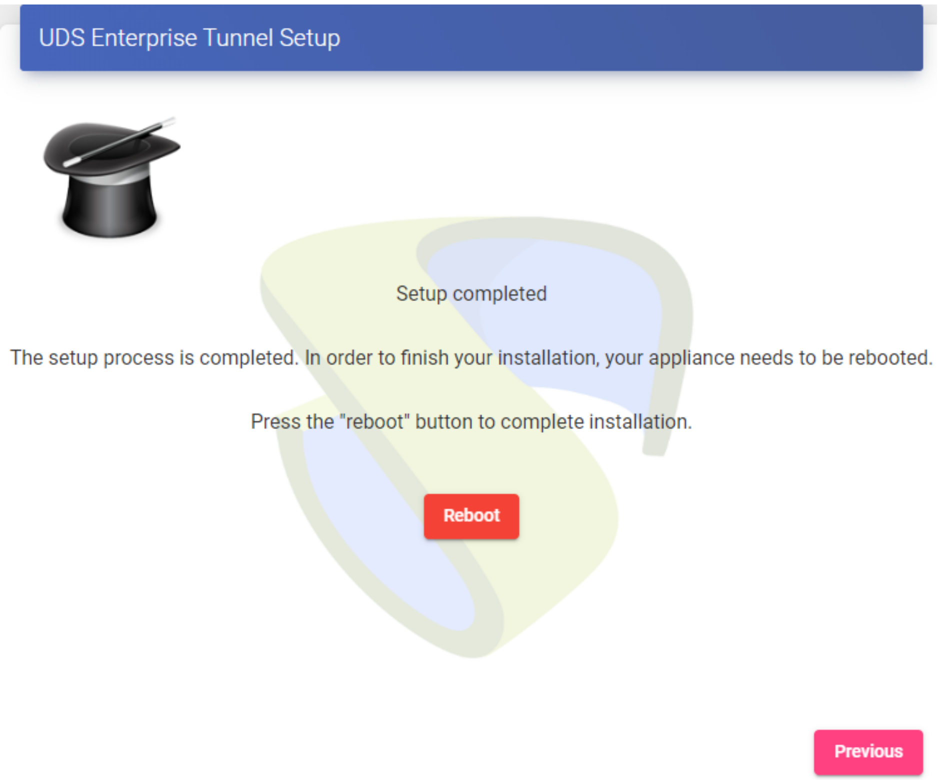
You need to indicate the certificate file in the "Server certificate" field (.crt, .pem, etc ...), the file with the "Private key" key (.key, .pem, etc ...) and optionally you can indicate the certifying entity “Chain file” (.crt, .pem, etc…).


UDS Enterprise Tunnel Setup
Web server certificate
Server certificate file (PEM format)
Private key file (PEM format)
Chain file (PEM format, optional)
Previous
Next

If you wish to configure the server HTTPS certificates, you can do it now. This process is OPTIONAL, so if you don't have your own certificates, you can proceed by pressing next button.

NOTE: For a totally secure installation, and to be able to make connections via HTTPS, the use of valid certificates on the server will always be recommended, otherwise anyone who wants to access the web portal will be notified with an error warning that the self-signed certificates of the UDS Server are insecure.

Step 8.- Finish the Tunnel server configuration by clicking on “Reboot” so that the server restarts and applies all the indicated configuration.



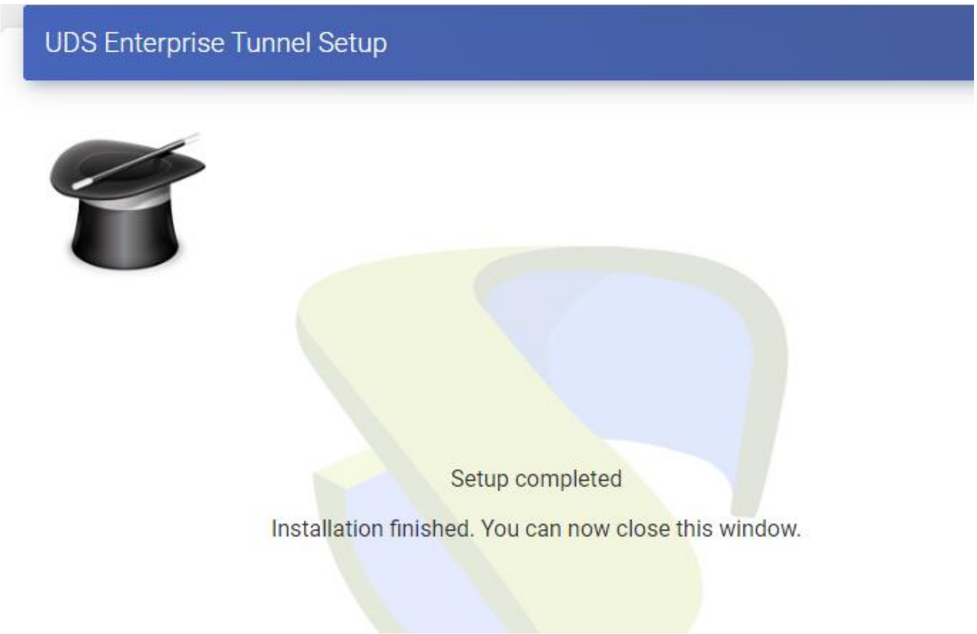
UDS Enterprise Tunnel Setup

Setup completed

The setup process is completed. In order to finish your installation, your appliance needs to be rebooted.

Press the "reboot" button to complete installation.

You can close the page of the configuration wizard and, once restarted, the UDS Tunnel server will be completely configured.



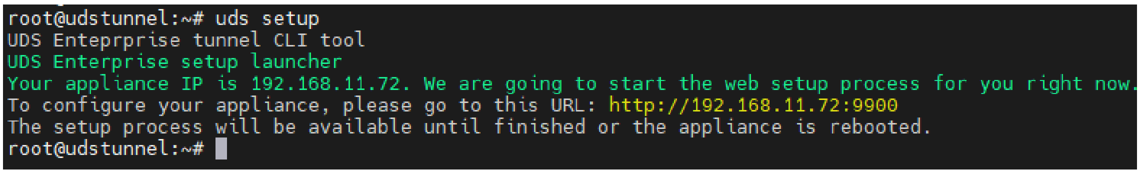
UDS Enterprise Tunnel Setup

Setup completed

Installation finished. You can now close this window.

If you need to run the configuration wizard again to modify any data, you will have to validate yourself on the server (with the root user and the password established in step 4) and execute the command:

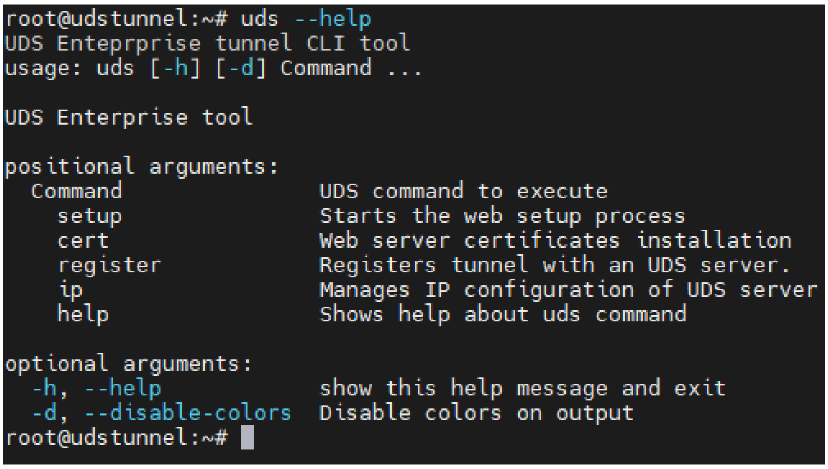
- **uds setup:** Launch the server configuration wizard



```
root@udstunnel:~# uds setup
UDS Enteprprise tunnel CLI tool
UDS Enterprise setup launcher
Your appliance IP is 192.168.11.72. We are going to start the web setup process for you right now.
To configure your appliance, please go to this URL: http://192.168.11.72:9900
The setup process will be available until finished or the appliance is rebooted.
root@udstunnel:~#
```

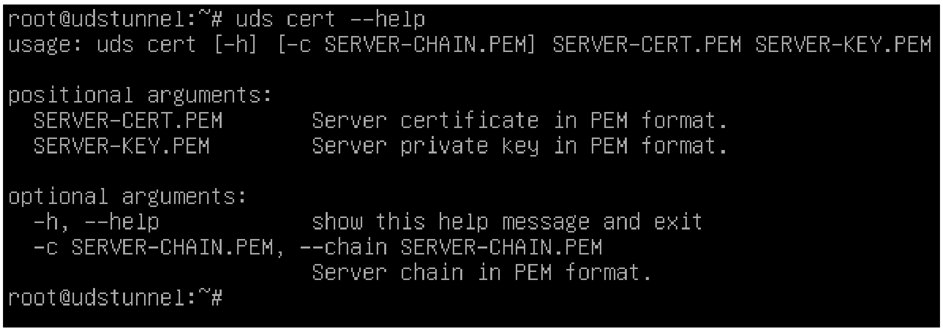
This will re-enable the setup wizard.

Additionally, with the command ***uds*** you can make other modifications on the server:



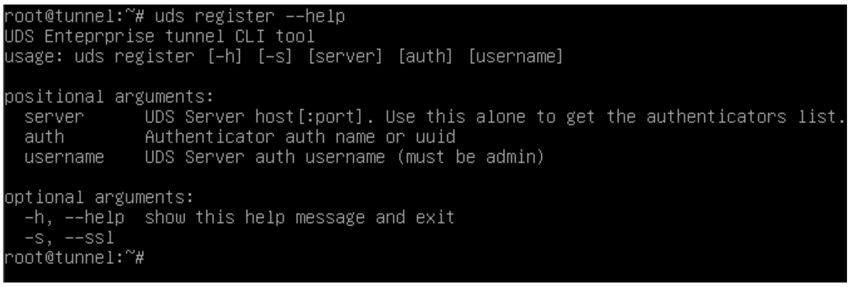
```
root@udstunnel:~# uds --help
UDS Enteprprise tunnel CLI tool
usage: uds [-h] [-d] Command ...

UDS Enterprise tool

positional arguments:
  Command               UDS command to execute
    setup               Starts the web setup process
    cert                Web server certificates installation
    register            Registers tunnel with an UDS server.
    ip                  Manages IP configuration of UDS server
    help                Shows help about uds command

optional arguments:
  -h, --help            show this help message and exit
  -d, --disable-colors  Disable colors on output
root@udstunnel:~#
```

- **uds cert:** Will allow the installation of certificates on the server:



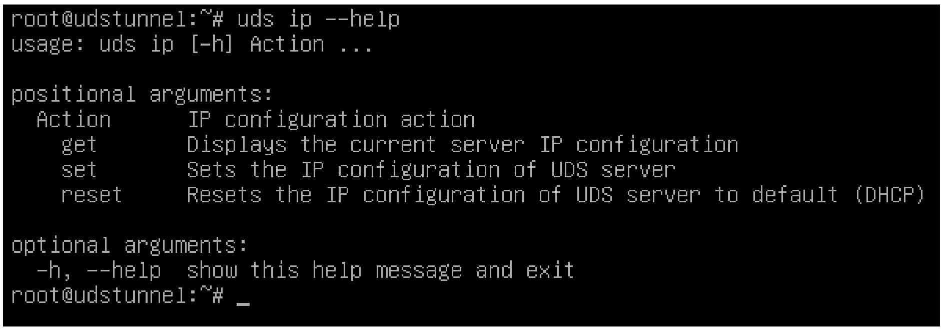
```
root@udstunnel:~# uds cert --help
usage: uds cert [-h] [-c SERVER-CHAIN.PEM] SERVER-CERT.PEM SERVER-KEY.PEM

positional arguments:
  SERVER-CERT.PEM       Server certificate in PEM format.
  SERVER-KEY.PEM        Server private key in PEM format.

optional arguments:
  -h, --help            show this help message and exit
  -c SERVER-CHAIN.PEM, --chain SERVER-CHAIN.PEM
                        Server chain in PEM format.
root@udstunnel:~#
```

- **uds register:** It will allow to register the Tunnel server in a specific UDS server (broker):



```
root@tunnel:~# uds register --help
UDS Enteprprise tunnel CLI tool
usage: uds register [-h] [-s] [server] [auth] [username]

positional arguments:
  server      UDS Server host[:port]. Use this alone to get the authenticators list.
  auth        Authenticator auth name or uuid
  username    UDS Server auth username (must be admin)

optional arguments:
  -h, --help  show this help message and exit
  -s, --ssl
root@tunnel:~#
```

- **uds ip:** Will allow to consult, modify and reset the IP data of the server:



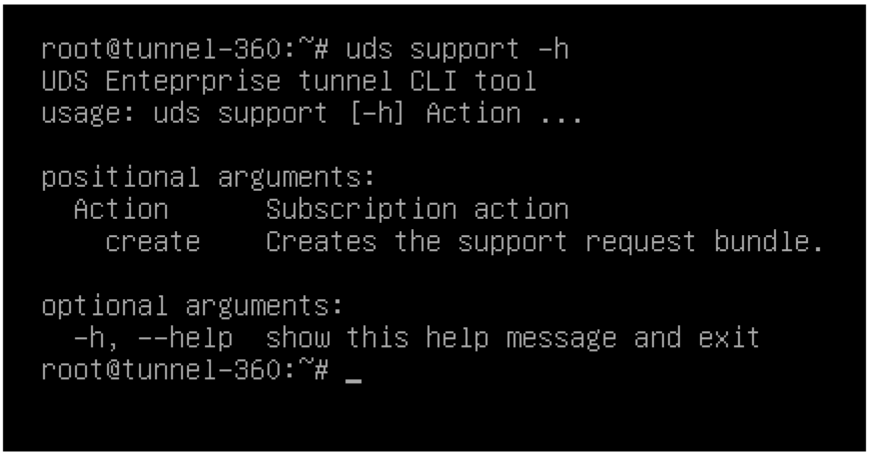
```
root@udstunnel:~# uds ip --help
usage: uds ip [-h] Action ...

positional arguments:
  Action      IP configuration action
    get       Displays the current server IP configuration
    set       Sets the IP configuration of UDS server
    reset     Resets the IP configuration of UDS server to default (DHCP)

optional arguments:
  -h, --help  show this help message and exit
root@udstunnel:~# _
```

- **uds ip get**: Shows the Ips information of the UDS server.

- **uds ip set**: Assign the network data of the server manually

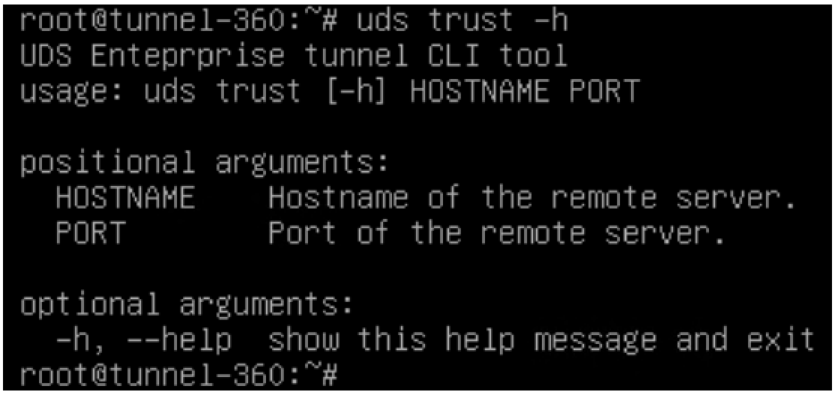
- **uds ip reset**: Restarts the network information of the UDS Appliance

- **uds support:** Commands related to support actions.



```
root@tunnel-360:~# uds support -h
UDS Enteprprise tunnel CLI tool
usage: uds support [-h] Action ...

positional arguments:
  Action      Subscription action
    create    Creates the support request bundle.

optional arguments:
  -h, --help  show this help message and exit
root@tunnel-360:~# _
```

- **uds trust:** Command that will allow us to trust a certificate from a remote server. **Only valid for self-signed certificates**.



```
root@tunnel-360:~# uds trust -h
UDS Enteprprise tunnel CLI tool
usage: uds trust [-h] HOSTNAME PORT

positional arguments:
  HOSTNAME    Hostname of the remote server.
  PORT        Port of the remote server.

optional arguments:
  -h, --help  show this help message and exit
root@tunnel-360:~#
```

Safe Employment Procedure:

In general, it is advisable to implement the basic and essential security mechanisms to any server; Strong passwords, backups, have security solutions, keep systems updated and modify configurations, users and passwords included, by default.

In addition, when including a web server, Apache, it is recommended to apply the following mechanisms:

- Remove the server version banner
- Disable the directory browser list
- Run Apache from an unprivileged account
- Securing Configuration Directory and Binary Permission
- SSL/TLS
    - Implement SSL certificate
    - Optimize SSL/TLS
    - Disable weak SSL/TLS protocols
    - Disable weak cipher suites
    - Install Chain Certificate
    - Securing Diffie-Hellman for TLS
- Eliminar “Information Leakage”
- Web Application Security
    - Disable unwanted HTTP methods
    - Avoid clickjacking attacks, injection of x-frames
    - X-XSS Protection
    - Implement WAF Mod Security
- Update the Apache server.

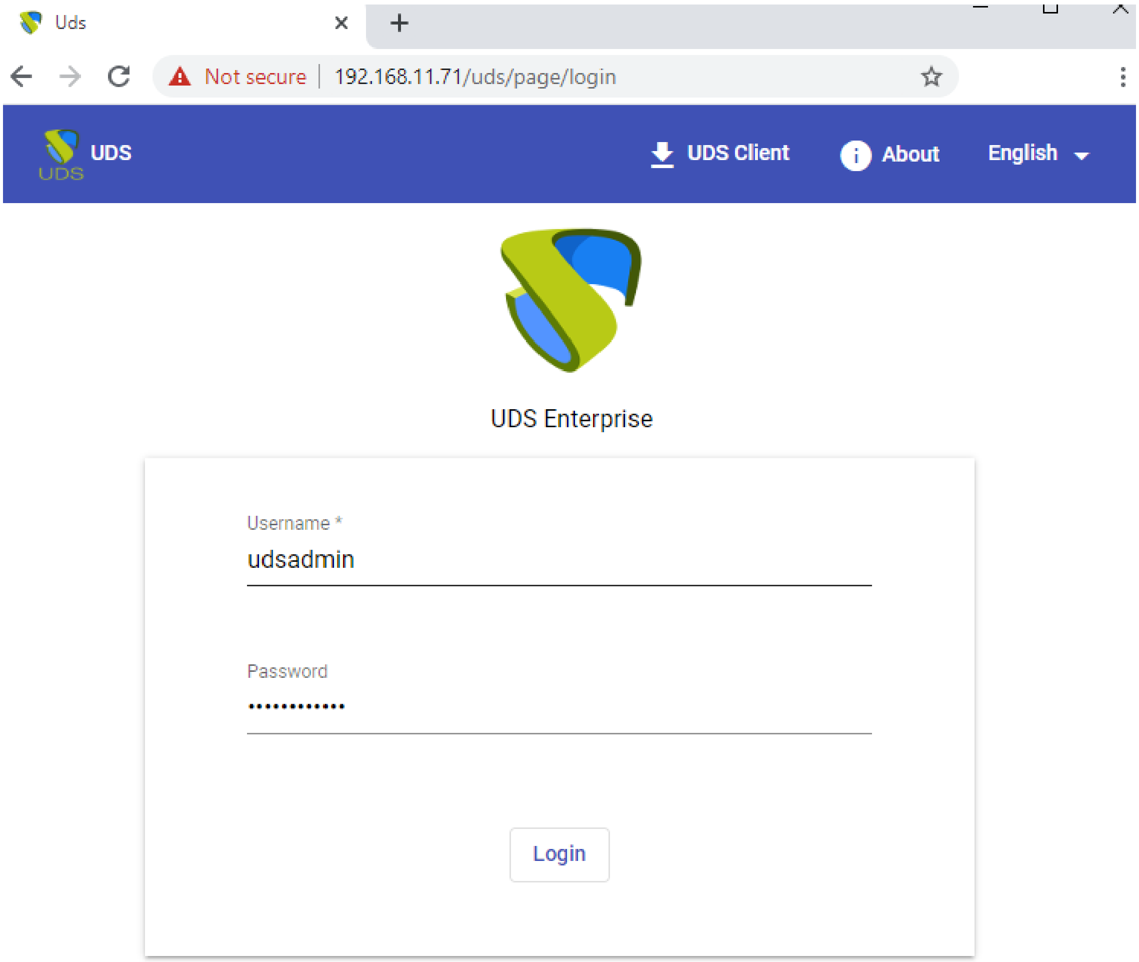
We recommend that you disable SSH access to this server, so that it is only accessible by console.

3.2.4 UDS Actor

The UDS Actor is a software component that is installed in the O.S. templates Windows or Linux (gold image), to be used for virtual desktop deployment, on RDS application servers to be able to present virtual application sessions to users, and on static machines where user sessions need to be controlled.

To install the UDS Actor, you must previously download from the UDS Broker the suitable Actor for each platform (Windows, Linux and vApps).

In order to do that, connect to the UDS Broker via web browser and using credentials for a user with **administration permission** to access the downloads:

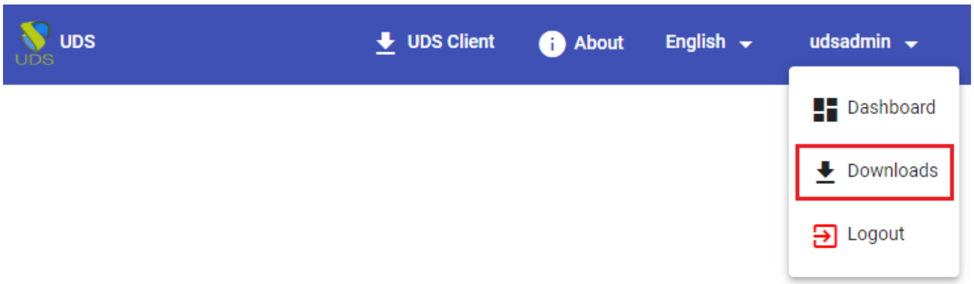


Username *
udsadmin

Password
••••••••••••

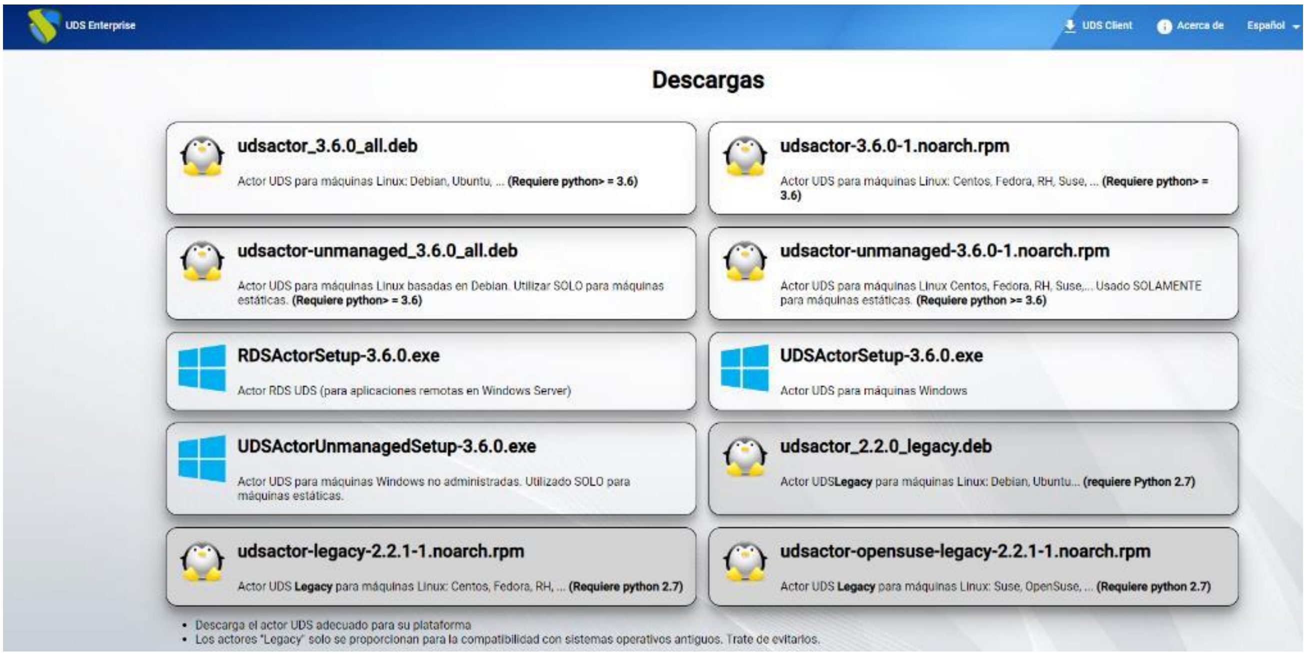
Login

Select "Downloads" In the user menu:



You will select the Actor corresponding to the operating system and service that is installed in the base template or application server on which the desktop services will be deployed:

- **udsactor_3.6.0_all.deb :** UDS Actor for Linux template machines (gold image) based on Debian distributions, such as: Ubuntu, Xubuntu, etc…
- **udsactor-3.6.0-1.noarch.rpm :** UDS Actor for Linux template machines (gold image) based on Red Hat distributions, such as: ContOS, Fedora, etc…
- **udsactor-unmanaged_3.6.0_all.deb:** UDS Actor to control the sessions of
- Debian-based machines from the service provider "***Static IP Machines Provider***" based on Debian, such as: Ubuntu, xUbuntu, etc…
- **RDSActorSetup-3.6.0.exe**: UDS Actor for Windows Server 2012 R2, 2016, 2019 or 2022 application servers with the RDS role configured.
- **UDSActorSetup-3.6.0.exe:** UDS Actor for Windows template machines (gold image).
- **UDSActorUnmanagedSetup-3.6.0.exe:** : UDS Actor to control the sessions of Windows machines from the service provider "***Static IP Machines Provider***".
- **udsactor-2.2.0_legacy.deb:** UDS Actor for Linux template machines (gold image) based on Debian distributions, such as: Ubuntu, Xubuntu, etc… where the Python3 version requirements cannot be met.
- **udsactor-legacy-2.2.1-1.noarch.rpm:** UDS Actor for Linux template machines (gold image) based on Red Hat distributions, such as: ContOS, Fedora, etc… where the Python3 version requirements cannot be met.
- **udsactor-opensuse-legacy-2.2.1-1.noarch.rpm:** UDS Actor for template machines base don Opensuse distributions, como: OpenSuse, etc… where the Python3 version requirements cannot be met.



Descargas

udsactor_3.6.0_all.deb
Actor UDS para máquinas Linux: Debian, Ubuntu, ... **(Requiere python> = 3.6)**

udsactor-3.6.0-1.noarch.rpm
Actor UDS para máquinas Linux: Centos, Fedora, RH, Suse, ... **(Requiere python> = 3.6)**

udsactor-unmanaged_3.6.0_all.deb
Actor UDS para máquinas Linux basadas en Debian. Utilizar SOLO para máquinas estáticas. **(Requiere python> = 3.6)**

udsactor-unmanaged-3.6.0-1.noarch.rpm
Actor UDS para máquinas Linux Centos, Fedora, RH, Suse,... Usado SOLAMENTE para máquinas estáticas. **(Requiere python >= 3.6)**

RDSActorSetup-3.6.0.exe
Actor RDS UDS (para aplicaciones remotas en Windows Server)

UDSActorSetup-3.6.0.exe
Actor UDS para máquinas Windows

UDSActorUnmanagedSetup-3.6.0.exe
Actor UDS para máquinas Windows no administradas. Utilizado SOLO para máquinas estáticas.

udsactor_2.2.0_legacy.deb
Actor UDS**Legacy** para máquinas Linux: Debian, Ubuntu... **(requiere Python 2.7)**

udsactor-legacy-2.2.1-1.noarch.rpm
Actor UDS **Legacy** para máquinas Linux: Centos, Fedora, RH, ... **(Requiere python 2.7)**

udsactor-opensuse-legacy-2.2.1-1.noarch.rpm
Actor UDS **Legacy** para máquinas Linux: Suse, OpenSuse, ... **(Requiere python 2.7)**

- Descarga el actor UDS adecuado para su plataforma
- Los actores "Legacy" solo se proporcionan para la compatibilidad con sistemas operativos antiguos. Trate de evitarlos.

Safe Employment Procedure:

Verify that the server from which the actor is downloaded is the selected one, verifying the certificate if it has it installed.

All actors are their software signed, verify the signature corresponds to the actor.

Enable SSL verification of the server certificate at the time of actor installation.

Enable all the security options you consider necessary on the machine where the actor is installed, these will be replicated to all Is of the publication.

In addition to the installation of the UDS Actor, it will be necessary to have installed and enabled the connection protocol to be used to connect to the generated desktops (For example, having the remote desktop enabled, the PCoIP client installed, etc ...).

Disable all sharing options via the protocol that you do not consider to be strictly necessary for the base machine where it is being installed.

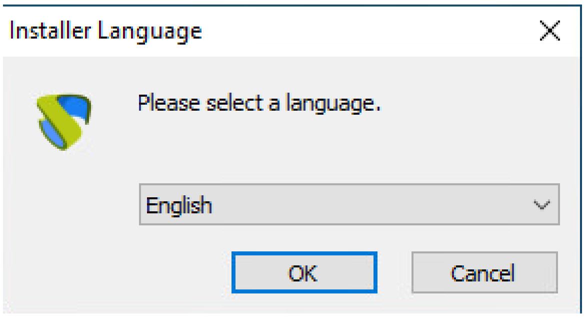
3.2.4.1 Windows self-generated virtual desktops

To manage the life cycle of Windows virtual desktops self-generated by UDS Enterprise, it is necessary that the template machine (gold image) on which they will be based has the UDS Actor installed: ***UDSActorSetup-3.6.0.exe***

NOTE:
Before installing the UDS Actor, it is necessary to have the IP address or name of the UDS server, the credentials of a user with administrative permissions on the UDS environment and at least one authenticator registered in the system.

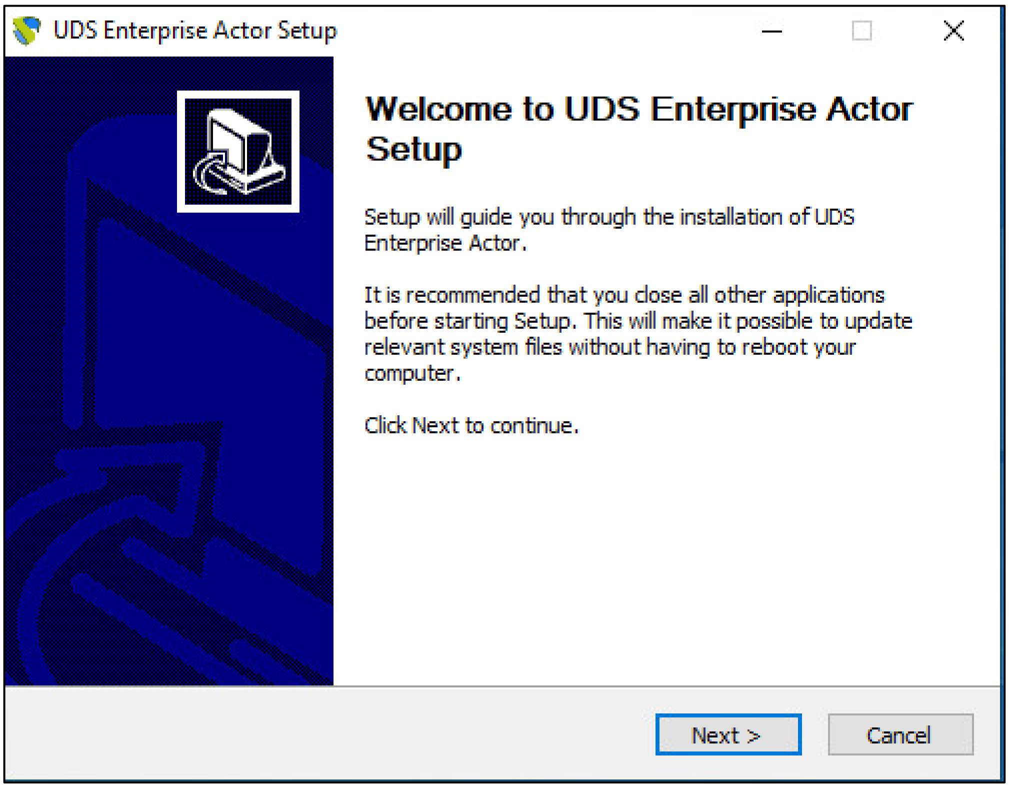
After downloading the UDS Actor for Windows O.S. and transferring it to the template machine, run it to proceed with its installation.

Select the language of the installer


Installer Language

Please select a language.

English


UDS Enterprise Actor Setup

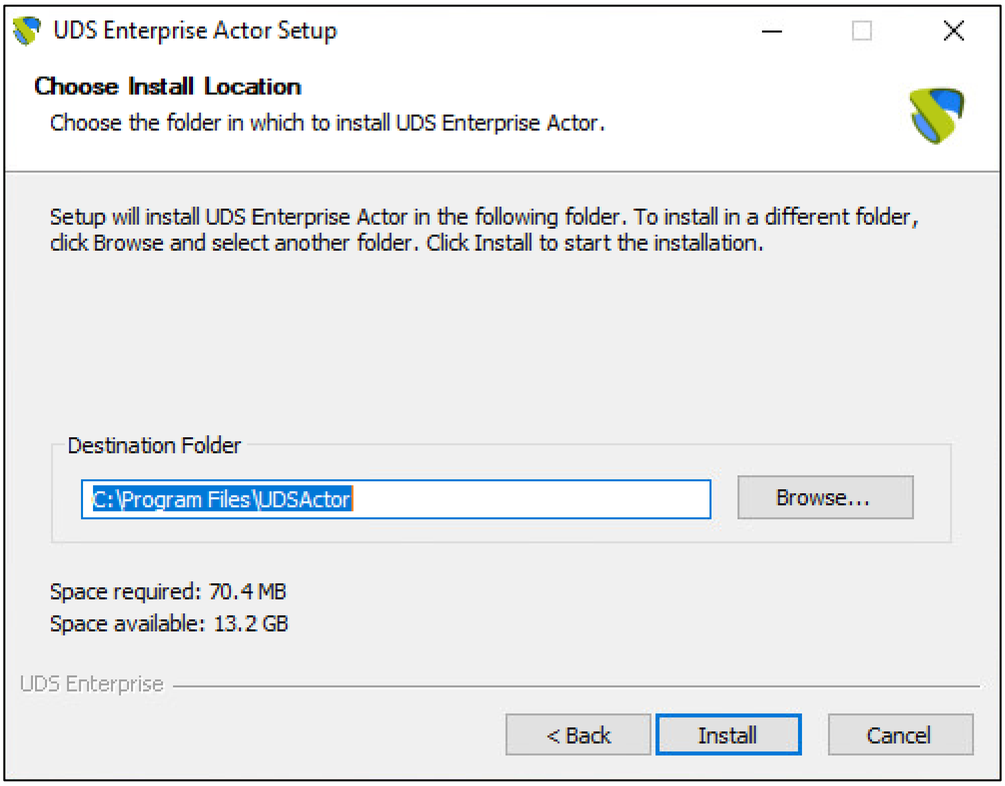
Welcome to UDS Enterprise Actor Setup

Setup will guide you through the installation of UDS Enterprise Actor.

It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.

Click Next to continue.

Indicate the installation path of the UDS Actor:



UDS Enterprise Actor Setup

Choose Install Location

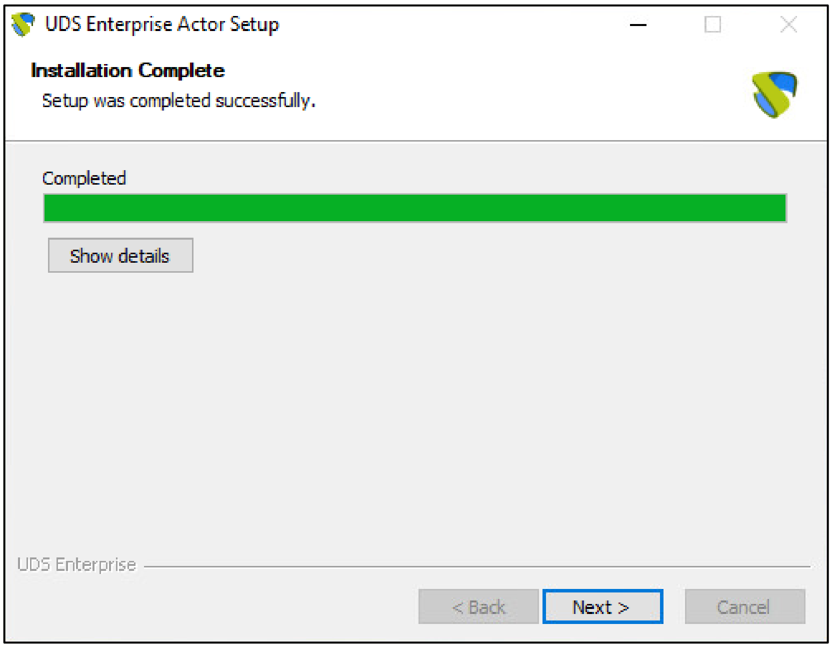
Choose the folder in which to install UDS Enterprise Actor.

Setup will install UDS Enterprise Actor in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.

Destination Folder: C:\Program Files\UDSActor

Space required: 70.4 MB
Space available: 13.2 GB

Click on **"Install"** to proceed with the installation:



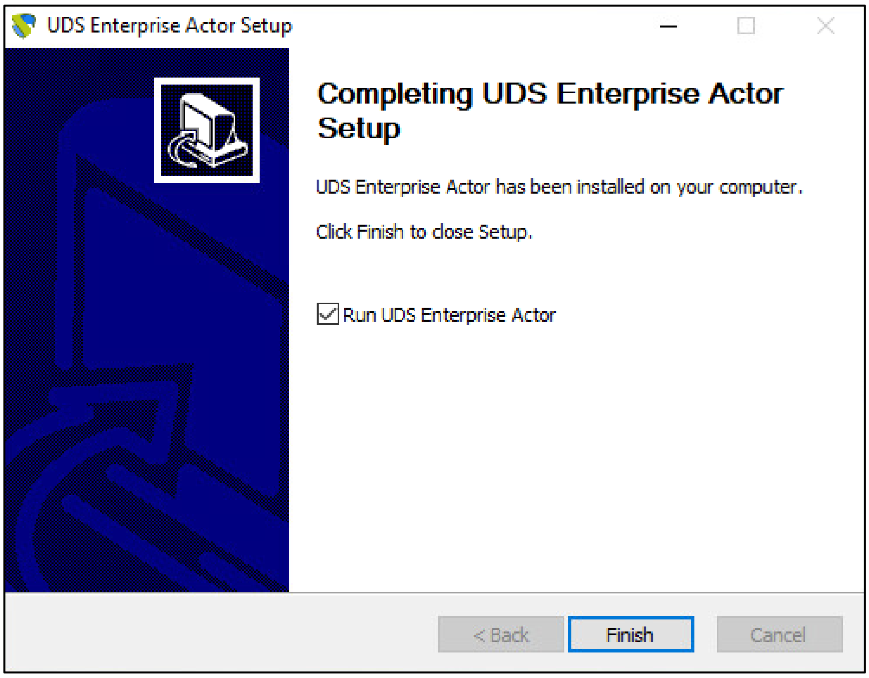
UDS Enterprise Actor Setup

Installation Complete

Setup was completed successfully.

Completed

Once the installation is finished, proceed to configure 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

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 the communication with the UDS server will be carried out.

It is recommended to obtain the greatest possible security, activate the verification of the certificate **"Verify Certificate**" in case of not, there will be a great risk for the security of the platform.

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

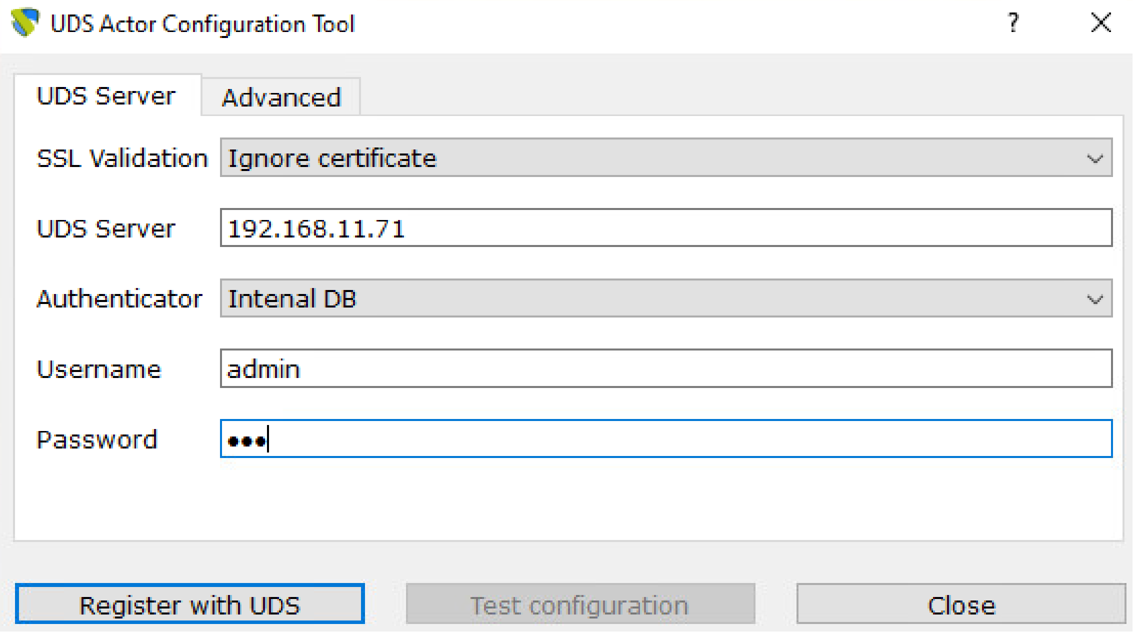
Authenticator: Authenticator to which the indicated administrator user belongs to register the UDS Actor.

Communication with the UDS server needs to be successful for the different authenticators to be displayed. At least one must be 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 previously selected authenticator).

Password: Password of the administrator user.

Safe use procedure: Passwords must be of sufficient length and include uppercase, lowercase, numbers and special characters.



UDS Actor Configuration Tool

UDS Server | Advanced

SSL Validation: Ignore certificate

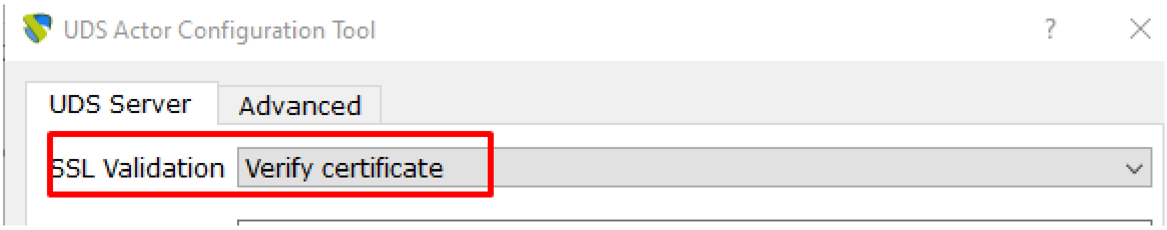
UDS Server: 192.168.11.71

Authenticator: Intenal DB

Username: admin

Password: •••

NOTE: To provide the platform with the greatest possible security, the "Verify Certificate" option must be selected in order to verify that the UDS Server certificate is valid.



UDS Actor Configuration Tool

UDS Server | Advanced

SSL Validation: Verify certificate

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

Preconnect: script to be run 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 you have recognized on the client (SRC IP)), hostname (SRC Host).

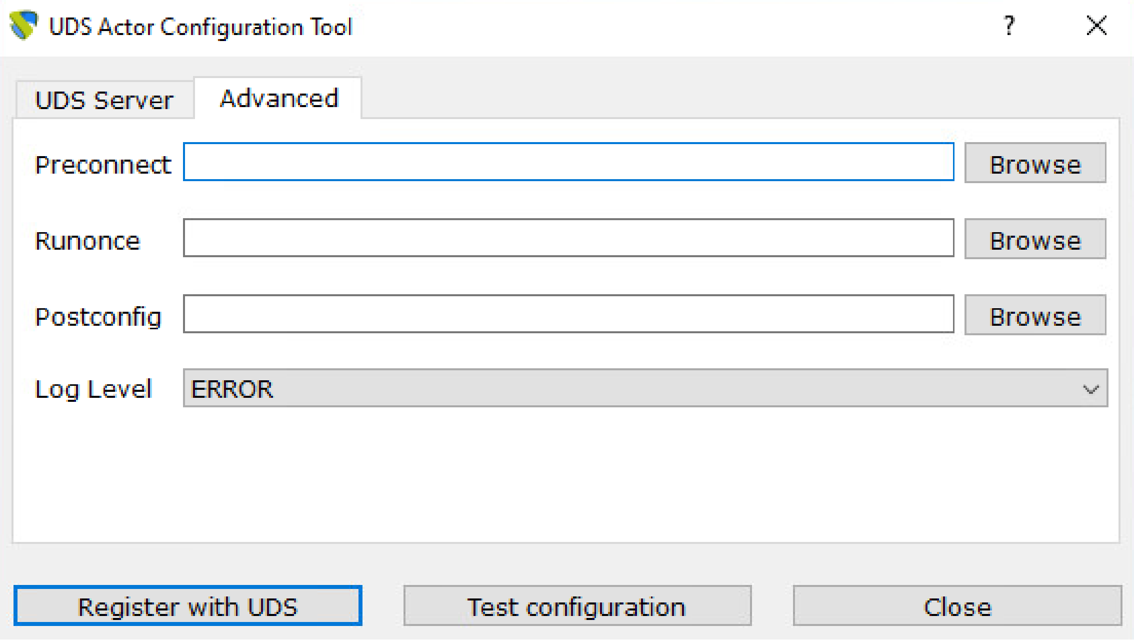
Runonce: script that runs only once and before the UDS Actor applies its settings. After its execution, (very useful to, for example, run a sysprep for each generated virtual desktop). It is deleted from the configuration. Parameters can be passed directly to it.

The script that is running needs to finish by restarting the virtual desktop. Otherwise, the desktop will never apply the Actor settings, preventing reaching the "*Valid*" state in UDS administration.

Postconfig: script that runs 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 have to restart the virtual desktop. This script is useful to add some "own" elements to the configuration made by the UDS Actor, such as copying files from the local network, executing configurations, etc...

Log Level: Types of logs to be shown in the UDS Actor log files. These log files (udsactor.log) will be located in the paths: %temp% (path of the user's temporary files) and C:\Windows\Temp (path of the O.S.'s temporary files).



UDS Actor Configuration Tool

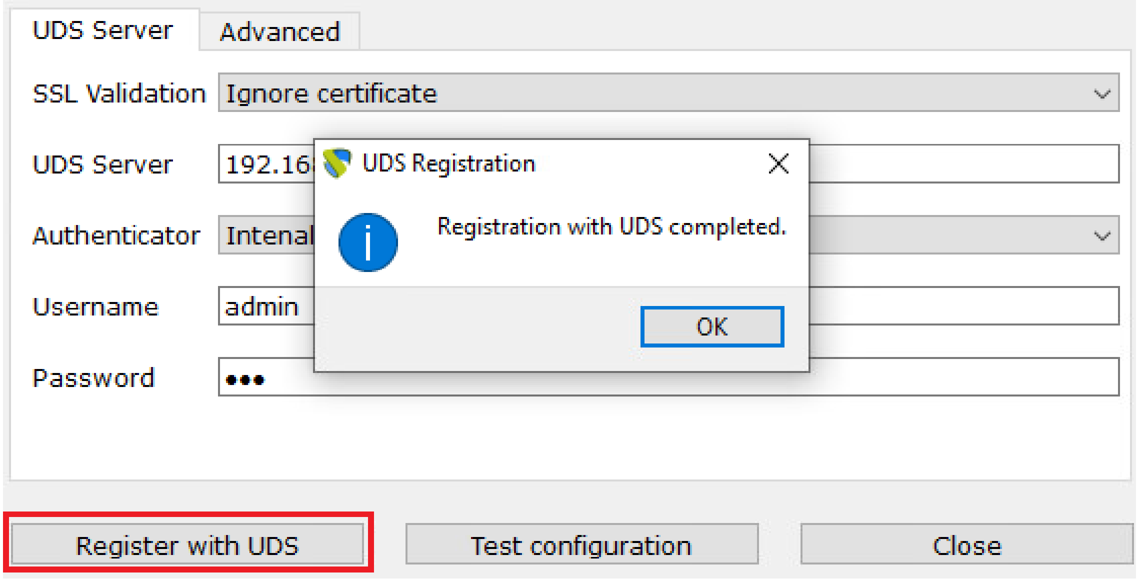
Preconnect:

Runonce:

Postconfig:

Log Level: ERROR

Una vez indicados todos los datos necesarios, pulsaremos sobre “***Register with UDS***”:



SSL Validation: Ignore certificate

UDS Server: 192.16

Authenticator: Intenal

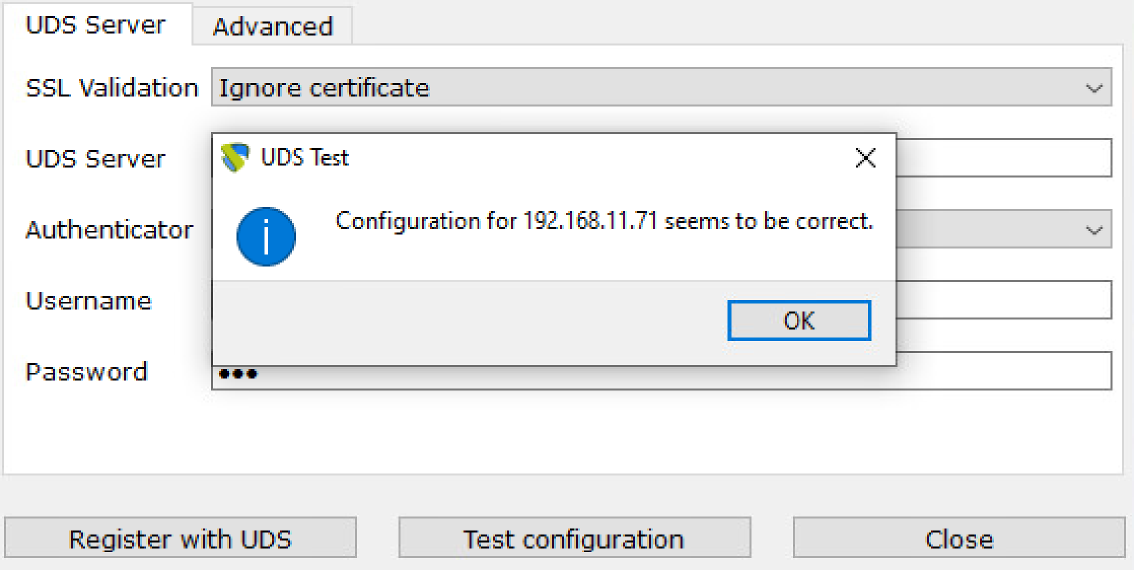
Username: admin

Password: •••

UDS Registration

Registration with UDS completed.

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



SSL Validation: Ignore certificate

Password: •••

Configuration for 192.168.11.71 seems to be correct.

It is very important to bear in mind that if any data is modified, it will always be necessary to carry out the registration process afterwards (by clicking on the “**Register with UDS**” button), if this action is not carried out, the changes will not be applied.

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

NOTE: In addition to the installation of the UDS Actor, it will be necessary to have enabled the connection protocol to be used to connect to the generated desktops (For example, to have enabled the remote desktop, installed the PCoIP client, etc...).

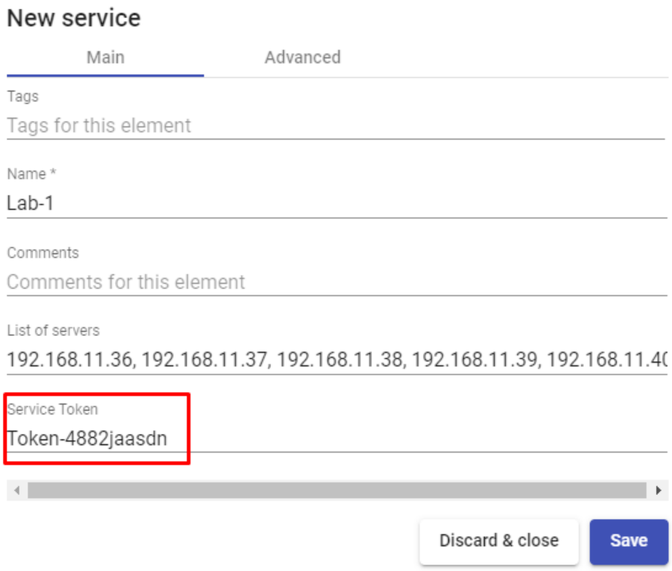
3.2.4.2 Windows static desktops

To control the user sessions (login and logout) of a machine configured within the provider "***Static IP Machines Provider***", it is necessary that it has the UDS Actor installed: ***UDSActorUnmanagedSetup-3.6.0.exe***

In addition to controlling a user's session, the actor will detect if there is already a user connected (for example, when accessing a physical computer) and will prevent the connection of another who has requested access.

If these machines do not have the UDS Actor installed and are part of a service of type "***Static Multiple IP***", UDS will not be able to control the user's logout from the machine and, therefore, will not be able to release it to make it available to another user.

NOTE: Before installing the UDS Actor, it is necessary to have the IP address or name of the UDS server and the "**Service Token**" key registered in a "**Static Multiple IP**" type service within the "**Static IP Machines Provider**"



Tags: Tags for this element

Name *: Lab-1

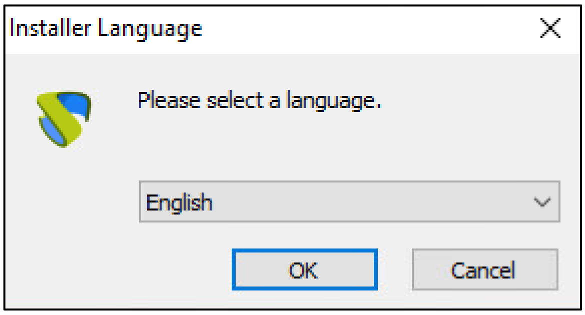
Comments: Comments for this element

List of servers: 192.168.11.36, 192.168.11.37, 192.168.11.38, 192.168.11.39, 192.168.11.4(

Service Token: Token-4882jaasdn

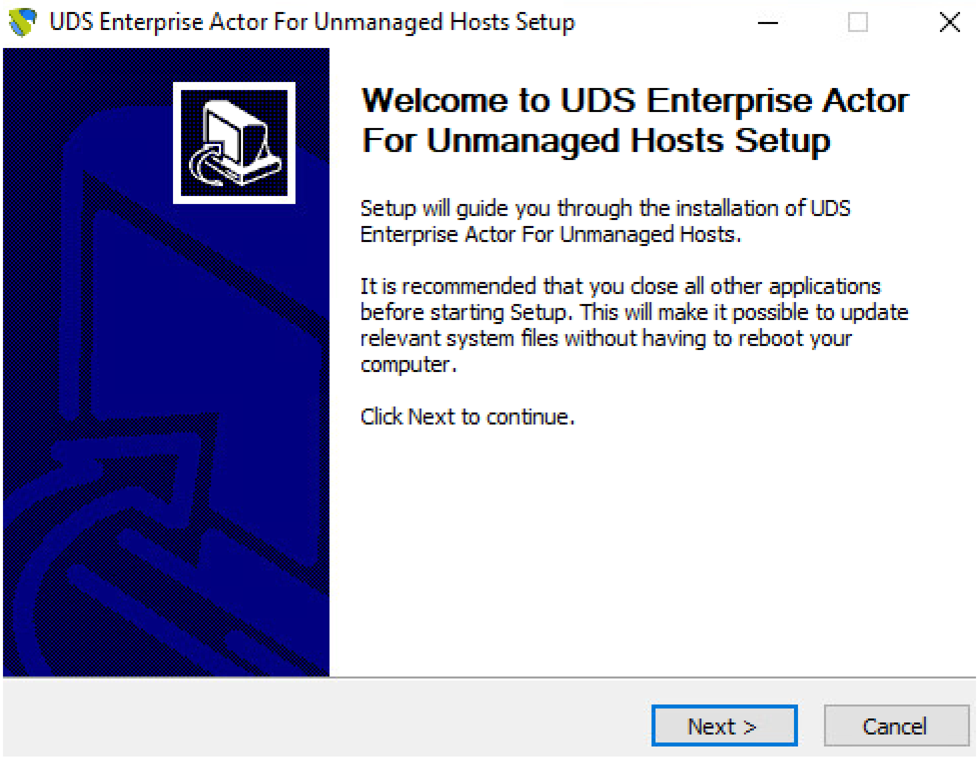
After downloading the UDS Actor for Windows O.S. and transferring it to the machine to which you want to connect users (either physical or virtual), you will run it to proceed with its installation.

Select the language of the installer:



Please select a language.

English



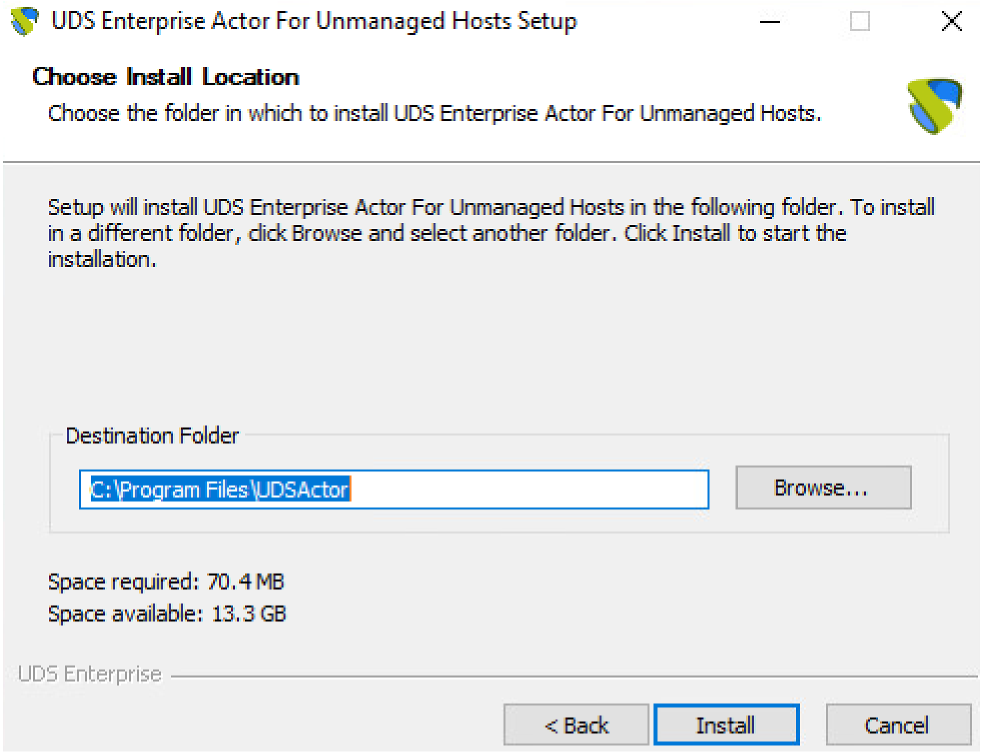
Welcome to UDS Enterprise Actor For Unmanaged Hosts Setup

Setup will guide you through the installation of UDS Enterprise Actor For Unmanaged Hosts.

It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.

Click Next to continue.

Indicate the installation path of the UDS Actor:



Choose Install Location

Choose the folder in which to install UDS Enterprise Actor For Unmanaged Hosts.

Setup will install UDS Enterprise Actor For Unmanaged Hosts in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.

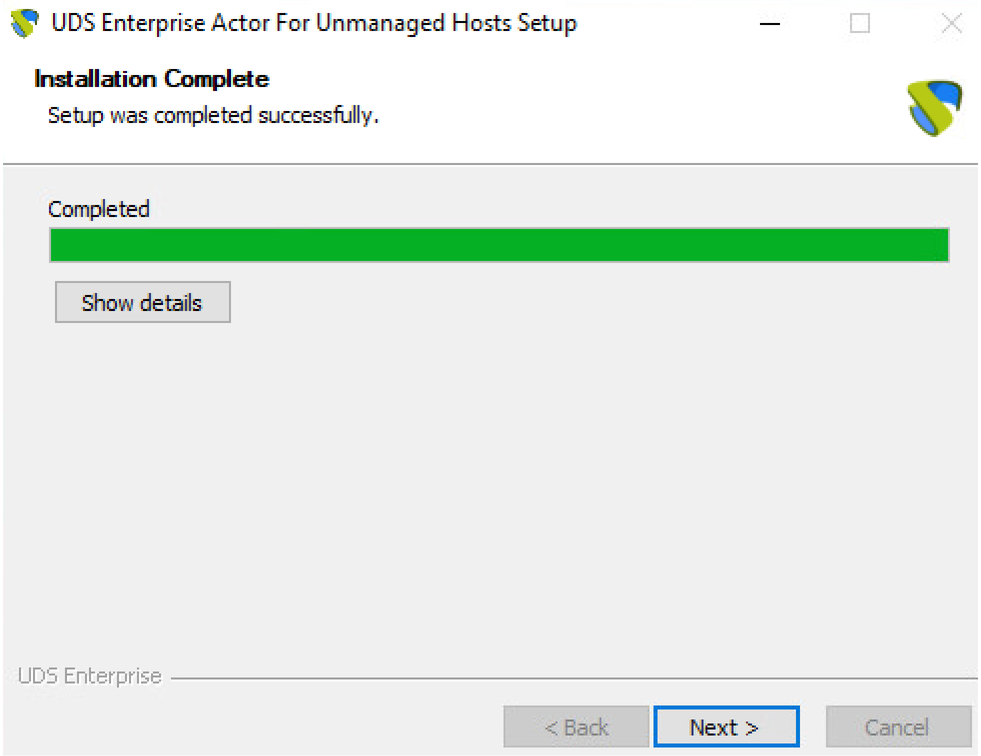
Destination Folder

C:\Program Files\UDSActor

Space required: 70.4 MB

Space available: 13.3 GB

Click on **“Install”** to procede with the instalation:



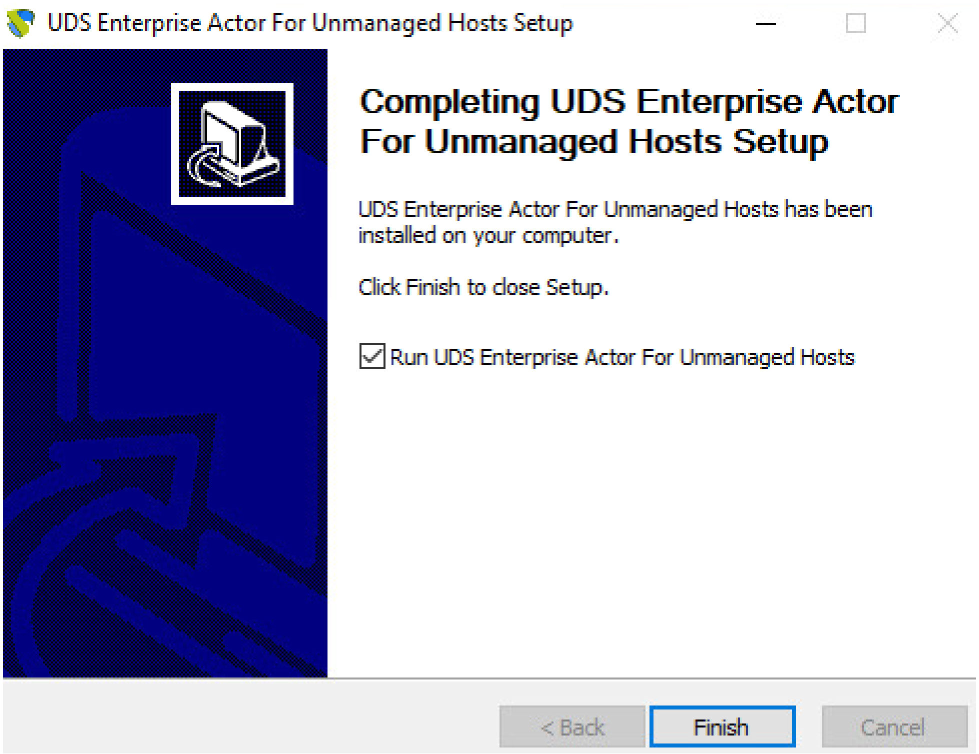
UDS Enterprise Actor For Unmanaged Hosts Setup

Installation Complete

Setup was completed successfully.

Completed

Once the installation is finished, proceed to configure the UDS Actor:



UDS Enterprise Actor For Unmanaged Hosts Setup

Completing UDS Enterprise Actor For Unmanaged Hosts Setup

UDS Enterprise Actor For Unmanaged Hosts has been installed on your computer.

Click Finish to close Setup.

☑ Run UDS Enterprise Actor For Unmanaged Hosts

Proceed to register the Actor with the UDS server indicating the following parameters:

SSL Validation: Type of security to communicate with the UDS server.

It is recommended to obtain the greatest possible security, activate the verification of the certificate **"Verify Certificate**" in case of not, there will be a great risk for the security of the platform.

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

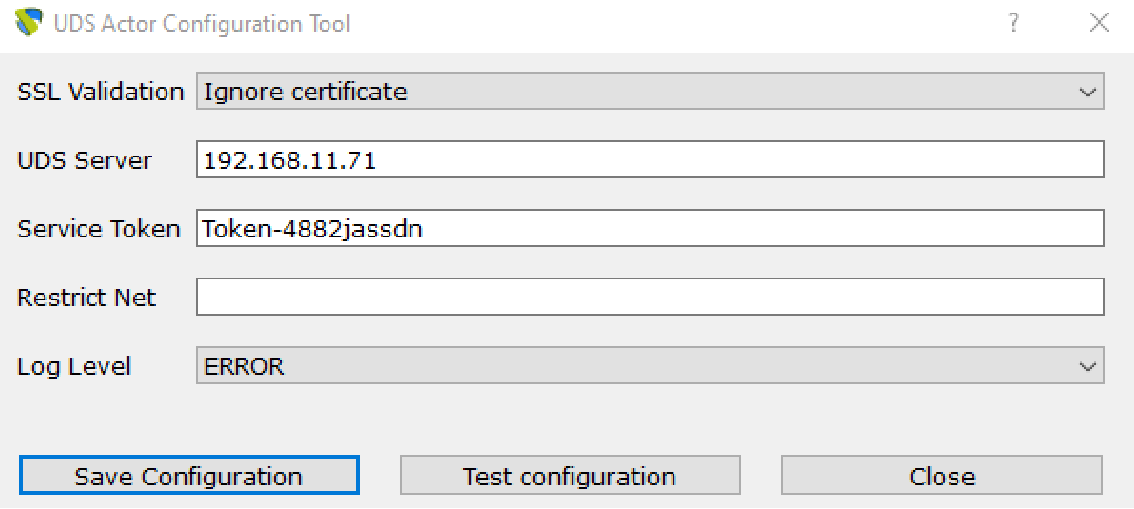
Service Token: Code created in the UDS administration, in the type of service "***Static Multiple IP***" within the service provider "***Static IP Machines Provider***".

Log Level: Types of logs to be shown in the UDS Actor log files. These log files (udsactor.log) will be located in the paths: %temp% (path of the user's temporary files) and C:\Windows\Temp (path of the temporary files of the O.S.).

Restrict Net: Adds the possibility of discriminating networks for the connection with UDS.

The network that we indicate will be used by UDS to notify the access to the machine by the user.

Necessary for cases where we have more than one network card, otherwise leave blank



SSL Validation: Ignore certificate

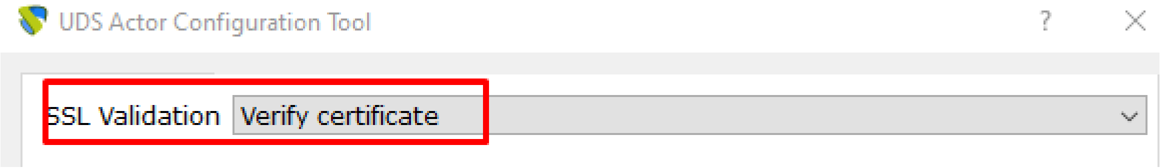
UDS Server: 192.168.11.71

Service Token: Token-4882jassdn

Restrict Net:

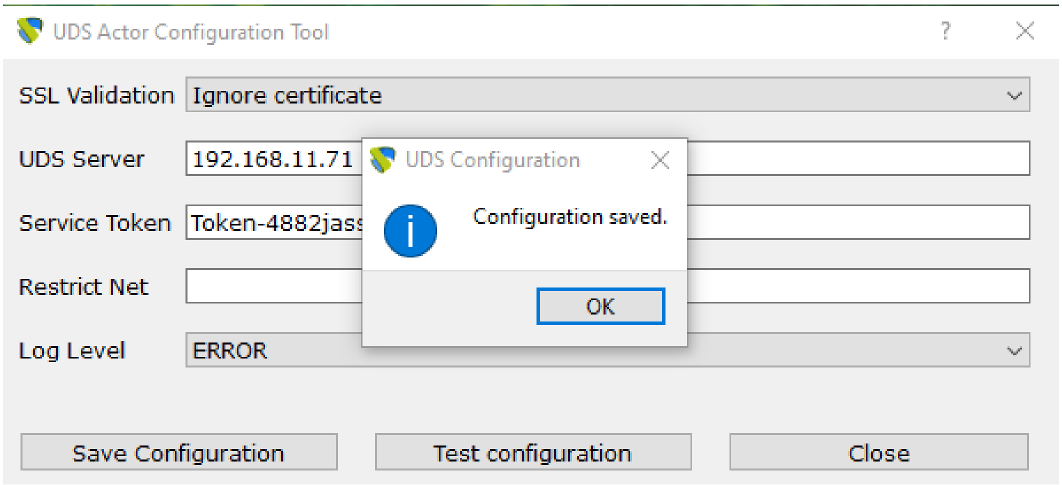
Log Level: ERROR

NOTE: To provide the platform with the greatest possible security, the "Verify Certificate" option must be selected in order to verify that the UDS Server certificate is valid.



SSL Validation: Verify certificate

Once these data are indicated, you will click on “***Save Configuration***”:



UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 192.168.11.71

Service Token: Token-4882jass

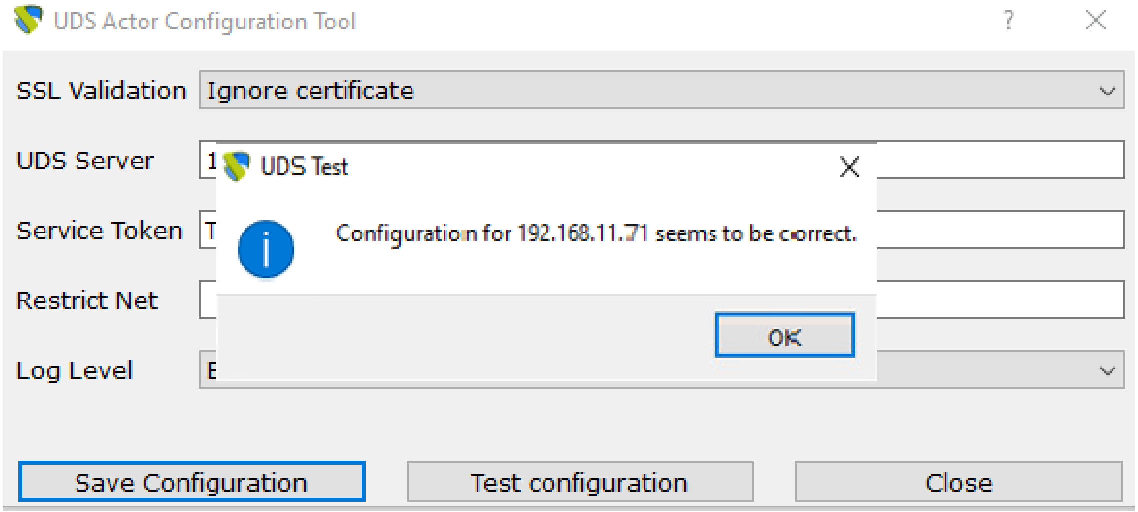
Restrict Net:

Log Level: ERROR

UDS Configuration

Configuration saved.

Once the installation and configuration of the UDS Actor has been completed, the machine will be available to be assigned by UDS and to control user sessions.



UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 1

Service Token: T

Restrict Net:

Log Level: E

UDS Test

Configuration for 192.168.11.71 seems to be correct.

Once the installation and configuration of the UDS Actor has been completed, the machine will be available to be assigned by UDS and to control user sessions.

NOTE: In addition to the installation of the UDS Actor, it will be necessary to have enabled the connection protocol to be used to connect to the generated desktops (For example, to have the remote writer enabled, etc...).

3.2.4.3 Linux self-generated virtual desktops

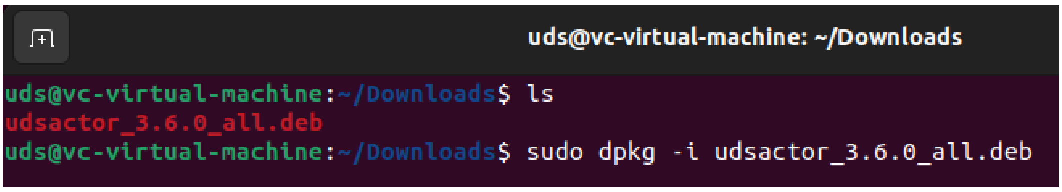
To manage the life cycle of Linux virtual desktops self-generated by UDS Enterprise, the template machine (gold image) on which they will be based must have the UDS Actor installed for the different Linux distributions:

- **Debian bases distributions:** *udsactor_3.6.0_all.deb*
- **Red Hat and Suse distributions:** *udsactor-3.6.0-1.noarch.rpm*

NOTE: Before installing the UDS Actor it will be necessary to have the IP address or name of the UDS server, the credentials of a user with administration permissions on the UDS environment and at least one authenticator registered in the system

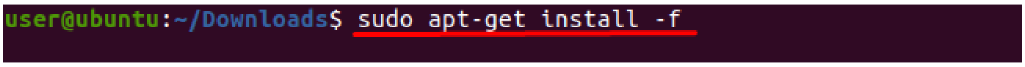
Once the UDS Actor for the chosen Linux distribution has been downloaded and transferred to the template machine, you will execute it to proceed with its installation.

It is highly recommended to perform such execution of the Actor via command console:

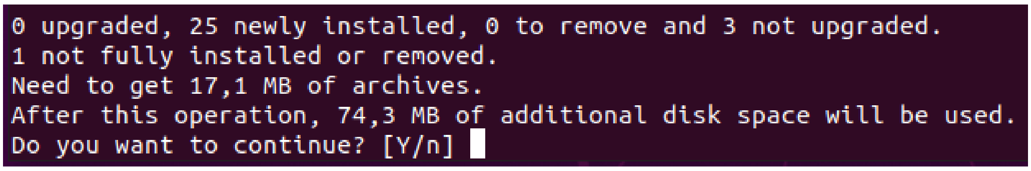


```
uds@vc-virtual-machine:~/Downloads$ ls
udsactor_3.6.0_all.deb
uds@vc-virtual-machine:~/Downloads$ sudo dpkg -i udsactor_3.6.0_all.deb
```

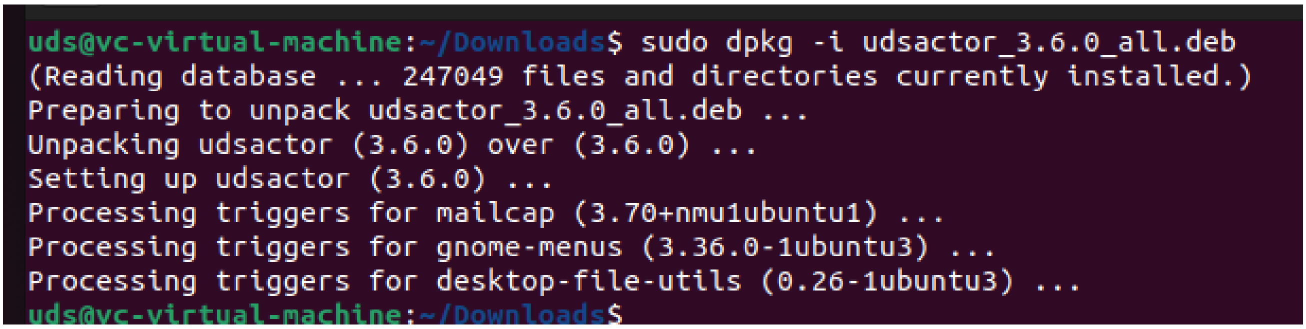
If you get an error due to lack of dependencies, you will proceed to install it:



```
user@ubuntu:~/Downloads$ sudo apt-get install -f
```

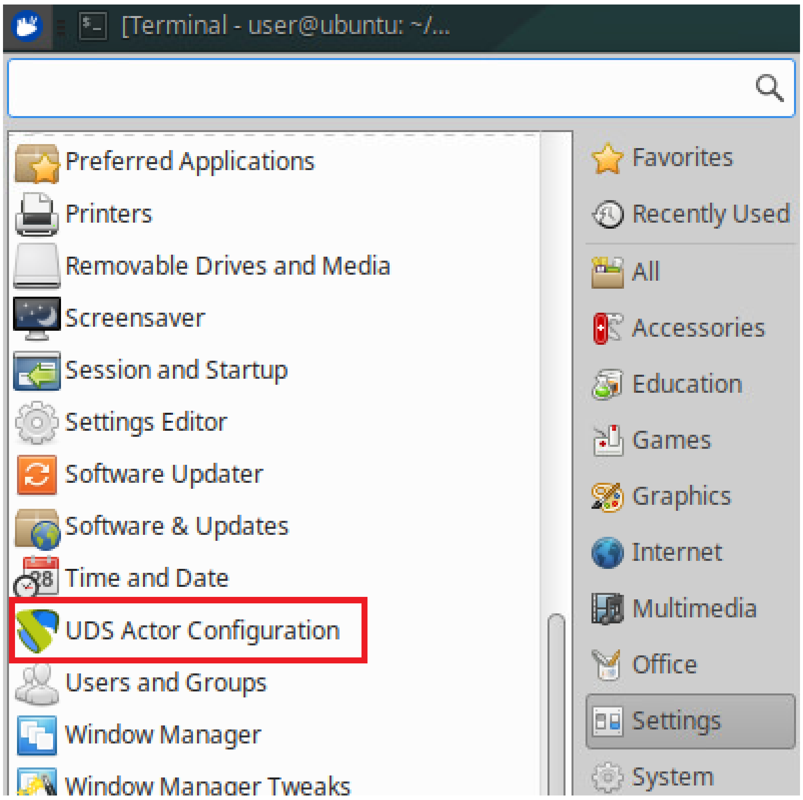


```
0 upgraded, 25 newly installed, 0 to remove and 3 not upgraded.
1 not fully installed or removed.
Need to get 17,1 MB of archives.
After this operation, 74,3 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```



```
uds@vc-virtual-machine:~/Downloads$ sudo dpkg -i udsactor_3.6.0_all.deb
(Reading database ... 247049 files and directories currently installed.)
Preparing to unpack udsactor_3.6.0_all.deb ...
Unpacking udsactor (3.6.0) over (3.6.0) ...
Setting up udsactor (3.6.0) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu3) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu3) ...
uds@vc-virtual-machine:~/Downloads$
```

Once the necessary dependencies are installed, run the UDS Actor configuration:



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

SSL Validation: Type of security to communicate with the UDS Server.

It is recommended to obtain the greatest possible security, activate the verification of the certificate **"Verify Certificate**" in case of not, there will be a great risk for the security of the platform.

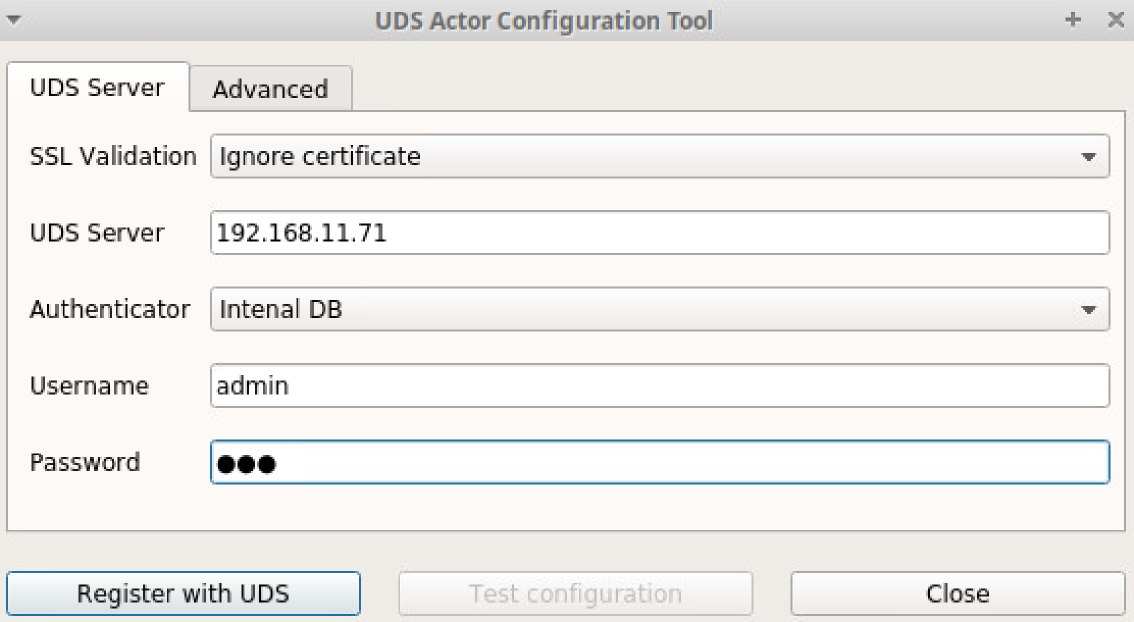
UDS Server: Name or IP address of the UDS server.

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

Communication with the UDS Server needs to be successful for the different authenticators to be displayed. At least one must be 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 previously selected authenticator).

Password: Password of the administrator user.



UDS Actor Configuration Tool

SSL Validation: Ignore certificate

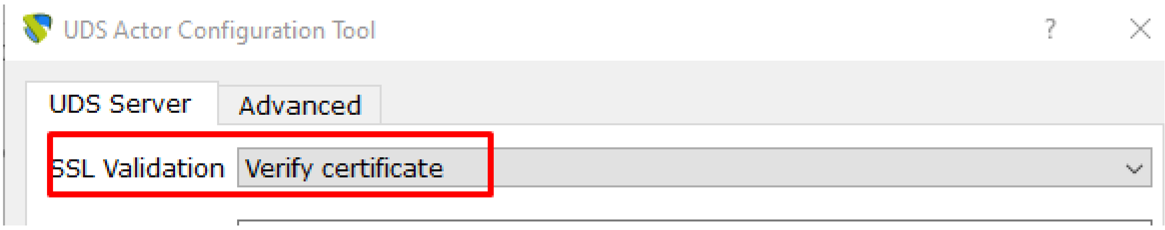
UDS Server: 192.168.11.71

Authenticator: Intenal DB

Username: admin

Password: ●●●

NOTE: To provide the platform with the greatest possible security, the "Verify Certificate" option must be selected in order to verify the certificate.



UDS Actor Configuration Tool

SSL Validation: Verify certificate

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

Preconnect: Script to be run 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 you have recognized on the client (SRC IP)), hostname (SRC Host).

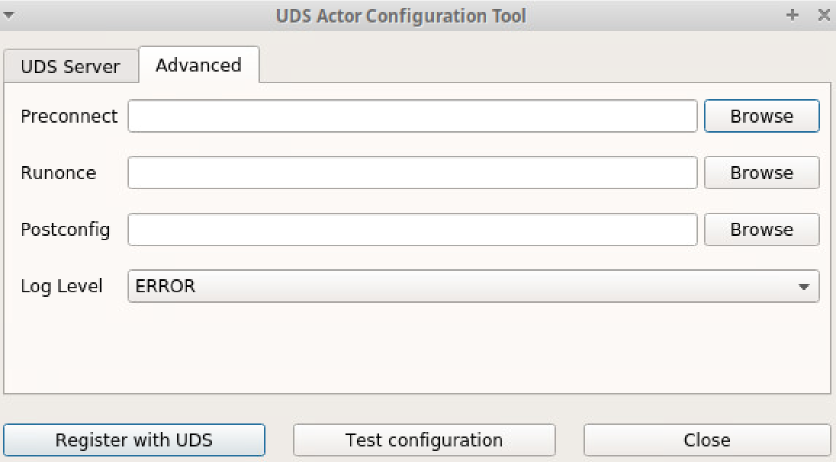
Runonce: Script that runs only once and before the UDS Actor applies its settings. After execution it is deleted from the configuration. Parameters can be passed directly to it.

The script that is running needs to finish by restarting the virtual desktop. Otherwise, the desktop will never apply the Actor settings, preventing it from reaching its "***Valid***" state in UDS administration

Postconfig: 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 it doesn't need to restart the virtual desktop. This script is useful to add some "own" element to the configuration made by the UDS Actor, such as copying files from the local network, executing configurations, etc...

Log Level: Types of logs to be shown in the UDS Actor log files. These log files (udsactor.log) will be located in the path: /var/log/


UDS Actor Configuration Tool

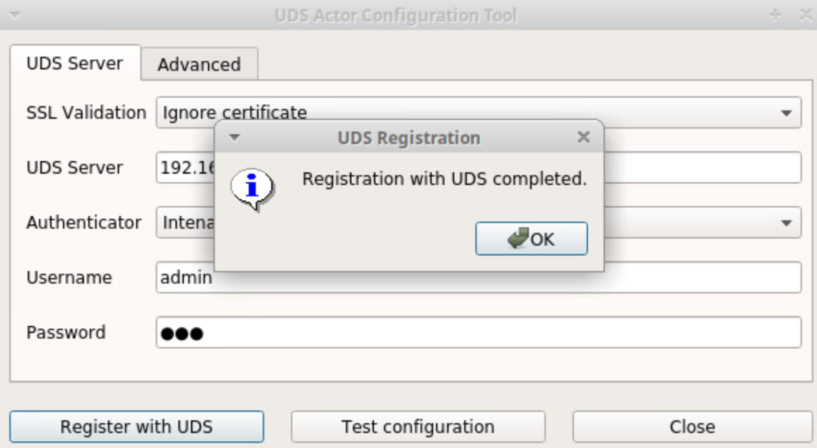
Preconnect:

Runonce:

Postconfig:

Log Level: ERROR

Once these data are indicated, click on "Register with UDS":


UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 192.16

Authenticator: Intena

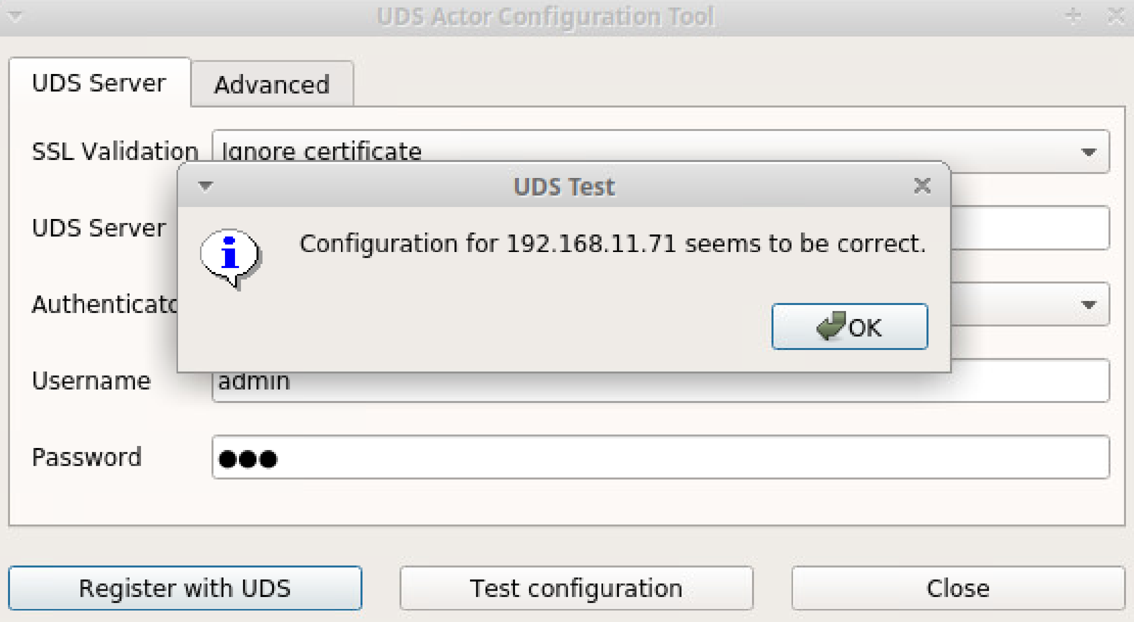
Username: admin

Password: ●●●

UDS Registration

Registration with UDS completed.

You can also perform a test by clicking on "Test configuration" to verify the correct connection to the UDS Server at any time:



SSL Validation: Ignore certificate

UDS Server

Authenticato

Username: admin

Password: ●●●

Configuration for 192.168.11.71 seems to be correct.

It is very important to note that if any data is modified, it will always be necessary to carry out the registration process afterwards (by clicking on the “Register with UDS” button), if this action is not carried out, the changes will not be applied.

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

NOTE: In addition to the installation of the UDS Actor, it will be necessary to have enabled the connection protocol to be used to connect to the generated desktops (For example, to have installed and enabled XRDP, X2Go Server, etc…).

It will also be necessary to ensure that the screensaver is installed, but not enabled in addition to not have "auto login" enabled on the machine.

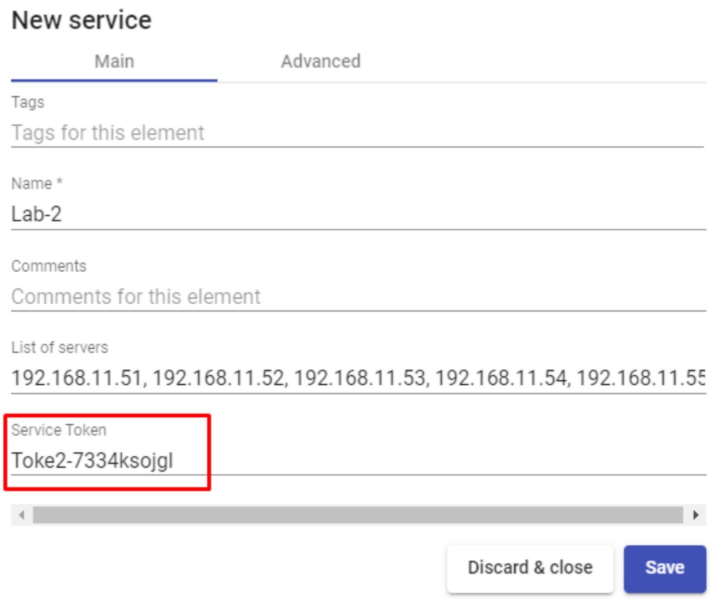
3.2.4.4 Linux static desktops

To control the user sessions (login and logout) of a machine configured within the provider "***Static IP Machines Provider***", it is necessary that it has the UDS Actor installed: ***udsactor-unmanaged_3.6.0_all.deb***

In addition to controlling a user's session, the actor will detect if there is already a user connected (for example, when accessing a physical computer) and will prevent the connection of another who has requested access.

If these machines do not have the UDS Actor installed and are part of a "***Static Multiple IP***", UDS will not be able to control the user's logout on the machine and, therefore, will not be able to release it to make it available to another user.

NOTE: Before installing the UDS Actor, it is necessary to have the IP address or name of the UDS Server and the "**Service Token**" key registered in a "**Static Multiple IP**" type service within the service provider "**Static IP Machines Provider**".



New service

Tags: Tags for this element

Name *: Lab-2

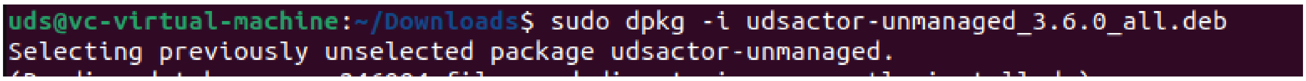
Comments: Comments for this element

List of servers: 192.168.11.51, 192.168.11.52, 192.168.11.53, 192.168.11.54, 192.168.11.55

Service Token: Toke2-7334ksojgl

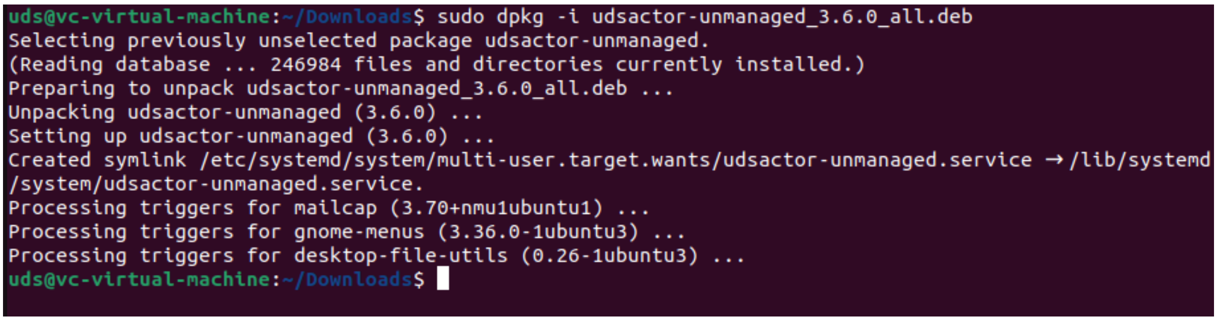
After downloading the UDS Actor for Linux O.S. and transferring it to the machine to which you want to connect users (either physical or virtual), you will run it to proceed with its installation.

It is highly recommended to perform such execution of the Actor via command console:



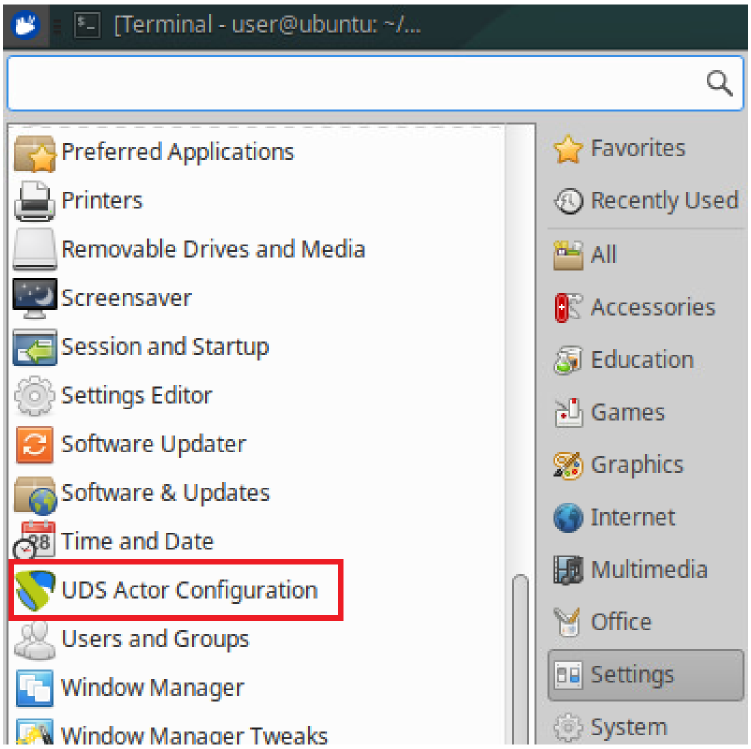
```
uds@vc-virtual-machine:~/Downloads$ sudo dpkg -i udsactor-unmanaged_3.6.0_all.deb
Selecting previously unselected package udsactor-unmanaged.
```

If you get an error due to lack of dependencies, you will proceed to its installation:



```
uds@vc-virtual-machine:~/Downloads$ sudo dpkg -i udsactor-unmanaged_3.6.0_all.deb
Selecting previously unselected package udsactor-unmanaged.
(Reading database ... 246984 files and directories currently installed.)
Preparing to unpack udsactor-unmanaged_3.6.0_all.deb ...
Unpacking udsactor-unmanaged (3.6.0) ...
Setting up udsactor-unmanaged (3.6.0) ...
Created symlink /etc/systemd/system/multi-user.target.wants/udsactor-unmanaged.service → /lib/systemd
/system/udsactor-unmanaged.service.
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu3) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu3) ...
uds@vc-virtual-machine:~/Downloads$ 
```

Once the necessary dependencies are installed, you will run the UDS Actor configuration:



Proceed to register the Actor with the UDS Server indicating the following parameters:

SSL Validation: Type of security to communicate with the UDS Server

It is recommended to obtain the greatest possible security, activate the verification of the certificate **"Verify Certificate**" in case of not, there will be a great risk for the security of the platform.

UDS Server: Name or IP address of the UDS Server

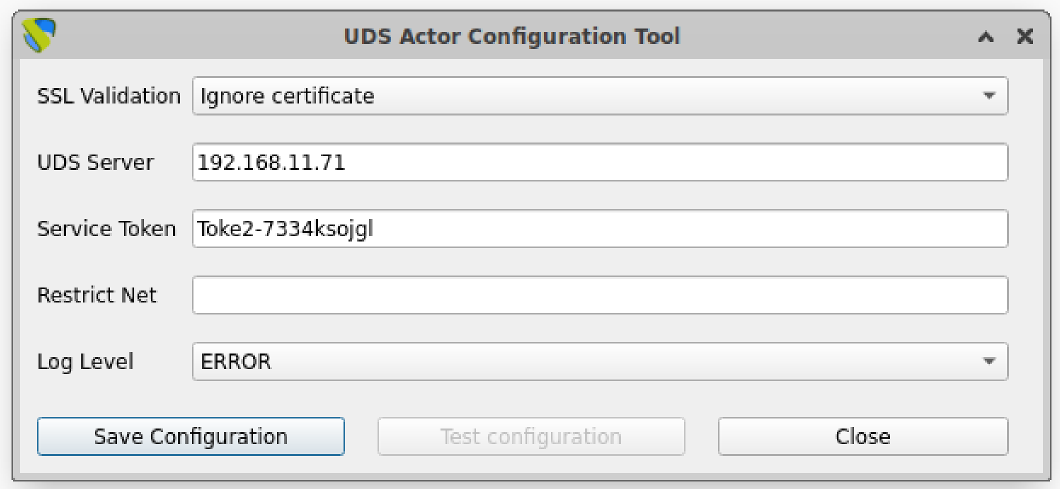
Service Token: Code created in the UDS administration, in the type of service "***Static Multiple IP***" within the service provider "***Static IP Machines Provider***".

Log Level: Types of logs to be shown in the UDS Actor log files. These log files

(udsactor.log) will be located in the path: /var/log/

Restrict Net: Adds the possibility of discriminating networks for the connection with UDS.The network that we indicate will be used by UDS to notify the access to the machine by the user.

Necessary for cases where we have more than one network card, otherwise leave blank


UDS Actor Configuration Tool

SSL Validation: Ignore certificate

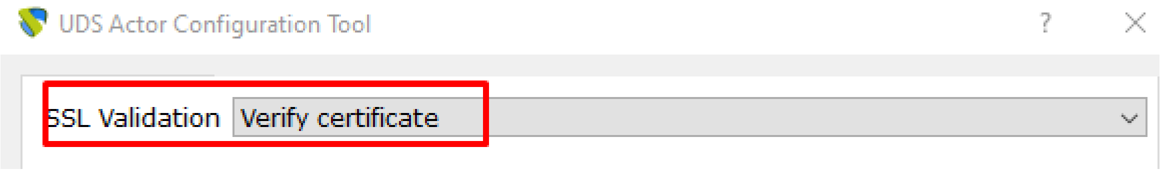
UDS Server: 192.168.11.71

Service Token: Toke2-7334ksojgl

Restrict Net:

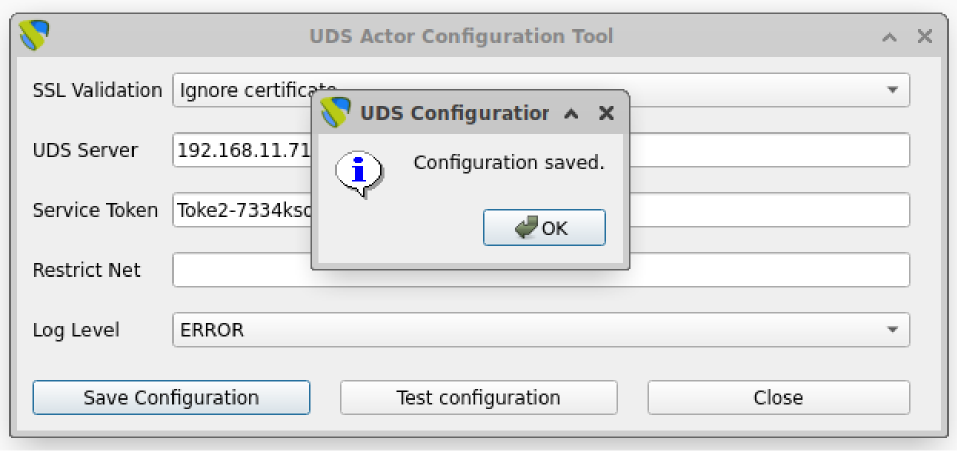
Log Level: ERROR

NOTE: To provide the platform with the greatest possible security, the "Verify Certificate" option must be selected in order to verify the certificate.


UDS Actor Configuration Tool

SSL Validation: Verify certificate

Once these data are indicated, click on "***Save Configuration***":



UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 192.168.11.71

Service Token: Toke2-7334ksc

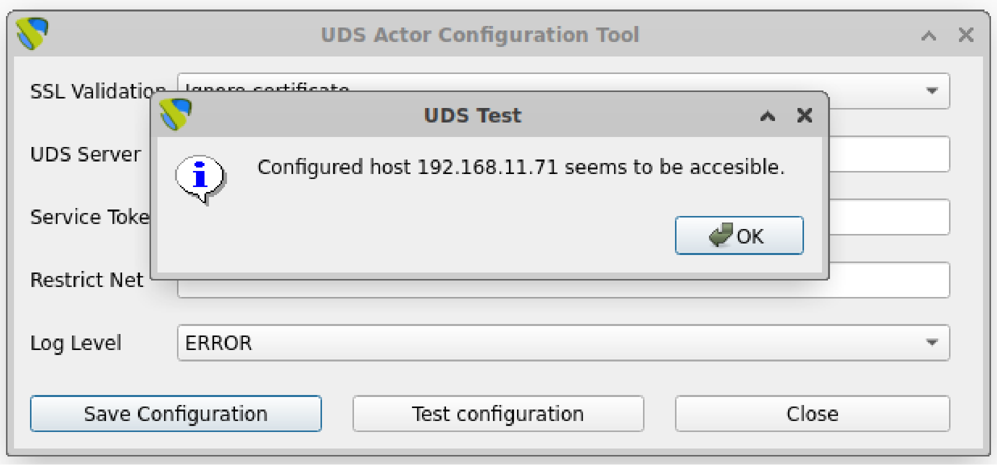
Restrict Net:

Log Level: ERROR

UDS Configuration

Configuration saved.

It will be necessary to run the configuration test to check if the indicated data are correct and there is connectivity with the UDS Server:



UDS Actor Configuration Tool

UDS Test

Configured host 192.168.11.71 seems to be accesible.

Log Level: ERROR

Once the installation and configuration of the UDS Actor have been completed, the machine will be available to be assigned by UDS and to control user sessions.

NOTE: In addition to the installation of the UDS Actor, it will be necessary to have the connection protocol to be used to connect to the generated desktops enabled (for example, having XRDP installed and enabled).

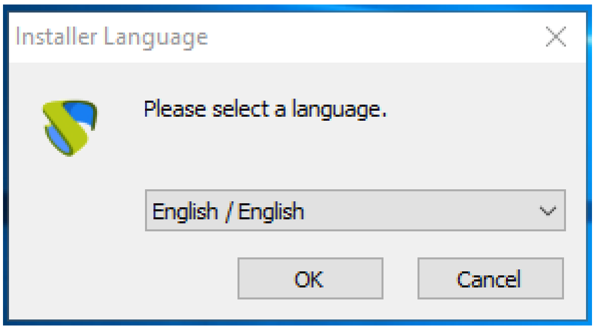
3.2.4.5 Windows virtual applications

In order for UDS to publish Windows application sessions and control their life cycle, the Windows Server application servers must have the UDS Actor installed: ***RDSActorSetup 3.6.0.exe***

NOTE:
Before installing the UDS Actor it will be necessary to have the IP address or name of the UDS Server, the credentials of a user with administration permissions on the UDS environment and at least one authenticator registered in the system.

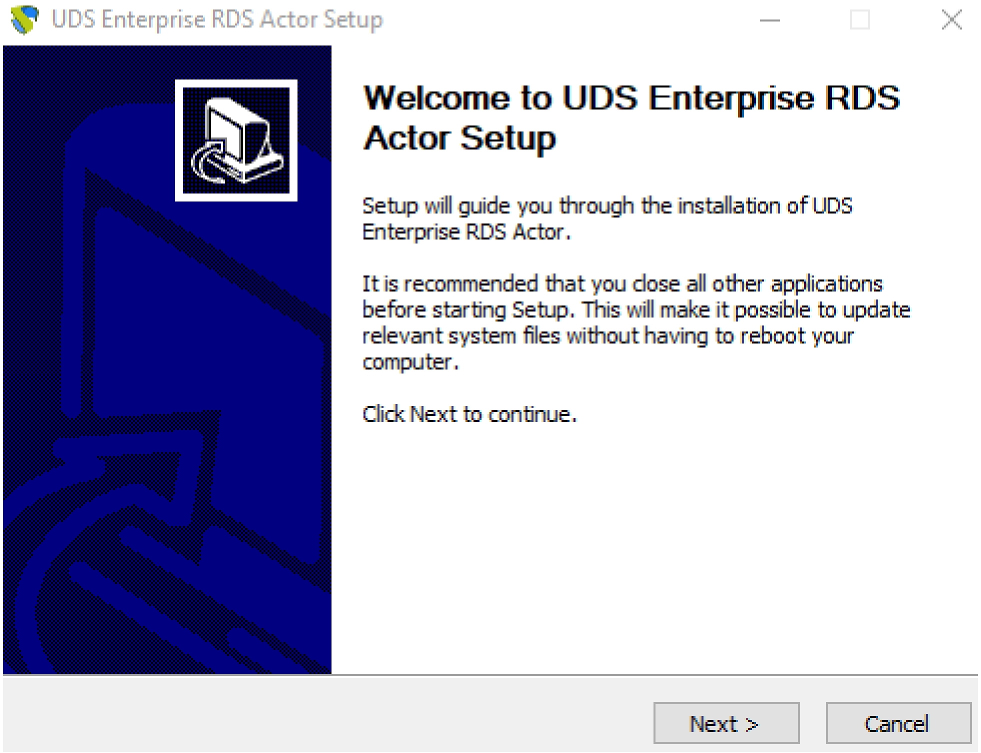
Once the UDS Actor for Windows Server application servers are downloaded, run it as administrator to proceed with its installation.

Select the language of the installer:



Please select a language.

English / English



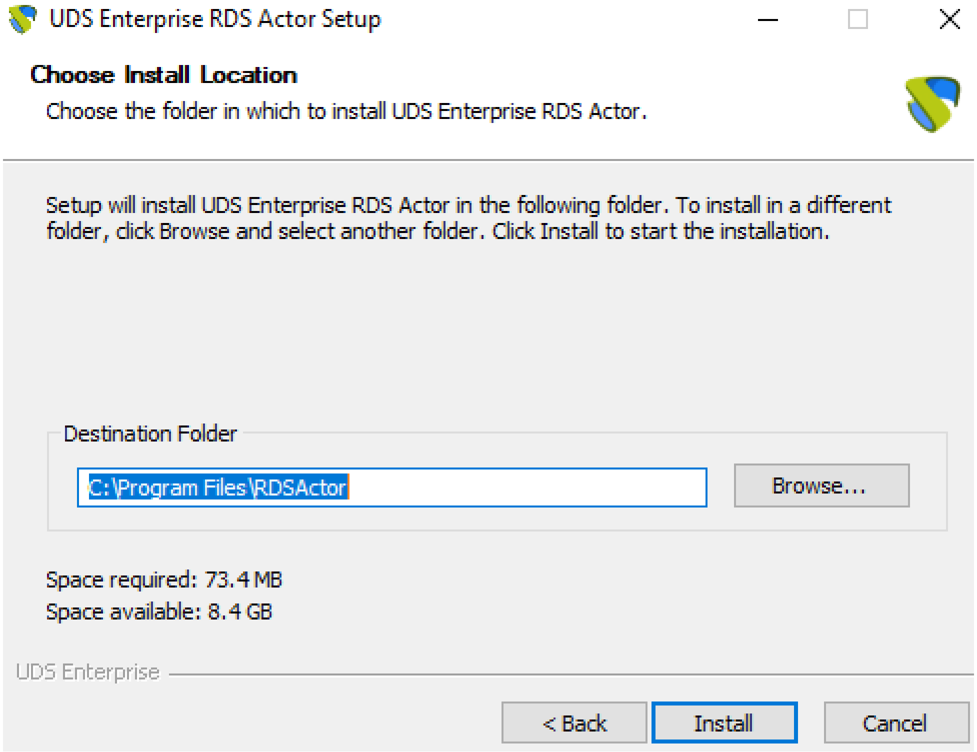
Welcome to UDS Enterprise RDS Actor Setup

Setup will guide you through the installation of UDS Enterprise RDS Actor.

It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.

Click Next to continue.

Indicate the installation path of the UDS Actor:



UDS Enterprise RDS Actor Setup

Choose Install Location

Choose the folder in which to install UDS Enterprise RDS Actor.

Setup will install UDS Enterprise RDS Actor in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.

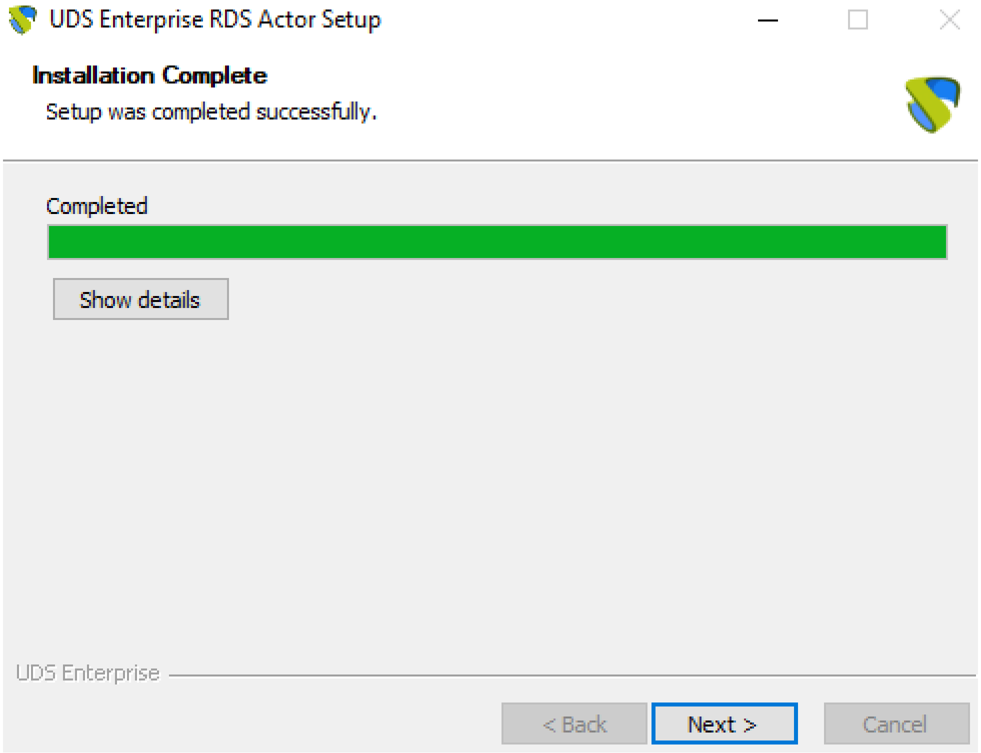
Destination Folder

C:\Program Files\RDSActor

Space required: 73.4 MB

Space available: 8.4 GB

Click on **"Install"** to proceed with the installation:



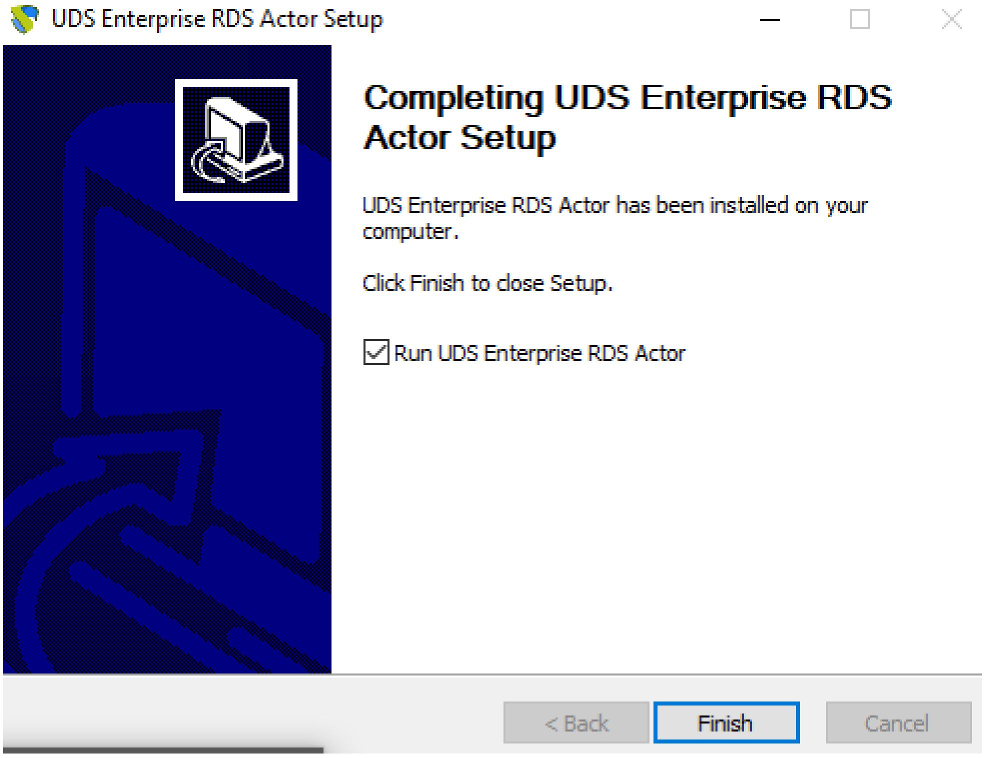
UDS Enterprise RDS Actor Setup

Installation Complete

Setup was completed successfully.

Completed

Once the installation is finished, proceed to configure the UDS Actor:



UDS Enterprise RDS Actor Setup

Completing UDS Enterprise RDS Actor Setup

UDS Enterprise RDS Actor has been installed on your computer.

Click Finish to close Setup.

☑ Run UDS Enterprise RDS Actor

Register the Actor with the UDS server indicating the following parameters:

SSL Validation: Type of security to communicate with the UDS Server.

It is recommended to obtain the greatest possible security, activate the verification of the certificate **"Verify Certificate**" in case of not, there will be a great risk for the security of the platform.

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

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

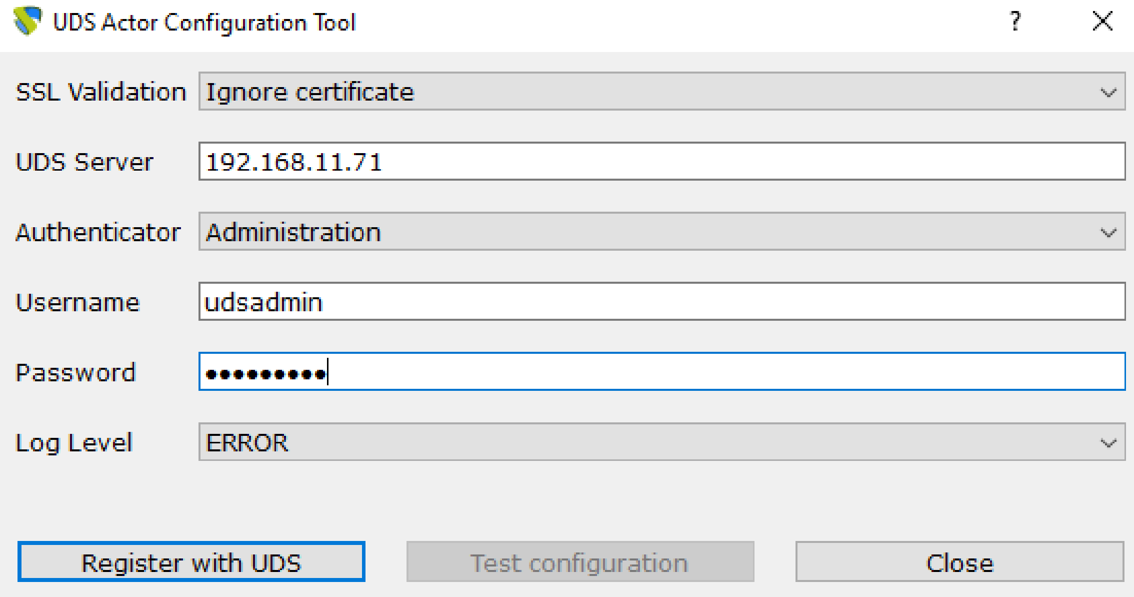
It is necessary that the communication with the UDS server be carried out correctly so that the different authenticators are displayed. There must be at least one registered in the UDS administration (the "***Administration***" authenticator corresponds to the super-user created in the UDS server configuration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

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

Password: Password of the administrator user.

Safe use procedure: Passwords must be of sufficient length and include uppercase, lowercase, numbers and special characters.

Log Level: Types of logs to be shown in the UDS Actor log files.



UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 192.168.11.71

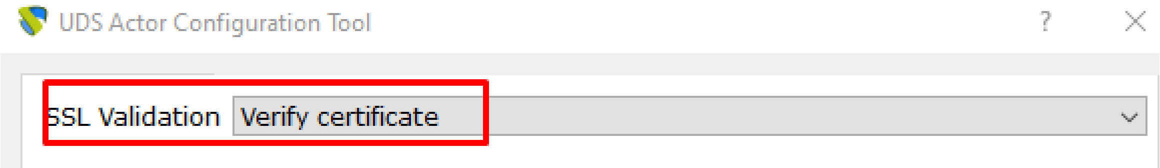
Authenticator: Administration

Username: udsadmin

Password: ●●●●●●●●●●

Log Level: ERROR

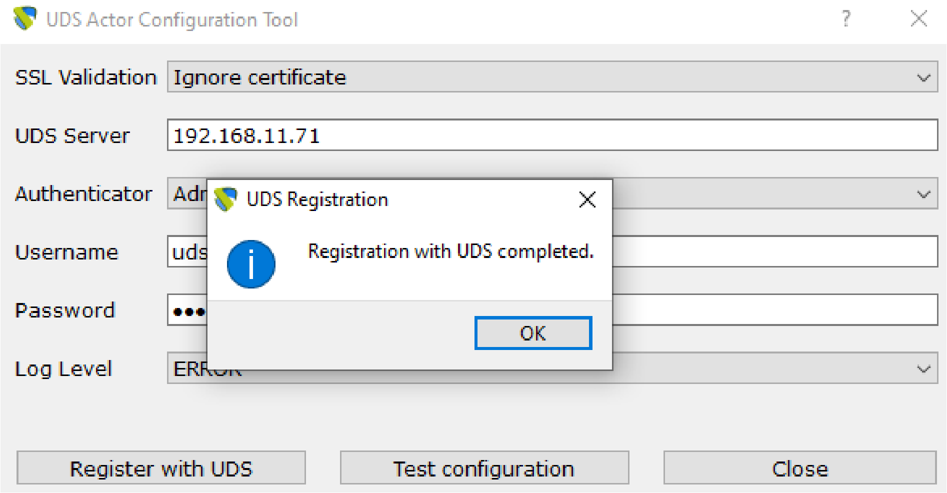
NOTE: To provide the platform with the greatest possible security, the "Verify Certificate" option must be selected in order to verify the certificate.



UDS Actor Configuration Tool

SSL Validation: Verify certificate

Once all the necessary data has been indicated, click on “Register with UDS”:



UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 192.168.11.71

Authenticator: Adr

Username: uds

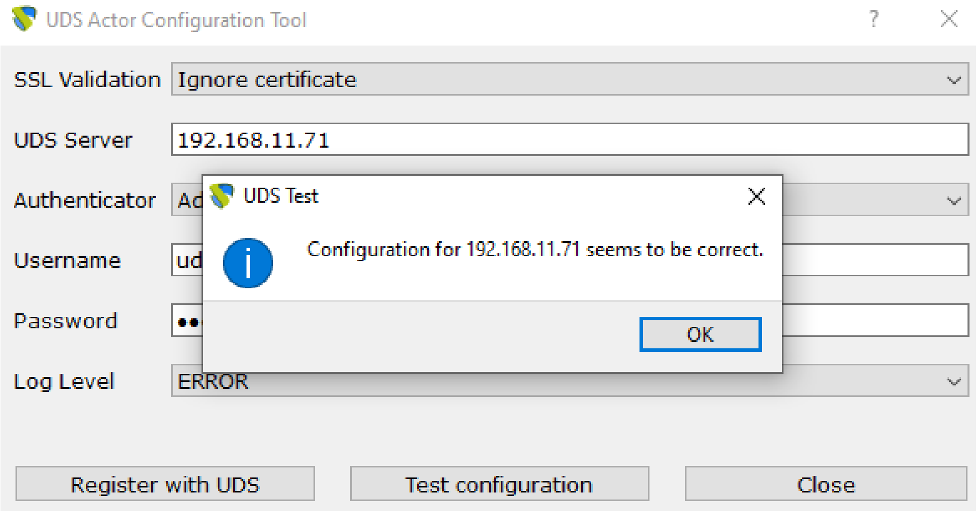
Password: •••

Log Level: ERROR

UDS Registration

Registration with UDS completed.

Once these data are indicated, click on “Test parameters” to verify that the indicated data are correct and there is connectivity with the UDS Server.



UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 192.168.11.71

Authenticator: Ad

Username: ud

Password: ••

Log Level: ERROR

UDS Test

Configuration for 192.168.11.71 seems to be correct.

It is very important to note that if any data is modified, it will always be necessary to carry out the registration process afterwards (by clicking on the “Register with UDS” button), if this action is not carried out, the changes will not be applied.

Once you have installed and configured the UDS Actor for RDS servers, you can now install the Remote Desktop Session (RDS) feature and integrate it with the UDS Actorto provide application sessions to users.

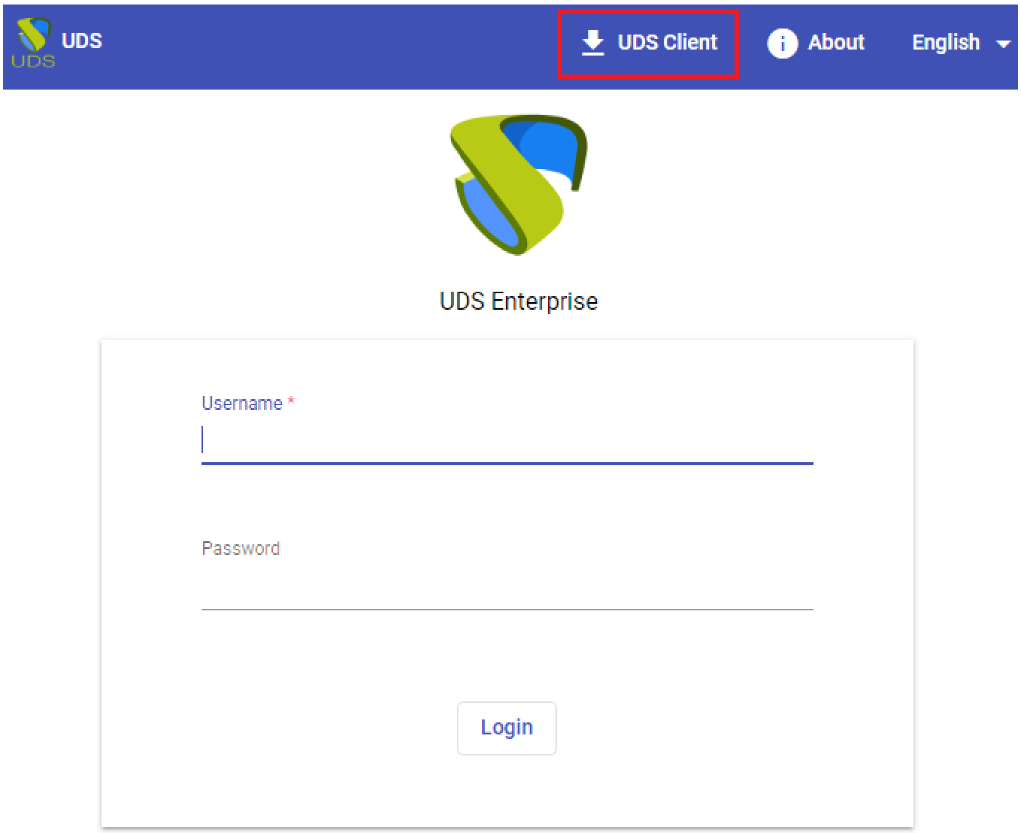
To proceed with the integration of UDS with Remote Desktop Services you can consult the guide “Installation and configuration of Microsoft RDS with UDS Enterprise” available in the documentation section of the UDS Enterprise website.

3.2.5 UDS Client

The UDS Client is a software component that is installed on the connection client computers that will launch UDS services (virtual desktops, application sessions, etc ...). For all connection types supported by UDS, this component will be required except for the HTML5 connection (which only requires a web browser)

To perform the installation of the UDS Client, it is necessary to make a previous download from the UDS Server (broker) by selecting the appropriate client for each type of O.S. from which we need to access services provided by UDS.

To make the download, access the UDS login portal and in the top menu select "***UDS Client***":



UDS clients that are available for download will be displayed in the browser. Select the client corresponding to the operating system from which you need to access the different services provided by UDS:

- **Windows client:** UDS Client for Windows O.S. connection clients.
- **Mac OS X client:** UDS Client for MacOS O.S. connection clients.

- **Debian based Linux client:** UDS Client for connection clients with Debianbased Linux O.S., such as Ubuntu, xUbuntu, etc...

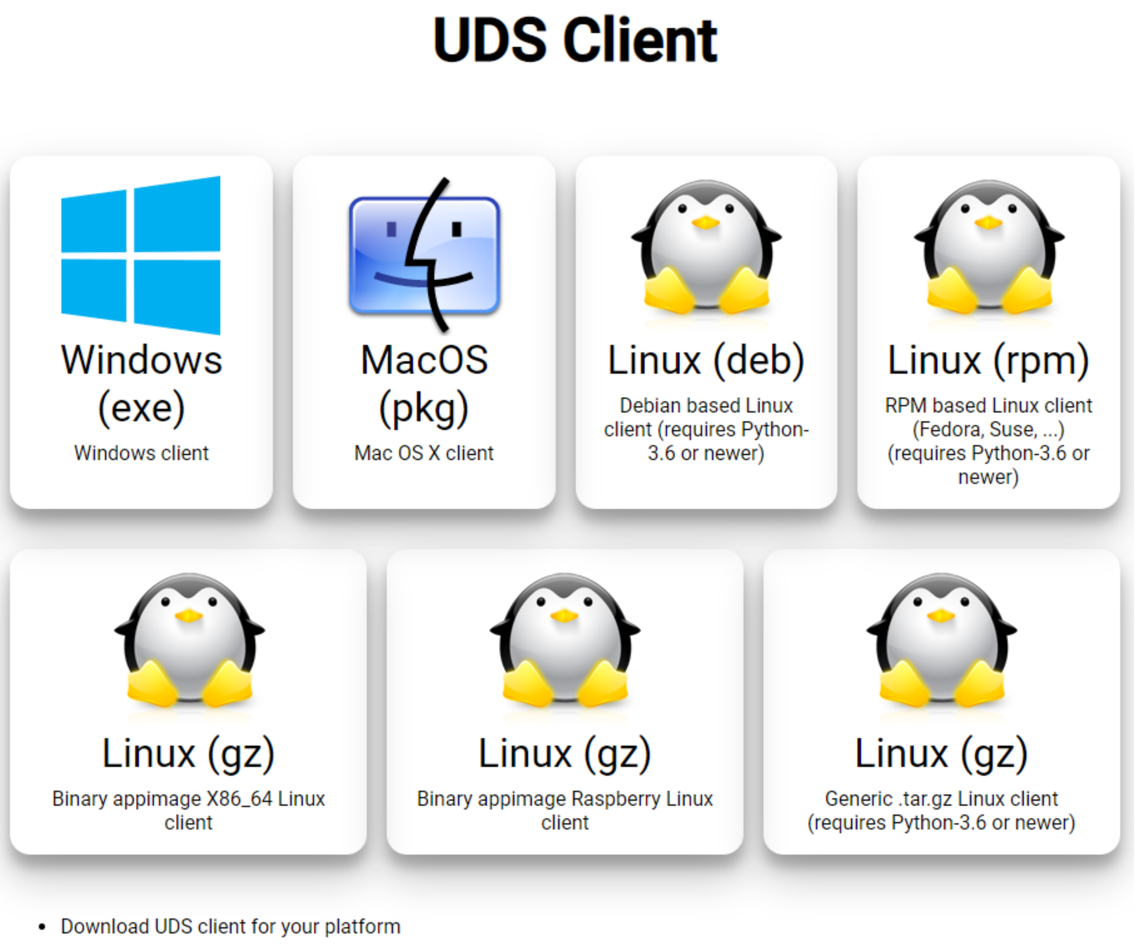
- **RPM based Linux client:** UDS Client for connection clients with O.S. Linux based on Red Hat, Suse, etc… like: CentOS, Fedora, etc…

- **Binary appimage X86_64 Linux client:** UDS Client for connection clients with O.S. Linux . In addition to the UDS client, this client includes the FreeRDP version 2.3 client and the X2Go client.

- **Binary appimage Raspberry Linux client:** UDS Portable Client for connection clients for Raspberry Pi devices. In addition to the UDS client, this client includes the FreeRDP version 2.3 client and the X2Go client.

  NOTE: To run the appimage client, it will be necessary to have the libfuse2 library installed (libfuse2 for Ubuntu 22, and the corresponding one for the rest of the distributions).

- **Genenic.tar.gz Linux:** UDS client source files for O.S Linux



UDS Client

Windows (exe)
Windows client

MacOS (pkg)
Mac OS X client

Linux (deb)
Debian based Linux client (requires Python-3.6 or newer)

Linux (rpm)
RPM based Linux client (Fedora, Suse, ...) (requires Python-3.6 or newer)

Linux (gz)
Binary appimage X86_64 Linux client

Linux (gz)
Binary appimage Raspberry Linux client

Linux (gz)
Generic .tar.gz Linux client (requires Python-3.6 or newer)

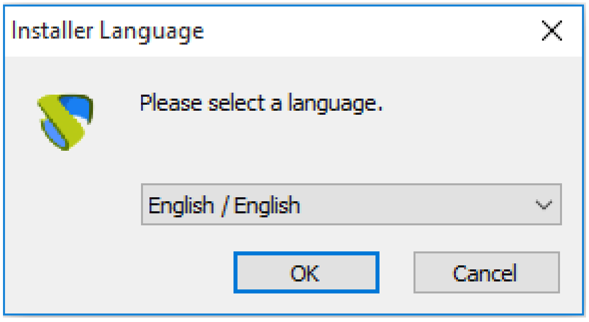
- Download UDS client for your platform

3.2.5.1 Windows

To connect to UDS services from Windows O.S connection clients, they need to have the UDS Client installed: ***UDSClientSetup-3.6.0.exe***

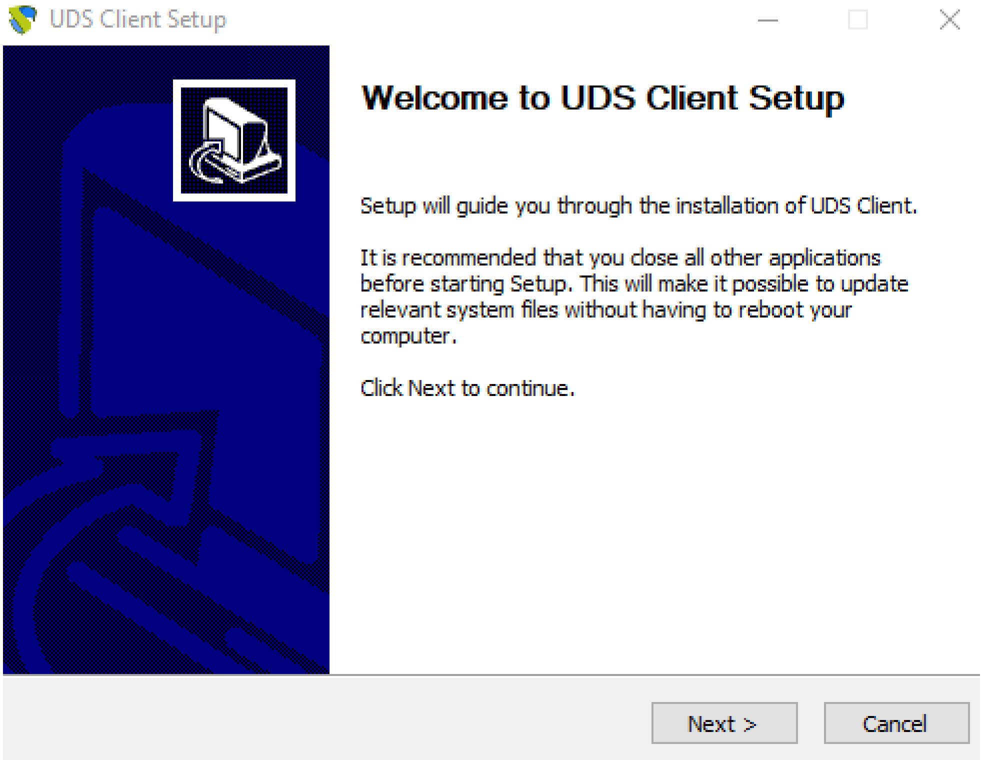
Once the UDS Client for Windows O.S. has been downloaded, run it to proceed with its installation.

Select the language of the installer:


Installer Language

Please select a language.

English / English


UDS Client Setup

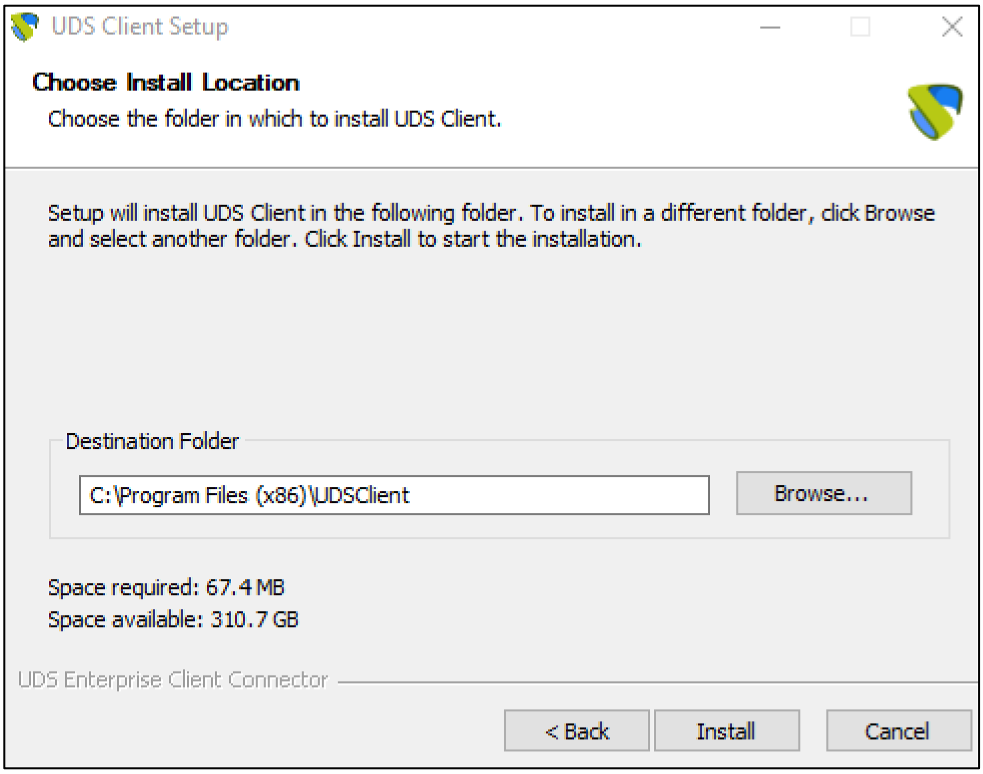
Welcome to UDS Client Setup

Setup will guide you through the installation of UDS Client.

It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.

Click Next to continue.

Indicate the installation path of the UDS Client:



UDS Client Setup

Choose Install Location

Choose the folder in which to install UDS Client.

Setup will install UDS Client in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.

Destination Folder

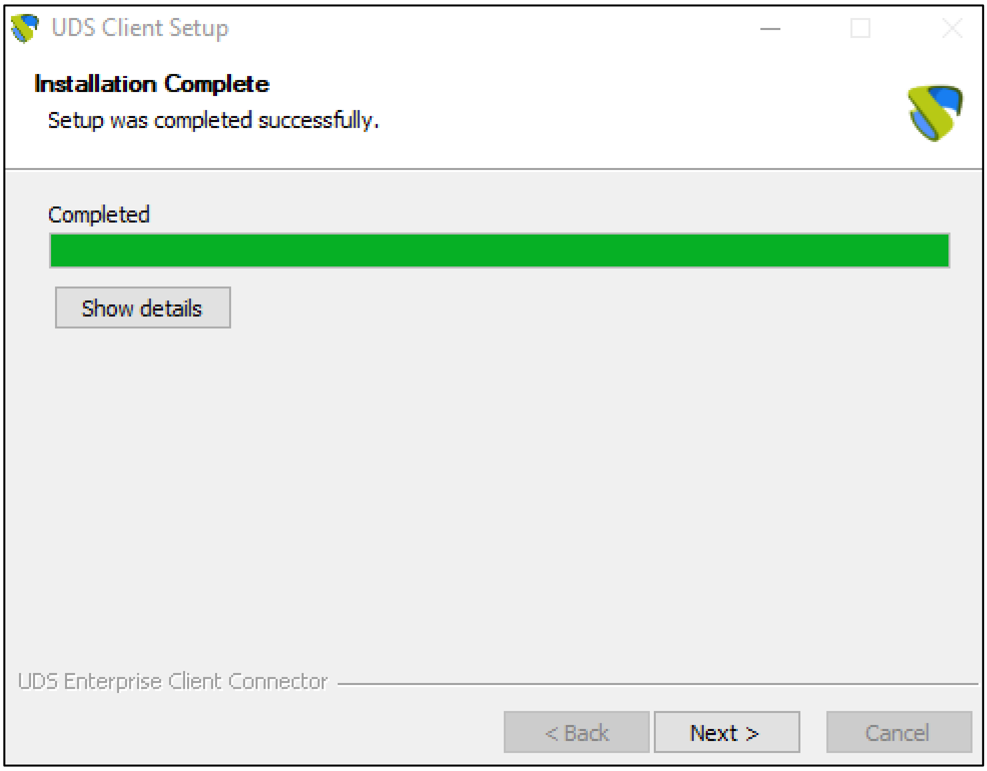
C:\Program Files (x86)\UDSClient

Space required: 67.4 MB

Space available: 310.7 GB

UDS Enterprise Client Connector

Click on "***Install***" to proceed with the installation:



UDS Client Setup

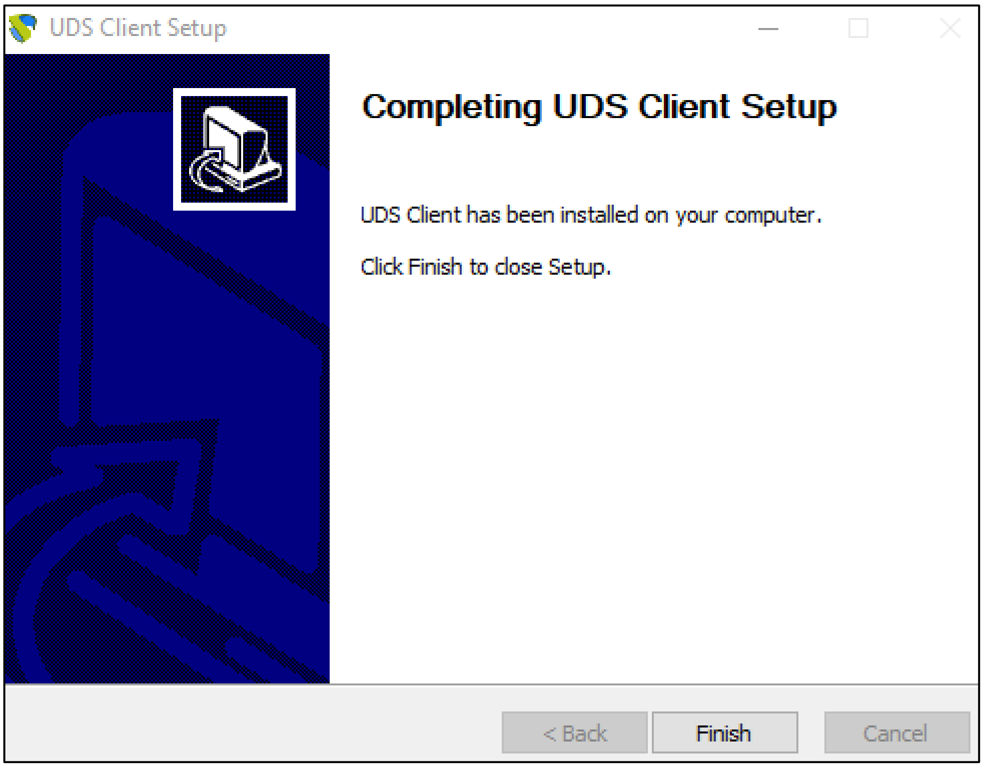
Installation Complete

Setup was completed successfully.

Completed

UDS Enterprise Client Connector

Once the installation is completed, finish the installation wizard:



UDS Client Setup

Completing UDS Client Setup

UDS Client has been installed on your computer.

Click Finish to close Setup.

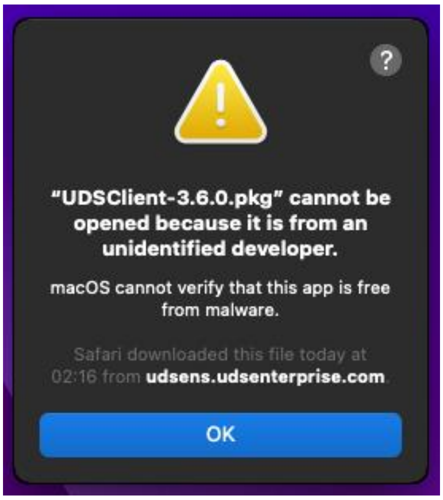
Once the installation is finished, the UDS Client will execute the selected connection protocol (Transport) and will connect with the requested service.

NOTE: If you access the service with the HTML5 connection type, it will not be necessary to have the UDS Client installed on the connection client computer. The only requirement for this connection is to have a current web browser.

3.2.5.2 MacOS

To connect to UDS services from connection clients with O.S. MacOS it is necessary that they have the UDS client installed: ***UDSClient-3.6.0.pkg***

Once the UDS Client for S.O. MacOS, we will execute it to proceed with its installation.
Initially a warning will appear that prevents us from executing it:

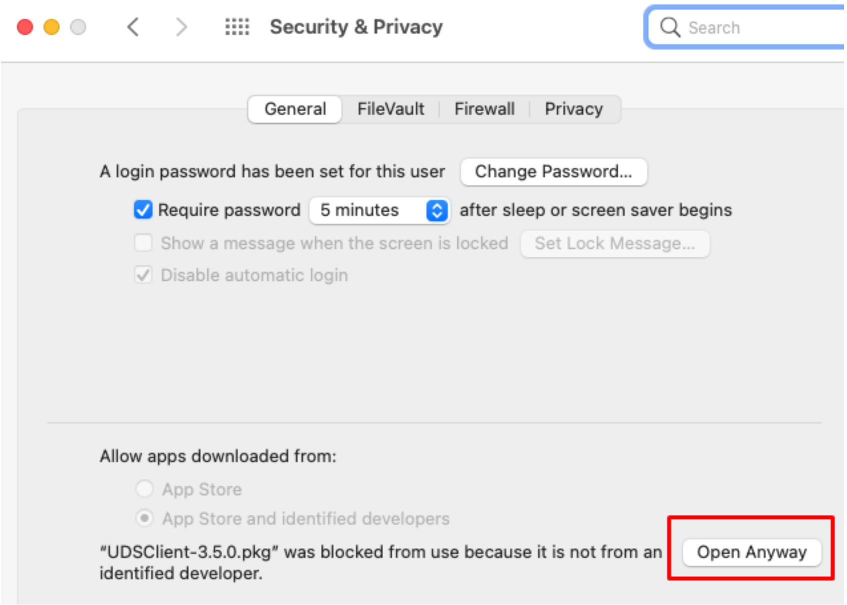


"UDSClient-3.6.0.pkg" cannot be opened because it is from an unidentified developer.

macOS cannot verify that this app is free from malware.

Safari downloaded this file today at 02:16 from **udsens.udsenterprise.com**

To solve it, access: Apple menu > System Preferences, click Security & Privacy, General:



A login password has been set for this user

☑ Require password 5 minutes after sleep or screen saver begins

□ Show a message when the screen is locked

☑ Disable automatic login

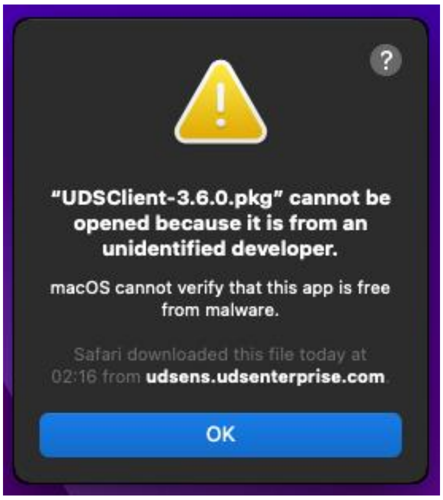
Allow apps downloaded from:

○ App Store

● App Store and identified developers

"UDSClient-3.5.0.pkg" was blocked from use because it is not from an identified developer.

Click on “**Open Anyway**” to open the UDS Client.

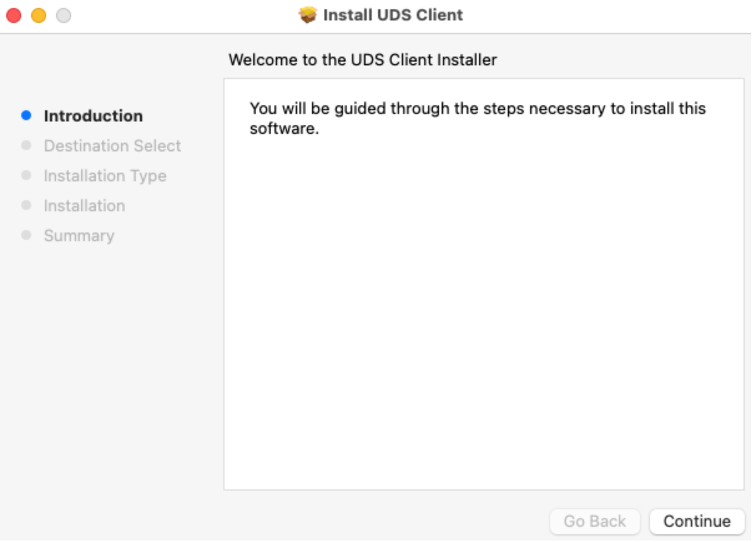


“UDSClient-3.6.0.pkg” cannot be opened because it is from an unidentified developer.

macOS cannot verify that this app is free from malware.

Safari downloaded this file today at 02:16 from **udsens.udsenterprise.com**

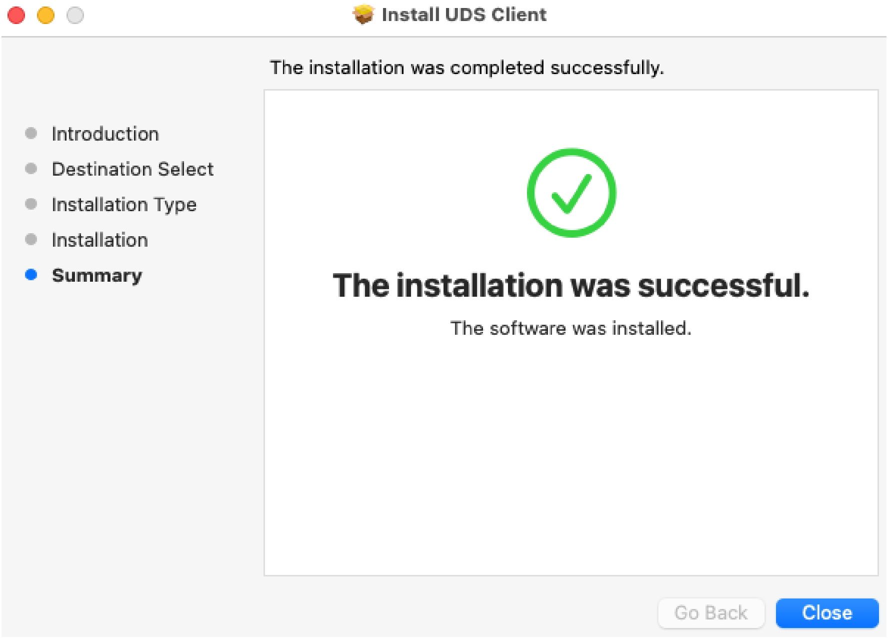
Proceed with the instalation of the UDS Client:



Install UDS Client

Welcome to the UDS Client Installer

You will be guided through the steps necessary to install this software.



The installation was completed successfully.

The installation was successful.

The software was installed.

Once the installation is done, the UDS Client will run the RDP protocol client (it must be previously installed) to make the connection with the requested service.

NOTE: If you access the service with the HTML5 connection type, it will not be necessary to have the UDS Client installed on the connection client computer. The only requirement for this connection is to have a current web browser.

The UDS client can use the RDP clients: FreeRDP or Microsoft Remote Desktop, for more information about its installation and configuration, you can consult the guide: “Enabling RDP connectin from MacOS devices” available in the documentation section of the UDS Enterprise web.

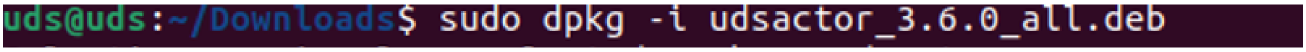
3.2.5.3 Linux

To connect to UDS services from Linux O.S. connection clients, they need to have the UDS Client for the different Linux distributions installed:

- **Debian based distributions:** *udsclient3_3.6.0_all.deb*
- **Red Hat and Suse distributions:** *udsclient3-3.6.0-1.noarch.rpm*

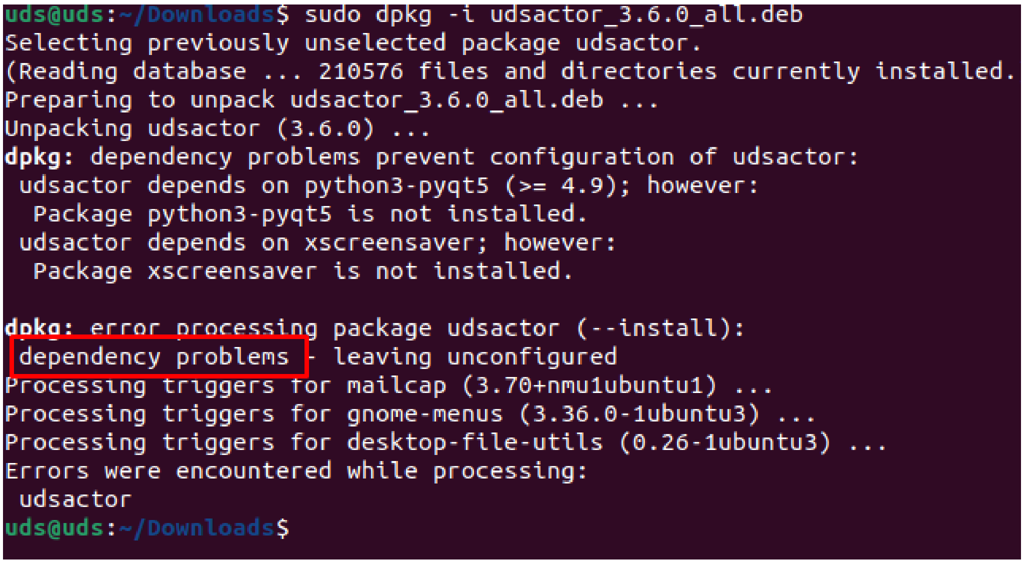
Once the UDS Client for the chosen Linux distribution is downloaded, execute it to proceed with its installation.

It is highly recommended to perform such execution of the Actor via command console:



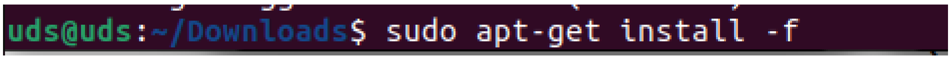
```
uds@uds:~/Downloads$ sudo dpkg -i udsactor_3.6.0_all.deb
```

If you get an error due to lack of dependencies, proceed to install it:

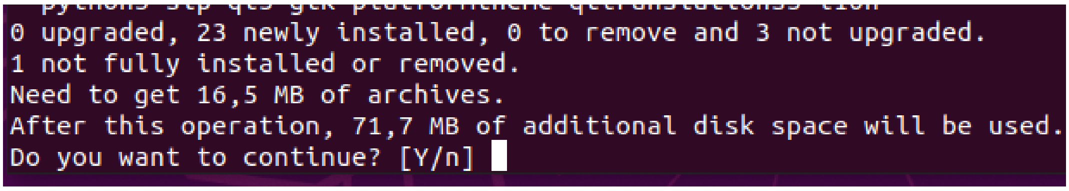


```
uds@uds:~/Downloads$ sudo dpkg -i udsactor_3.6.0_all.deb
Selecting previously unselected package udsactor.
(Reading database ... 210576 files and directories currently installed.
Preparing to unpack udsactor_3.6.0_all.deb ...
Unpacking udsactor (3.6.0) ...
dpkg: dependency problems prevent configuration 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 mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu3) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu3) ...
Errors were encountered while processing:
 udsactor
uds@uds:~/Downloads$
```

Si tenemos problemas de dependencias tendremos que lanzar el siguiente comando:



```
uds@uds:~/Downloads$ sudo apt-get install -f
```



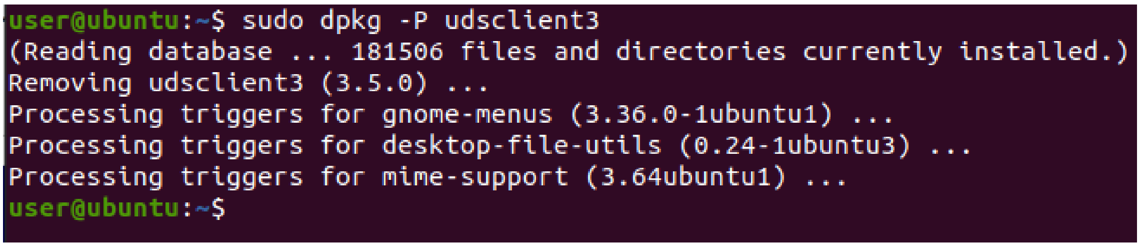
```
0 upgraded, 23 newly installed, 0 to remove and 3 not upgraded.
1 not fully installed or removed.
Need to get 16,5 MB of archives.
After this operation, 71,7 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Once the necessary dependencies are installed, the installation will finish. The UDS Client will execute the selected connection protocol (Transport) and will connect with the requested service.

NOTE: If you access the service with the HTML5 connection type, it will not be necessary to have the UDS Client installed on the connection client computer. The only requirement for this connection is to have a current web browser.

If you need to uninstall the UDS Client, you can do it through the command:

```
dpkg -P udsclient3
```



```
user@ubuntu:~$ sudo dpkg -P udsclient3
(Reading database ... 181506 files and directories currently installed.)
Removing udsclient3 (3.5.0) ...
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) ...
user@ubuntu:~$
```

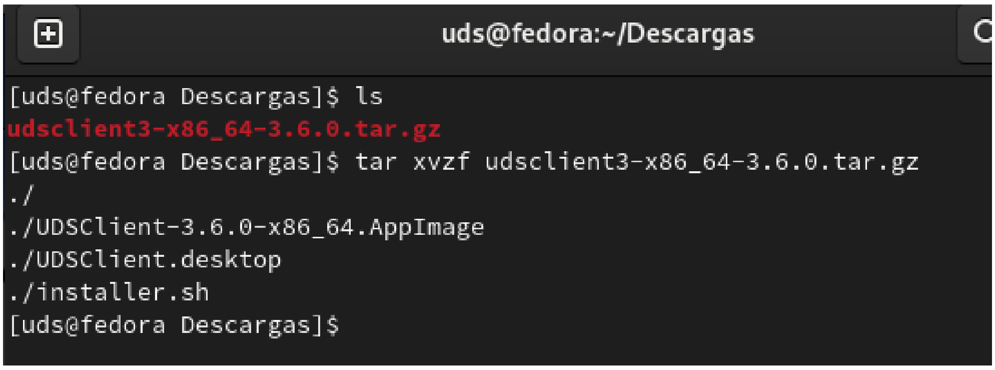
3.2.5.4 Linux AppImage

To connect to UDS services from connection clients with S.O. Linux it is necessary that they have the UDS client installed, this client in its modality "***Self-contained***" generated with AppImage will allow you to also have the UDS client: FreeRDP (version 2.3), the X2Go client and Python (3.8udsclient) without having these elements as a requirement to carry out its installation.

NOTE: This UDS AppImage client can be used in almost any Linux distribution (based on Debian, Red Hat, Suse, etc…).

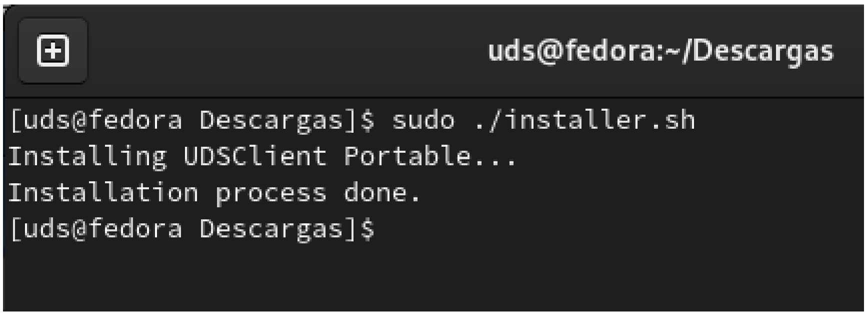
NOTE: To run the appimage client, it will be necessary to have the libfuse2 library installed (libfuse2 for Ubuntu 22, and the corresponding one for the rest of the distributions).

Once the UDS AppImage Client has been downloaded: ***udsclient3-x86_64-3.6.0.tar.gz***, unzip it:



```
[uds@fedora Descargas]$ ls
udsclient3-x86_64-3.6.0.tar.gz
[uds@fedora Descargas]$ tar xvzf udsclient3-x86_64-3.6.0.tar.gz
./
./UDSClient-3.6.0-x86_64.AppImage
./UDSClient.desktop
./installer.sh
[uds@fedora Descargas]$
```

Execute the script with administrator permissions ***installer.sh***



```
[uds@fedora Descargas]$ sudo ./installer.sh
Installing UDSClient Portable...
Installation process done.
[uds@fedora Descargas]$
```

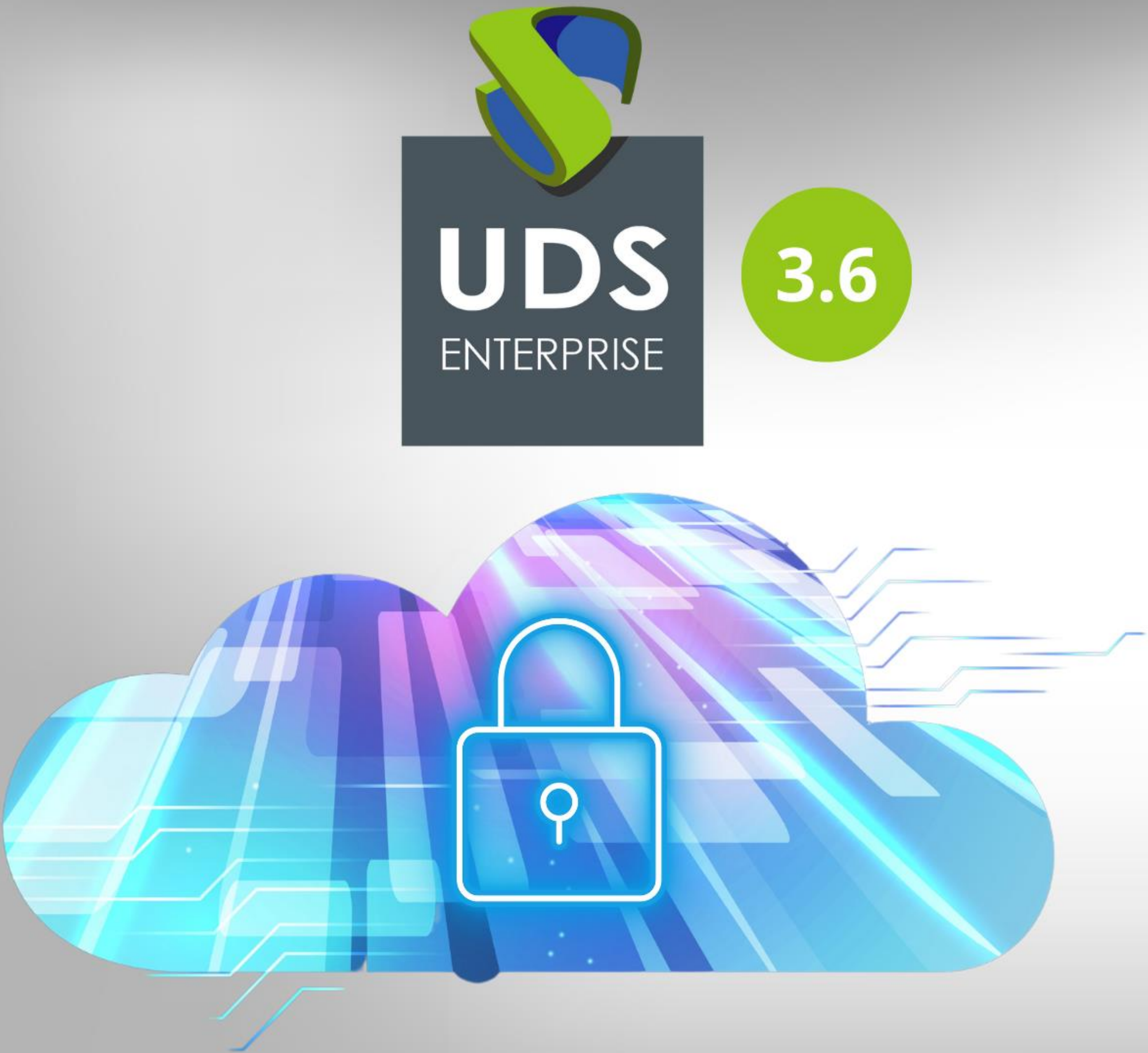
Once the installation of the script is finished, we will be able to connect to Windows virtual desktops and applications via RDP protocol (through the FreeRDP client) and to Linux virtual applications via X2Go client.

NOTE: If you access the service with the HTML5 connection type, it will not be necessary tohave the UDS Client installed on the connection client computer. The only requirementfor this connection is to have a current web browser

Once the execution of the script is finished, we can delete the files resulting from decompressing the UDS AppImage

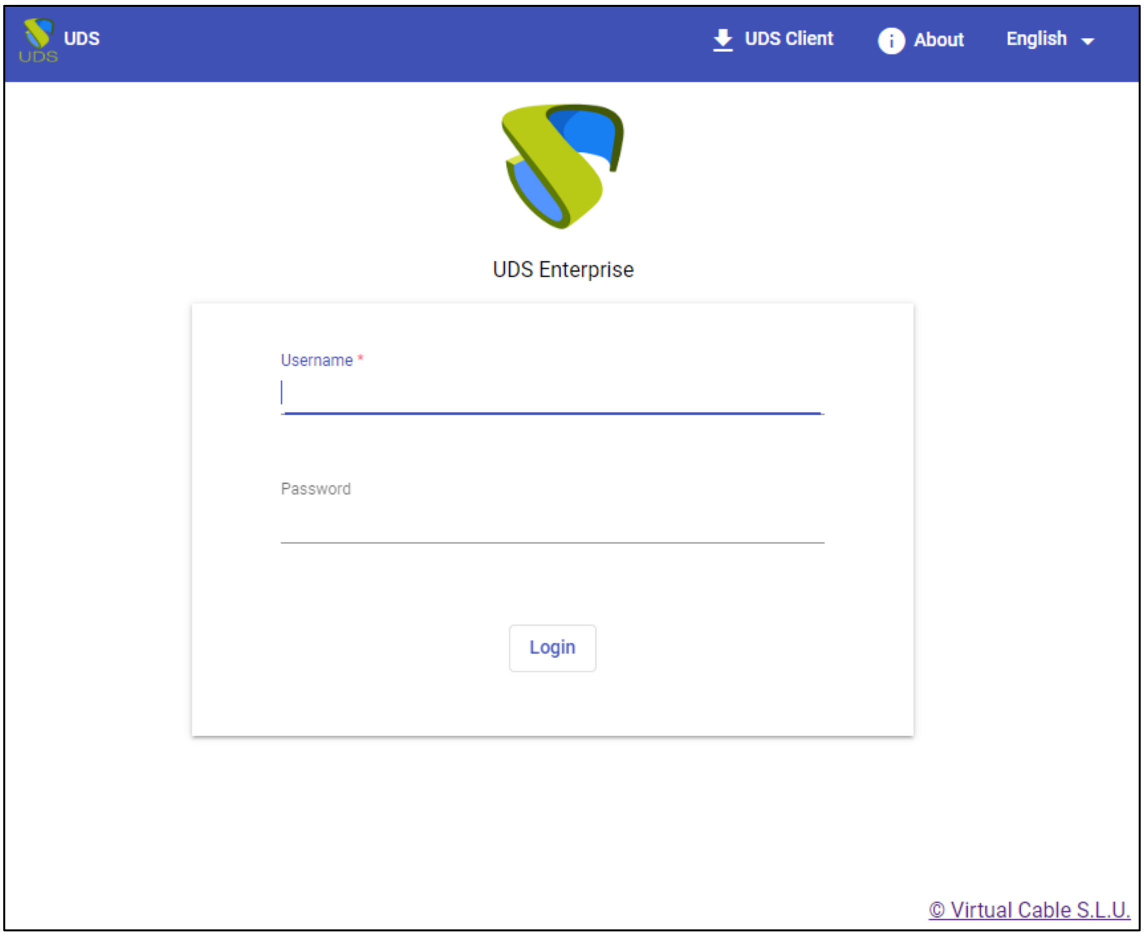
VIRTUAL
CABLE

UDS Enterprise 3.6 Installation, administration and user guide



4 MANAGING UDS ENTERPRISE

Once the UDS platform components are installed, the system is ready to start its configuration. Enter the IP address or UDS Server name (Broker) through http or https access.



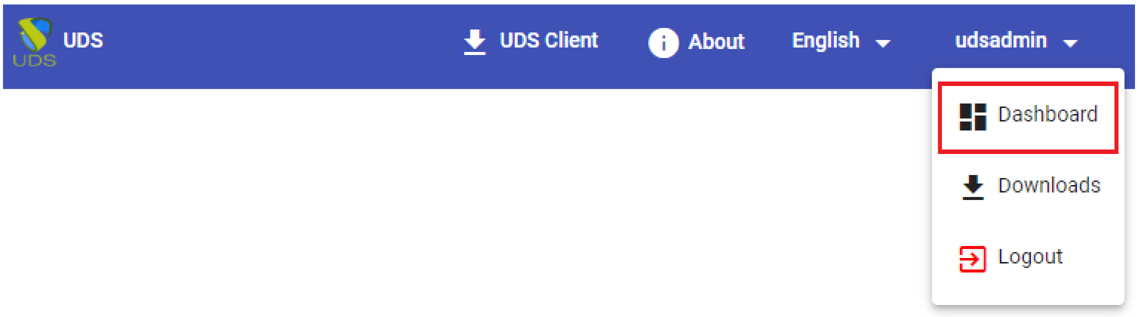
The first time you enter UDS administration dashboard, you must enter using the administrator user and the password indicated in the UDS Broker virtual appliance configuration script.

Once you access the administration dashboard, you will be able to change the password and create or select new users to enter the administration dashboard.

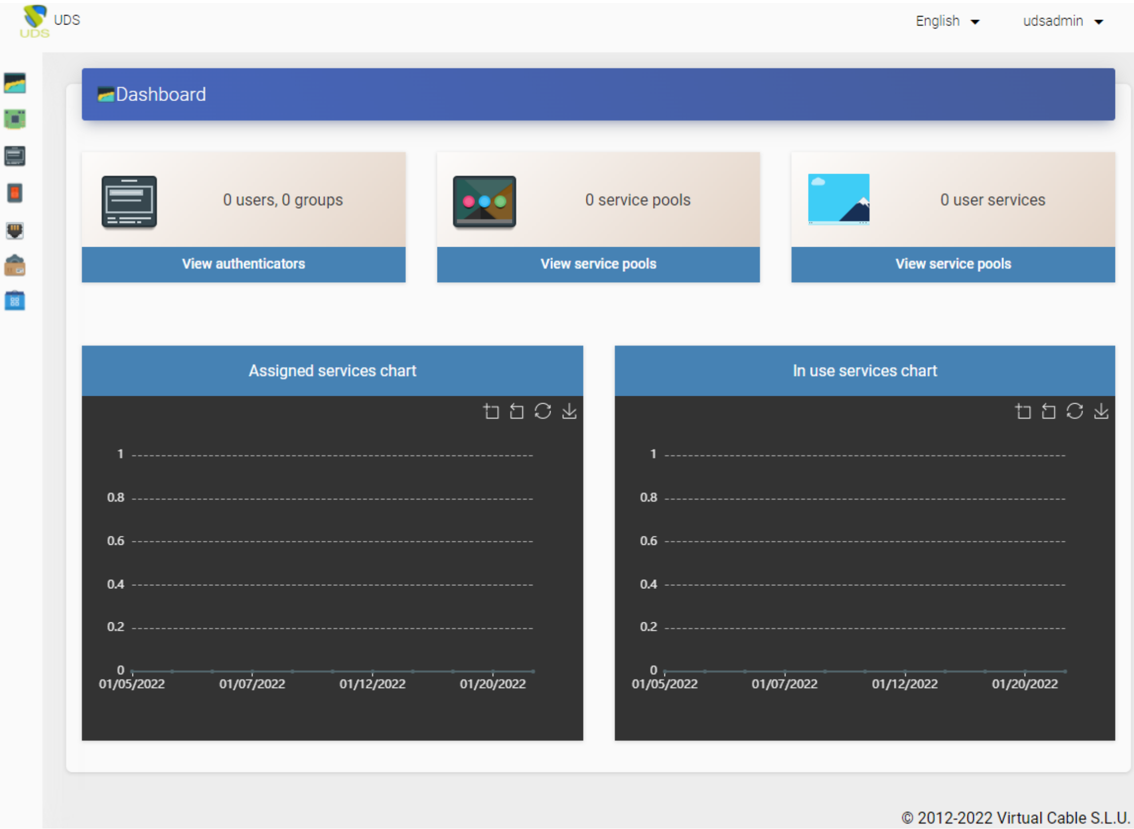
In the case that you already have a user with administration permissions in the UDS platform, indicate the user, the password, and select the authenticator that the user will validate with (only in case of having more than one authenticator).

If more than one authenticator is connected to UDS platform and you would like to access the administration dashboard with the administrator user and the password indicated in the configuration script of the UDS Broker virtual appliance the selected authenticator won't be used, because this user won't be validated against any authenticator.

In the user menu, select "***Dashboard"*** to enter UDS administration:



Once inside the UDS administration, the initial configuration of the components that will form a "***Service Pool***", is carried out. It will allow the deployment and connection of the different services supported by UDS (virtual desktops, virtual application sessions, etc…)



The configuration of each "***Services Pool***" " must be approached like the building of a puzzle:

- Each "***Services Pool***" is made up of different elements or pieces: “***Base Services***”, “***OS Managers***”, “***Transports***” y “***Authenticators***”

- Once the elements of the first "***Services Pool***" have been configured, the creation thereof will begin, repeating the process with the next "***Services Pool***" if there is one

- The sum of the "***Services Pool*** already configured will make up the type of deployment of the desktops and virtual applications managed by the UDS platform

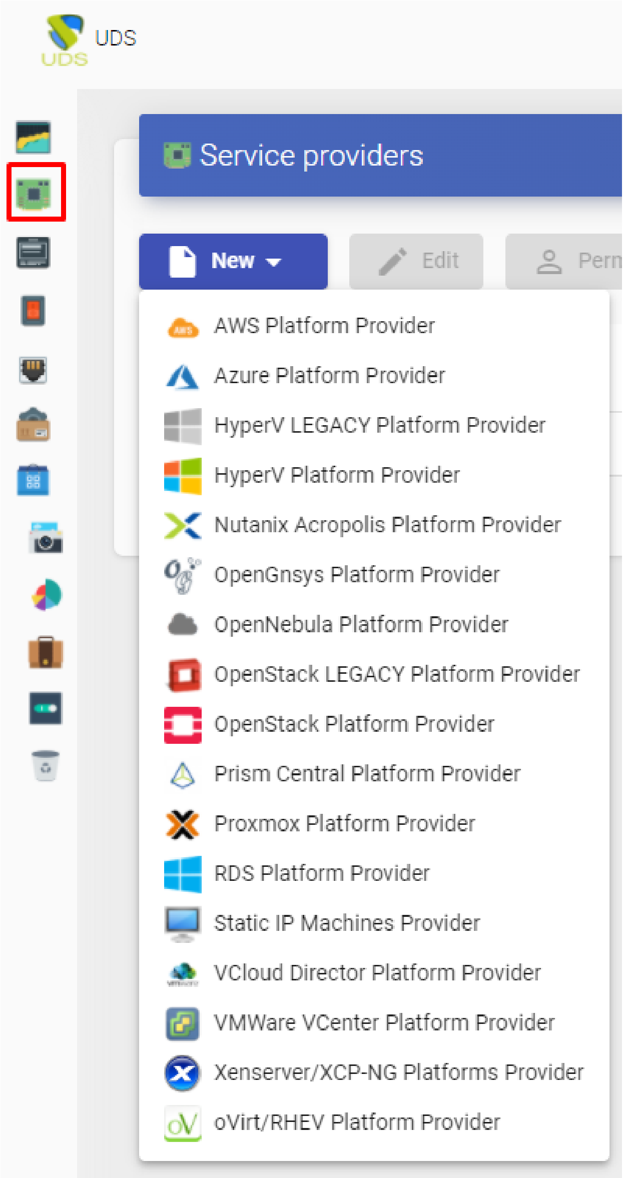
4.1 Service Providers

A “*Service Providers*” is responsible for providing IP services.

The services offered by UDS will be on-demand virtual desktops or applications provided by a virtualization platform or persistent physical/virtual desktops assigned to specific users via IPs assignment.

In order to build a “*Service Pool*” and publish virtual desktops and applications, it is necessary to have created at least one “*Service Providers*”, UDS supports multiple “*Service Providers*” ” to run simultaneously.

Currently, UDS supports the following “*Service Providers*”:



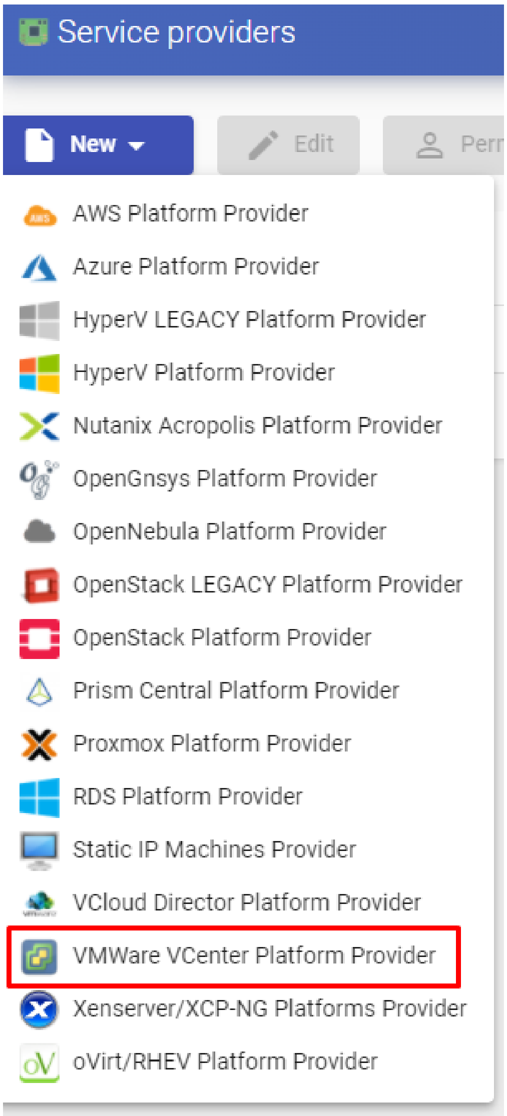
- AWS Platform Provider
- Azure Platform Provider
- HyperV LEGACY Platform Provider
- HyperV Platform Provider
- Nutanix Acropolis Platform Provider
- OpenGnsys Platform Provider
- OpenNebula Platform Provider
- OpenStack LEGACY Platform Provider
- OpenStack Platform Provider
- Prism Central Platform Provider
- Proxmox Platform Provider
- RDS Platform Provider
- Static IP Machines Provider
- VCloud Director Platform Provider
- VMWare VCenter Platform Provider
- Xenserver/XCP-NG Platforms Provider
- oVirt/RHEV Platform Provider

4.1.1 VDI Platform with VMware vSphere

Deployment of UDS self-generated virtual desktops on a VMware vSphere virtualization infrastructure.

4.1.1.1 Register a Service provider “VMware vCenter Platform Provider”

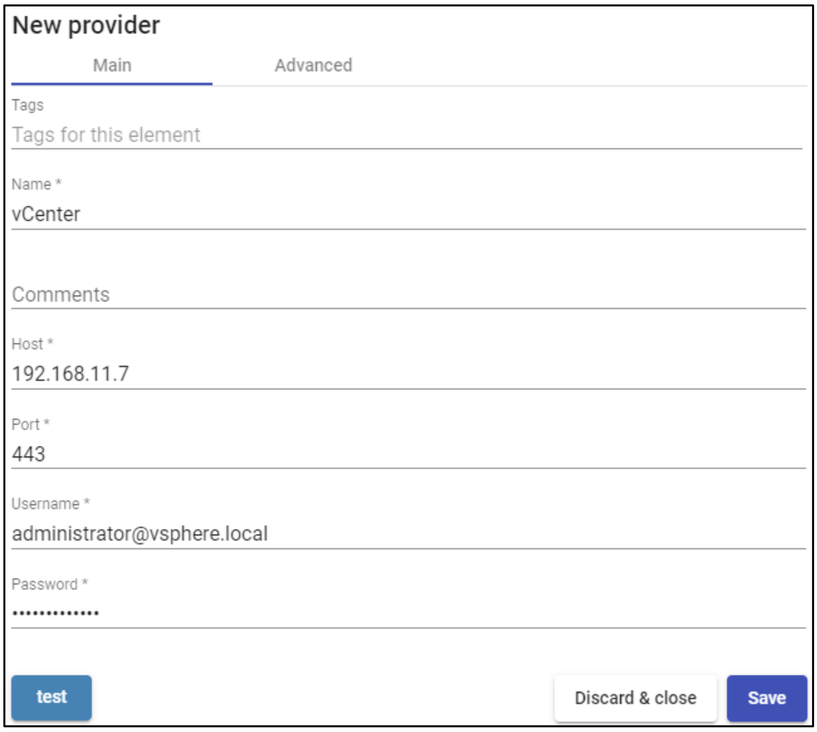
Click on “***New***” and select “***VMware vCenter Platform Provider***”:


Service providers
New
Edit
Perr
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

In a “*VMware vCenter Platform Provider*” the minimum parameters to configure are:

- Main:

Service provider name, vCenter server IP (field “*Host*”), Center connection port, and a username and password with administration rights on the vCenter.



New provider

Main | Advanced

Tags: Tags for this element

Name *: vCenter

Comments

Host *: 192.168.11.7

Port *: 443

Username *: administrator@vsphere.local

Password *: ••••••••••••••

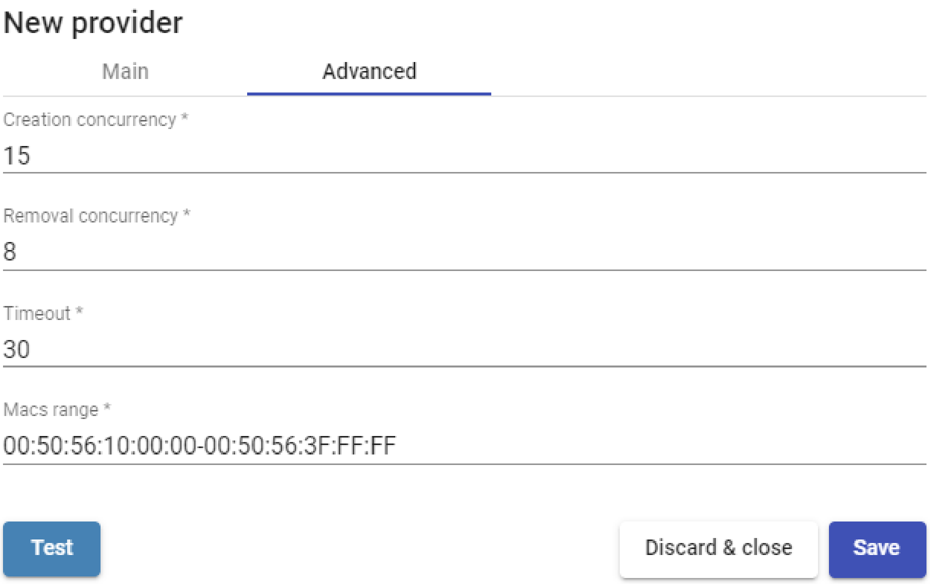
- Advanced:

Creation concurrency. The number of simultaneous desktop creation tasks.

Removal concurrency. The number of simultaneous desktop removal tasks.

Timeout. “*Timeout*” " for the connection with vCenter.

Macs range. Range of MAC addresses used by UDS for the creation of virtual desktops.



New provider

Main | Advanced

Creation concurrency *
15

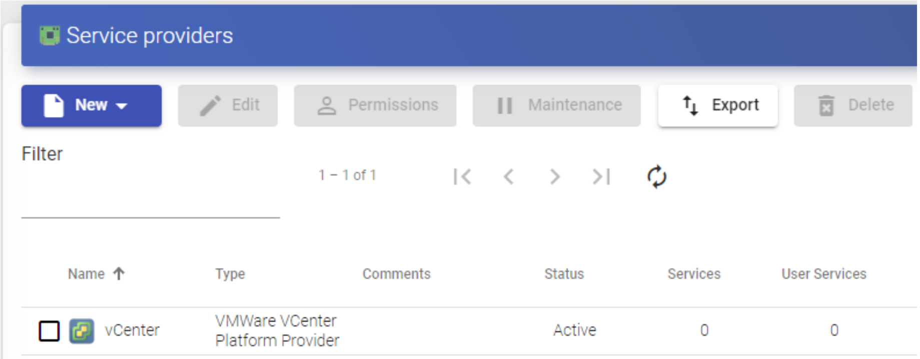
Removal concurrency *
8

Timeout *
30

Macs range *
00:50:56:10:00:00-00:50:56:3F:FF:FF

Through the button “*Test*” you can test and make sure the connection is successful.

Save the configuration and you will have a valid "***Service Providers***" to start registering base services of the VMware vSphere platform.



Service providers

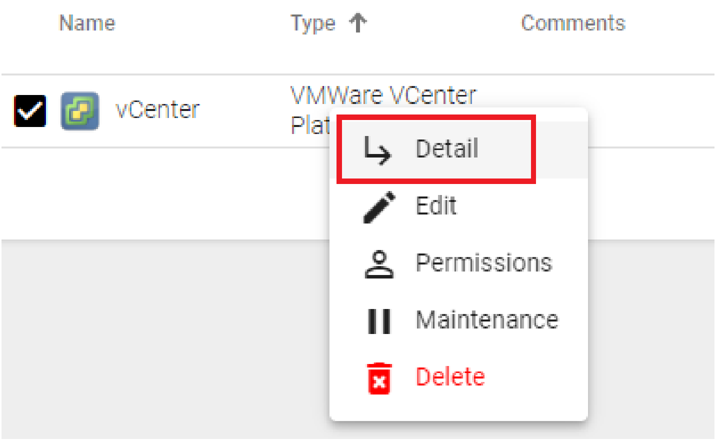
	Name	Type	Comments	Status	Services	User Services
□	vCenter	VMWare VCenter Platform Provider		Active	0	0

NOTE:
If we have several VMware vSphere platforms managed by different vCenter servers, we can register all the "**Service Providers**" of the type “**VMware vCenter Platform Provider**” that we need.

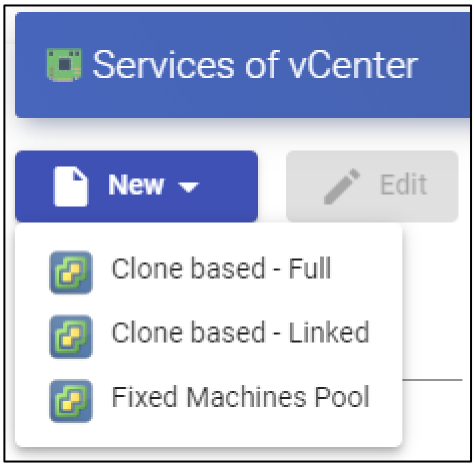
In order to modify any parameter in an already existing “***Service Providers***” select it and click on “***Edit***”.

Through the button “***Enter Maintenance Mode***” you can suspend all the operations issued by UDS Broker for a given service provider. It is recommended to put your service provider in maintenance mode in case the connection to this latter has been lost or for a maintenance stop.

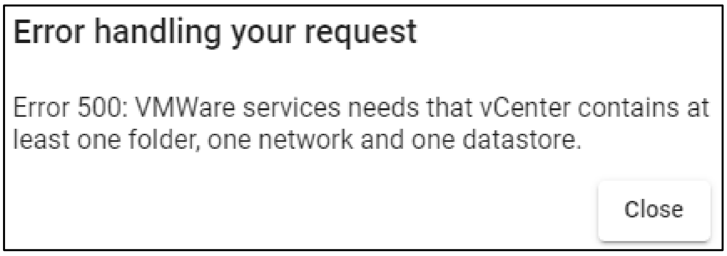
Once the VMware vSphere platform is integrated into UDS, different types of base services can be created. To do this, double click on the service provider created select "*Detail*" in the provider menu:



You will have the following types of base services:



NOTE:
To create any of the base services supported by UDS, you will need to have at least one network to connect virtual machines, a datastore to store the publications and desktops, and a folder in the "VMs and Templates" view. If you don't have any of these elements, you will get the following error:



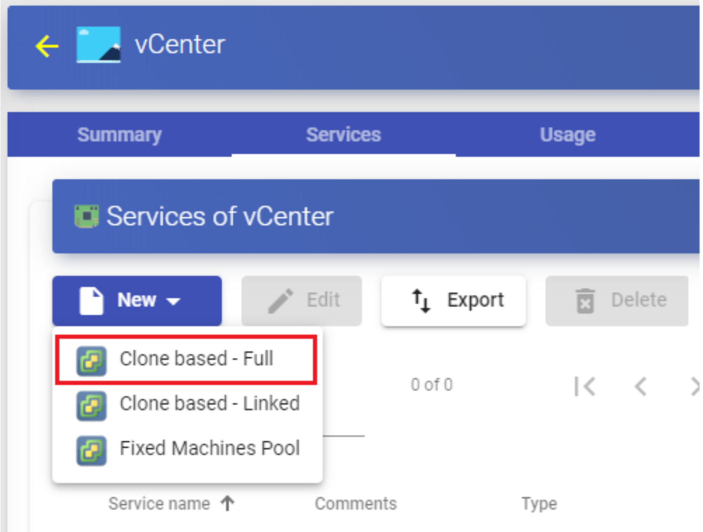
Error handling your request

Error 500: VMWare services needs that vCenter contains at least one folder, one network and one datastore.

4.1.1.2 Configure a Service based on “Clone based - Full”

This type of service will create, within the virtual infrastructure, complete virtual desktops independent of the active publication.

To create base services of type "***Clone based - Full***" access the“***Service Providers***”, select the “***Services***” tab, click on “***New***” and select “***Clone based – Full***”.



In a "Clone based - Full" minimal parameters to be configured are:

- Main:

Name: Service name.

Datacenter: Datacenter of the VMware vSphere environment to host the service.

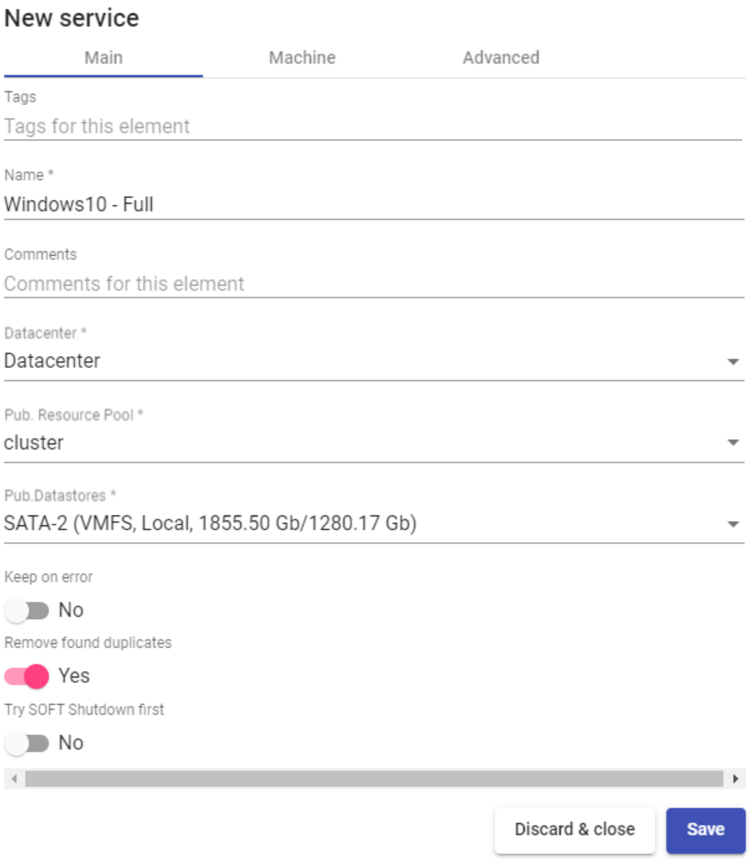
Pub. Resource Pool: vCenter resource pool where the publications and virtual desktops will be hosted (if Pools are not available in the VMware infrastructure, they will be created in the root).

Pub. Datastores: Location where the service publication will be stored. You can select one, several or all the available datastores. In case of selecting several, the system will always locate the new publications in the datastore that has more free space.

Keep on error: When activated, the system ignores all service access errors.

Remove found duplicates: If this option is activated (default value), when UDS finds a virtual desktop with the same name (and generated by UDS) as the desktop you are about to create, it will delete it (its use is recommended to avoid the existence of “lost” VMs” In the vCenter inventory).

Try SOFT Shutdown first: When activated, the system will attempt to perform a “Soft” shutdown in the O.S. of the virtual desktop.



New service

Tags: Tags for this element

Name *: Windows10 - Full

Comments: Comments for this element

Datacenter *: Datacenter

Pub. Resource Pool *: cluster

Pub.Datastores *: SATA-2 (VMFS, Local, 1855.50 Gb/1280.17 Gb)

Keep on error: No

Remove found duplicates: Yes

Try SOFT Shutdown first: No

- Machine:

Resource Pool: vCenter resources pool where the virtual machine template (Gold Image) to be used by the service is located..

Base Machine: Virtual machine template (Gold Image) used by the UDS system for deploying the virtual desktops.

Memory: Amount of memory in Mb to be assigned to the virtual Full Clones generated.

Main Network: UDS Actor communication network with the UDS Server. It will also define the network interface to modify in the generated virtual desktops.

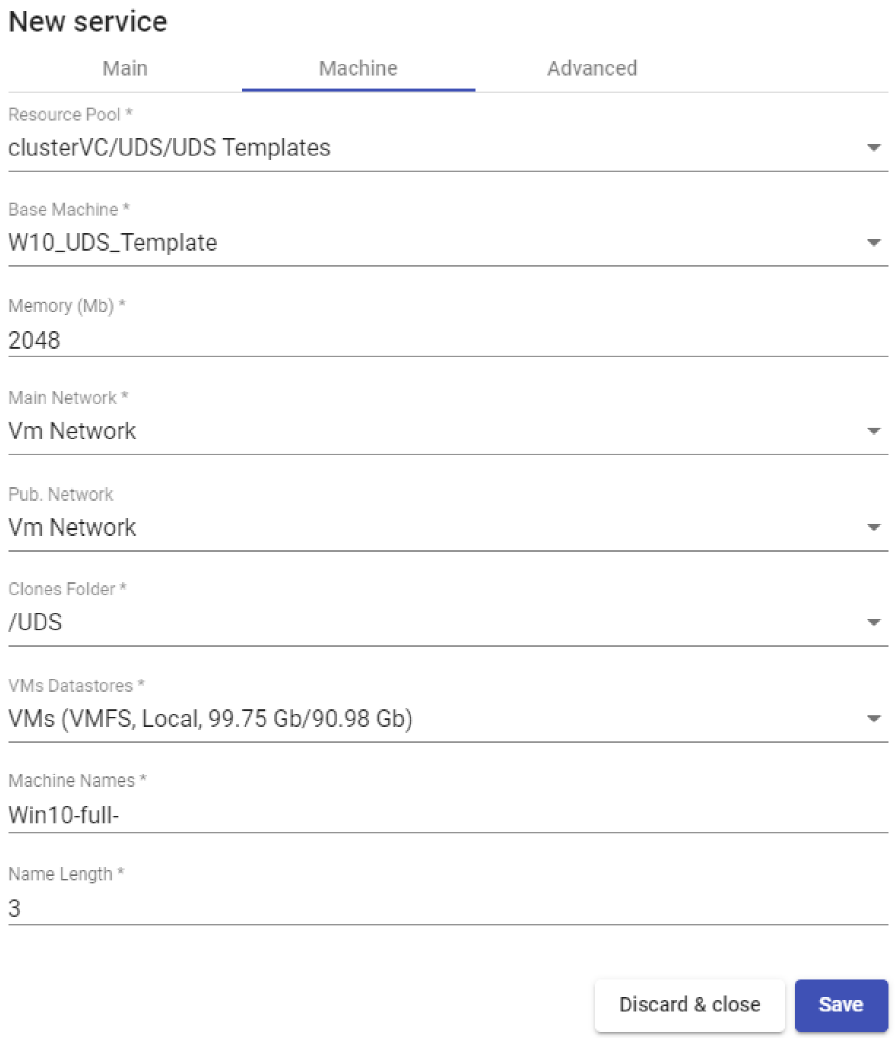
Pub. Network: Network where virtual desktops will connect.

Clones Folder: Folder where the new virtual desktops will be registered in the "VMs and Templates" view of vCenter.

VMs Datastores: Location where the generated virtual desktops will be stored. You can select one, several or all the datastores. In case of selecting several, the system will always locate the new virtual desktops in the datastore that has more free space.

Machine Names: Root name of all the Full Clones virtual desktops to be deployed on this service. (eg: Machine Names= Win10-full-).

Name Length: Number of digits of the counter attached to the root of the desktops name (ex: Name Length = 3. The final name of the generated desktops would be: Win10-full-**000**, Win10-full-**001** ... Win10-full-**999**).


New service

Resource Pool *
clusterVC/UDS/UDS Templates

Base Machine *
W10_UDS_Template

Memory (Mb) *
2048

Main Network *
Vm Network

Pub. Network
Vm Network

Clones Folder *
/UDS

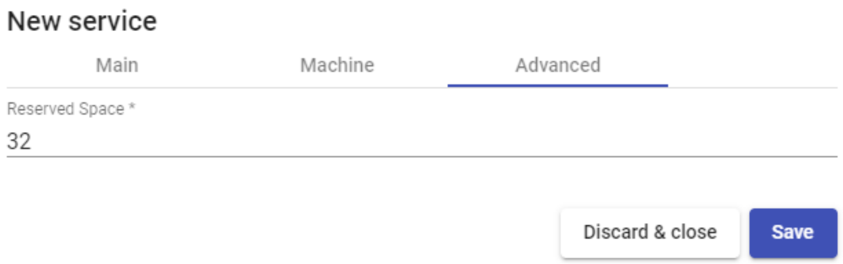
VMs Datastores *
VMs (VMFS, Local, 99.75 Gb/90.98 Gb)

Machine Names *
Win10-full-

Name Length *
3

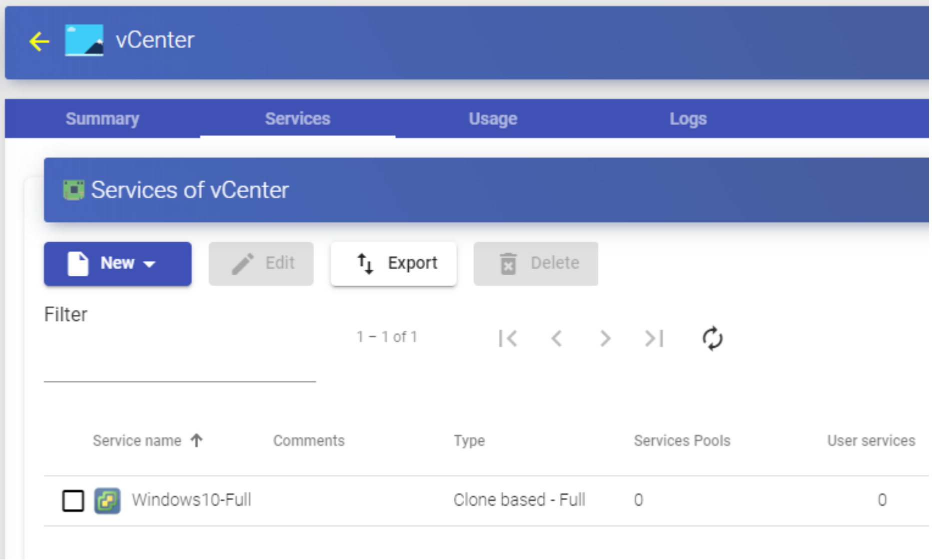
- Advanced:

Reserved Space: When in a datastore there is less free space than indicated in this parameter (in GB), UDS will not use it to host publications or virtual desktops.


New service

Reserved Space *
32

Save the configuration and you will have a valid"***Clone based - Full***" on the VMware vCenter platform. You can register all the services of the type"***Clone based - Full*** that you need.

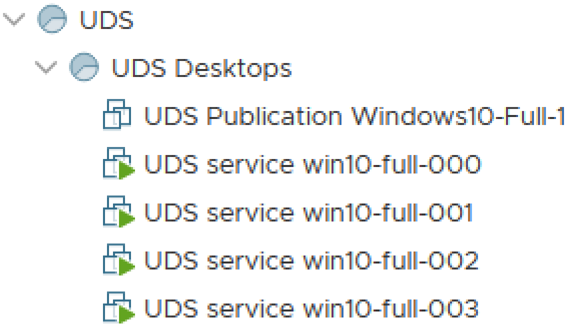


Service name	Comments	Type	Services Pools	User services
□ Windows10-Full		Clone based - Full	0	0

Once the full UDS environment has been configured (Services, Authenticators, OS Managers y Transports) and the first “***Service Pool***”, you will be able to observe how the virtual desktops based on VMware Linked Clones are deployed on the vCenter server.

The first task that the vCenter will perform will be to create a base machine (this machine will be created each time you make a publication of a service) which will be a clone of the template selected when registering the service, with a hard drive size and features equal to those of said template.

Once the cloning process of the base machine is finished (the UDS system names it as: "UDS Publication *nombre_pool*-*número_publicación*”) he virtual desktops are automatically created in vCenter (the system names them as: “UDS service *Machine_Name*+*Name_Length*”) based on the cache parameters configured in the “***Service Pools***”.

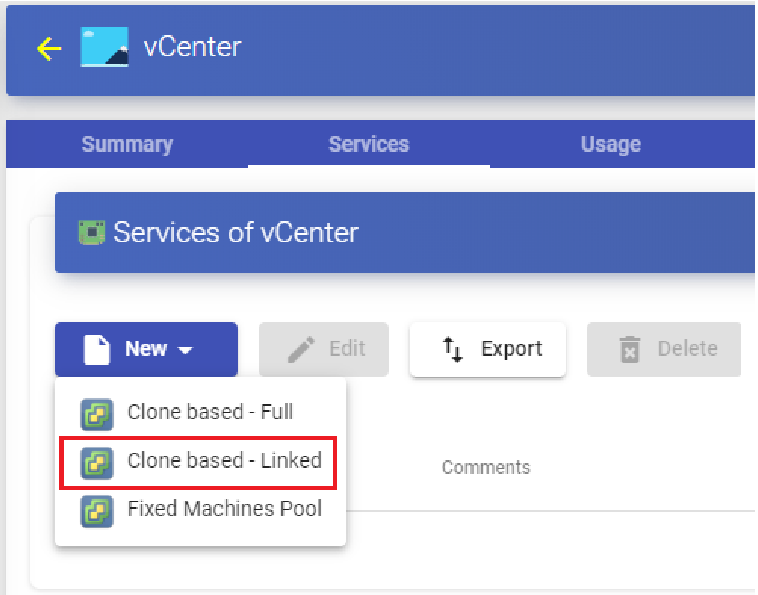

UDS
UDS Desktops
UDS Publication Windows10-Full-1
UDS service win10-full-000
UDS service win10-full-001
UDS service win10-full-002
UDS service win10-full-003

NOTE:
The disk space that the virtual desktops (“Full Clones”) will occupy will be the same as that of the template machine.

4.1.1.3 Configure a Service based on “Clone based – Linked”

This type of service will create, within the virtual infrastructure, virtual desktops in Linked Clone mode depending on the active publication.

To create base services of type “***Clone based – Linked***” access the “***Service Providers***” section, select the “***Services***”tab, click on “***New***” y select "***Clone based -Linked***".



In a "Clone based - Linked", the minimal parameters to be configured are:

- Main:

Name: Service name.

Datacenter: Datacenter of the VMware vSphere environment to host the service.

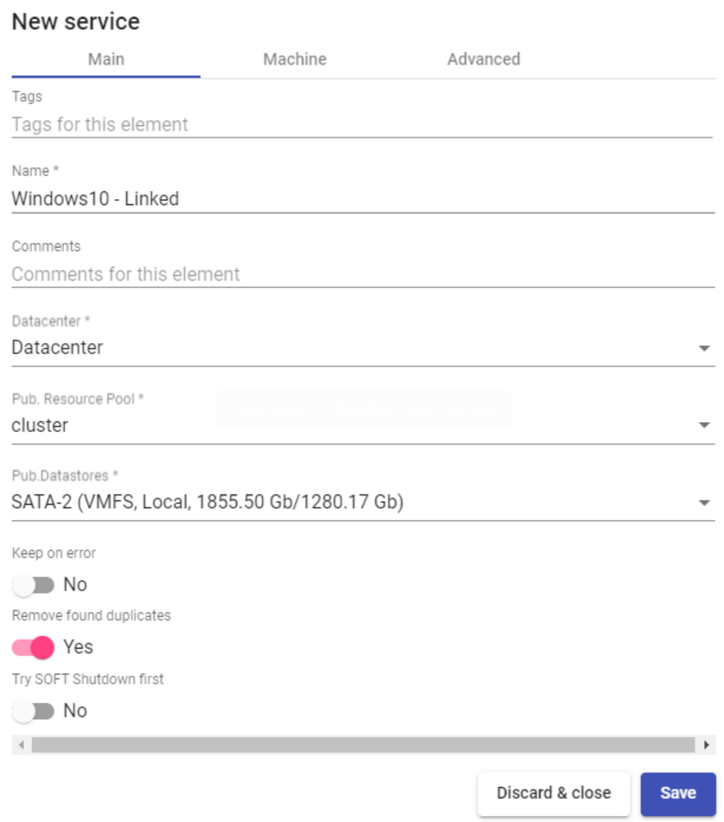
Pub. Resource Pool: vCenter resource pool where the publications and virtual desktops will be hosted (if Pools are not available in the VMware infrastructure, they will be created at the root).

Pub. Datastores: Location where the service publication will be stored. You can select one, several or all the available datastores. In case of selecting several, the system will always locate the new publications in the datastore that has more free space.

Keep on error: When activated, the system ignores all service access errors.

Remove found duplicates: If this option is activated (default value), when UDS finds a virtual desktop with the same name (and generated by UDS) as the desktop you are about to create, it will delete it (its use is recommended to avoid the existence of “lost” VMs In the vCenter inventory).

Try SOFT Shutdown first: When activated, the system will attempt to perform a “Soft” shutdown in the O.S. of the virtual desktop.



New service

Tags
Tags for this element

Name *
Windows10 - Linked

Comments
Comments for this element

Datacenter *
Datacenter

Pub. Resource Pool *
cluster

Pub.Datastores *
SATA-2 (VMFS, Local, 1855.50 Gb/1280.17 Gb)

Keep on error
No

Remove found duplicates
Yes

Try SOFT Shutdown first
No

- Machine:

Resource Pool: vCenter resources pool where the virtual machine template (Gold Image) to be used by the service is located.

Base Machine: Virtual machine template (Gold Image) used by the UDS system for deploying the virtual desktops.

Memory: Amount of memory in Mb to be assigned to the Full Clones virtual generated.

Main Network: UDS Actor communication network with the UDS Server.

Pub. Network: Network where virtual desktops will connec.

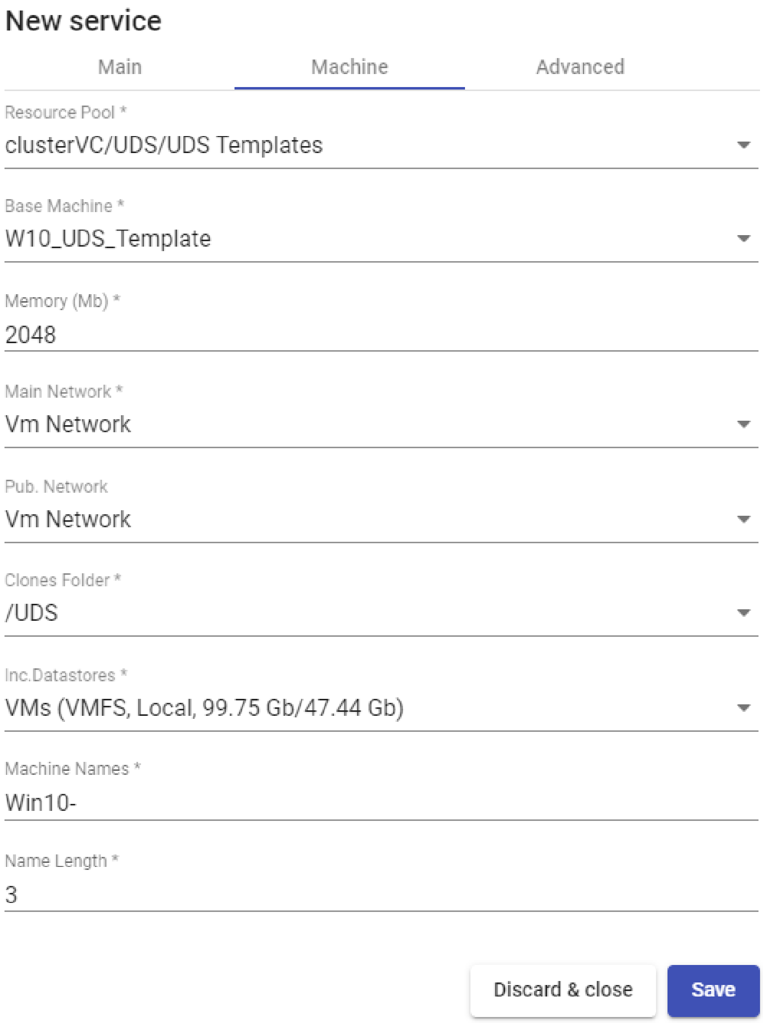
Clones Folder: Folder where the new virtual desktops will be registered in the "VMs and Templates" view of vCenter.

VMs Datastores: Location where the generated virtual desktops will be stored. You can select one, several or all the datastores. In case of selecting several, the system will always locate the new virtual desktops in the datastore that has more free space.

Machine Names: Root name of all of the Linked Clones virtual desktops to be deployed on this service. (eg: Machine Names= Win10-)

Name Length: Number of digits of the counter attached to the root of the desktops name (ex: Name Length = 3. The final name of the generated desktops would be:

Win10-**000**, Win10-**001** ... Win10-**999**)



New service

Resource Pool *
clusterVC/UDS/UDS Templates

Base Machine *
W10_UDS_Template

Memory (Mb) *
2048

Main Network *
Vm Network

Pub. Network
Vm Network

Clones Folder *
/UDS

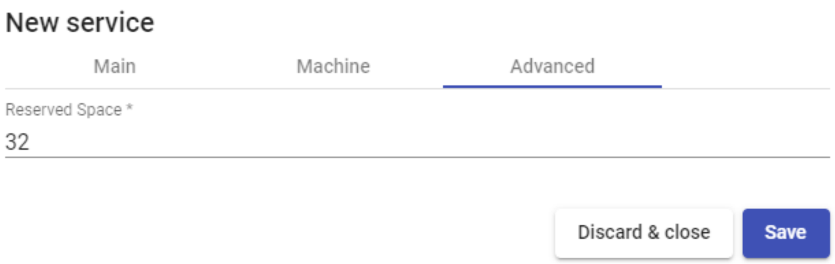
Inc.Datastores *
VMs (VMFS, Local, 99.75 Gb/47.44 Gb)

Machine Names *
Win10-

Name Length *
3

- Advanced:

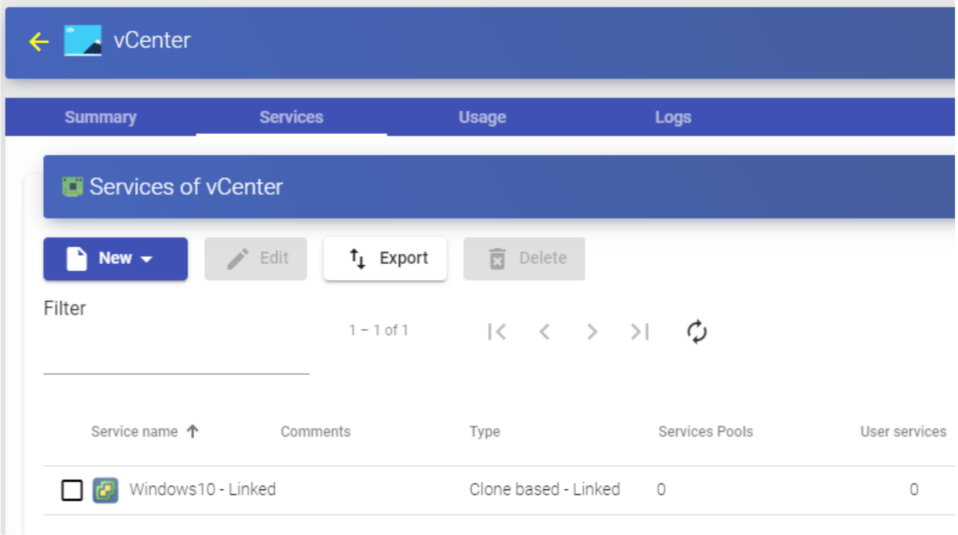
Reserved Space: When in a datastore there is less free space than indicated in this parameter (in GB), UDS will not use it to host publications or virtual desktops



New service

Reserved Space *
32

When saving this configuration, you'll already have a valid "***Clone based - Linked***" " in the VMware vCenter platform. You can register all "***Clone based - Linked***" that you need in the UDS platform.

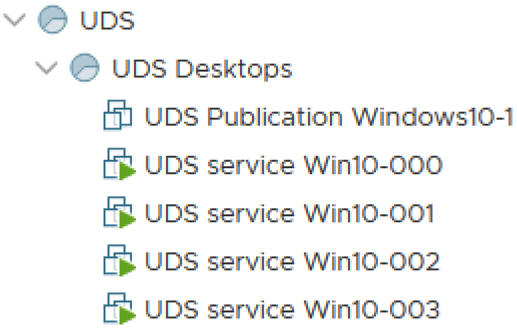


Service name	Comments	Type	Services Pools	User services
□ Windows10 - Linked		Clone based - Linked	0	0

Once the full UDS environment has been configured (Services, Authenticators, OS Managers and Transports) and the first "***Service Pool***", has been created, you will be able to observe how the virtual desktops based on VMware Linked Clones are deployed on the vCenter server.

The first task that the vCenter will perform will be to create a base machine (this machine will be created each time you make a publication of a service), which will be a clone of the template selected when registering the service, with a hard drive size and features equal to those of said template.

Once the cloning process of the base machine is finished (the UDS system names it as: "UDS Publication *nombre_pool*-*número_publicación*") the virtual desktops are automatically created in vCenter (the UDS system names them as: "UDS service *Machine_Name*+*Name_Length*") based on the cache parameters configured in the "***Service Pools***".



UDS
UDS Desktops
UDS Publication Windows10-1
UDS service Win10-000
UDS service Win10-001
UDS service Win10-002
UDS service Win10-003

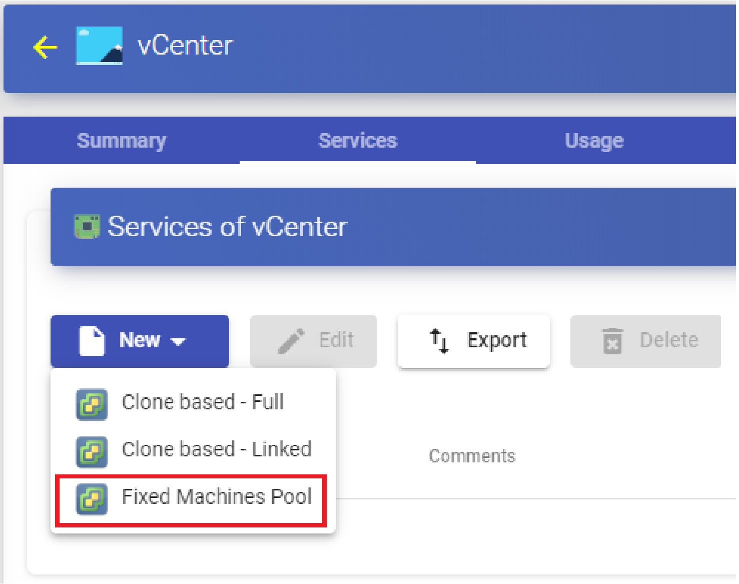
NOTE:
The disk space occupied by the virtual dektops ("Linked Clones") will be exclusively the one occupied by the modifications made by the users on the machines after their

initial connection.

4.1.1.4 Configure a Service based on "Fixed Machines Pool"

This type of service will allow direct connection of users to existing virtual machines in a VMware vSphere environment pool.

To create base services of type "***Fixed Machines Pool***" access the "***Service Providers***", section, select the "***Services***",tab, click on "***New***" y and select "***Fixed Machines Pool***".



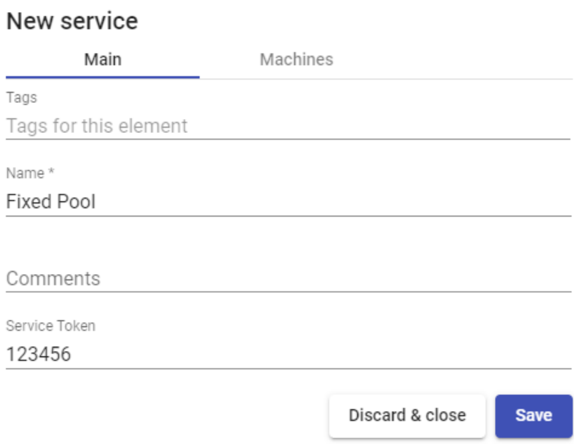
In a "Fixed Machines Pool" minimal parameters to be configured are:

- Main:

Name: Service name.

Service Token: If it is required that UDS recognizes the "***login***" and the "***logout***" of a user who accesses a service of this type (so that when a "***logout***" UDS automatically releases the machine and makes it available to another user) it will be necessary to fill this field with alphanumeric characters. If the field is left empty, UDS will permanently assign the machine to a user (until an administrator manually releases the service).

NOTE:
If the "**Service Token**" field is filled in, on the machines selected for the connection it will be necessary to have the UDS Actor "**UDSActorUnmanagedSetup-x.x.x.exe**" installed and, in its configuration, you need to indicate those same characters in the "**Service Token**" field.



New service

Tags: Tags for this element

Name *: Fixed Pool

Comments

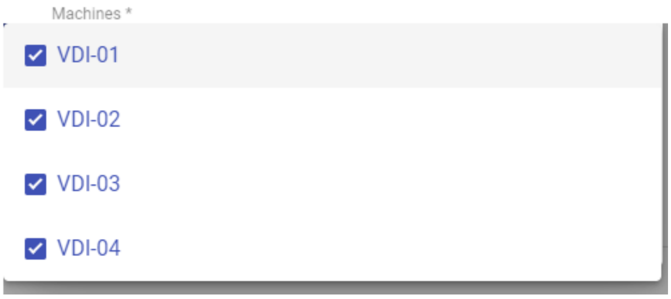
Service Token: 123456

- Machine:

Datacenter: Datacenter of the vSphere environment where the virtual machines that we want to manage and assign to users are hosted.

Resource Pool: Resource pool where the virtual machines that we want to manage and assign to users are located.

Machines: Virtual machines existing in the resource pool indicated above that will be managed by UDS and to which access can be provided to different users. You can selectively choose the machines:



Machines *

☑ VDI-01

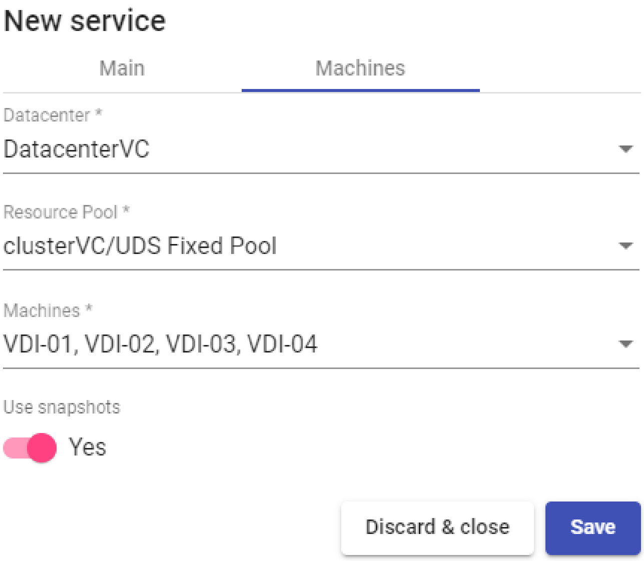
☑ VDI-02

☑ VDI-03

☑ VDI-04

Use Snapshots: If this parameter is enabled, UDS will create a snapshot on the virtual machine before the user connects. Once its assignment is removed (by automatic detection of user logout or manual deletion by an administrator) the snapshot will be recovered so that the machine is in the same state it was before the user connection. If this parameter is not activated, UDS will not recover any previous state of the machinewhen the assignment to a user is removed.

NOTE:
If the option "**Use Snapshots**" is activated and the virtual machine already has a snapshot, UDS will not perform any additional snapshot and will recover the existing one.


New service

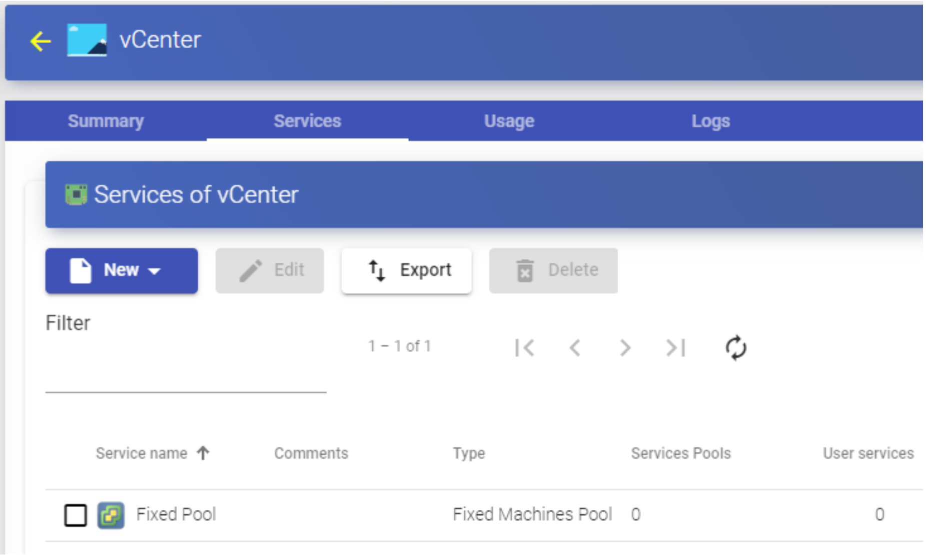
Datacenter *
DatacenterVC

Resource Pool *
clusterVC/UDS Fixed Pool

Machines *
VDI-01, VDI-02, VDI-03, VDI-04

Use snapshots
Yes

Save the configuration you will have a valid "***Fixed Machines Pool***" on the VMware vCenter platform. You will be able to register all the "***Fixed Machines Pool***" services that you need

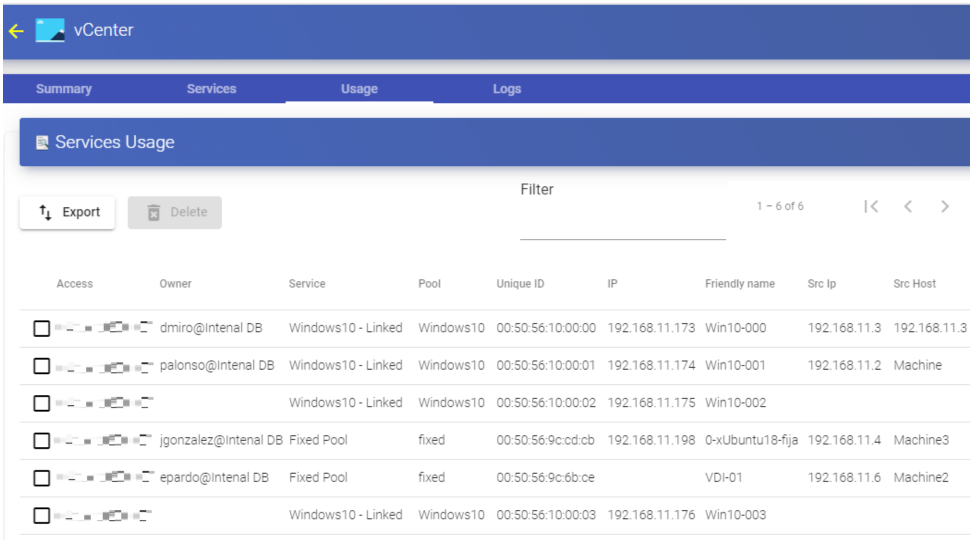


Service name	Comments	Type	Services Pools	User services
□ Fixed Pool		Fixed Machines Pool	0	0

4.1.1.5 Summary of the Service usage and error logs

Within a "***Service Provider***" you will have a tab called "***Usage***" that will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this "***Service Provider***".

To access this information on the use of services, access the "***Service Providers***" " and select "***Usage***":



	Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□	[illegible]	dmiro@Intenal DB	Windows10 - Linked	Windows10	00:50:56:10:00:00	192.168.11.173	Win10-000	192.168.11.3	192.168.11.3
□	[illegible]	palonso@Intenal DB	Windows10 - Linked	Windows10	00:50:56:10:00:01	192.168.11.174	Win10-001	192.168.11.2	Machine
□	[illegible]		Windows10 - Linked	Windows10	00:50:56:10:00:02	192.168.11.175	Win10-002		
□	[illegible]	jgonzalez@Intenal DB	Fixed Pool	fixed	00:50:56:9c:cd:cb	192.168.11.198	0-xUbuntu18-fija	192.168.11.4	Machine3
□	[illegible]	epardo@Intenal DB	Fixed Pool	fixed	00:50:56:9c:6b:ce		VDI-01	192.168.11.6	Machine2
□	[illegible]		Windows10 - Linked	Windows10	00:50:56:10:00:03	192.168.11.176	Win10-003		

You will see:

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator. If it appears empty, it means that the service has not been assigned to any user and is available in the cache.

Service: Name of the base service belonging to the "Service Provider" from which the service was generated.

Pool: Name of the "***Service Pools***" to which the service belongs.

Unique ID: Dirección MAC del servicio.

IP: IP address of the service.

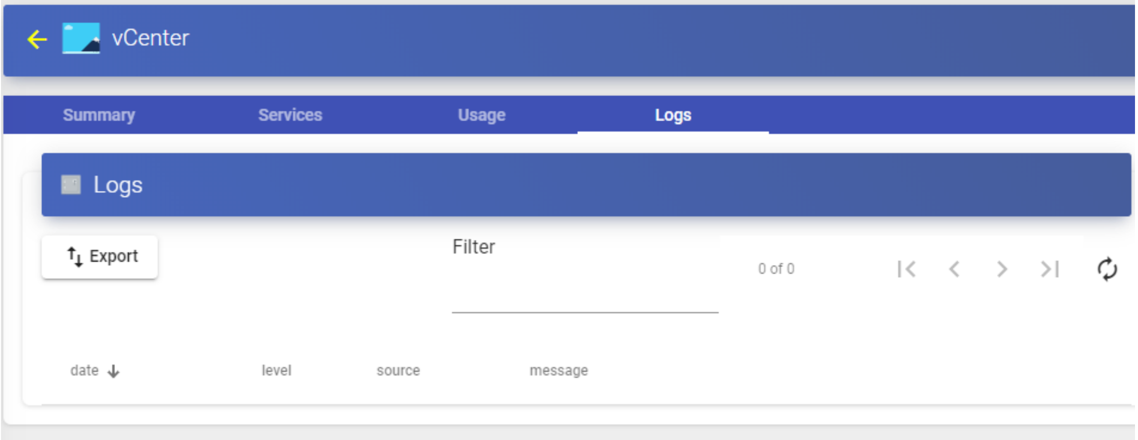
Friendly name: Name of the service. In the base services "***Clone based – Full***" and "***Clone base – Linked***" it will also be the DNS name of the virtual machine selfgenerated by UDS.

Src Ip: IP address of the connection client accessing the service.

Src Host: DNS name of the connection client that accesses the service. If you cannot access this name, your IP address will be indicated.

It will also be possible to select one or several services to proceed with their elimination (in the base service of type “***Fixed Machine Pool***” you will only eliminate the assignment with the user).

The “***Logs***” tab will show information about any possible issue that occurred in the “***Service Provider***”:

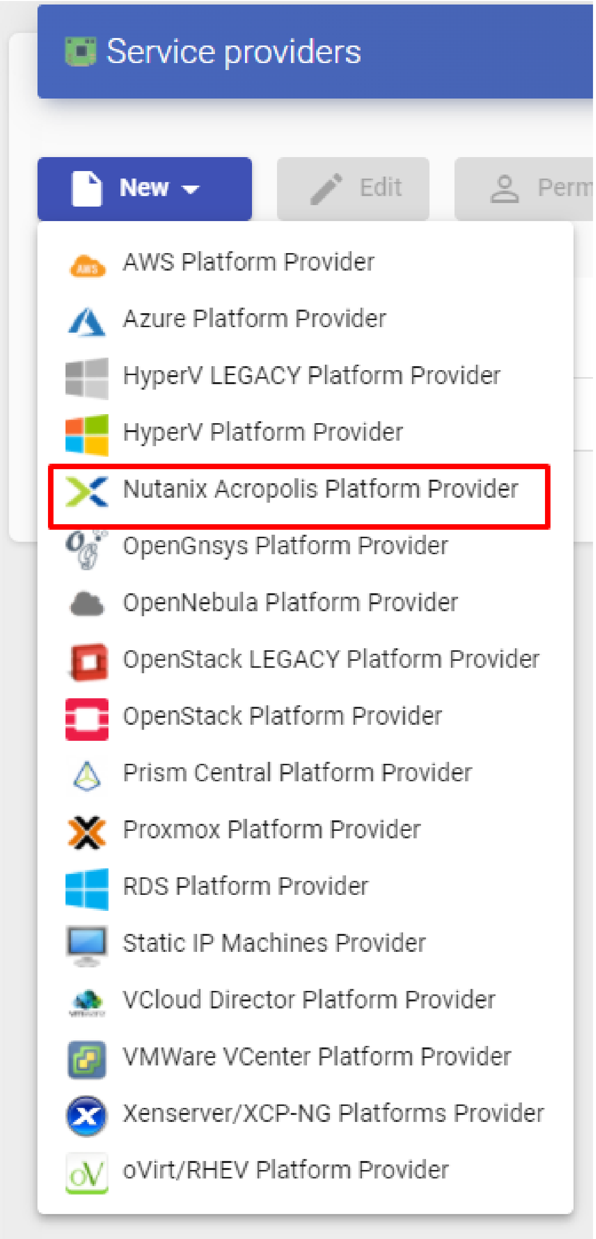


4.1.2 VDI platform with Nutanix Acropolis

Deploying and connecting to virtual desktops on a Nutanix AHV virtualization infrastructure

4.1.2.1 Register a Service provider "Nutanix Acropolis Platform Provider"

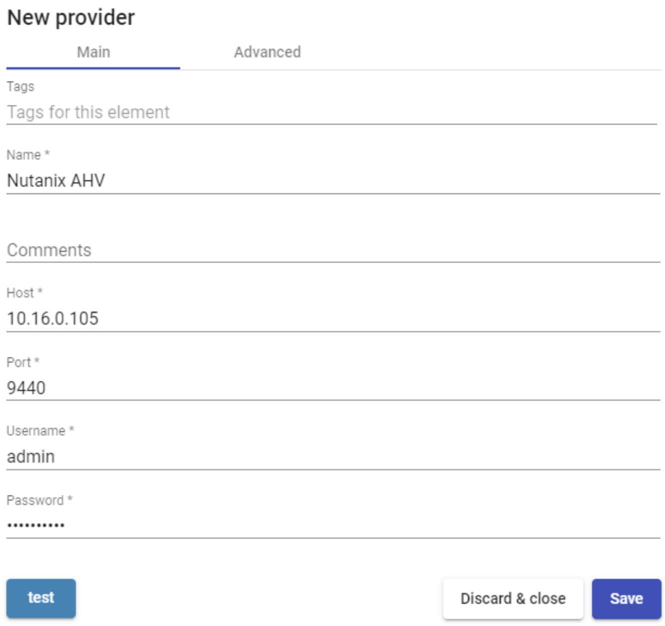
Click on "*New*" and select "*Nutanix Acropolis Platform Provider*".


Service providers
New
Edit
Perm
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

In a "***Nutanix Acropolis Provider***" the minimum parameters to configure are:

- Main:

Name of the service provider, IP or name of the web console to access the AHV platform ("***Host***" field), connection port, username, and password with administration rights.


New provider

Main | Advanced

Tags: Tags for this element

Name *: Nutanix AHV

Comments

Host *: 10.16.0.105

Port *: 9440

Username *: admin

Password *: ••••••••••

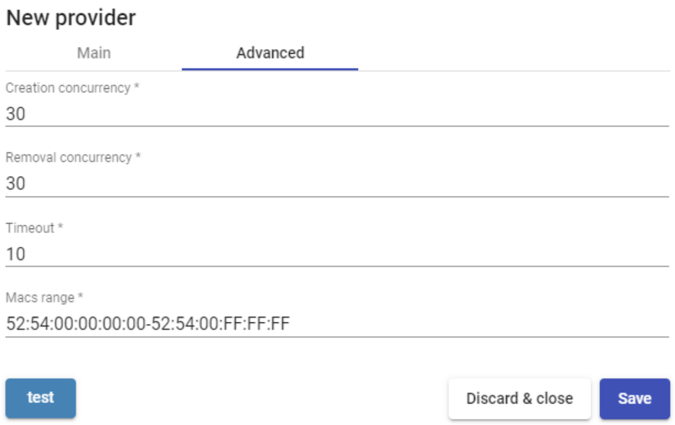
- Advanced:

Creation concurrency: Number of simultaneous desktop creation tasks.

Removal concurrency: Number of simultaneous desktop deletion tasks.

Timeout: "*Timeout* for connection with the AHV platform.

Macs range: Range of MAC addresses used by UDS to create virtual desktops.


New provider

Main | Advanced

Creation concurrency *: 30

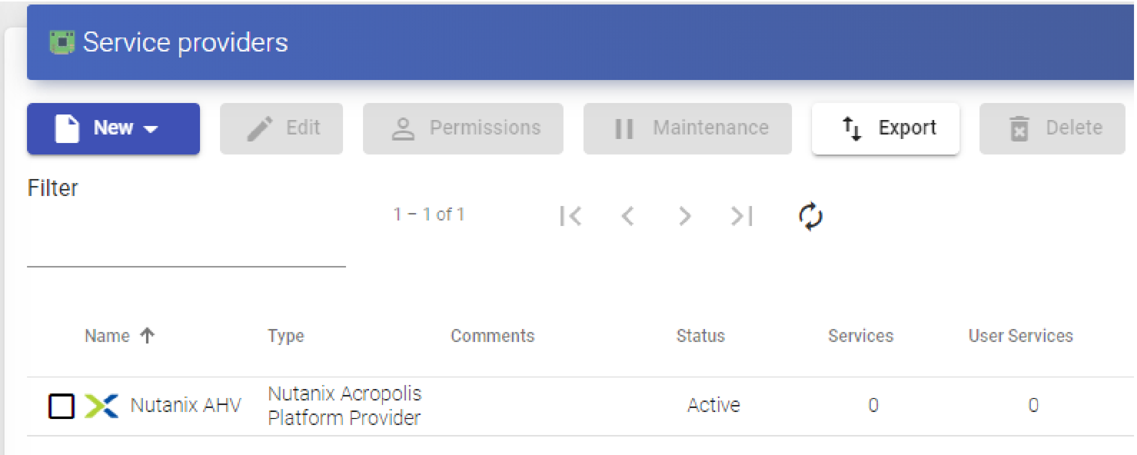
Removal concurrency *: 30

Timeout *: 10

Macs range *: 52:54:00:00:00:00-52:54:00:FF:FF:FF

With the “*Test*” button you can check that the connection is done correctly.

Save the configuration and you will have a valid "***Service Providers***" to start registering base services on the Nutanix AHV platform



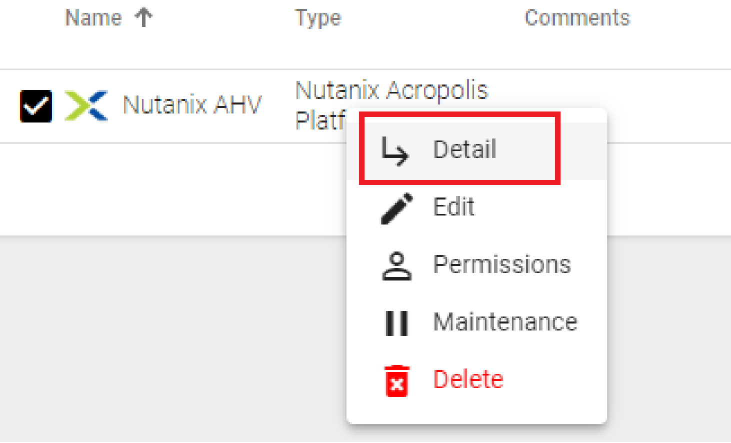
Name	Type	Comments	Status	Services	User Services
□ Nutanix AHV	Nutanix Acropolis Platform Provider		Active	0	0

NOTE:
If you have several Nutanix AHV platforms, you can register all the "**Service Providers**" of the type “**Nutanix Acropolis Provider**” that you need.

To modify any parameter in an existing “***Service Providers***” you will select it and click on “***Edit***”.

Using the button “***Enter Maintenance Mode***” you can pause all operations performed by the UDS Server on a service provider. It is recommended to put a service provider in maintenance mode in cases where communication with that service provider has been lost or a maintenance stop is planned.

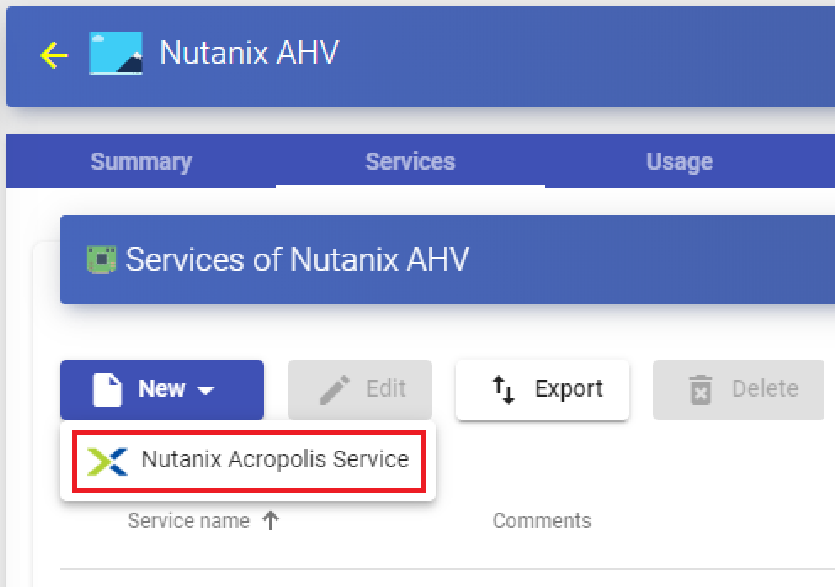
Once the Nutanix AHV platform is integrated into UDS, base services can be created. To do this, we double-click on the service provider created, or in the provider's menu we select “***Detail***”:



4.1.2.2 Configure a Service based on "Nutanix Acropolis Service"

This type of service will create, within the virtual infrastructure, virtual desktops dependent on the active publication.

To create base services of type "***Nutanix Acropolis Service***" Access the "***Service Providers***", select the"***Services***"tab click on "***New***" and select "***Nutanix Acropolis Service***".



The minimum parameters to configure in this type of service are

- Main:

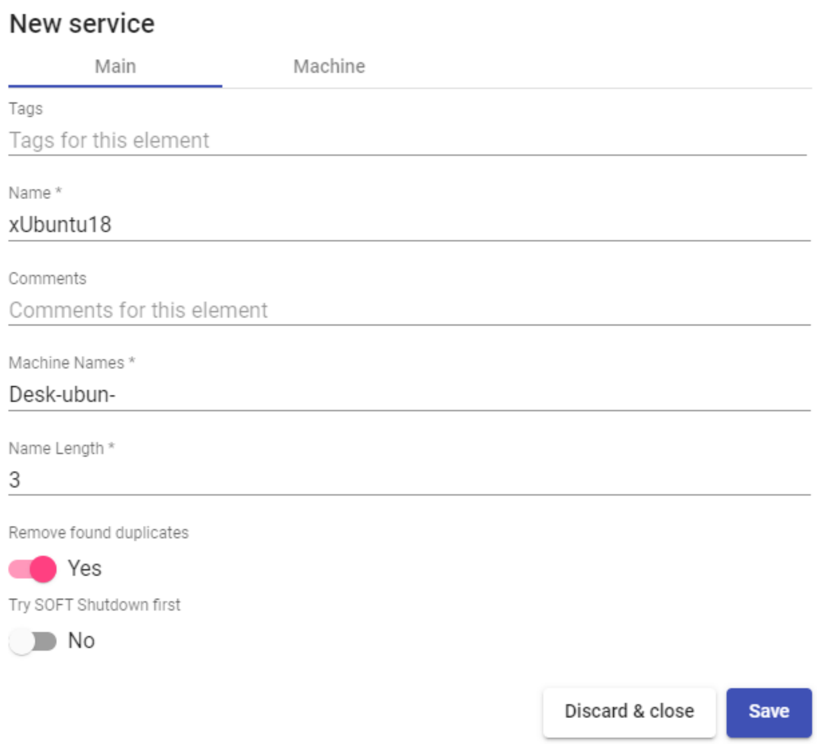
Name: Service name.

Machine Names: Root of the name of all virtual desktops to be deployed in this service. (ex: Machine Names= Desk-ubun-).

Name Length: Number of digits of the counter attached to the root of the desktops name (ex: Name Length= 3. The final name of the generated desktops would be: Deskubun-**000**, Desk-ubun-**001**... Desk-ubun-**999**).

Remove found duplicates: If this option is activated (default value), when UDS finds a virtual desktop with the same name (and generated by UDS) as the desktop you are about to create, it will delete it (its use is recommended to avoid the existence of "lost" VMs).

Try SOFT Shutdown first: When activated, the system will attempt to perform a "Soft" shutdown in the O.S. of the virtual desktop.



New service

Tags
Tags for this element

Name *
xUbuntu18

Comments
Comments for this element

Machine Names *
Desk-ubun-

Name Length *
3

Remove found duplicates
Yes

Try SOFT Shutdown first
No

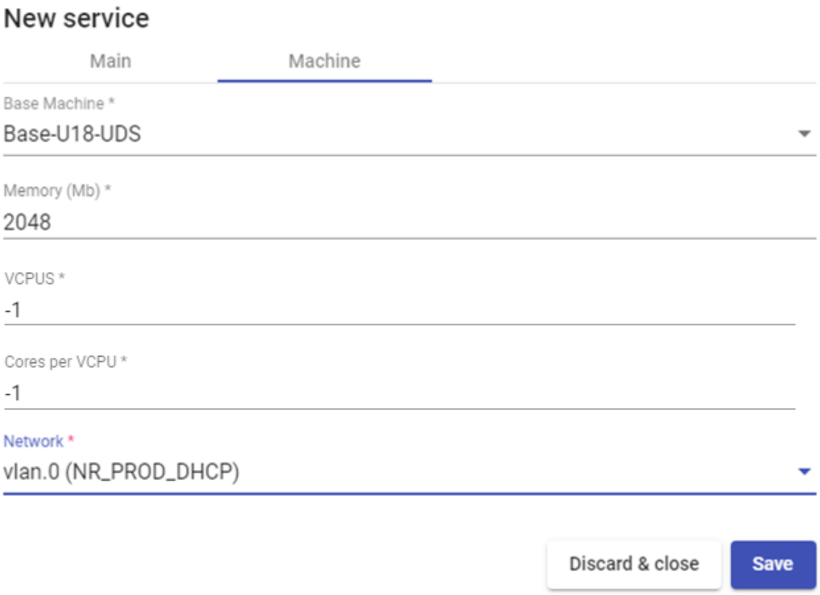
- Machine:

Base Machine: Template virtual machine (Gold Image) used by the UDS system for the deployment of virtual desktops.

Memory: Amount of memory in Mb to be allocated to the generated virtual desktops.

VCPUS: Number of vCPUs that the generated desktops will have (the value -1 will use the template configuration)
Cores per VCPU: Number of cores per vCPUs that the generated desktops will have (the value -1 will use the template configuration)

Network: Network where virtual desktops will connect.



New service

Main | Machine

Base Machine *: Base-U18-UDS

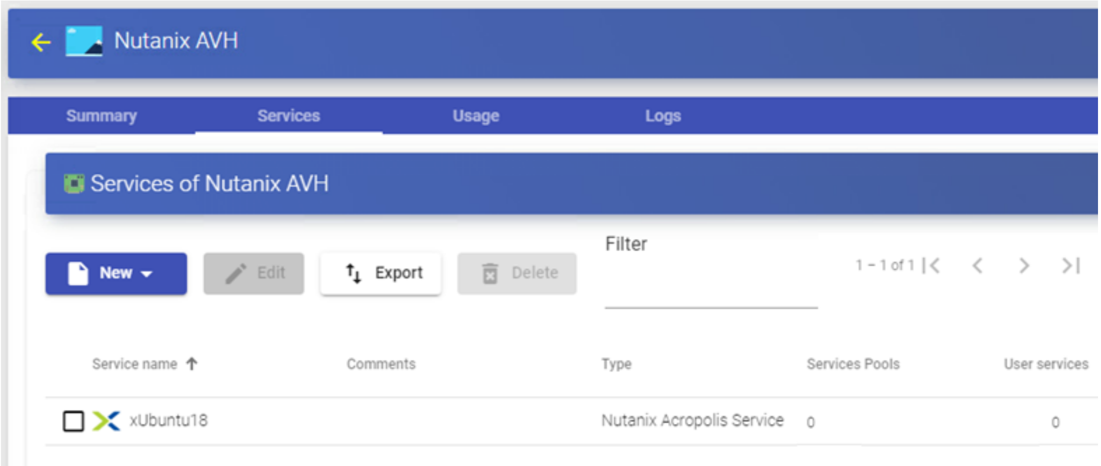
Memory (Mb) *: 2048

VCPUS *: -1

Cores per VCPU *: -1

Network *: vlan.0 (NR_PROD_DHCP)

Save the configuration and you will have a valid "***Nutanix Acropolis Service***" " on the Nutanix platform. You can register all the "***Nutanix Acropolis Service***" " that you need on the UDS platform.



Nutanix AVH

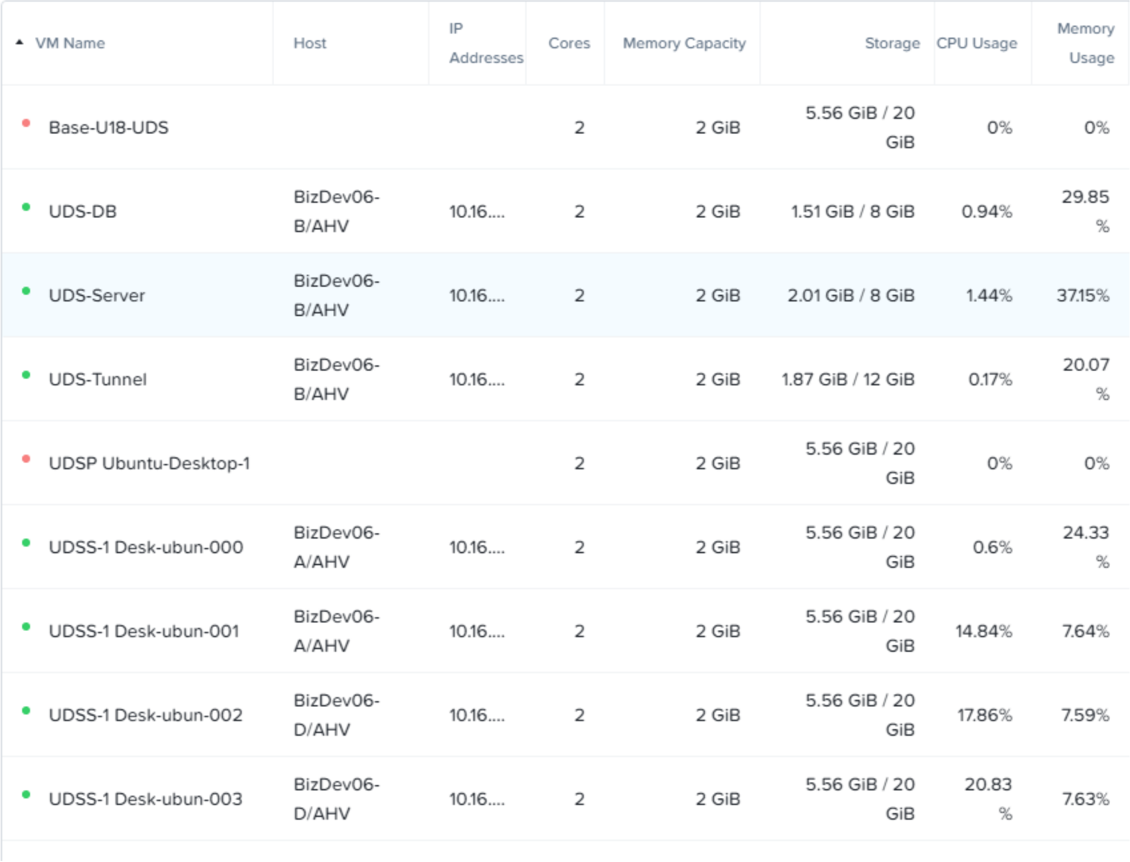
Services of Nutanix AVH

Service name	Comments	Type	Services Pools	User services
□ xUbuntu18		Nutanix Acropolis Service	0	0

Once you have all the UDS environment configured (Services, Authenticators, OS Managers and Transports) and created the first "***Service Pool***", you will be able to observe in the Nutanix AHV web console how the desktop deployments are carried out.

The first task that will be performed will be to create a publication of the template (this machine will be generated every time you make a publication of a service). It will be a clone of the template chosen at service registration, with a disk size and characteristics equal to that template.

Once the publication creation process is finished (the system will name it as: “UDSP *nombre_pool-número_publicación*”) the desktops will be automatically created (the system names them as: “UDSS-*number_publicación Machine_Name*+*Name_Length*”) based on to the cache parameters configured in the “***Service Pools***”.

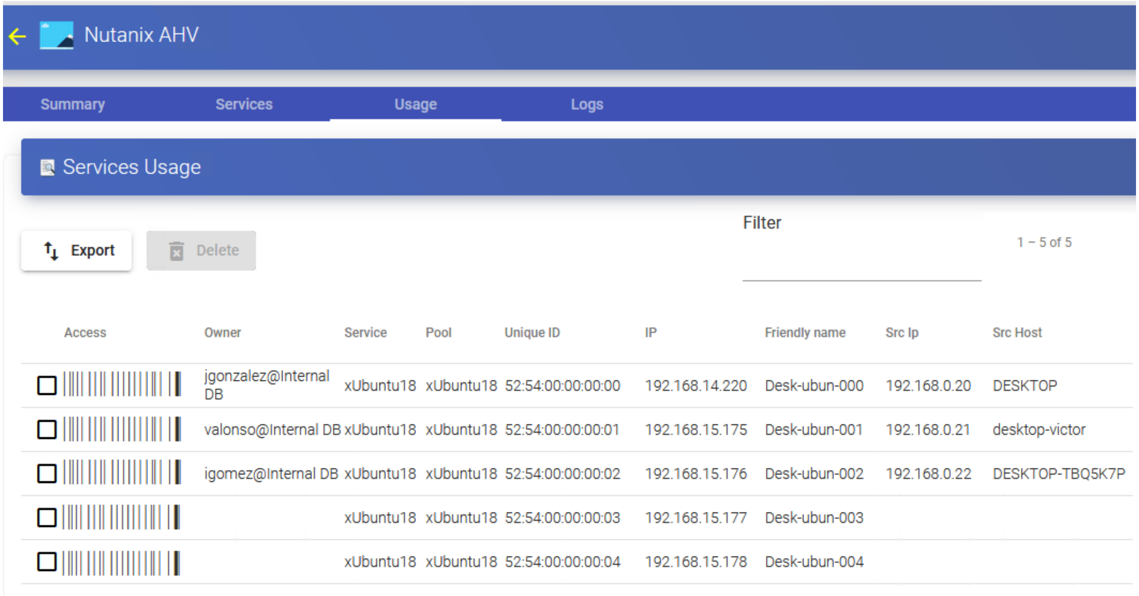


▲ VM Name	Host	IP Addresses	Cores	Memory Capacity	Storage	CPU Usage	Memory Usage
● Base-U18-UDS			2	2 GiB	5.56 GiB / 20 GiB	0%	0%
● UDS-DB	BizDev06-B/AHV	10.16....	2	2 GiB	1.51 GiB / 8 GiB	0.94%	29.85 %
● UDS-Server	BizDev06-B/AHV	10.16....	2	2 GiB	2.01 GiB / 8 GiB	1.44%	37.15%
● UDS-Tunnel	BizDev06-B/AHV	10.16....	2	2 GiB	1.87 GiB / 12 GiB	0.17%	20.07 %
● UDSP Ubuntu-Desktop-1			2	2 GiB	5.56 GiB / 20 GiB	0%	0%
● UDSS-1 Desk-ubun-000	BizDev06-A/AHV	10.16....	2	2 GiB	5.56 GiB / 20 GiB	0.6%	24.33 %
● UDSS-1 Desk-ubun-001	BizDev06-A/AHV	10.16....	2	2 GiB	5.56 GiB / 20 GiB	14.84%	7.64%
● UDSS-1 Desk-ubun-002	BizDev06-D/AHV	10.16....	2	2 GiB	5.56 GiB / 20 GiB	17.86%	7.59%
● UDSS-1 Desk-ubun-003	BizDev06-D/AHV	10.16....	2	2 GiB	5.56 GiB / 20 GiB	20.83 %	7.63%

4.1.2.3 Summary of the service usage and error logs

Within a “***Service Provider***” you will have a tab called “***Usage***” that will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this “***Service Provider***”.

To access this information on the use of services, access the “***Service Providers***” and select the “***Usage***” tab:



	Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□	[redacted]	jgonzalez@Internal DB	xUbuntu18	xUbuntu18	52:54:00:00:00:00	192.168.14.220	Desk-ubun-000	192.168.0.20	DESKTOP
□	[redacted]	valonso@Internal DB	xUbuntu18	xUbuntu18	52:54:00:00:00:01	192.168.15.175	Desk-ubun-001	192.168.0.21	desktop-victor
□	[redacted]	igomez@Internal DB	xUbuntu18	xUbuntu18	52:54:00:00:00:02	192.168.15.176	Desk-ubun-002	192.168.0.22	DESKTOP-TBQ5K7P
□	[redacted]		xUbuntu18	xUbuntu18	52:54:00:00:00:03	192.168.15.177	Desk-ubun-003		
□	[redacted]		xUbuntu18	xUbuntu18	52:54:00:00:00:04	192.168.15.178	Desk-ubun-004		

You will see:

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator. If it appears empty, it means that the service has not been assigned to any user and is available in the cache.

Service: Name of the base service belonging to the “***Service Provider***” from which the service was generated.

Pool: Name of the "***Service Pools***" to which the service belongs.

Unique ID: MAC address of the service.

IP: IP address of the service.

Friendly name: Name of the service. It will also be the DNS name of the UDS selfgenerated virtual machine.

Src Ip: IP address of the connection client accessing the service.

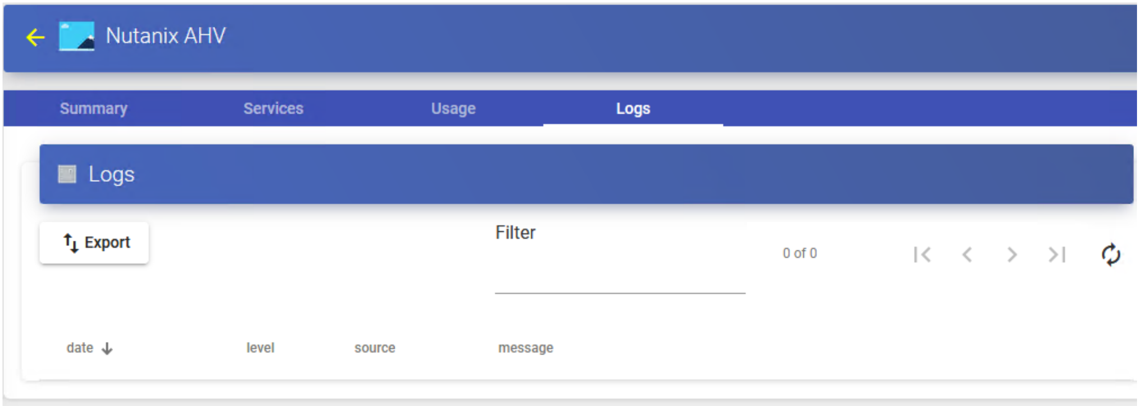
.

Src Host: DNS name of the connection client that accesses the service. If you cannot

access this name, the IP address will be indicated.

It will also be possible to select one or several services to proceed with their elimination.

The “***Logs***” tab will show information about a possible issue that occurred in the “***Service Provider***”:

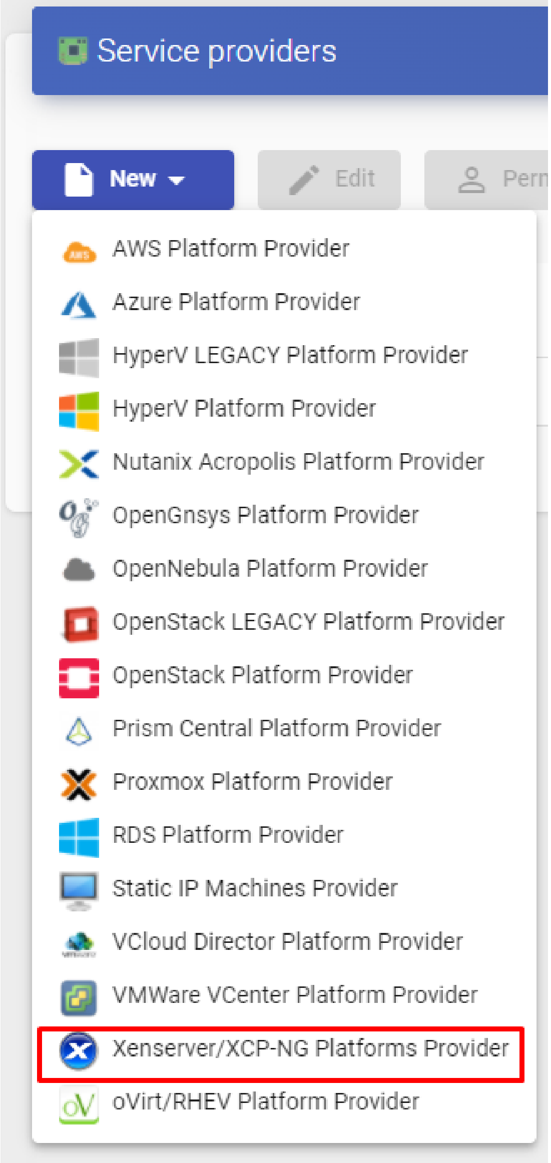


4.1.3 VDI Platform with Citrix XenServer / XCP-ng

Deploy and connect to virtual desktops on a Citrix XenServer or XCP-ng virtualization infrastructure.

4.1.3.1 Register a service provider “XenServer / XCP-NG Platform Provider”

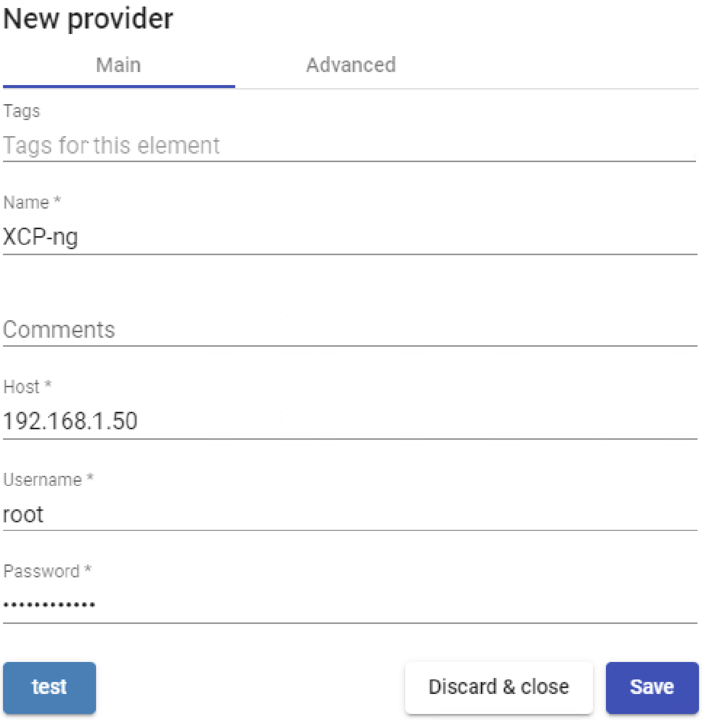
Click on "*New*" and select “***Xenserver / XCP-NG Platform Provider***”.


Service providers
New
Edit
Perm
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

In a "***Xenserver / XCP-NG Platform Provider***" the minimum parameters to configure are:

- Main:

Service provider name, IP or XenServer/XCP-ng server name. In case you want to connect a cluster (Pool), enter the Master server "***Host field***"), username and password with administration rights over XenServer/XCP-ng.



New provider

Tags: Tags for this element

Name *: XCP-ng

Comments

Host *: 192.168.1.50

Username *: root

Password *: ••••••••••••

- Advanced:

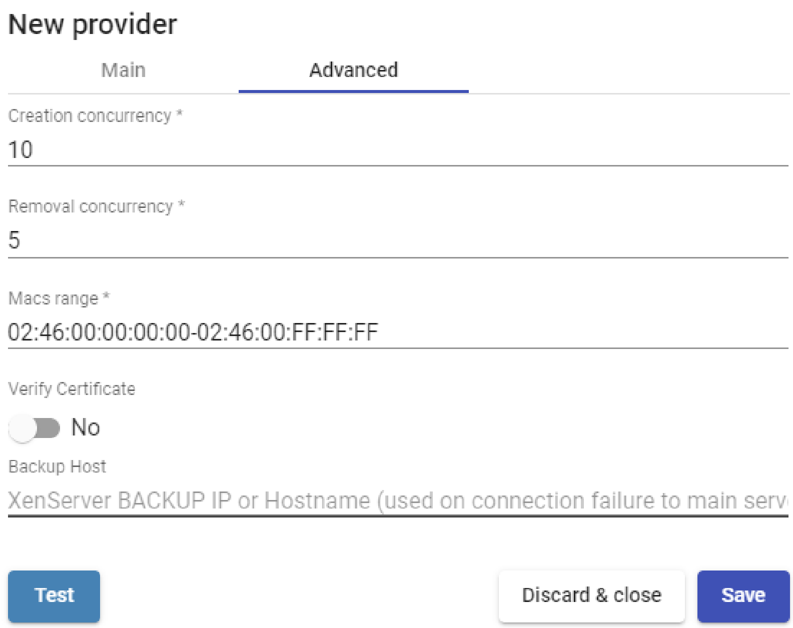
Creation concurrency: Number of simultaneous desktop creation tasks.

Removal concurrency: Number of simultaneous desktop deletion tasks.

Macs range: Range of MAC addresses used by UDS to create virtual desktops.

Verify Certificate: Virtualization Host Certificate Verification.

Backup Host: Backup server that will be used when there is no communication with the main server indicated in the "**Host**" field of the "**Main**" tab.



New provider

Creation concurrency *
10

Removal concurrency *
5

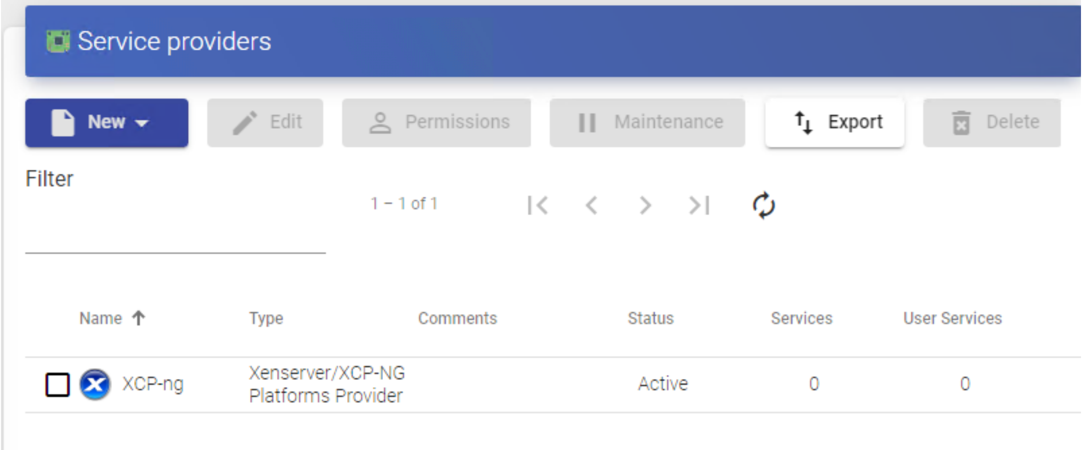
Macs range *
02:46:00:00:00:00-02:46:00:FF:FF:FF

Verify Certificate
No

Backup Host
XenServer BACKUP IP or Hostname (used on connection failure to main serv

With the “*Test*” you can verify that the conection is made correctly.

Save the configuration and you will have a valid "***Service Providers***" to start registering base services on the Citrix XenServer or XCP-ng platform.



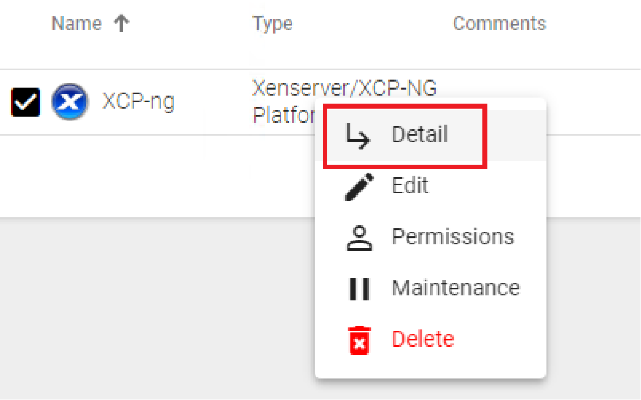
Name	Type	Comments	Status	Services	User Services
□ XCP-ng	Xenserver/XCP-NG Platforms Provider		Active	0	0

NOTE:
If you have several Citrix XenServer or XCP-ng platforms, you can register all the"**Service Providers**" of the type “**Xenserver / XCP-NG Platform Provider**” that you need.

To modify any parameter in an existing "***Service Providers*** you will select it and click on "***Edit***".

Using the button "***Enter Maintenance Mode***" " you can pause all operations produced by the UDS Server on a service provider. It is recommended that a service provider is brought into maintenance mode in cases where communication with that service provider has been lost or a maintenance outage is planned

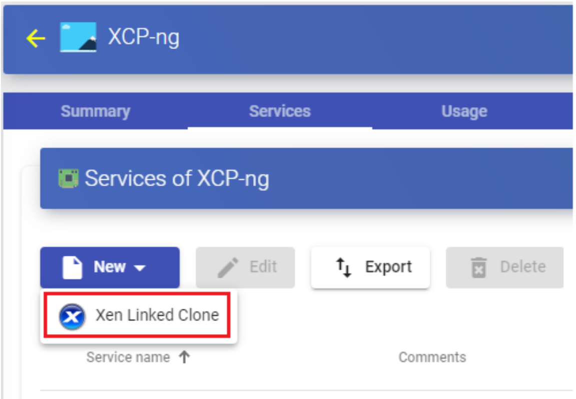
Once the Citrix XenServer or XCP-ng platform is integrated into UDS, base services can be created. To do this, double click on the service provider created or in the provider menu select "***Detail***":



4.1.3.2 Configure a service based on “Xen Linked Clone”

This type of service will create, within the virtual infrastructure, virtual desktops dependent on the active publication.

To create base services of type "***Xen Linked Clone***" access the “***Service Providers***”, select the “***Services***” tab, click on “***New***” and select “***Xen Linked Clone***”.



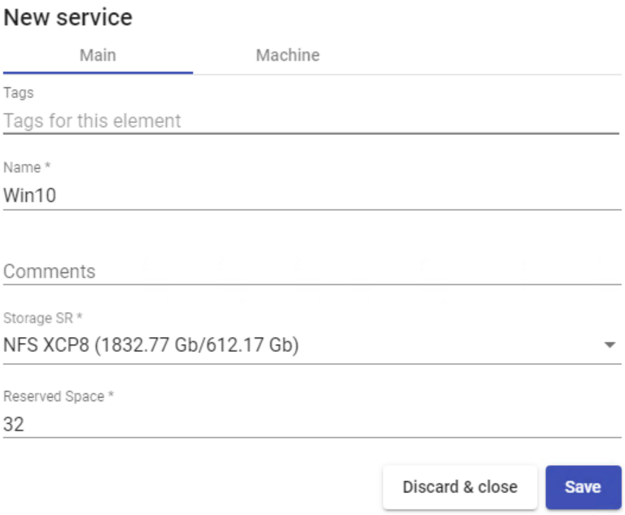
The minimum parameters to configure in this type of service are:

- Main:

Name: Service name.

Storage SR: Location where the generated virtual desktops and publications will be stored. **Only shared storages are supported (If you are connecting to a single Host and you want to use its local storage, you can manually modify it from the host console and convert it to SR storage so that you can use it with UDS)**

Reserved Space: When there is less free space on a storage than indicated in this parameter (in GB), UDS will not use it to host publications or virtual desktops.


New service

Main | Machine

Tags: Tags for this element

Name *: Win10

Comments

Storage SR *: NFS XCP8 (1832.77 Gb/612.17 Gb)

Reserved Space *: 32

- Machine:

Base Machine: Template virtual machine (Gold Image) used by the UDS system for the deployment of virtual desktops.

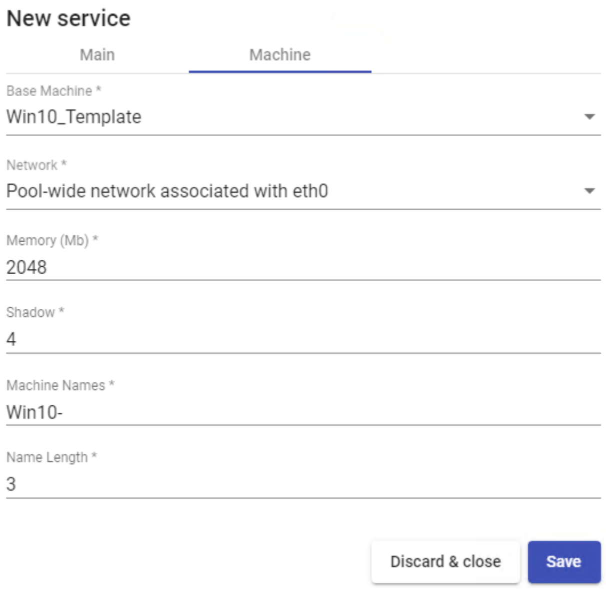
Network: Network where the virtual desktops will be connected.

Memory: Amount of memory in Mb that will be assigned to the generated Linked Clones virtual desktops.

Shadow: Memory multiplier.

Machine Names: Root of the name of all Linked Clones virtual desktops to be deployed in this service. (e.g.: Machine Names= Win10-)

Name Length: Number of digits of the counter attached to the root of the name of the desktops (ex: Name Length= 3. The final name of the desktops generated would be: Win10-**000**, Win10-**001**... Win10-**999**).


New service

Base Machine * Win10_Template

Network * Pool-wide network associated with eth0

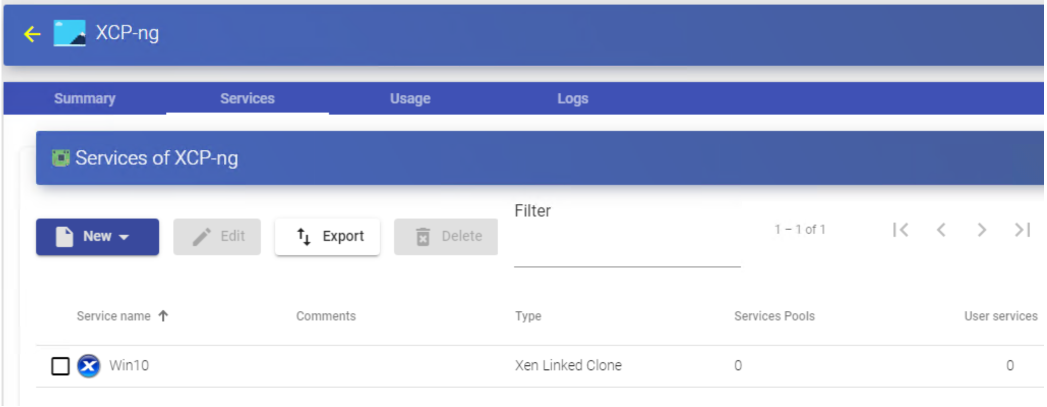
Memory (Mb) * 2048

Shadow * 4

Machine Names * Win10-

Name Length * 3

Save the configuration and you will have a valid " ***Xen Linked Clone*** " on the XenServer or XCP-ng platform. You can register all the services of the type " ***Xen Linked Clone*** " that you need.

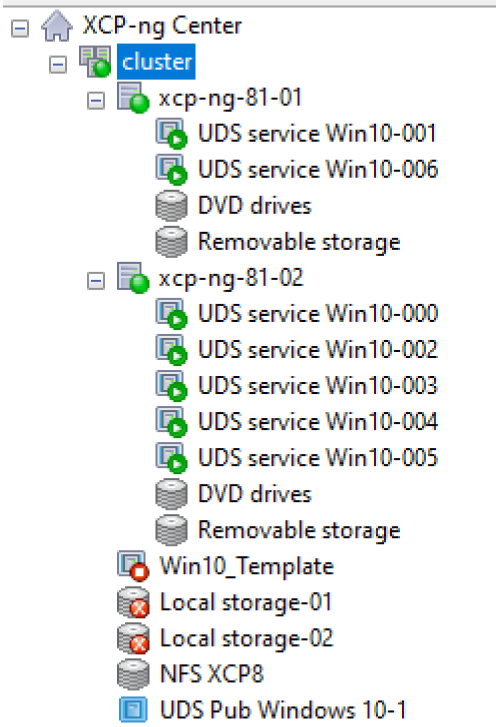


Service name	Comments	Type	Services Pools	User services
□ Win10		Xen Linked Clone	0	0

Once you have all the UDS environment configured (Services, Authenticators, OS Managers and Transports) and created the first "***Service Pool***", you will be able to observe in the XenCenter or XCP-ng Center how the desktop deployments are carried out.

The first task that will be carried out will be to create a publication of the template (this machine will be generated every time we make a publication of a service), which will be a clone of the template chosen at service registration, with a disk size and characteristics equal to said template.

Once the publication creation process is finished (the system will name it as: "UDS Pub *name_pool-númber_publication*") the desktops are automatically created (the system names them as: "UDS service *Machine_Name-Name_Length*") based on the cache parameters configured in the "***Service Pools***".

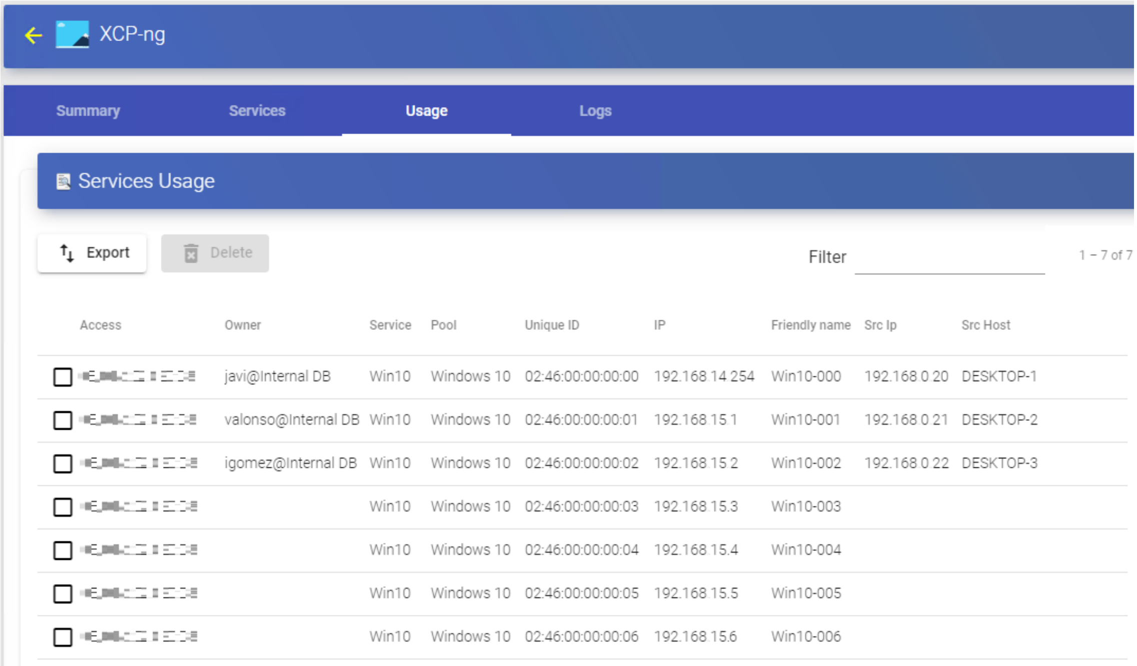


```
XCP-ng Center
  cluster
    xcp-ng-81-01
      UDS service Win10-001
      UDS service Win10-006
      DVD drives
      Removable storage
    xcp-ng-81-02
      UDS service Win10-000
      UDS service Win10-002
      UDS service Win10-003
      UDS service Win10-004
      UDS service Win10-005
      DVD drives
      Removable storage
    Win10_Template
    Local storage-01
    Local storage-02
    NFS XCP8
    UDS Pub Windows 10-1
```

4.1.3.3 Summary of Service usage and error logs

Within a "***Service Provider***" you will have a tab called "***Usage*** that will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this "***Service Provider***".

To access this information on the use of services you access the "***Service Providers***" and select the "***Usage***" tab:



	Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□	[illegible]	javi@Internal DB	Win10	Windows 10	02:46:00:00:00:00	192.168.14.254	Win10-000	192.168.0.20	DESKTOP-1
□	[illegible]	valonso@Internal DB	Win10	Windows 10	02:46:00:00:00:01	192.168.15.1	Win10-001	192.168.0.21	DESKTOP-2
□	[illegible]	igomez@Internal DB	Win10	Windows 10	02:46:00:00:00:02	192.168.15.2	Win10-002	192.168.0.22	DESKTOP-3
□	[illegible]		Win10	Windows 10	02:46:00:00:00:03	192.168.15.3	Win10-003		
□	[illegible]		Win10	Windows 10	02:46:00:00:00:04	192.168.15.4	Win10-004		
□	[illegible]		Win10	Windows 10	02:46:00:00:00:05	192.168.15.5	Win10-005		
□	[illegible]		Win10	Windows 10	02:46:00:00:00:06	192.168.15.6	Win10-006		

You will see:

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator. If it appears empty, it means that the service has not been assigned to any user and is available in the cache.

Service: Name of the base service belonging to the "***Service Provider***" from which the service was generated.

Pool: Name of the “***Service Pools***” to which the service belongs.

Unique ID: MAC address of the service.

IP: IP address of the service.

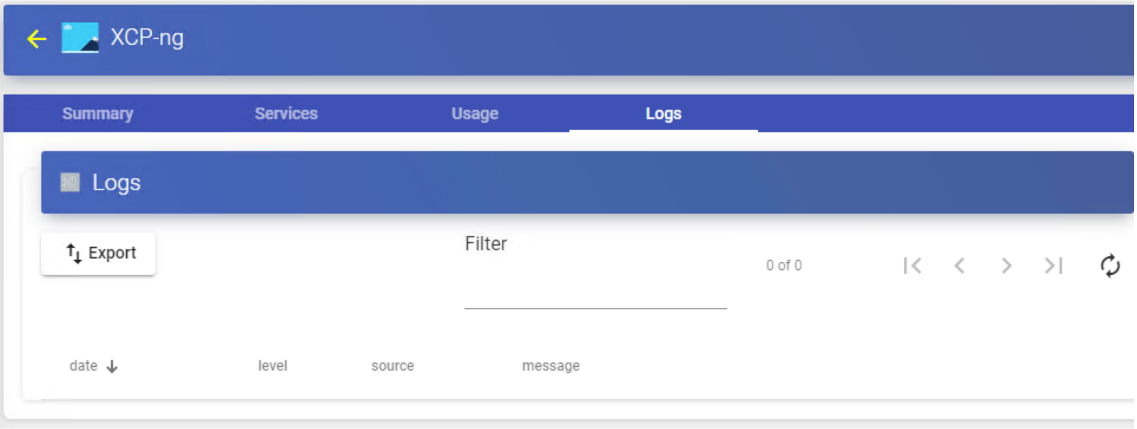
Friendly name: Name of the service. It will also be the DNS name of the UDS selfgenerated virtual machine.

Src Ip: IP address of the connection client accessing the service.

Src Host: DNS name of the connection client that accesses the service. If you cannot access this name, the IP address will be indicated.

It will also be possible to select one or several services to proceed with their elimination.

The "***Logs***" tab will show information about a possible issue that occurred in the "***Service Provider***":

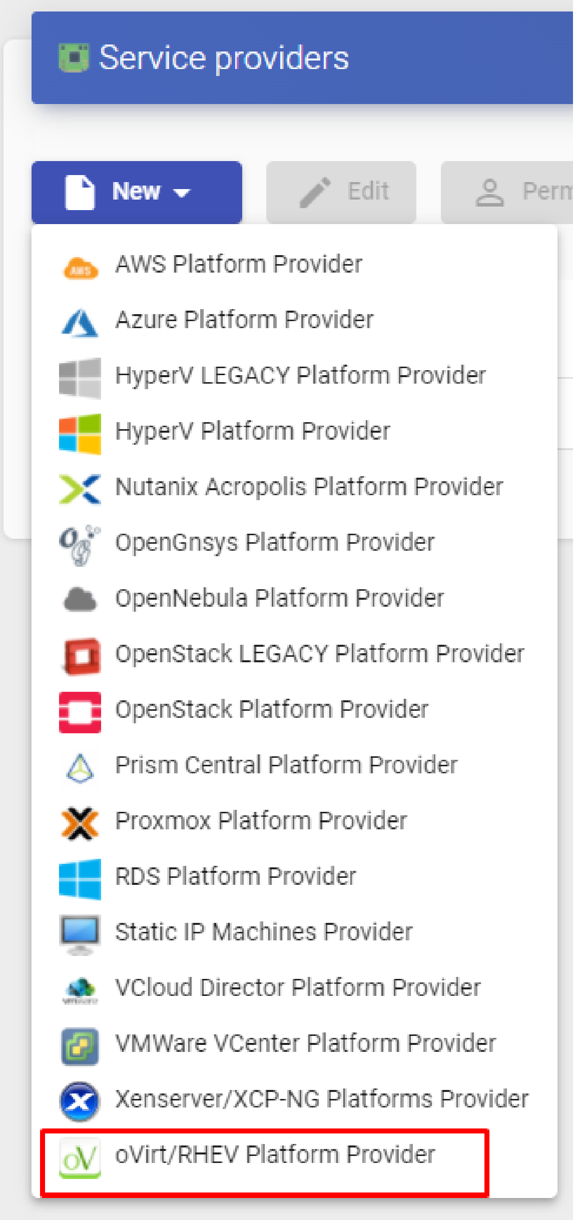


4.1.4 VDI Platform with oVirt / RHV

Deployment and connection to virtual desktops on an oVirt or Red Hat Enterprise Virtualization (RHV) infrastructure.

4.1.4.1 Register a Service provider "oVirt Platform Provider"

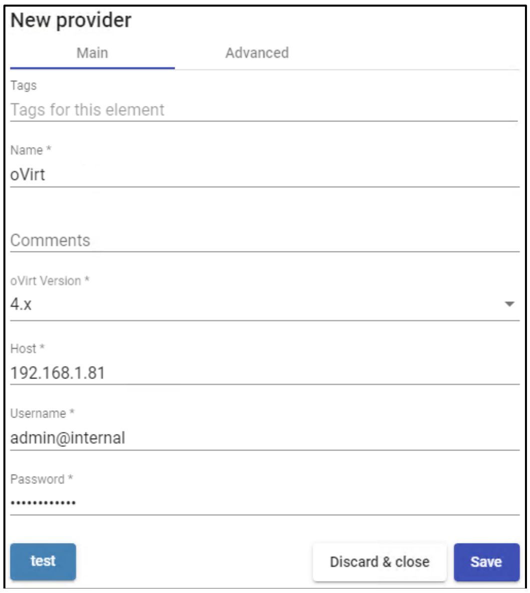
Click on "***New***" and select "***oVirt / RHV Platform Provider***".


Service providers
New
Edit
Perm
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

In an “***oVirt / RHV Platform Provider***” minimal parameters to be configured are:

- Main:

Service provider name, oVirt-engine or RHV-Manager server IP (field “***Host*** a username (in the format user@domain) and password with administration rights on oVirt-engine or RHV-Manager.


New provider

Tags: Tags for this element

Name *: oVirt

Comments

oVirt Version *: 4.x

Host *: 192.168.1.81

Username *: admin@internal

Password *: ••••••••••••

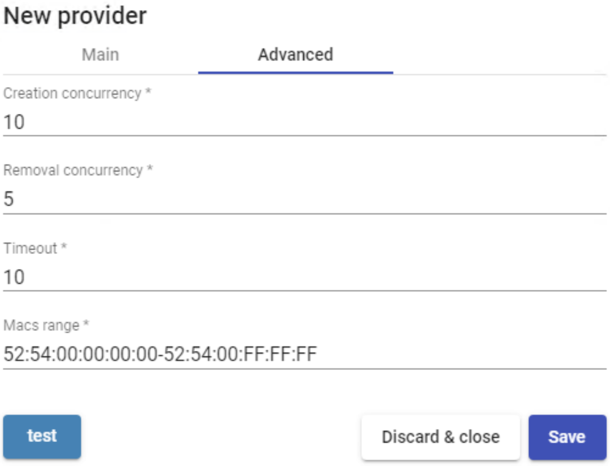
- Advanced:

Creation concurrency: Number of simultaneous desktop creation tasks.

Removal concurrency: Number of simultaneous desktop deletion tasks.

Timeout: “***Timeout***” for connection with oVirt-engine or RHV-Manager.

Macs range: Range of MAC addresses used by UDS to create virtual desktops.


New provider

Creation concurrency *: 10

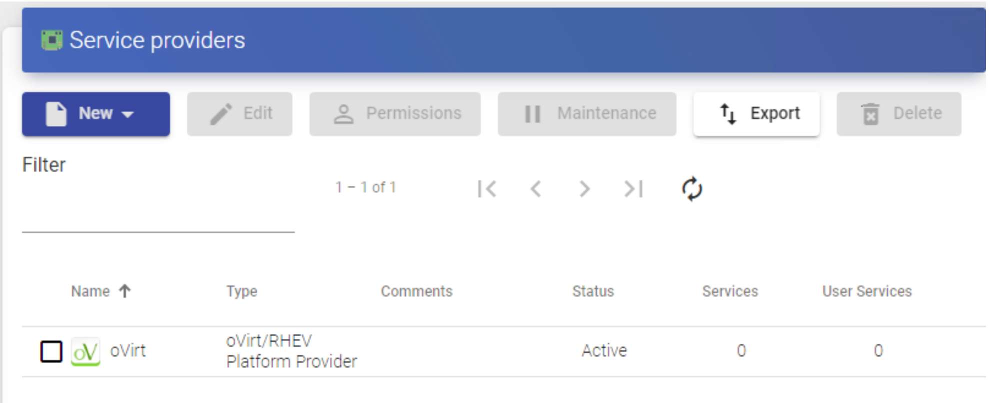
Removal concurrency *: 5

Timeout *: 10

Macs range *: 52:54:00:00:00:00-52:54:00:FF:FF:FF

Using the “***Test***” button you will check that the connection is made correctly.

Save the configuration and you will have a valid "***Service Providers***" to start registeringbase services on the oVirt or RHV platform.



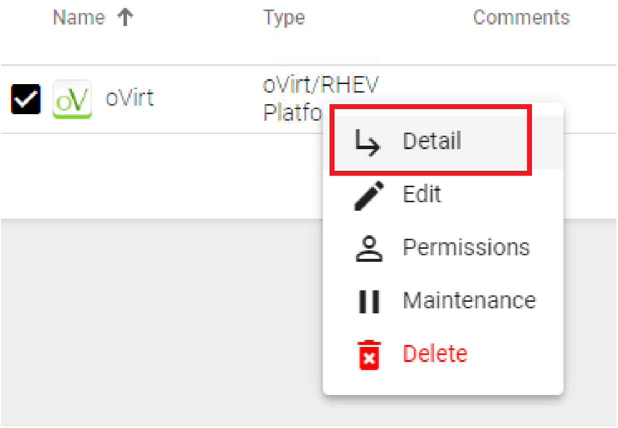
Name	Type	Comments	Status	Services	User Services
☐ oVirt	oVirt/RHEV Platform Provider		Active	0	0

NOTE:
If you have several ovirt or RHV platforms, you will be able to register all the "**Service Providers**" of the type "**oVirt / RHV Platform Provider**" that we need.

To modify any parameter in an existing "***Service Providers***" you will select it and click on "***Edit***".

Using the button "***Enter Maintenance Mode*** you can pause all operations produced by the UDS Server on a service provider. It is recommended that a service provider is brought into maintenance mode in cases where communication with that service provider has been lost or a maintenance outage is planned

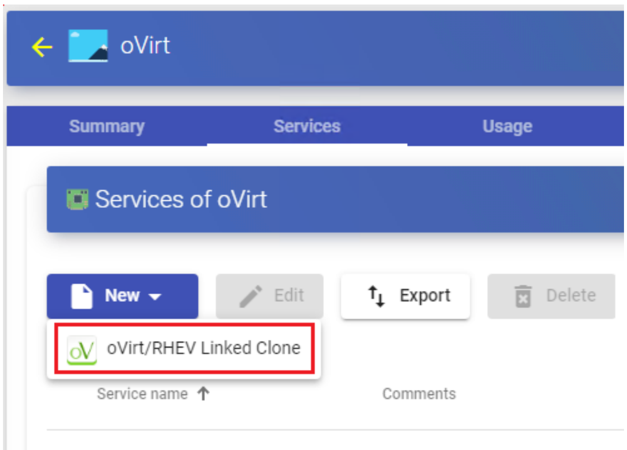
Once the oVirt or RHV platform is integrated into UDS, base services can be created.
To do this, double click on the service provider created or in the provider menu select "***Detail***":



4.1.4.2 Configure a Service based on “oVirt/RHV Linked Clone”

This type of service will create, within the virtual infrastructure, virtual desktops dependent on the active publication

To create base services of type "***oVirt/RHV Linked Clone***" access the “***Service Providers***”, select the “***Services***” tab,click on “***New***” and select “***oVirt/RHV Linked Clone***”.



The minimum parameters to configure in this type of service are:

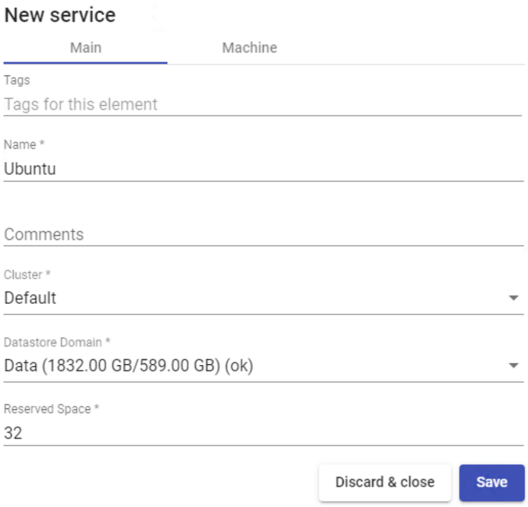
- ○ Main:

Name: Service name.

Cluster: oVirt/RHV node cluster that will host the generated virtual desktops.

Datastore Domain: Location where the generated virtual desktops and publications will be stored.

Reserved Space: When there is less free space on a storage than indicated in this parameter (in GB), UDS will not use it to host publications or virtual desktops.



Tags: Tags for this element

Name *: Ubuntu

Comments

Cluster *: Default

Datastore Domain *: Data (1832.00 GB/589.00 GB) (ok)

Reserved Space *: 32

- Machine:

Base Machine Virtual machine template (Gold Image) used by the UDS system for the deployment of virtual desktops.

Memory: Amount of memory in Mb that will be assigned to the Linked Clones virtual desktops.

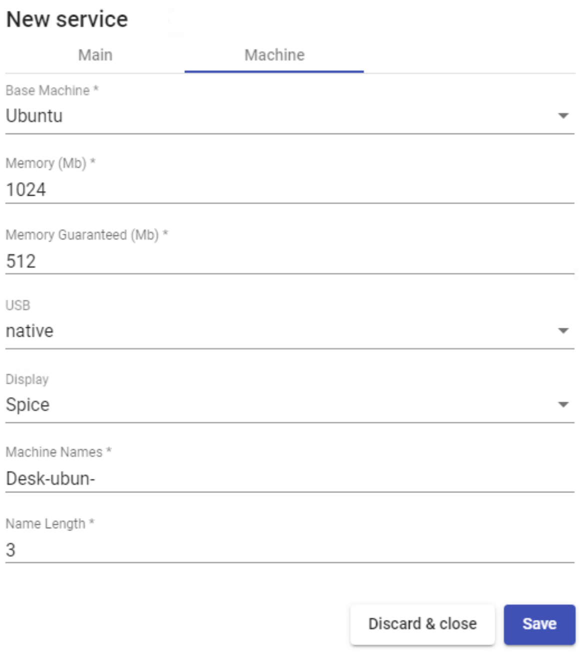
Memory Guaranteed: : Amount of memory that will be guaranteed to the Linked Clones.

USB: If selected, virtual desktops will support USB redirection.

Display: Connection mode from oVirt-Manager or RHV-Manager that the generated virtual desktops will have configured.

Machine Names: Root name of all of the Linked Clones to be deployed in this service (ex: Machine Names= Desk-ubun-).

Name Length: Number of counter digits attached to the root name of the desktops (e.g.: Name Length= 3, The final name of the generated desktops would be: Deskubun-**000**, Desk-ubun-**001**... Desk-ubun-**999**).



New service

Base Machine * Ubuntu

Memory (Mb) * 1024

Memory Guaranteed (Mb) * 512

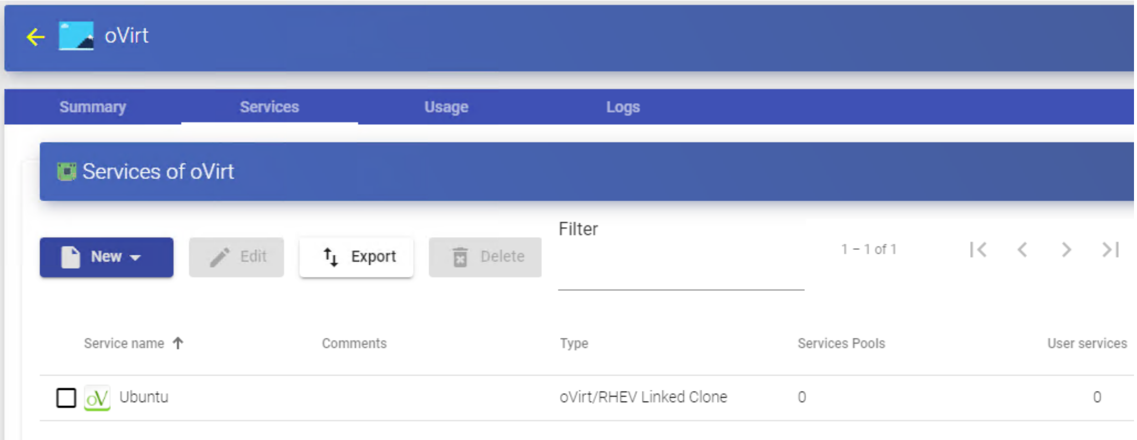
USB native

Display Spice

Machine Names * Desk-ubun-

Name Length * 3

After saving this configuration, you will already have a valid "***oVirt/RHV Linked Clone***" in the oVirt or RHV platform. You can register all "***oVirt/RHV Linked Clone***" that you need.

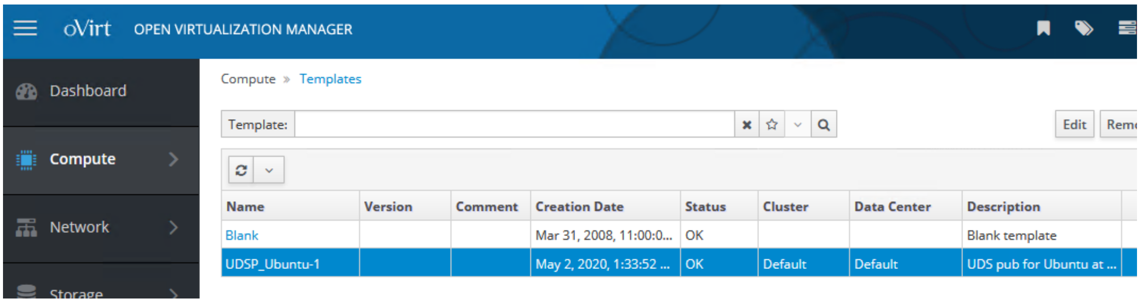


Service name	Comments	Type	Services Pools	User services
□ Ubuntu		oVirt/RHEV Linked Clone	0	0

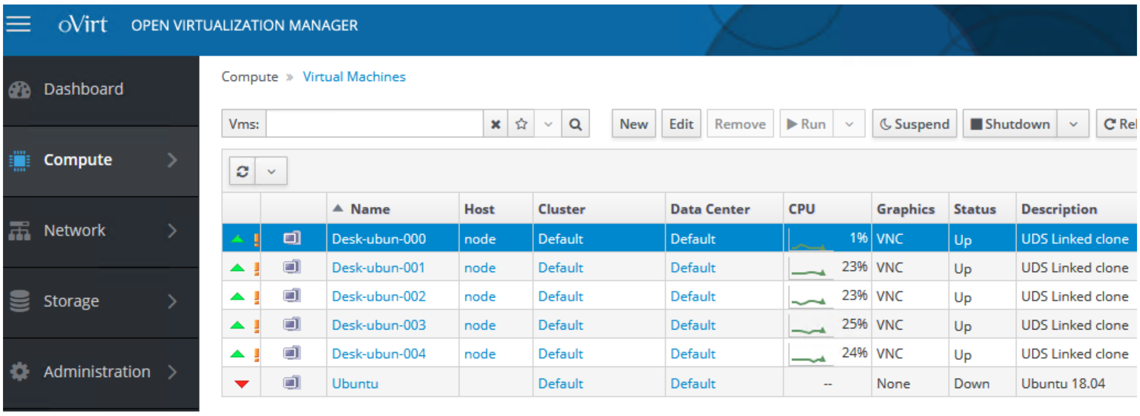
Once you have all the UDS environment configured (Services, Authenticators, OS Managers and Transports) and created the first "***Service Pool***", you will be able to observe in oVirt-engine or RHV-Manager how the desktops deployments are carried out.

The first task that will be performed will be to create a publication of the template (this machine will be generated every time you make a publication of a service). It will be a clone of the template chosen at service registration, with a disk size and characteristics equal to that template.

Once the publication creation process is finished (the system will name it as: "UDSP_*name_pool*-*number_publication*") he desktops will be automatically created (the system names them as: "*Machine_Name*-*Name_Length*") based on the parameters of cache configured in the "***Service Pools***".



Name	Version	Comment	Creation Date	Status	Cluster	Data Center	Description
Blank			Mar 31, 2008, 11:00:0...	OK			Blank template
UDSP_Ubuntu-1			May 2, 2020, 1:33:52 ...	OK	Default	Default	UDS pub for Ubuntu at ...

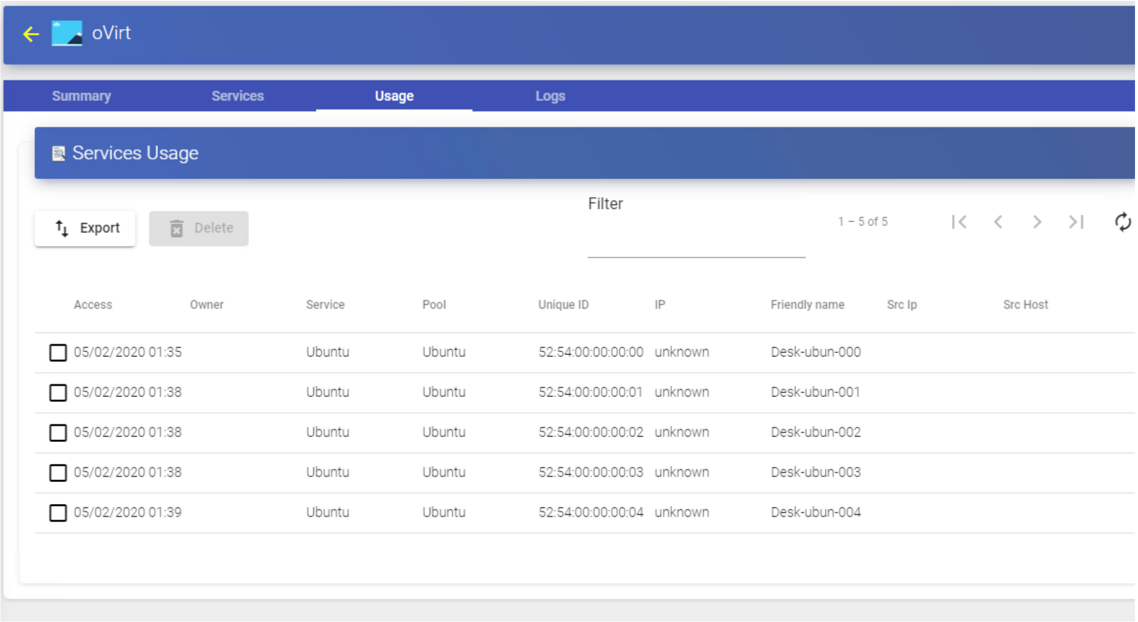


		Name	Host	Cluster	Data Center	CPU	Graphics	Status	Description
▲ !		Desk-ubun-000	node	Default	Default	1%	VNC	Up	UDS Linked clone
▲ !		Desk-ubun-001	node	Default	Default	23%	VNC	Up	UDS Linked clone
▲ !		Desk-ubun-002	node	Default	Default	23%	VNC	Up	UDS Linked clone
▲ !		Desk-ubun-003	node	Default	Default	25%	VNC	Up	UDS Linked clone
▲ !		Desk-ubun-004	node	Default	Default	24%	VNC	Up	UDS Linked clone
▼		Ubuntu		Default	Default	--	None	Down	Ubuntu 18.04

4.1.4.3 Summary of Service usage and errors

Within a "***Service Provider***" there's a tab called "***Usage***" that will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this "***Service Provider***".

To access this information on the use of services, access the "***Service Providers***" and select the "***Usage***" tab:



	Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□	05/02/2020 01:35		Ubuntu	Ubuntu	52:54:00:00:00:00	unknown	Desk-ubun-000		
□	05/02/2020 01:38		Ubuntu	Ubuntu	52:54:00:00:00:01	unknown	Desk-ubun-001		
□	05/02/2020 01:38		Ubuntu	Ubuntu	52:54:00:00:00:02	unknown	Desk-ubun-002		
□	05/02/2020 01:38		Ubuntu	Ubuntu	52:54:00:00:00:03	unknown	Desk-ubun-003		
□	05/02/2020 01:39		Ubuntu	Ubuntu	52:54:00:00:00:04	unknown	Desk-ubun-004		

You will see

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator. If it appears empty, it means that the service has not been assigned to any user and is available in the cache

Service: Name of the base service belonging to the "***Service Provider***" from which the service was generated.

Pool: Name of the "***Service Pools***" to which the service belongs.

Unique ID: MAC address of the service.

IP: P address of the service.

Friendly name: Name of the service. It will also be the DNS name of the UDS selfgenerated virtual machine.

Src Ip: IP address of the connection client accessing the service.

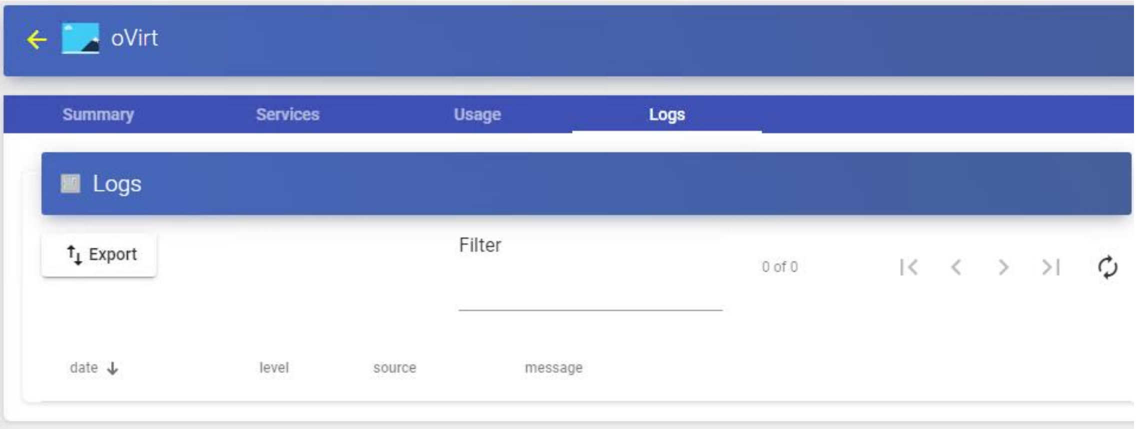
.

Src Host: DNS name of the connection client that accesses the service. If you cannot

access this name, the IP address will be indicated.

It will also be possible to select one or several services to proceed with their elimination.

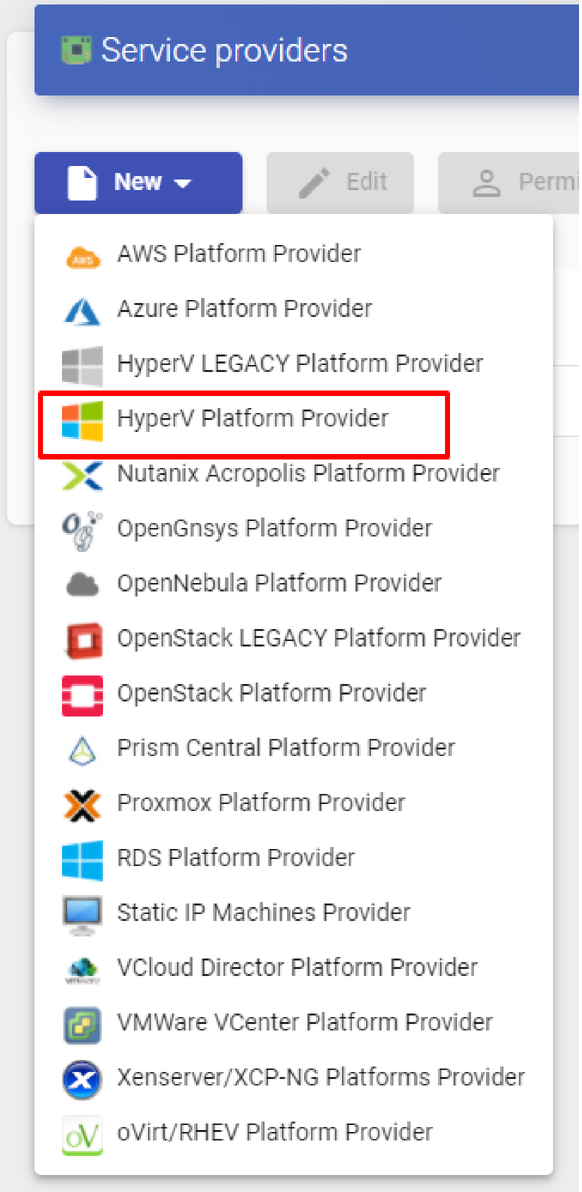
The "***Logs***" tab show information about a possible issue that occurred in the "***Service Provider***":



4.1.5 VDI Platform with Microsoft Hyper-V

Deployment of virtual desktops self-generated by UDS in a Microsoft Hyper-V virtualization infrastructure.

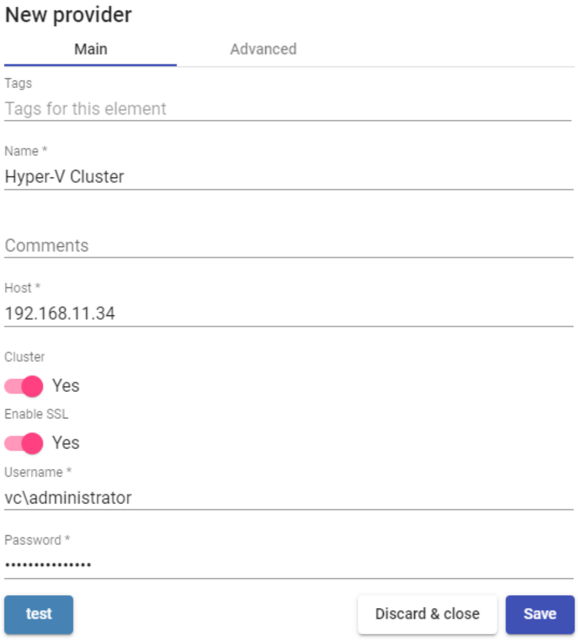
Click on "***New***" and select “***HyperV Platform Provider***”:


Service providers
New
Edit
Permi
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

In a "***HyperV Platform Provider***" you must configure at least the following parameters:

- Main:

Name of the service provider, IP/name of the Hyper-V Standalone server or IP/name of the Hyper-V cluster ("***Host***" field). If you integrate a Hyper-V cluster (Cluster = "***Yes***") or a Standalone server (Cluster = "***No***"), you must use an SSL connection. A username and password will have to be assigned with administration rights on the Hyper-V cluster or the Standalone server.



New provider

Tags: Tags for this element

Name *: Hyper-V Cluster

Comments

Host *: 192.168.11.34

Cluster: Yes

Enable SSL: Yes

Username *: vc\administrator

Password *: ••••••••••••••••

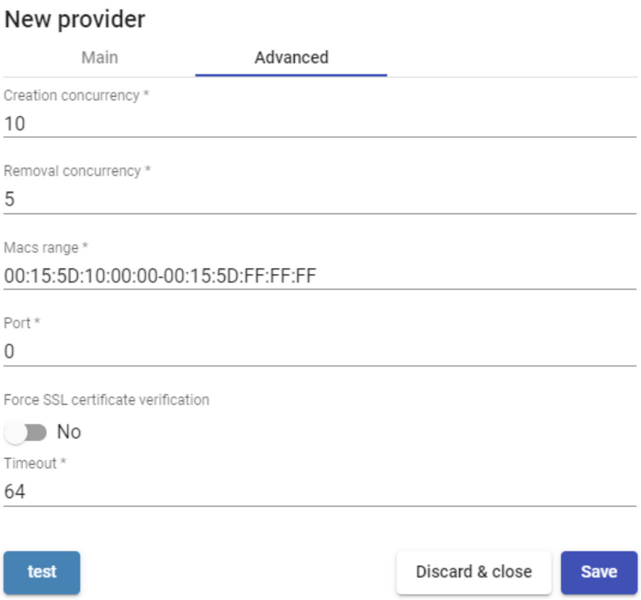
NOTE:
If you try to directly connect a Hyper-V server that is part of a cluster, the system will notify you that you must connect against the cluster that manages it.

For the connection to be successful, it will be necessary to execute the following script from PowerShell on all Hyper-V nodes (even if they are part of a cluster):

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

- Advanced:

Number of simultaneous desktop creation tasks ("***Creation concurrency***" field), number of simultaneous desktop removal tasks ("***Removal concurrency***" field), range of MAC addresses used by UDS for creating virtual desktops, connection port (the value 0 will use the default port: 5985) and the "***Timeout***" for the conection.



New provider

Creation concurrency *
10

Removal concurrency *
5

Macs range *
00:15:5D:10:00:00-00:15:5D:FF:FF:FF

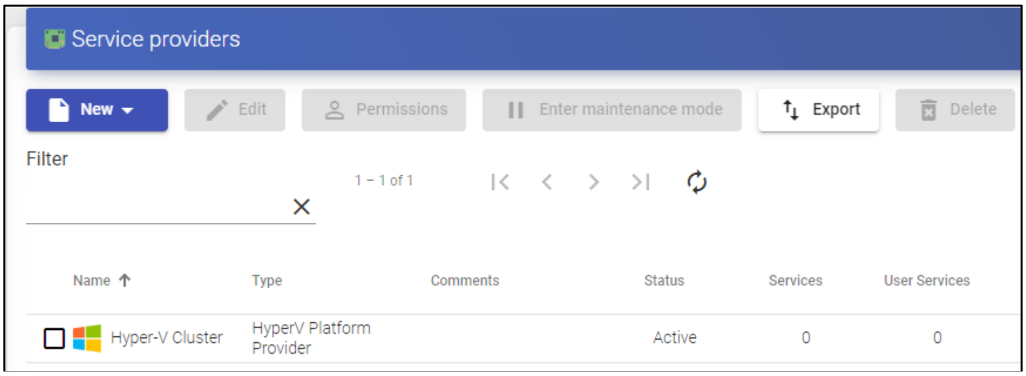
Port *
0

Force SSL certificate verification
No

Timeout *
64

With the button “*Test*” you can test and make sure the connection is successful.

Save the configuration and you will have a valid "***Service Providers***" " to start registering base services for the Microsoft Hyper-V platform.



Service providers

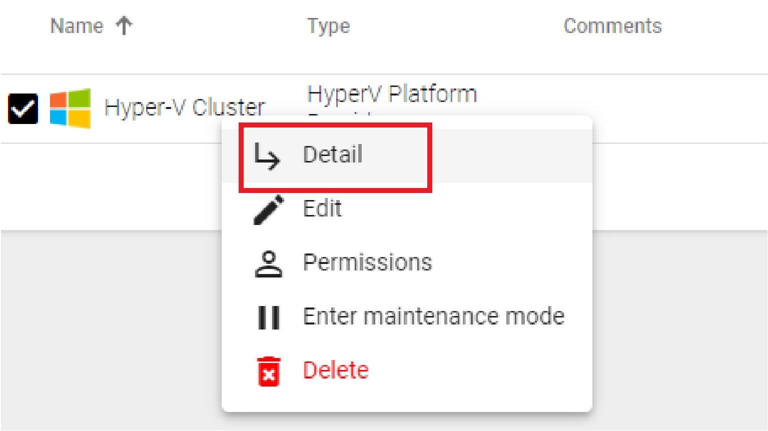
Name	Type	Comments	Status	Services	User Services
□ Hyper-V Cluster	HyperV Platform Provider		Active	0	0

NOTE:
If you have several Microsoft Hyper-V platforms (in a cluster or Standalone), you can register all the "**Service Providers**" of the type “**HyperV Platform Provider**” that you need.

To modify any parameter in an existing "***Service Providers***" select it and click on "***Edit***".

Using the "***Enter Maintenance Mode***" button, you can pause all operations performed by the UDS Server on a service provider. It is recommended to put a service provider in maintenance mode in cases where communication with that service provider has been lost or a maintenance outage is planned.

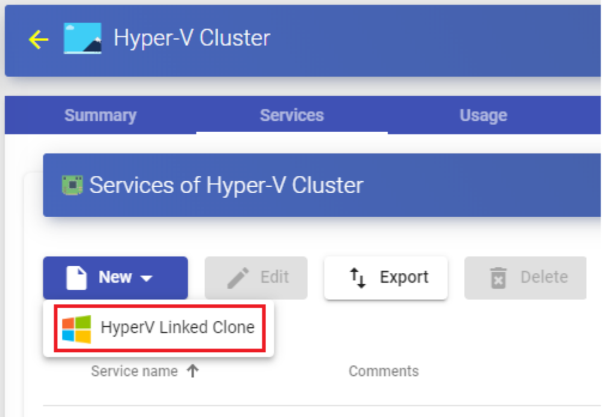
Once the Microsoft Hyper-V platform is integrated into UDS, base services can be created. To do this, double-click on the service provider created or selec "***Detail***"in the provider's menu:



4.1.5.1 Configure servicio based on “Hyper-V Linked Clone”

This type of service will create, within the virtual infrastructure, virtual desktops dependent on the active publication.

To create base services of type "***HyperV Linked Clone***" access the “***Service Providers***”, select the tab “***Services***”, click on “***New***” and select “***HyperV Linked Clone***”.



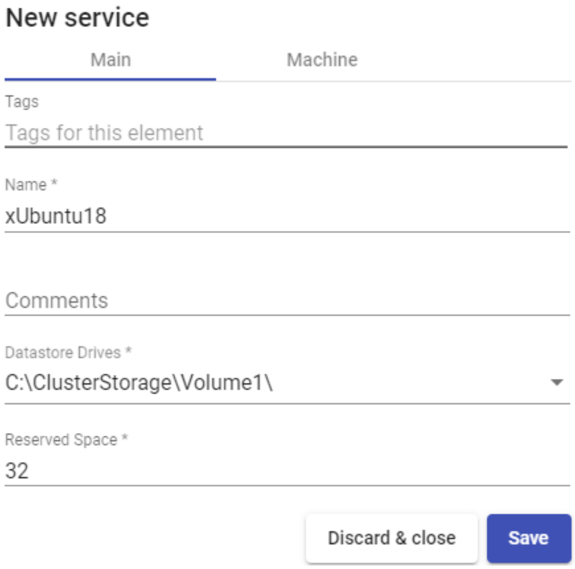
The minimum parameters to configure in this type of service are:

- Main:

Name: Service name.

Datastores Drives: Location where the publications and virtual desktops generated will be stored (In this storage a folder called “***UDSData***” will be created where all the disks of the generated machines will be stored).

Reserved Space: When there is less free space in storage than indicated in this parameter (in GB), UDS will not use it to host publications or virtual desktops.



New service

Main | Machine

Tags: Tags for this element

Name *: xUbuntu18

Comments

Datastore Drives *: C:\ClusterStorage\Volume1\

Reserved Space *: 32

- Machine:

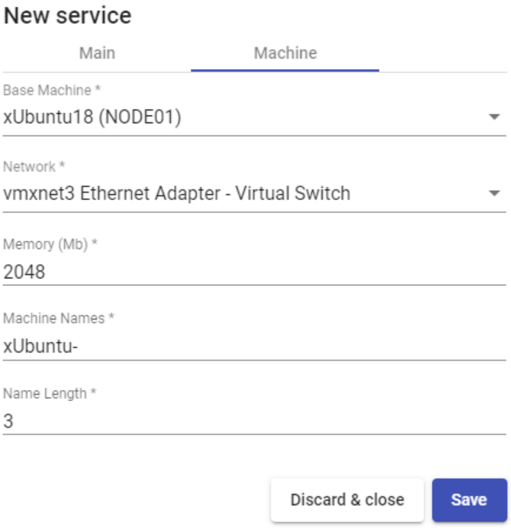
Base Machine: Virtual machine template (Gold Image) used by the UDS system for the deployment of virtual desktops.

Network: Network to connect virtual desktops.

Memory: Amount of memory in Mb that will be assigned to the Linked Clones virtual desktops.

Machine Names: Root name of all of the Linked Clones virtual desktops to be deployed on this service. (e.g.: Machine Names= xUbuntu-).

Name Length: Number of digits of the counter attached to the root name of the desktops (eg: Name Length= 3, the final name of the generated desktops would be: xUbuntu-**000**, xUbuntu-**001**... xUbuntu-**999**).



New service

Base Machine *: xUbuntu18 (NODE01)

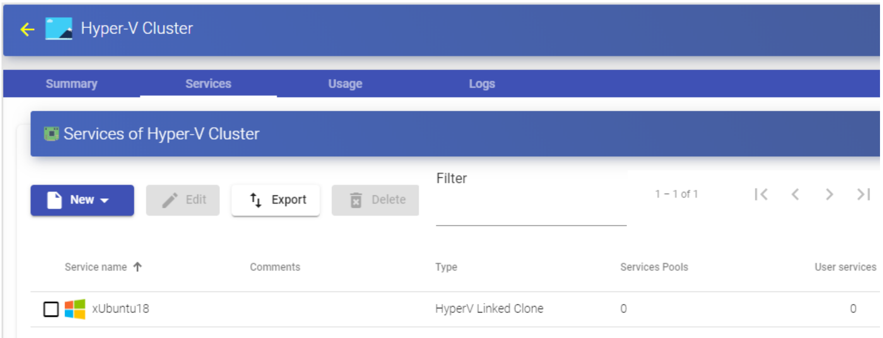
Network *: vmxnet3 Ethernet Adapter - Virtual Switch

Memory (Mb) *: 2048

Machine Names *: xUbuntu-

Name Length *: 3

Save the configuration and you will have a valid "***HyperV Linked Clone***" on the HyperV platform. You can register all the "***HyperV Linked Clone***” that you need.



Hyper-V Cluster

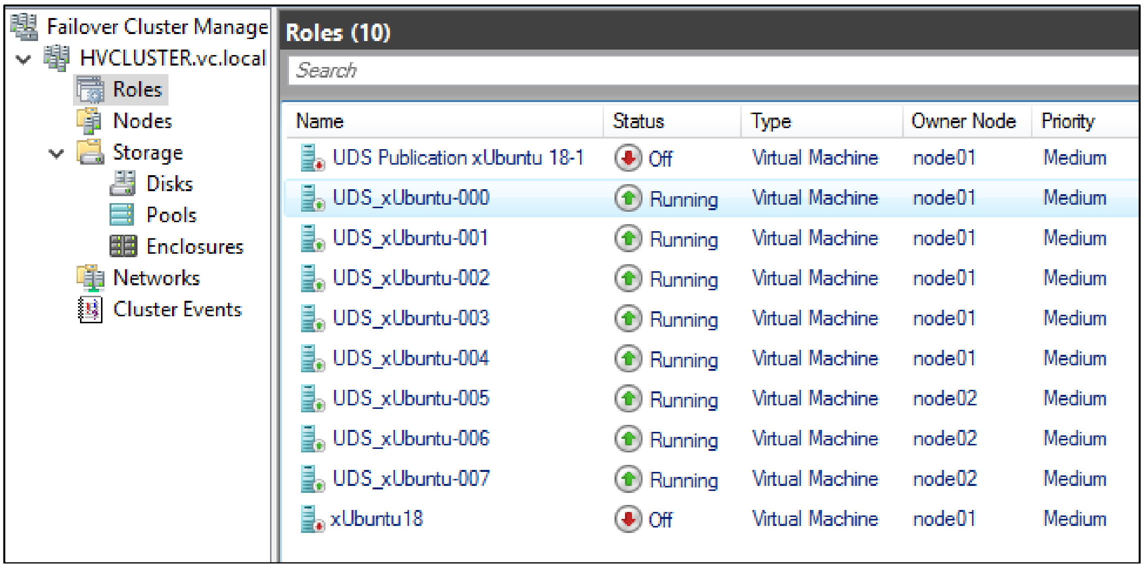
Services of Hyper-V Cluster

Service name	Comments	Type	Services Pools	User services
□ xUbuntu18		HyperV Linked Clone	0	0

Once you have the full UDS environment configured (Services, Authenticators, OS Managers and Transports) and created the first “***Service Pool***”, you can observe in the administration of the Hyper-V cluster or the Hyper-V Standalone server how the deployments of the desktops are carried out.

The first task that will be performed will be to create a publication of the template (this machine will be generated every time we publish a service). It will be a clone of the template chosen when registering the service, with a disk size and characteristics equal to that template.

Once the publication creation process is finished (the system will name it as: "UDS Publication *name_pool*-*númber_publication*”) he virtual desktops are automatically created (the system names them as: “UDS_ *Machine_Name*-*Name_Length*”) based on the cache parameters configured in the “***Service Pools***”.



- Failover Cluster Manage
  - HVCLUSTER.vc.local
    - Roles
    - Nodes
    - Storage
      - Disks
      - Pools
      - Enclosures
    - Networks
    - Cluster Events

Roles (10)

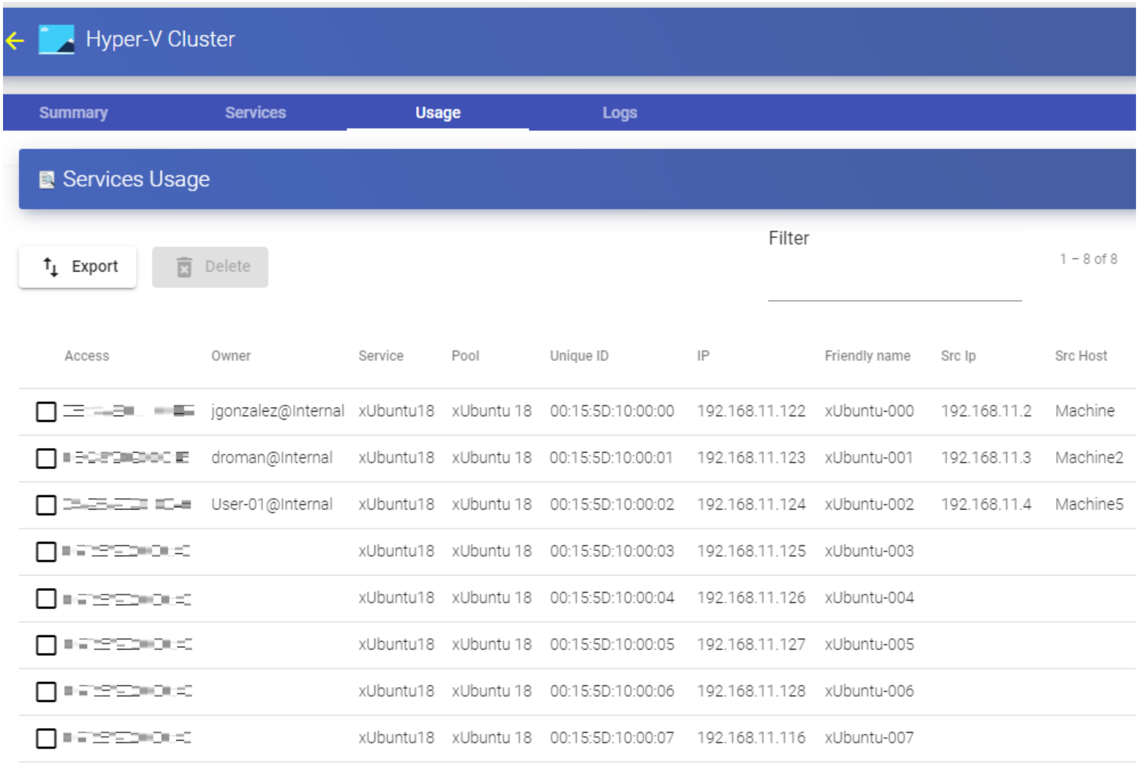
Search

Name	Status	Type	Owner Node	Priority
UDS Publication xUbuntu 18-1	Off	Virtual Machine	node01	Medium
UDS_xUbuntu-000	Running	Virtual Machine	node01	Medium
UDS_xUbuntu-001	Running	Virtual Machine	node01	Medium
UDS_xUbuntu-002	Running	Virtual Machine	node01	Medium
UDS_xUbuntu-003	Running	Virtual Machine	node01	Medium
UDS_xUbuntu-004	Running	Virtual Machine	node01	Medium
UDS_xUbuntu-005	Running	Virtual Machine	node02	Medium
UDS_xUbuntu-006	Running	Virtual Machine	node02	Medium
UDS_xUbuntu-007	Running	Virtual Machine	node02	Medium
xUbuntu18	Off	Virtual Machine	node01	Medium

4.1.5.2 Summary of Service usage and error logs

Within a “***Service Provider***” you will have a tab called “***Usage***” that will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this “***Service Provider***”.

To access this information on the use of services, access the “***Service Providers***” and select the “***Usage***”:



	Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□	[redacted]	jgonzalez@Internal	xUbuntu18	xUbuntu 18	00:15:5D:10:00:00	192.168.11.122	xUbuntu-000	192.168.11.2	Machine
□	[redacted]	droman@Internal	xUbuntu18	xUbuntu 18	00:15:5D:10:00:01	192.168.11.123	xUbuntu-001	192.168.11.3	Machine2
□	[redacted]	User-01@Internal	xUbuntu18	xUbuntu 18	00:15:5D:10:00:02	192.168.11.124	xUbuntu-002	192.168.11.4	Machine5
□	[redacted]		xUbuntu18	xUbuntu 18	00:15:5D:10:00:03	192.168.11.125	xUbuntu-003		
□	[redacted]		xUbuntu18	xUbuntu 18	00:15:5D:10:00:04	192.168.11.126	xUbuntu-004		
□	[redacted]		xUbuntu18	xUbuntu 18	00:15:5D:10:00:05	192.168.11.127	xUbuntu-005		
□	[redacted]		xUbuntu18	xUbuntu 18	00:15:5D:10:00:06	192.168.11.128	xUbuntu-006		
□	[redacted]		xUbuntu18	xUbuntu 18	00:15:5D:10:00:07	192.168.11.116	xUbuntu-007		

You will see:

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator. If it appears empty, it means that the service has not been assigned to any user and is available in the cache.

Service: Name of the base service belonging to the "***Service Provider***" " from which the service was generated.

Pool: Name of the "***Service Pools***" to which the service belongs.

Unique ID: MAC address of the service.

IP: IP address of the service.

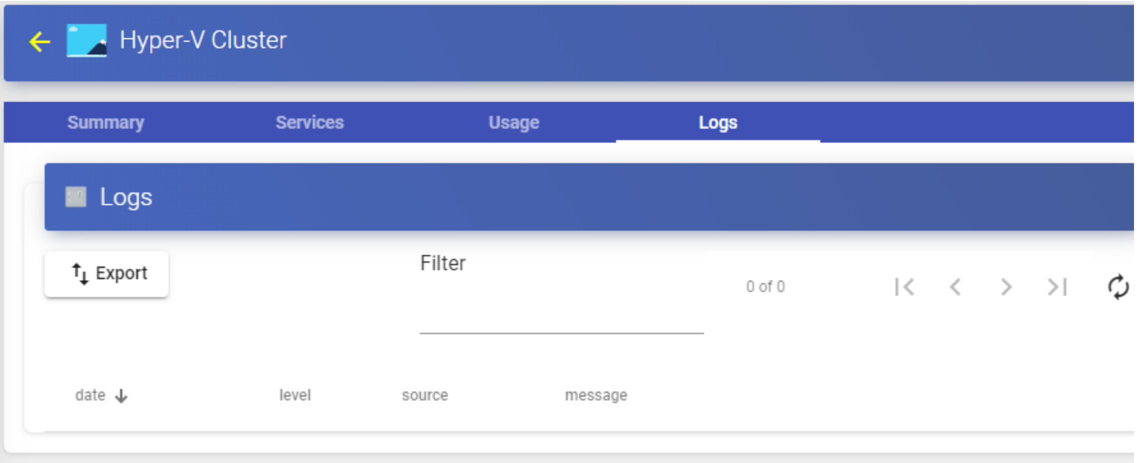
Friendly name: Name of the service. It will also be the DNS name of the UDS selfgenerated virtual machine.

Src Ip: IP address of the connection client accessing the service.

Src Host: DNS name of the connection client that accesses the service. If you cannot access this name, the IP address will be indicated.

It will also be possible to select one or several services to proceed with them elimination.

The "***Logs***" tab will show information about a possible issue that occurred in the "***Service Provider***":



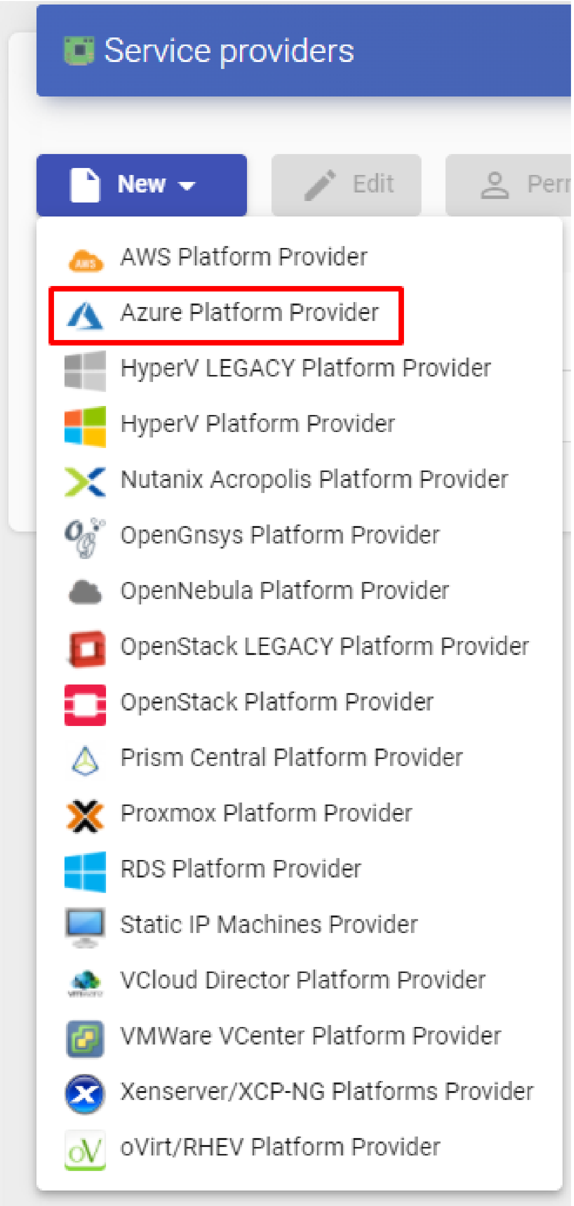
4.1.6 VDI platform with Microsoft Azure

Deploying and connecting to virtual desktops in a Microsoft Azure virtualization infrastructure.

4.1.6.1 Register a Service provider "Azure Platform Provider"

The integration of UDS Enterprise with an Azure platform requires a series of previous tasks and requirements to be carried out in the Azure environment itself. It is advisable to consult the manual "***VDI with UDS Enterprise and Microsoft Azure***" available at the sección de documentación of the UDS Enterprise website.

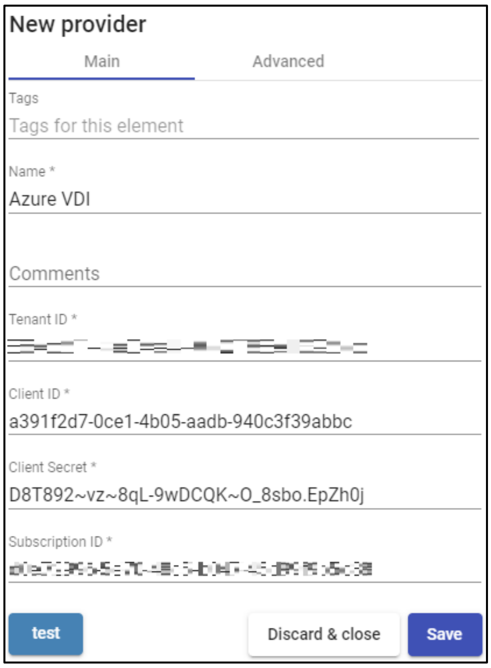
Click on "***New***" and select "***Azure Platform Provider***".


Service providers
New
Edit
Perr
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

In an “***Azure Platform Provider***” the minimum parameters to configure are:

- Main:

Service name, Tenant ID, Client ID, Client Secret and subscription ID.



New provider

Tags: Tags for this element

Name *: Azure VDI

Comments

Tenant ID *: [redacted]

Client ID *: a391f2d7-0ce1-4b05-aadb-940c3f39abbc

Client Secret *: D8T892~vz~8qL-9wDCQK~O_8sbo.EpZh0j

Subscription ID *: [redacted]

NOTE:

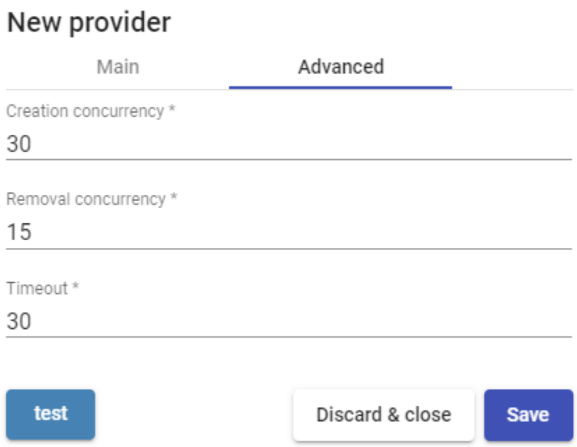
To locate and generate all the requested data, you can consult the manual “VDI with UDS Enterprise and Microsoft Azure” available in the documentation section of the UDS Enterprise website.

- Advanced:

Creation concurrency: Number of simultaneous desktop creation tasks.

Removal concurrency: Number of simultaneous desktop removal tasks.

Timeout: “*Timeout*” for the connection with the Microsoft Azure environment



New provider

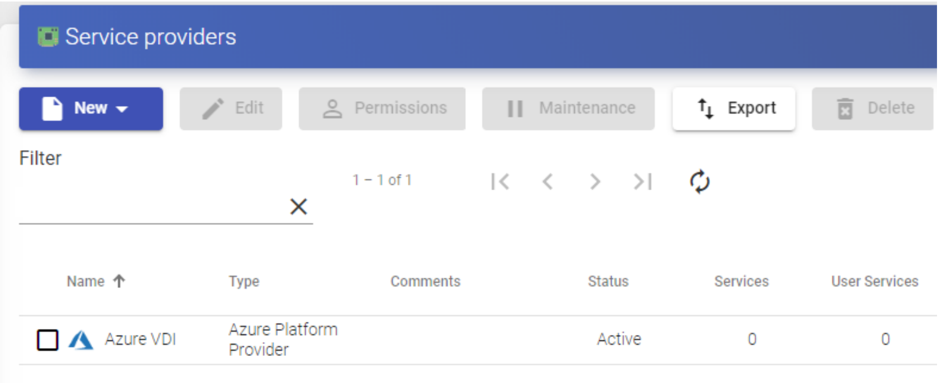
Creation concurrency *
30

Removal concurrency *
15

Timeout *
30

With the “*Test*” button you will check that the connection is successful.

Save the configuration and you will have a valid "***Service Provider***" to start registering base services on the Microsoft Azure platform.



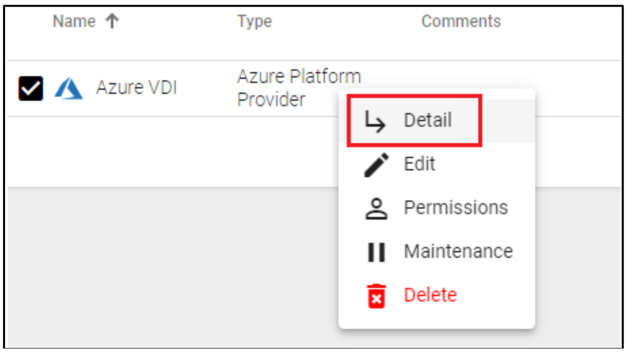
Name	Type	Comments	Status	Services	User Services
☐ Azure VDI	Azure Platform Provider		Active	0	0

NOTE:
If you have several Microsoft Azure platforms, you can register all the "**Service Providers**" of the type “**Azure Platform Provider**” that you need.

To modify any parameter in an existing “***Service Provider***” select it and click on “***Edit***”.

Using the “***Enter Maintenance Mode***” button, you can pause all operations performed by the UDS Server on a service provider. It is recommended to put a service provider into maintenance mode in cases where communication with that service provider has been lost or a maintenance outage is planned

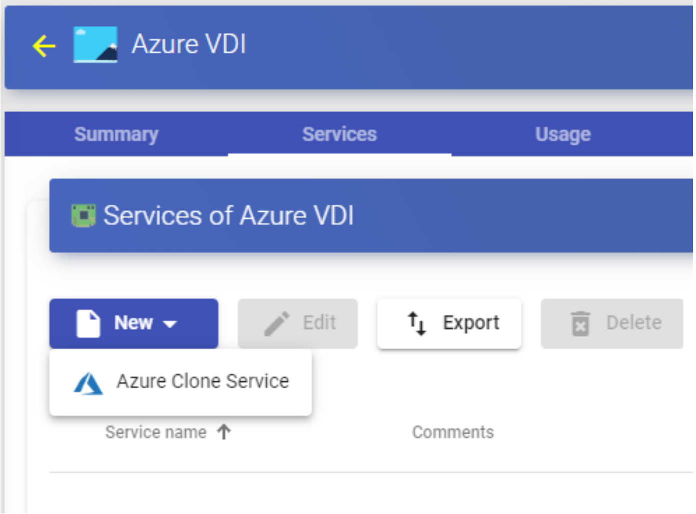
Once the Azure platform is integrated into UDS, base services can be created. To do this, double-click on the service provider created or select “***Detail***” in the provider:



4.1.6.2 Configure a Service based on "Azure Clone Service"

This type of service will create, within the virtual infrastructure, virtual desktops dependent on the active publication.

To create "***Azure Clone Service***" access "***Service Provider***", select the tab "***Services***", click on "***New***" and select "***Azure Clone Service***".



The minimum parameters to configure in this type of service are:

- Main:

Name: Name of the service.

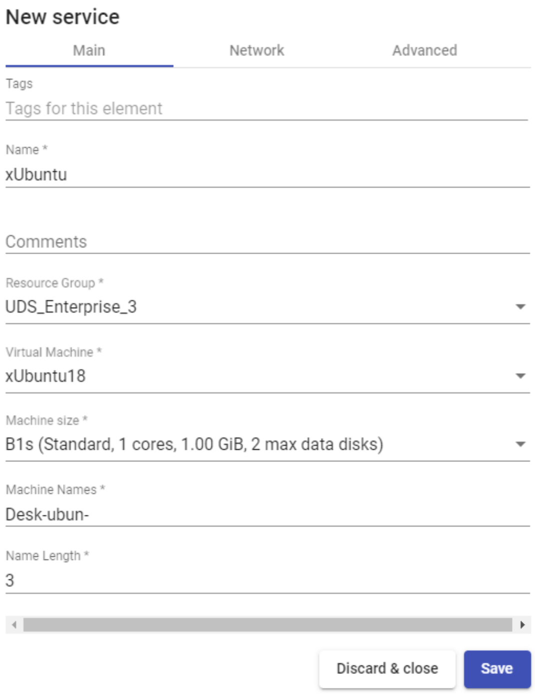
Resource Group: Group of existing resources in the Azure platform on which the virtual desktops will be deployed.

Virtual Machine: Virtual machine template (Gold Image) used by the system for the deployment of virtual desktops.

Machine Size: Number of resources that the virtual desktops automatically deployed by UDS will have (this list will show all the types of machines available in Azure. Therefore, make sure that the chosen type is supported by your Azure subscription).

Machine Names: Root of the name of all virtual desktops to be deployed in this service. (e.g.: Machine Names= Desk-ubun-).

Name Length: Number of digits of the counter attached to the root of the name of the desktops (ex: Name Length= 3. The final name of the generated desktops would be: Desk-ubun-**000**, Desk-ubun-**001**... Desk-ubun-**999**).


New service

Tags: Tags for this element

Name *: xUbuntu

Comments

Resource Group *: UDS_Enterprise_3

Virtual Machine *: xUbuntu18

Machine size *: B1s (Standard, 1 cores, 1.00 GiB, 2 max data disks)

Machine Names *: Desk-ubun-

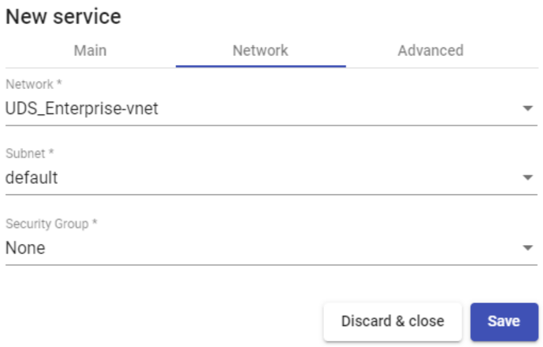
Name Length *: 3

- Network:

Network: Existing virtual network of the Azure environment to which the virtual desktops will be connected (there must be connectivity with the UDS Server component).

Subnet: Existing subnet of the Azure environment to which the virtual desktops will be connected.

Security Group: Security group (if necessary) to assign to the new virtual desktops.


New service

Network *: UDS_Enterprise-vnet

Subnet *: default

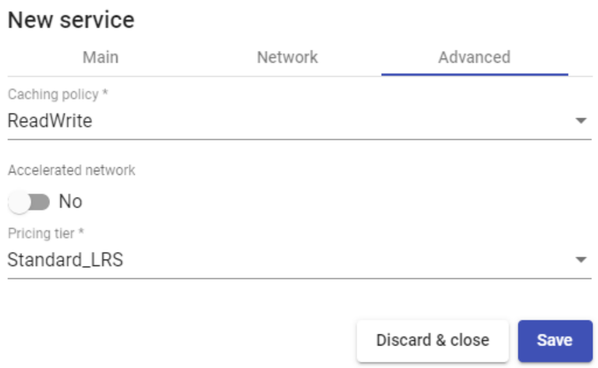
Security Group *: None

- Advanced:

Caching policy: Disk cache settings.

Accelerated network: Enables the use of this technology (cannot be used with most types of machines, only with: D/DSv3, E/ESv3, Fsv2 and Ms/Mms and Linux OS).

Pricing tier: Redundancy level applied.



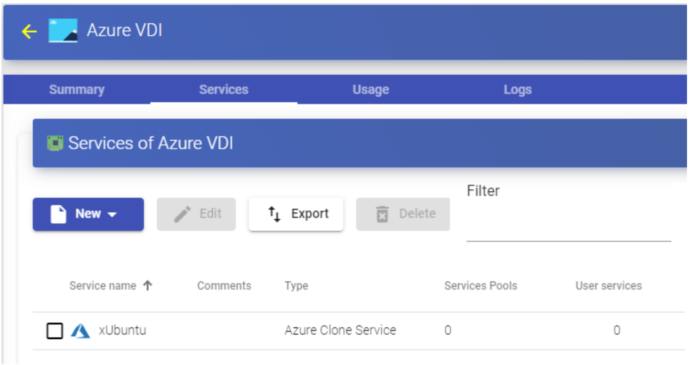
New service

Caching policy *
ReadWrite

Accelerated network
No

Pricing tier *
Standard_LRS

Save the configuration and you will have a valid "***Azure Clone Service***" " on the Microsoft Azure platform. You will be able to register all the services of the type "***Azure Clone Service***" that you need.

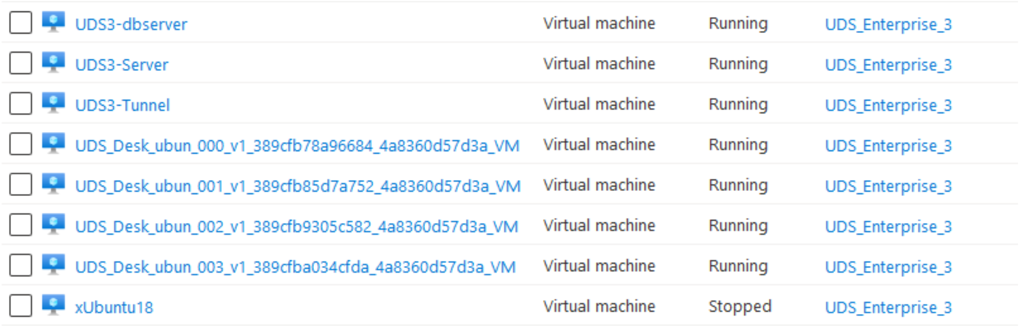


Service name	Comments	Type	Services Pools	User services
☐ xUbuntu		Azure Clone Service	0	0

Once you have the full UDS environment configured (Services, Authenticators, OS Managers and Transports) and created the first "***Service Pool***", you will be able to observe in the Azure console ("***Virtual Machines***") how the desktops are deployed.

The first task that will be performed will be to create a publication of the template (this machine will be generated every time you publish a service). It will be a clone of the template chosen when registering the service, with a disk size and characteristics equal to that template.

Once the publication creation process is finished, the desktops are automatically created (the system names them as: "UDS _*Machine_Name_Name_Length*") based on the cache parameters configured in the "***Service Pools***".

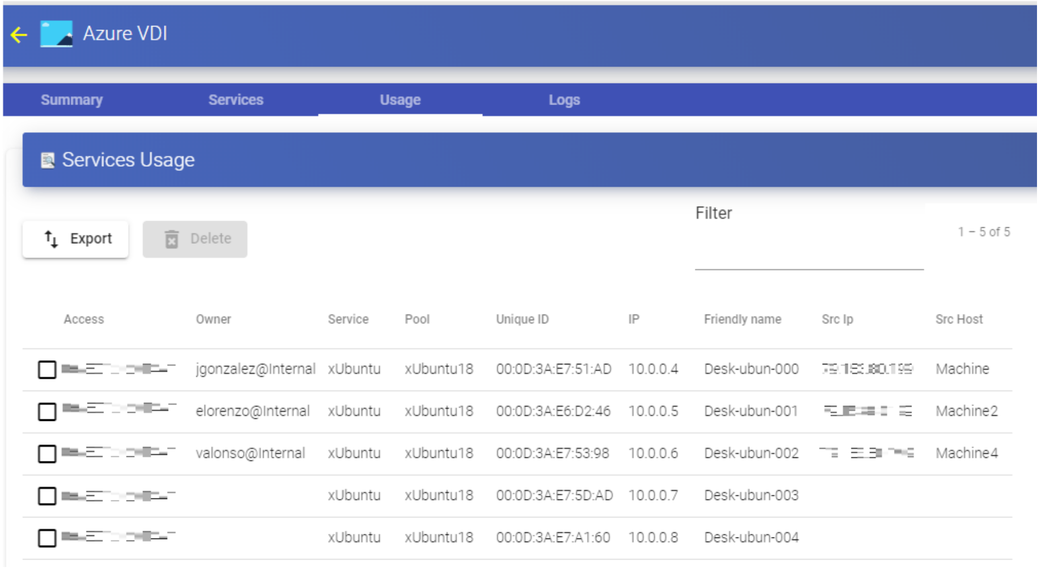


☐ UDS3-dbserver	Virtual machine	Running	UDS_Enterprise_3
☐ UDS3-Server	Virtual machine	Running	UDS_Enterprise_3
☐ UDS3-Tunnel	Virtual machine	Running	UDS_Enterprise_3
☐ UDS_Desk_ubun_000_v1_389cfb78a96684_4a8360d57d3a_VM	Virtual machine	Running	UDS_Enterprise_3
☐ UDS_Desk_ubun_001_v1_389cfb85d7a752_4a8360d57d3a_VM	Virtual machine	Running	UDS_Enterprise_3
☐ UDS_Desk_ubun_002_v1_389cfb9305c582_4a8360d57d3a_VM	Virtual machine	Running	UDS_Enterprise_3
☐ UDS_Desk_ubun_003_v1_389cfba034cfda_4a8360d57d3a_VM	Virtual machine	Running	UDS_Enterprise_3
☐ xUbuntu18	Virtual machine	Stopped	UDS_Enterprise_3

4.1.6.3 Resumen Summary of Service usage and error logs

Within a "***Service Provider***" you will have a tab called "***Usage***" hat will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this "***Service Provider***".

To access this information on the use of services, access "***Service Providers*** and select "***Usage***":



	Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□	[illegible]	jgonzalez@Internal	xUbuntu	xUbuntu18	00:0D:3A:E7:51:AD	10.0.0.4	Desk-ubun-000	[illegible]	Machine
□	[illegible]	elorenzo@Internal	xUbuntu	xUbuntu18	00:0D:3A:E6:D2:46	10.0.0.5	Desk-ubun-001	[illegible]	Machine2
□	[illegible]	valonso@Internal	xUbuntu	xUbuntu18	00:0D:3A:E7:53:98	10.0.0.6	Desk-ubun-002	[illegible]	Machine4
□	[illegible]		xUbuntu	xUbuntu18	00:0D:3A:E7:5D:AD	10.0.0.7	Desk-ubun-003		
□	[illegible]		xUbuntu	xUbuntu18	00:0D:3A:E7:A1:60	10.0.0.8	Desk-ubun-004		

You will see:

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator. If it appears empty, it means that the service has not been assigned to any user and is available in the cache.

Service: Name of the base service belonging to the "**Service Provider**" from which the service was generated.

Pool: Name of the "***Service Pools***" to which the service belongs.

Unique ID: MAC address of the service.

IP: IP address of the service.

Friendly name: Name of the service. It will also be the DNS name of the UDS selfgenerated virtual machine.

Src Ip: IP address of the connection client accessing the service.

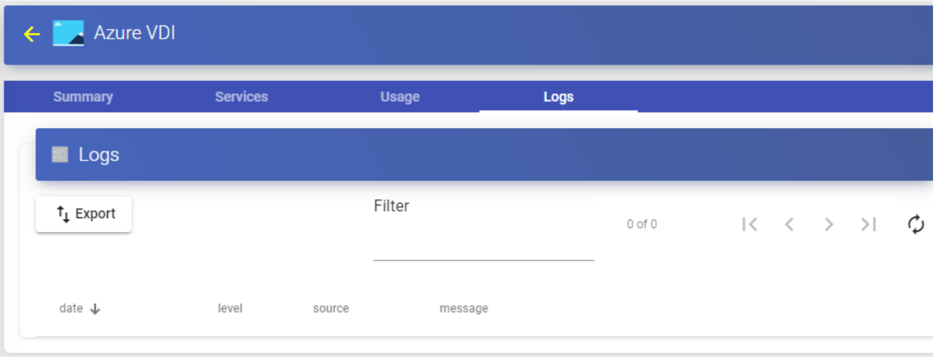
.

Src Host: DNS name of the connection client that accesses the service. If you cannot

access this name, the IP address will be indicated.

It will also be possible to select one or several services to proceed with their elimination.

The "***Logs***" tab will show information about a possible issue that occurred in the "***Service Provider***":



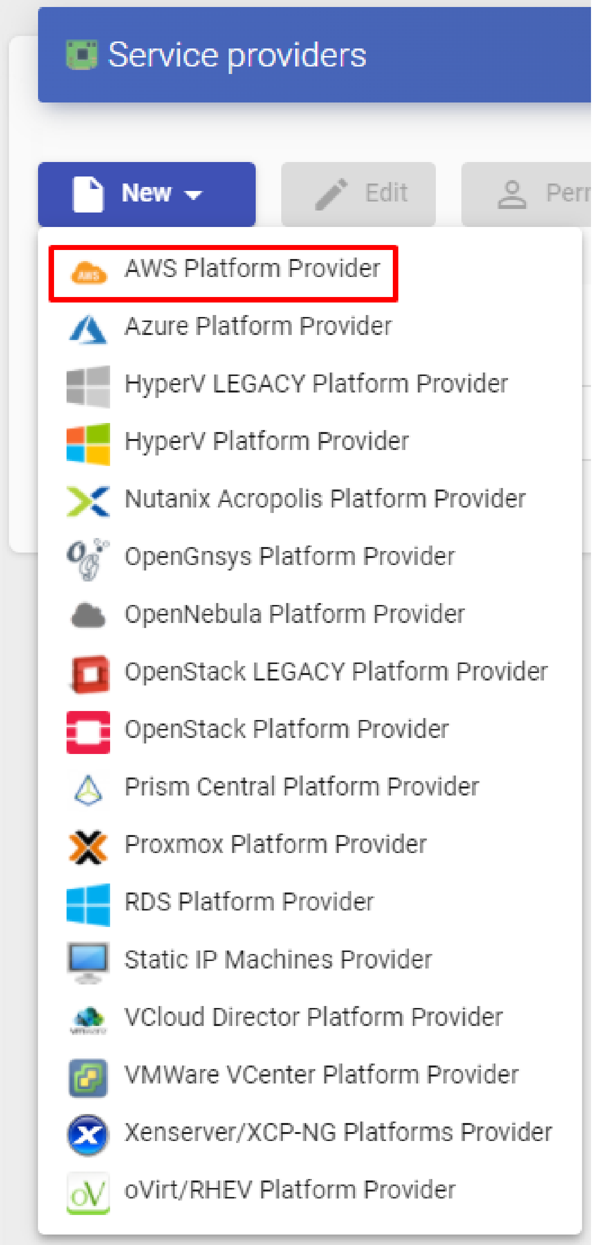
4.1.7 Plataforma VDI con Amazon AWS

Despliegue y conexión a escritorios virtuales en una infraestructura de virtualización Amazon AWS.

4.1.7.1 Alta de proveedor de servicios “AWS Platform Provider”

The integration of UDS Enterprise with an AWS platform m requires a series of previous tasks and requirements to be carried out in the Azure environment itself. It is advisable to consult the manual “***VDI with UDS Enterprise and Amazon AWS***” available at Documentation section of the UDS Enterprise website.

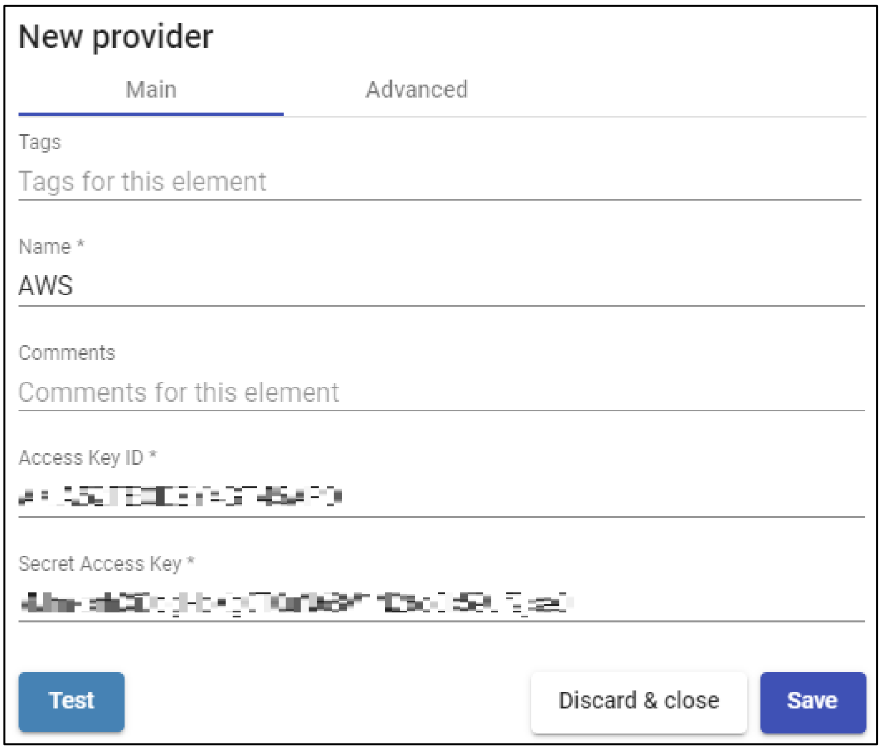
Click on "***New***" and select “***AWS Platform Provider***”.


Service providers
New
Edit
Perr
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

In an “*AWS Platform Provider*” the minimum parameters to configure are:

- Main:

Service Name, Access Key ID and Secret Access Key.



New provider

Tags: Tags for this element

Name *: AWS

Comments: Comments for this element

Access Key ID *: [redacted]

Secret Access Key *: [redacted]

NOTE:

To locate and generate all the requested data, you can consult the manual “VDI with UDS Enterprise and Amazon AWS” available in the documentation section of the UDS Enterprise web.

- Advanced:

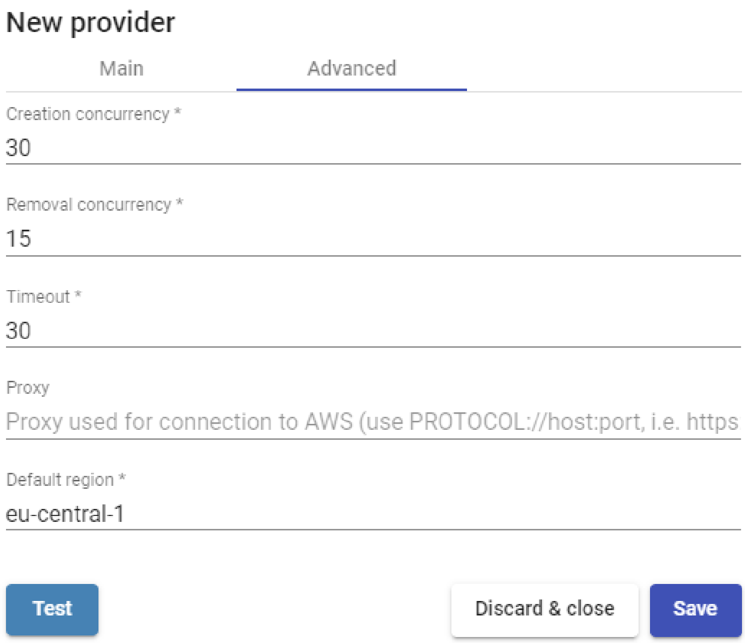
Creation concurrency: Number of simultaneous desktop creation tasks.

Removal concurrency: Number of simultaneous desktop removal tasks.

Timeout: “*Timeout*” for the connection with the AWS enviroment.

Proxy: Proxy server used in the connection with the AWS environment.

Default region: Region to use in the AWS environment.



New provider

Main | Advanced

Creation concurrency *
30

Removal concurrency *
15

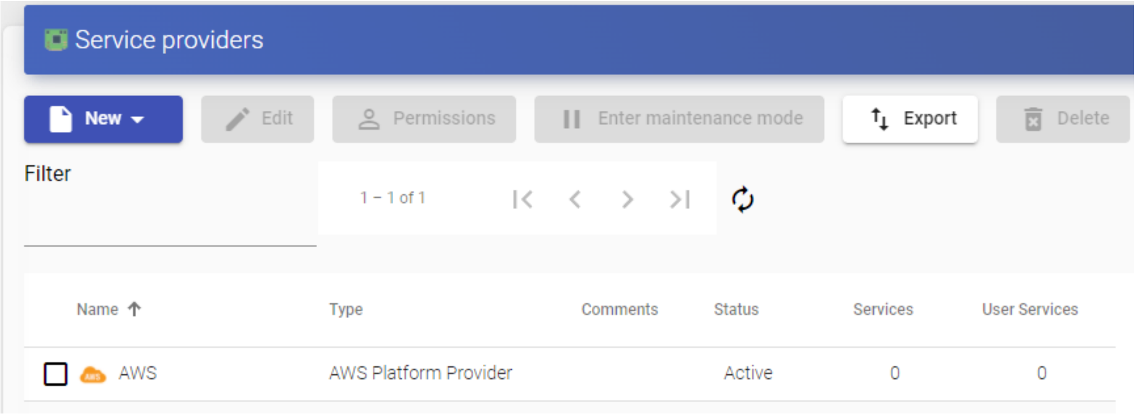
Timeout *
30

Proxy
Proxy used for connection to AWS (use PROTOCOL://host:port, i.e. https

Default region *
eu-central-1

With “*Test*” button you will check that the connection is successful.

Save the configuration and you will have a valid "*Service Provider*" to start registering base services on the Amazon AWS platform.



Service providers

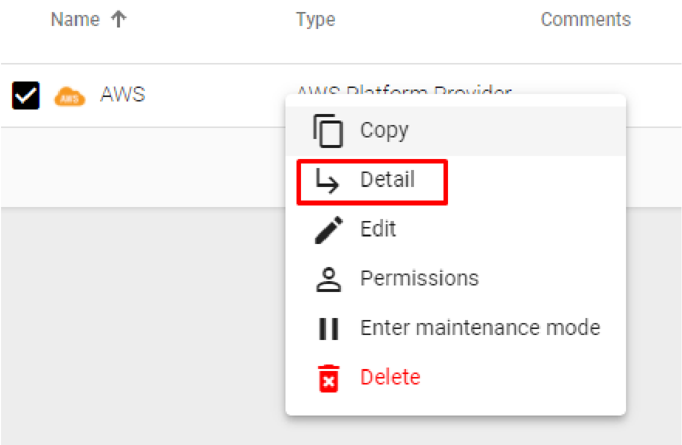
	Name	Type	Comments	Status	Services	User Services
□	AWS	AWS Platform Provider		Active	0	0

NOTE:
If you have AWS platforms, you can register all the "**Service Providers**" of the type “**AWS Platform Provider**” that you need.

To modify any parameter in an existing "***Service Provider***" select it and click on "***Edit***".

Using the "***Enter Maintenance Mode***" button, you can pause all operations performed by the UDS Server on a service provider. It is recommended to put a service provider into maintenance mode in cases where communication with that service provider has been lost or a maintenance outage is planned.

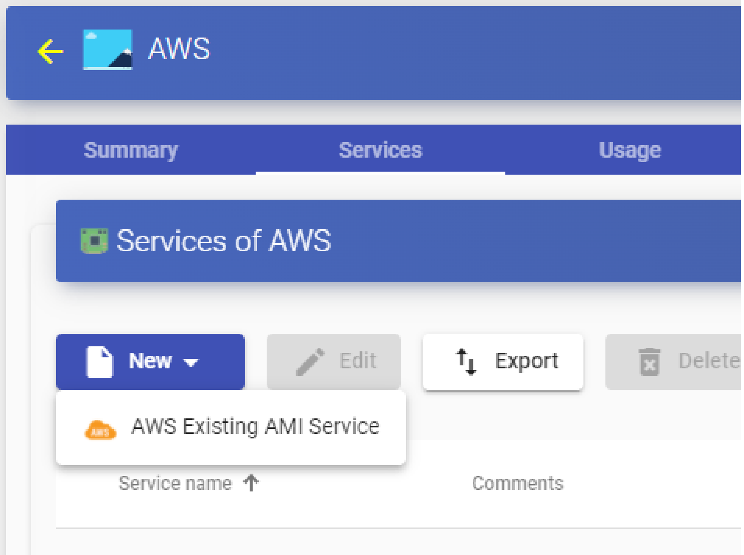
Once theAWS platform is integrated into UDS, base services can be created. To do this, double-click on the service provider created or select "***Detail***"in the provider:



4.1.7.2 Configure service based on “AWS Existing AMI Service”

This type of service will create, within the virtual infrastructure, virtual desktops dependent on the active publication.

To create “***AWS Existing AMI Service***" type access “***Service Provider***”, select the “***Services***” tab, click on “***New***” and select “***AWS Existing AMI Service***”.



The minimum parameters to configure in this type of service are:

- Main:

Name: Name of the service.

Region: Region of the AWS environment on which the desktops will be deployed. The AMIs to be used and the key pairs must also be hosted in this region.

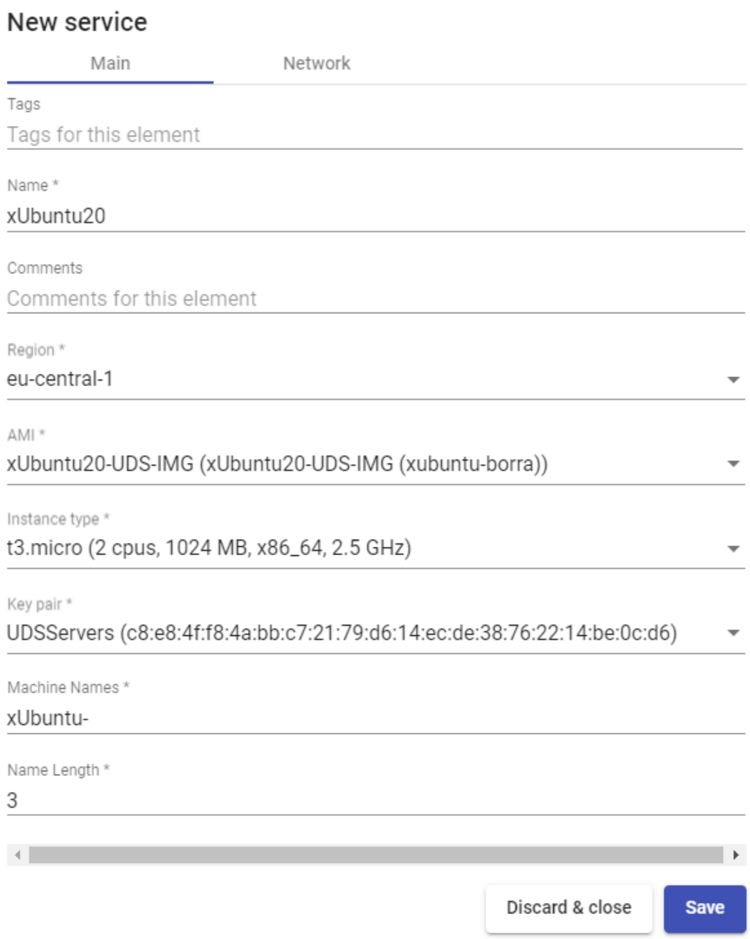
AMI: Template (Gold Image) used by the system for the deployment of virtual desktops.

Instance type: Amount of resources that the virtual desktops automatically deployed by UDS will have (all the types of machines available in AWS will be shown in this list. Therefore, you must make sure that the chosen type is supported by our AWS region).

Key pair: Key pair to be assigned to generated virtual desktops.

Machine Names: Root of the name of all virtual desktops to be deployed in this service. (e.g.: Machine Names= Xubun-).

Name Length: Number of digits of the counter attached to the root of the name of the desktops (ex: Name Length= 3. The final name of the generated desktops would be: Desk-ubun-**000**, Desk-ubun-**001**... Desk-ubun-**999**).



New service

Tags: Tags for this element

Name *: xUbuntu20

Comments: Comments for this element

Region *: eu-central-1

AMI *: xUbuntu20-UDS-IMG (xUbuntu20-UDS-IMG (xubuntu-borra))

Instance type *: t3.micro (2 cpus, 1024 MB, x86_64, 2.5 GHz)

Key pair *: UDSServers (c8:e8:4f:f8:4a:bb:c7:21:79:d6:14:ec:de:38:76:22:14:be:0c:d6)

Machine Names *: xUbuntu-

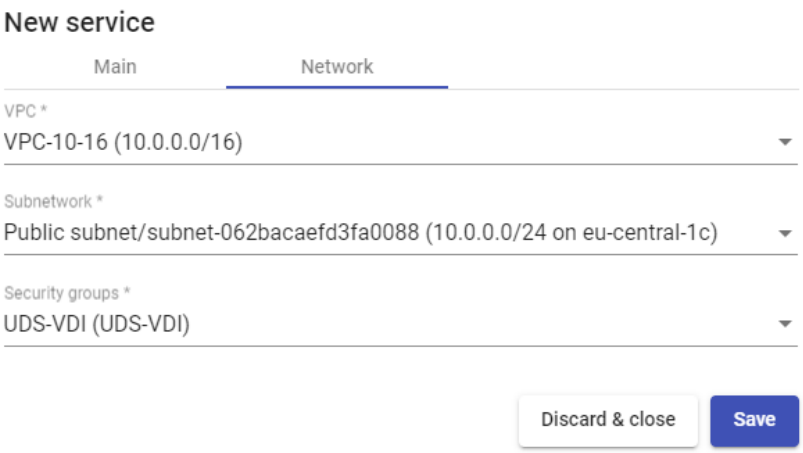
Name Length *: 3

- Network:

VPC: Existing VPC of the AWS environment to which the virtual desktops will be connected (there must be connectivity with the UDS Server and UDS Tunnel components).

Subnetwork: Existing subnet of the AWS environment to which the virtual desktops will be connected (there must be connectivity with the UDS Server and UDS Tunnel components).

Security Group: Security group to which to assign the new virtual desktops (this security group must have the necessary rules so that the generated desktops have communication with the different elements of the infrastructure).



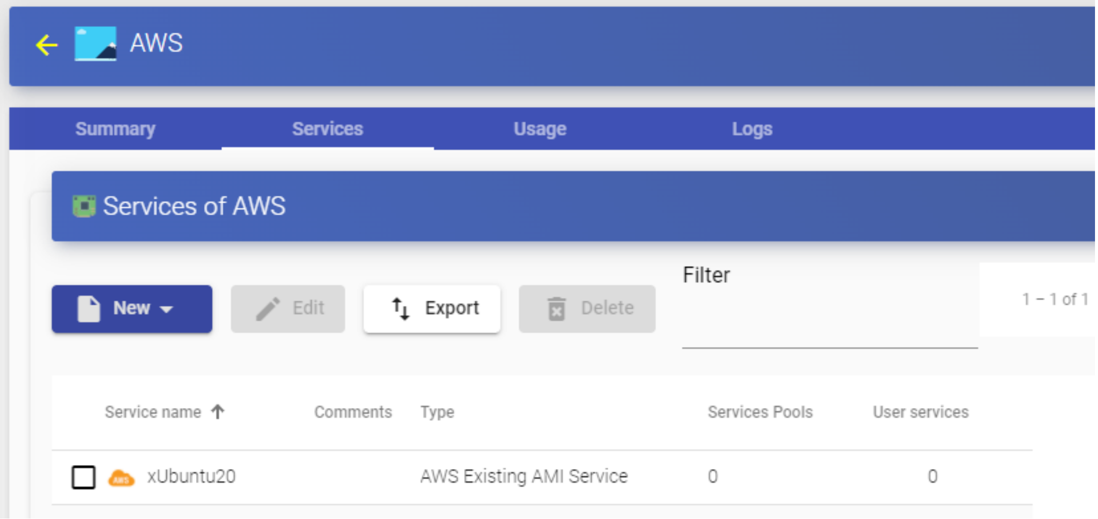
New service

VPC *
VPC-10-16 (10.0.0.0/16)

Subnetwork *
Public subnet/subnet-062bacaefd3fa0088 (10.0.0.0/24 on eu-central-1c)

Security groups *
UDS-VDI (UDS-VDI)

Save the configuration and you will have a valid" ***AWS Existing AMI Service*** " on the AWS platform. You will be able to register all the services of the type "***AWS Existing AMI Service*** " that you need.

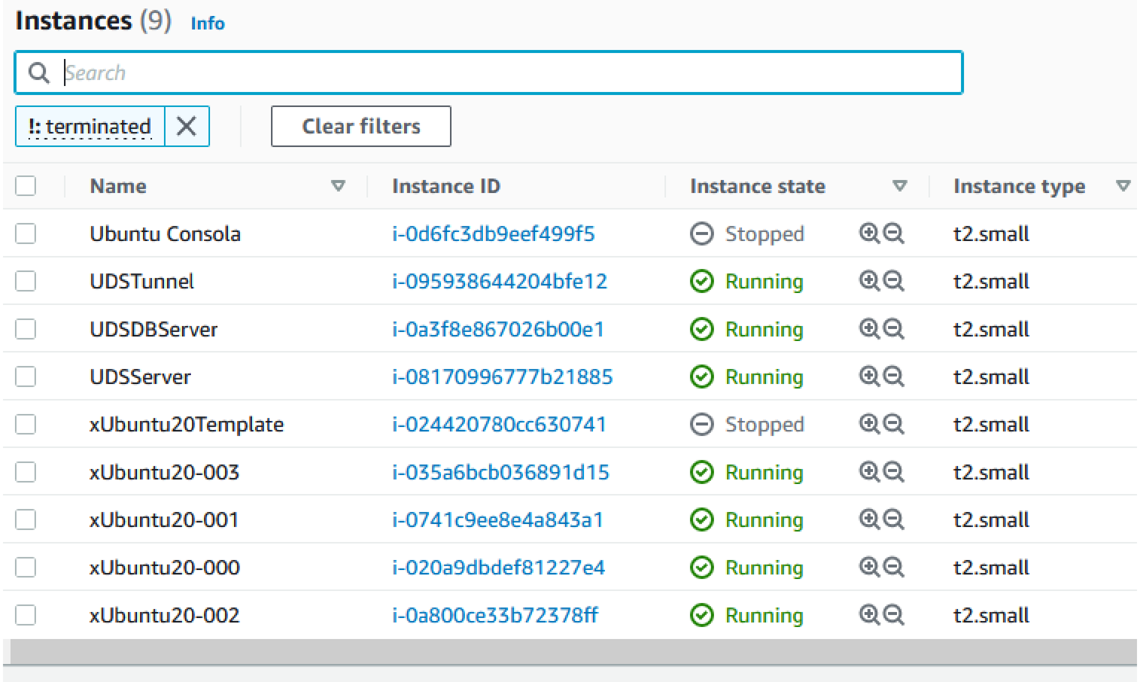


	Service name	Comments	Type	Services Pools	User services
□	xUbuntu20		AWS Existing AMI Service	0	0

Once you have the full UDS environment configured (Services, Authenticators, OS Managers y Transports and created the firs "***Service Pool***", you will be able to
Observe the EC2 of AWS console ("***Instances***") how the desktops are deployed..

The first task that will be performed will be to create a publication of the template (this machine will be generated every time you publish a service).

Once the publication creation process is finished, the desktops are automatically created (the system names them as: "UDS_*Machine_Name_Name_Length*")) based on the cache parameters configured in thel "***Service Pools***".



Instances (9) Info

Search

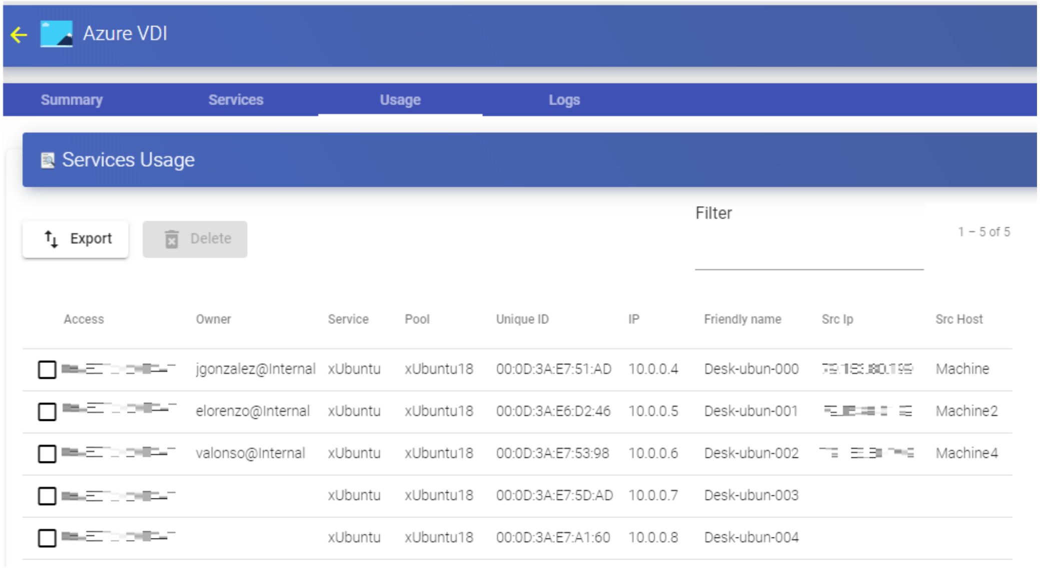
!: terminated ✕ | Clear filters

□	Name	Instance ID	Instance state		Instance type
□	Ubuntu Consola	i-0d6fc3db9eef499f5	⊖ Stopped	🔍	t2.small
□	UDSTunnel	i-095938644204bfe12	✓ Running	🔍	t2.small
□	UDSDBServer	i-0a3f8e867026b00e1	✓ Running	🔍	t2.small
□	UDSServer	i-08170996777b21885	✓ Running	🔍	t2.small
□	xUbuntu20Template	i-024420780cc630741	⊖ Stopped	🔍	t2.small
□	xUbuntu20-003	i-035a6bcb036891d15	✓ Running	🔍	t2.small
□	xUbuntu20-001	i-0741c9ee8e4a843a1	✓ Running	🔍	t2.small
□	xUbuntu20-000	i-020a9dbdef81227e4	✓ Running	🔍	t2.small
□	xUbuntu20-002	i-0a800ce33b72378ff	✓ Running	🔍	t2.small

4.1.7.3 Summary of Service usage and error logs

Within a “***Service Provider***” you will have a tab called “***Usage***” that will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this “***Service Provider***”.

To access this information on the use of services, access “***Service Providers*** and select “***Usage***”:



Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□ [redacted]	jgonzalez@Internal	xUbuntu	xUbuntu18	00:0D:3A:E7:51:AD	10.0.0.4	Desk-ubun-000	[redacted]	Machine
□ [redacted]	elorenzo@Internal	xUbuntu	xUbuntu18	00:0D:3A:E6:D2:46	10.0.0.5	Desk-ubun-001	[redacted]	Machine2
□ [redacted]	valonso@Internal	xUbuntu	xUbuntu18	00:0D:3A:E7:53:98	10.0.0.6	Desk-ubun-002	[redacted]	Machine4
□ [redacted]		xUbuntu	xUbuntu18	00:0D:3A:E7:5D:AD	10.0.0.7	Desk-ubun-003		
□ [redacted]		xUbuntu	xUbuntu18	00:0D:3A:E7:A1:60	10.0.0.8	Desk-ubun-004		

You will see:

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator. If it appears empty, it means that the service has not been assigned to any user and is available in the cache.

Service: Name of the base service belonging to the “**Service Provider**” from which the service was generated.

Pool: Name of the “***Service Pools***” to which the service belongs.

Unique ID: MAC address of the service.

IP: IP address of the service.

Friendly name: Name of the service. It will also be the DNS name of the UDS selfgenerated virtual machine.

Src Ip: IP address of the connection client accessing the service.

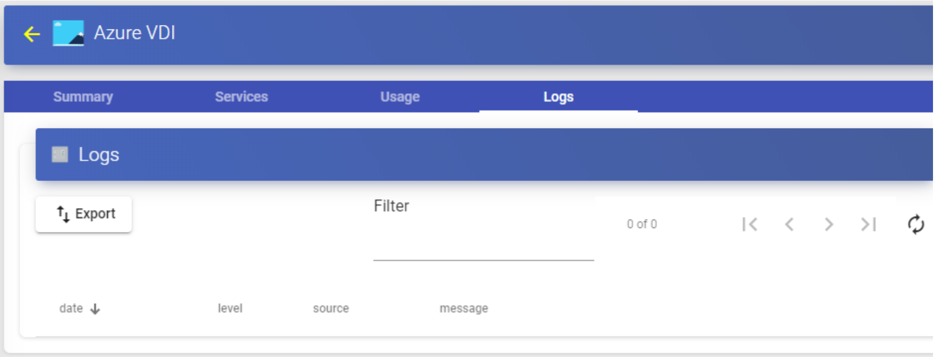
.

Src Host: DNS name of the connection client that accesses the service. If you cannot

access this name, the IP address will be indicated.

It will also be possible to select one or several services to proceed with their elimination.

The "***Logs***" tab will show information about a possible issue that occurred in the "***Service Provider***":

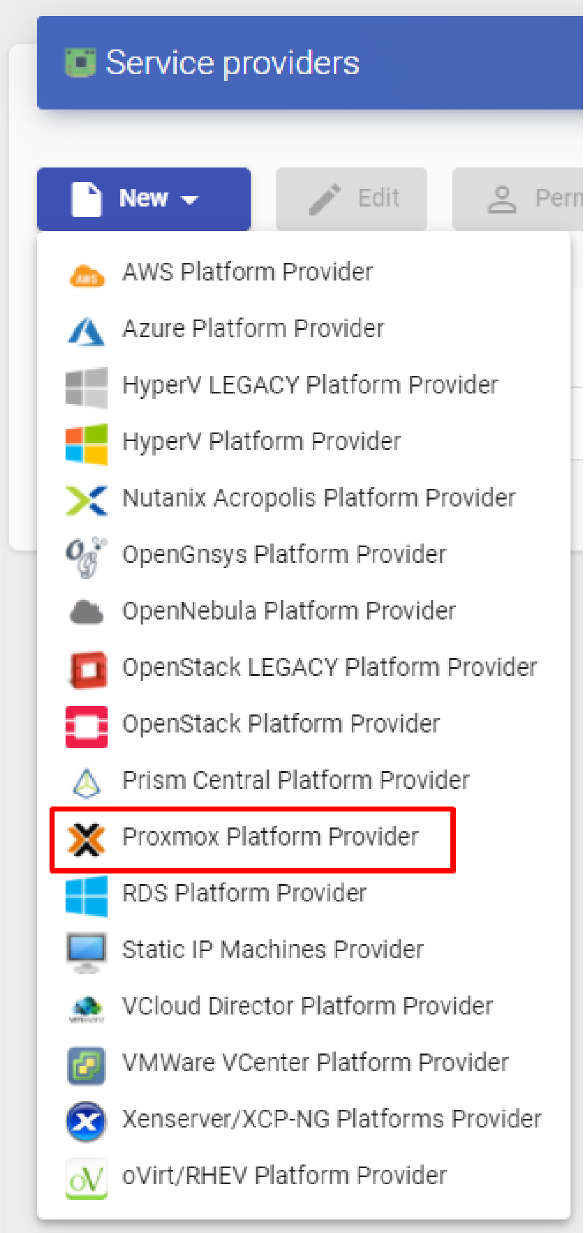


4.1.8 VDI platform with Proxmox

Deployment and connection to virtual desktops in a Proxmox infrastructure.

4.1.8.1 Register a Service provider “Proxmox Platform Provider”

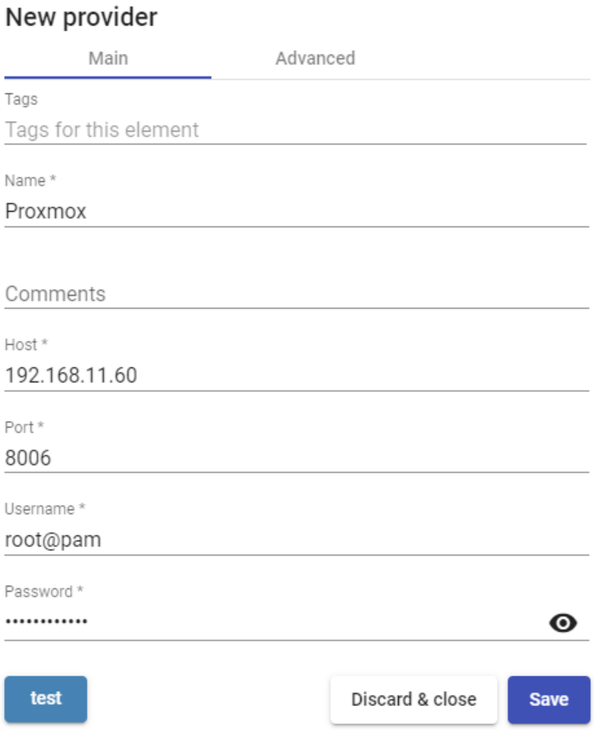
Click on "***New***" and select “***Proxmox Platform Provider***”.


Service providers
New
Edit
Perm
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

In a "***Proxmox Platform Provider***" the minimum parameters to configure are:

- Main:

Name of the service provider, IP or name of the Proxmox server or cluster ("***Host***" field), the connection port, the user namew (with user@authenticator format) and
password with administrative rights.



New provider

Tags: Tags for this element

Name *: Proxmox

Comments

Host *: 192.168.11.60

Port *: 8006

Username *: root@pam

Password *: ••••••••••••

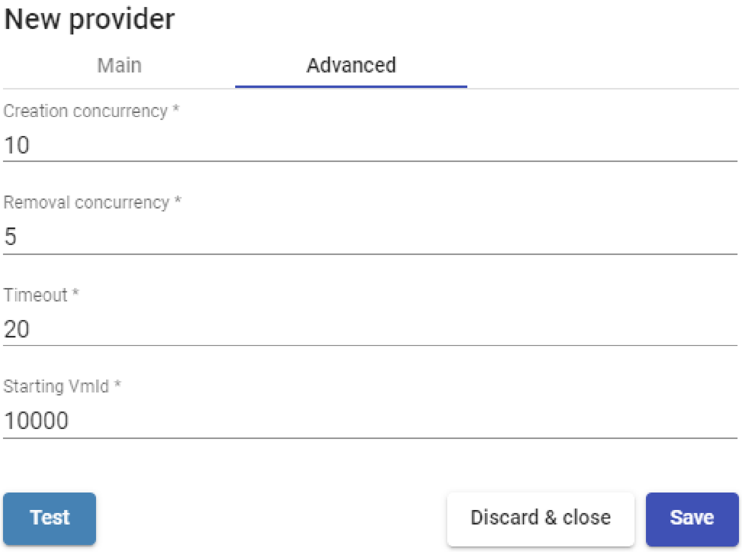
- Advanced:

Creation concurrency: Number of concurrent desktop creation tasks.

Removal concurrency: Number of concurrent desktop deletion tasks.

Timeout: "*Timeout*" for connection with Proxmox.

Starting Vmid: Machine ID with which UDS will start generating machines.


New provider

Main | Advanced

Creation concurrency *: 10

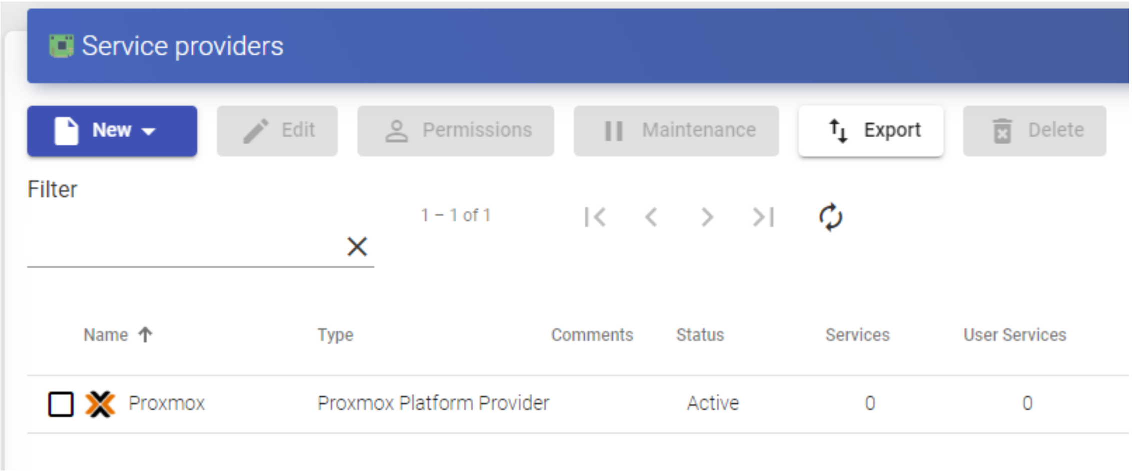
Removal concurrency *: 5

Timeout *: 20

Starting VmId *: 10000

With "*Test*" button you will check that the connection is made correctly.

Save the configuration and you will have a valid "*Service Providers*" to start registering base services on the Proxmox platform.


Service providers

Name	Type	Comments	Status	Services	User Services
☐ Proxmox	Proxmox Platform Provider		Active	0	0

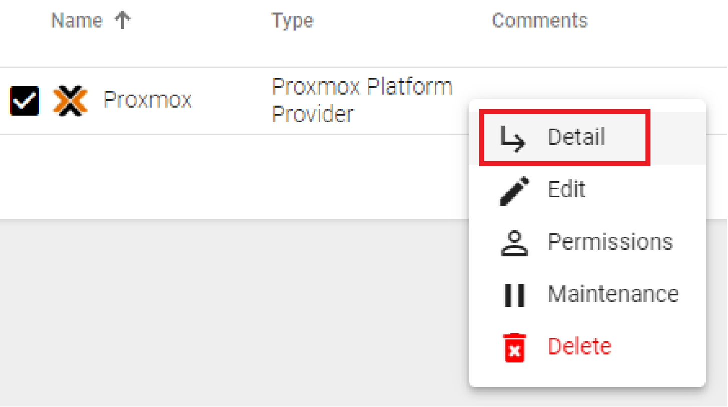
NOTE:

If you have several Proxmox platforms (both independent servers and clusters), you can register all the "**Service Providers**" of the type “**Proxmox Platform Provider**” thet we need.

To modify any parameter in an existing "***Service Providers***" existente, you will select it and click on "***Edit***".

Using the "***Enter Maintenance Mode***" you can pause all operations performed by the UDS Server on a service provider. It is recommended to put a service provider into maintenance mode in cases where communication with that service provider has been lost or a maintenance outage is planned

Once the Proxmox platform is integrated into UDS, base services can be created. To do this, double click on the service provider created or on the provider's menu and selec "***Detail***":

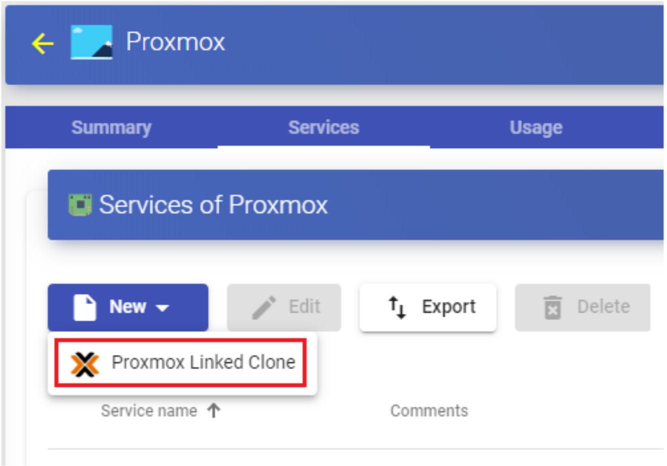


Name ↑	Type	Comments
☑ Proxmox	Proxmox Platform Provider	

4.1.8.2 Configure a service based on “Proxmox Linked Clone”

This type of service will create, within the virtual infrastructure, virtual desktops dependent on the active publication.

To create base services of the "***Proxmox Linked Clone***" type, access the “***Service Providers***”, select the “***Services***”, click on “***New***” and select “***Proxmox Linked Clone***”.



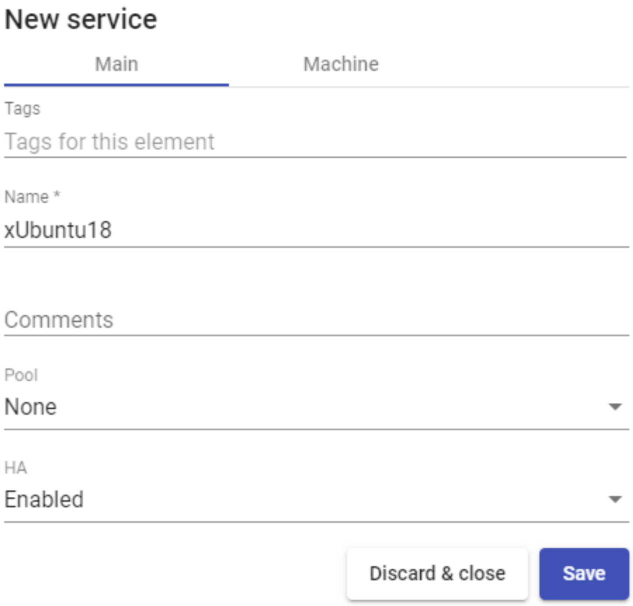
The minimum parameters to configure in this type of service are:

- Main:

Name: Service name.

Pool: Pool that will contain the machines created by UDS.

HA: It allows enabling the generated machines to use “***HA Group***”.



Tags: Tags for this element

Name *: xUbuntu18

Comments

Pool: None

HA: Enabled

- Machine:

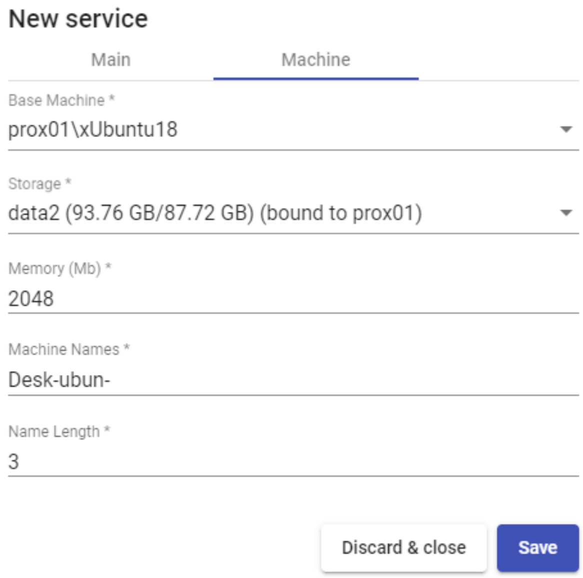
Base Machine: Virtual machine template (Gold Image) used by the UDS system for the deployment of virtual desktops.

Storage: Location where the generated virtual desktops and publications will be stored. **Storages that allow the creation of "Snapshots". For more information visit the following URL: https://pve.proxmox.com/wiki/Storage**.

Memory: Amount of memory in Mb to be allocated to the generated virtual desktops

Machine Names: Root of the name of all virtual desktops to be deployed in this service. (e.g.: Machine Names= Desk-ubun-).

Name Length: Number of digits of the counter attached to the root of the name of the desktops (ex: Name Length= 3. The final name of the generated desktops would be: Desk-ubun-**000,** Desk-ubun-**001**... Desk-ubun-**999**).


New service

Base Machine *: prox01\xUbuntu18

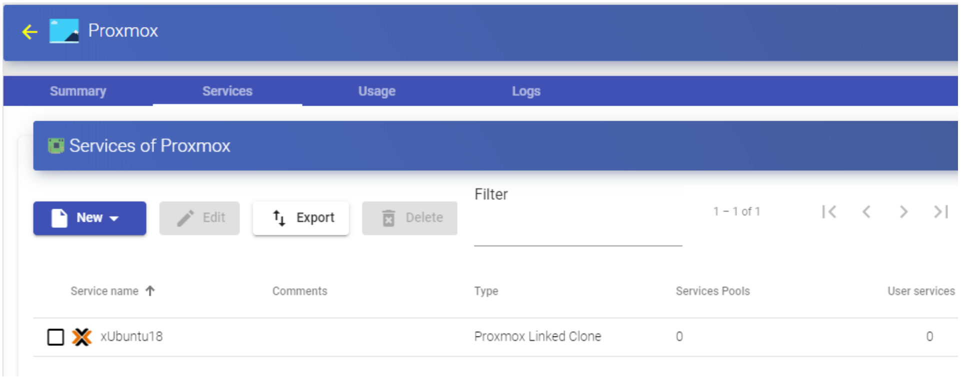
Storage *: data2 (93.76 GB/87.72 GB) (bound to prox01)

Memory (Mb) *: 2048

Machine Names *: Desk-ubun-

Name Length *: 3

Save the configuration and you will have a valid "***Proxmox Linked Clone***" on the Proxmox platform. You can register all the services of the "***Proxmox Linked Clone***" that you need.

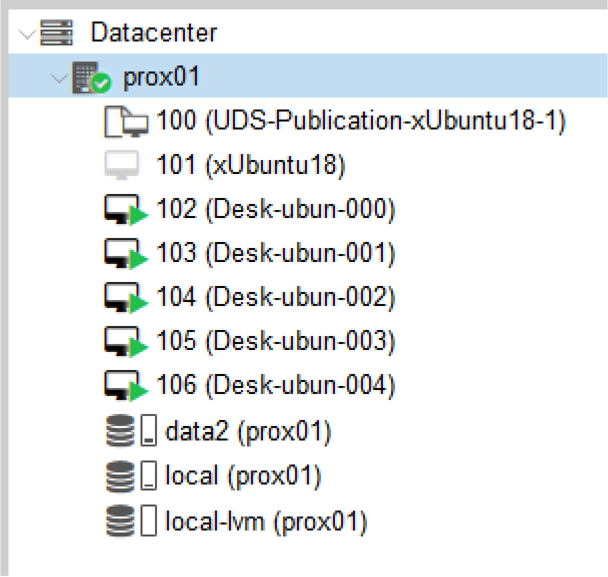


Service name	Comments	Type	Services Pools	User services
□ xUbuntu18		Proxmox Linked Clone	0	0

Once you have the full UDS environment configured (Services, Authenticators, OS Managers and Transports) and created the first "***Service Pool***", you can observe in the Proxmox environment how the desktops are deployed.

The first task that will be performed will be to generate a publication of the template (This machine will be generated every time you publish a service). It will be a clone of the template chosen when registering the service, with a disk size and characteristics equal to that template.

Once the publication creation process is finished (the system will name it as: "UDSPublication - *name_pool*-*number*-*publication*") the desktops are automatically created (the system will name them as: "*Machine_Name*-*Name_Length*") based on the cache parameters configured in the "***Service Pools***".

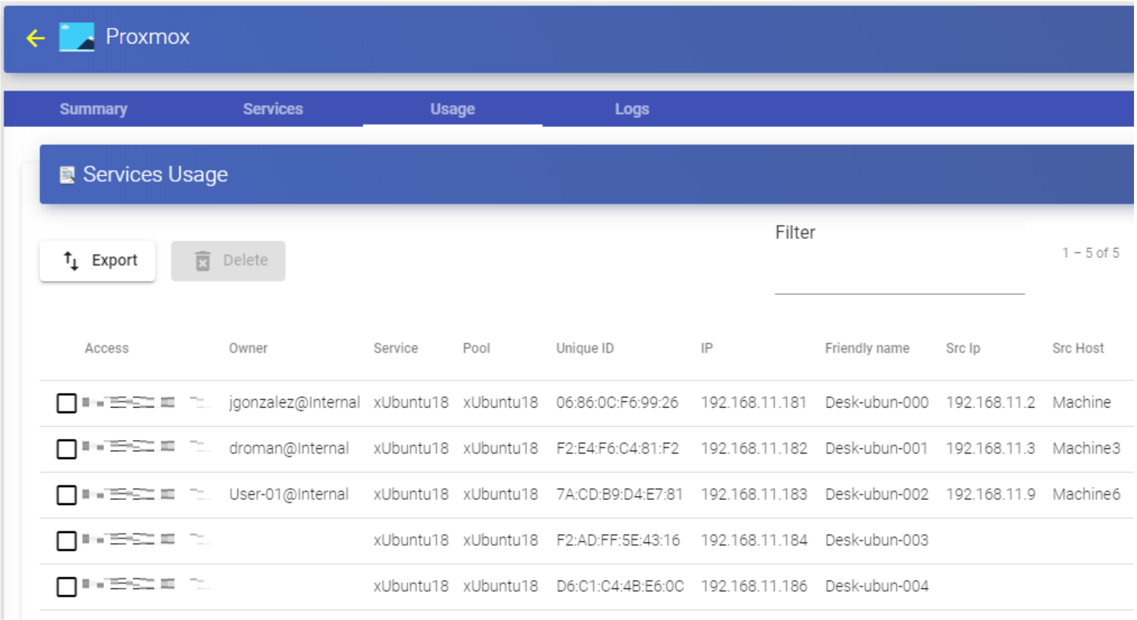


Datacenter
prox01
100 (UDS-Publication-xUbuntu18-1)
101 (xUbuntu18)
102 (Desk-ubun-000)
103 (Desk-ubun-001)
104 (Desk-ubun-002)
105 (Desk-ubun-003)
106 (Desk-ubun-004)
data2 (prox01)
local (prox01)
local-lvm (prox01)

4.1.8.3 Summary of Service usage and error logs

Within a “***Service Provider***” you will have a tab called “***Usage***” that will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this “***Service Provider***”.

To access this information on the use of services, access the “***Service Providers***” and select the “***Usage***” tab:



Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□ [illegible]	jgonzalez@Internal	xUbuntu18	xUbuntu18	06:86:0C:F6:99:26	192.168.11.181	Desk-ubun-000	192.168.11.2	Machine
□ [illegible]	droman@Internal	xUbuntu18	xUbuntu18	F2:E4:F6:C4:81:F2	192.168.11.182	Desk-ubun-001	192.168.11.3	Machine3
□ [illegible]	User-01@Internal	xUbuntu18	xUbuntu18	7A:CD:B9:D4:E7:81	192.168.11.183	Desk-ubun-002	192.168.11.9	Machine6
□ [illegible]		xUbuntu18	xUbuntu18	F2:AD:FF:5E:43:16	192.168.11.184	Desk-ubun-003		
□ [illegible]		xUbuntu18	xUbuntu18	D6:C1:C4:4B:E6:0C	192.168.11.186	Desk-ubun-004		

You will see:

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator. If it appears empty, it means that the service has not been assigned to any user and is available in the cache.

Service: Name of the base service belonging to the “Service Provider” from which the service was generated.

Pool: Name of the "***Service Pools***" to which the service belongs.

Unique ID: MAC address of the service.

IP: IP address of the service.

Friendly name: Name of the service. It will also be the DNS name of the UDS selfgenerated virtual machine.

Src Ip: IP address of the connection client accessing the service.

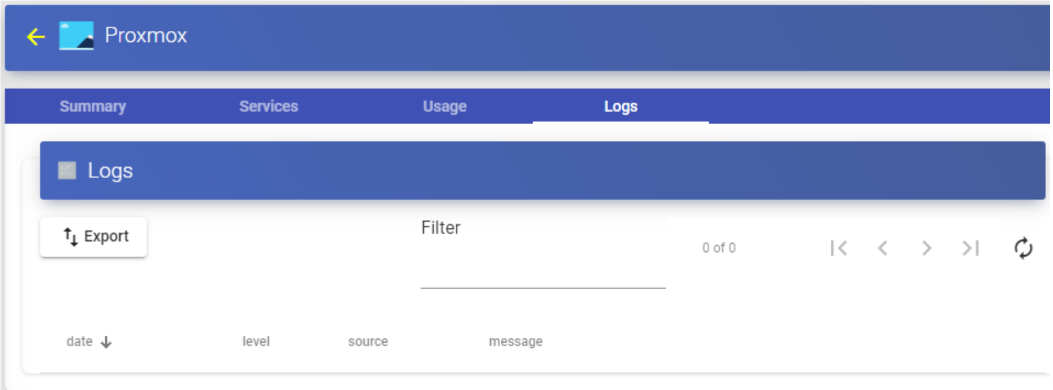
.

Src Host: DNS name of the connection client that accesses the service. If you cannot

access this name, the IP address will be indicated.

It will also be possible to select one or several services to proceed with their elimination.

The “***Logs***” tab will show information about a possible issue that occurred in the “***Service Provider***”:



4.1.9 Direct Connection to Persistent Devices

This type of "***Service provider***" allows the assignment of users to persistent or static computers, whether they are physical machines or virtual machines.

You will have two types of services:

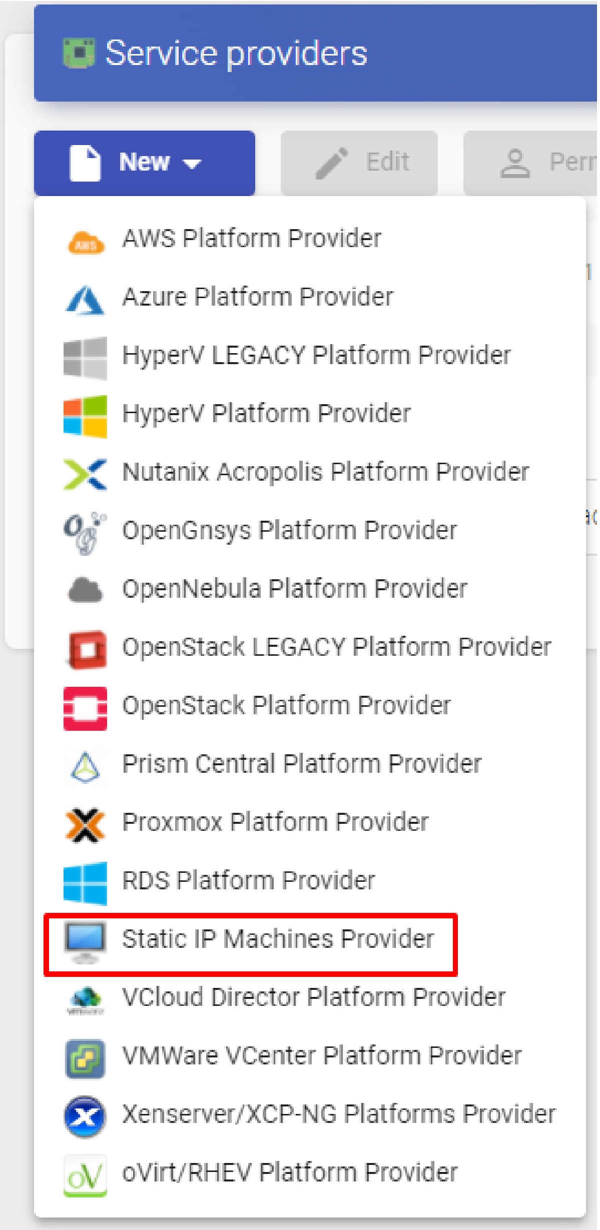
- "***Static Multiple IP***", It will allow you to create a base service to connect a single user with a computer (IP address). You may indicate one or more IP addresses so that the system can enable user access to said IPs.
  The assignment will be made in order of access, that is, the first user to access this service will be assigned the first IP address in the list, although it is also possible to make a selective assignment (an existing user in an authenticator to an-IP address).

- "***Static Single IP***", which will allow you to create a base service to connect several users with a single computer. If the device allows multiple sessions, each user who accesses will start a new session.

NOTE:
For users to be able to make a successful connection, it is necessary that the machines indicated by their IP address (either in the "**Static Multiple IP**" o "**Static Single IP**") are previously turned on and have the connection protocol assigned to access installed and enabled.

4.1.9.1 Register a Service provider "Static IP Machines Provider"

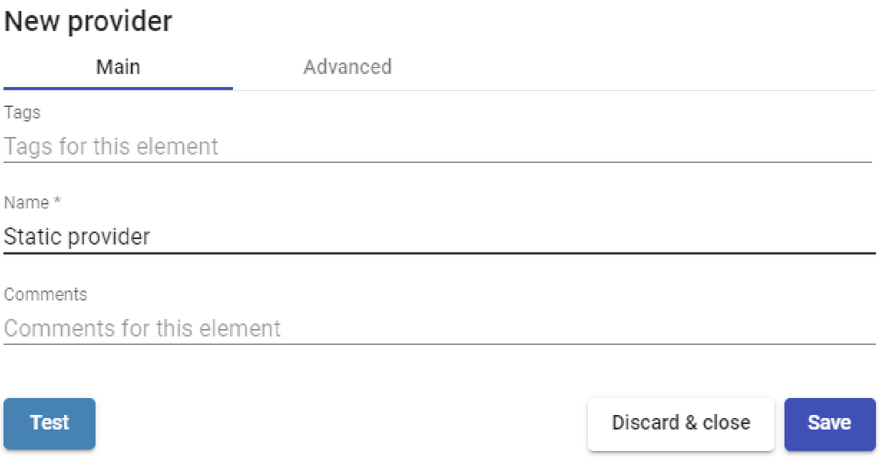
Click on "*New*" and select "***Static IP Machines Provider***".


Service providers
New
Edit
Perr
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

In a “***Static IP Machines Provider***” the minimum parameters to configure are:

- Main:

Descriptive name for the service provider.



New provider

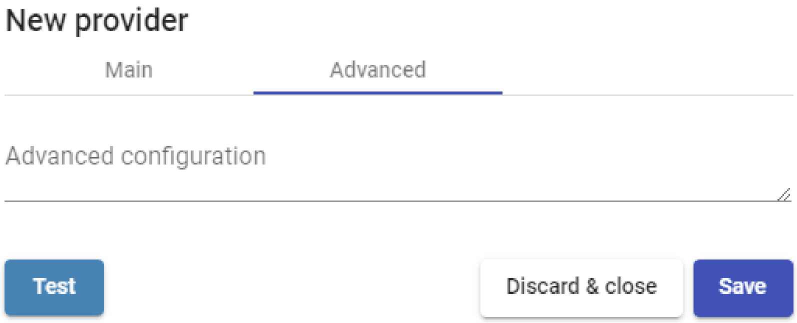
Tags: Tags for this element

Name *: Static provider

Comments: Comments for this element

- Advanced:

Advanced configuración: You can indicate the [wol] option and enable “**Wake on LAN**” on physical machines.



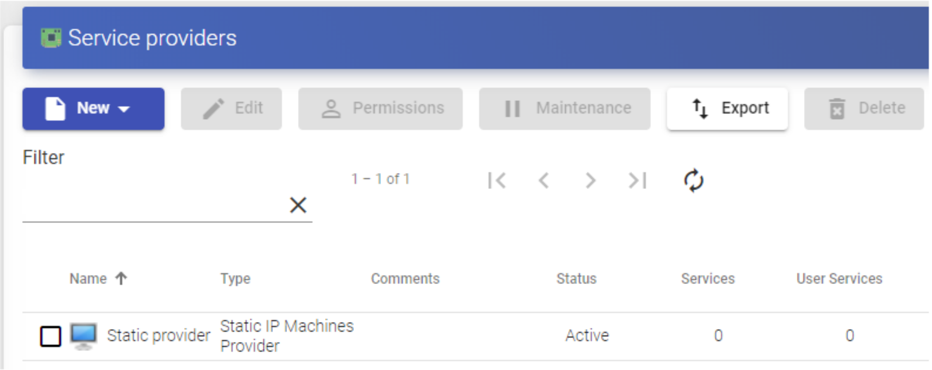
New provider

Advanced configuration

NOTE:

If you want to use the “Advanced configuration” section to enable WoL on physical computers, we recommend that you consult the manual: “**Wake on LAN on physical machines with UDS Enterprise**” located in the section documentation from the UDSEnteprise website.

Save the configuration and you will have a valid "***Service Providers***" to start registering basic services in a provider of the "***Static IP Machines Provider***" type.



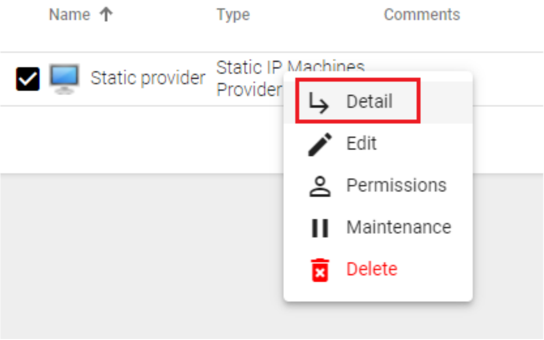
Name ↑	Type	Comments	Status	Services	User Services
□ Static provider	Static IP Machines Provider		Active	0	0

NOTE:
You can register all the "**Service Providers**" of the type "**Static IP Machines Provider**" that you need.

To modify any parameter in an existing "***Service Providers***" select it and click on "***Edit***".

Using the "***Enter Maintenance Mode***" button, you can pause all operations performed by the UDS Server on a service provider.

Once created, base services can be created. To do this, double-click on the service provider or select "***Detail***"in the provider's menu:

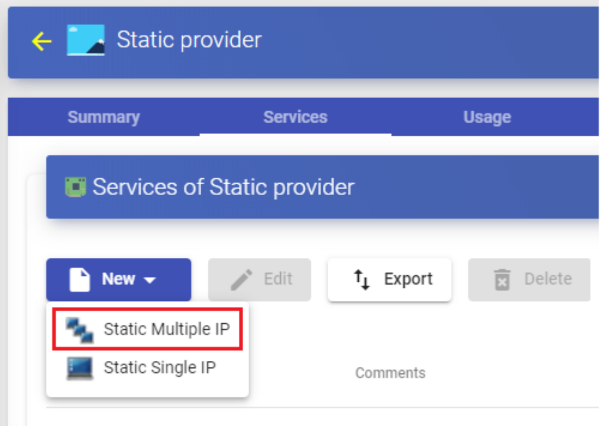


Name ↑	Type	Comments
☑ Static provider	Static IP Machines Provider	

4.1.9.2 Configure a service based on “Static Multiple IP”

Este tipo de servicio permitirá al acceso de usuarios a diferentes equipos (físicos o virtuales). La conexión siempre se realizará uno a uno, es decir, un usuario a un equipo.

Para crear servicios base de tipo "***Static Multiple IP***" accedemos al “***Service Providers***”, seleccionamos la pestaña “***Services***”, pulsamos sobre “***New***” y seleccionamos “***Static Multiple IP***”.



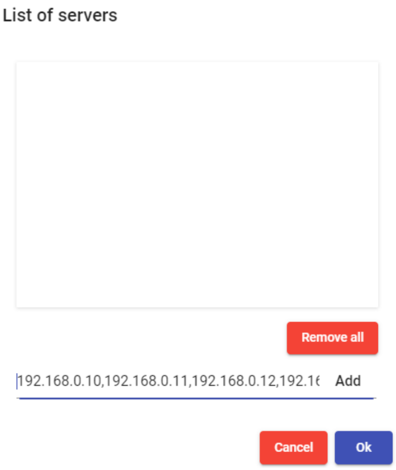
The minimum parameters to configure in this type of service are:

- Main:

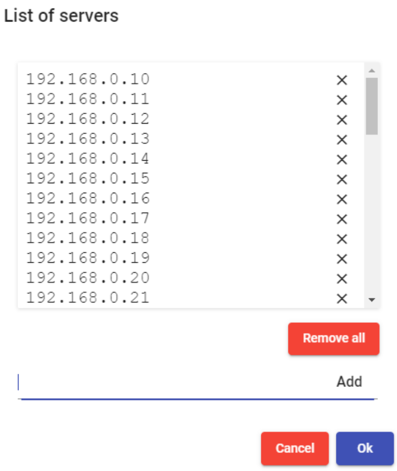
Name: Name of the service.

List of servers: IP addresses of the computers to which users will connect

Enter the different IP addresses separated by commas, and click on e “***Add***”:



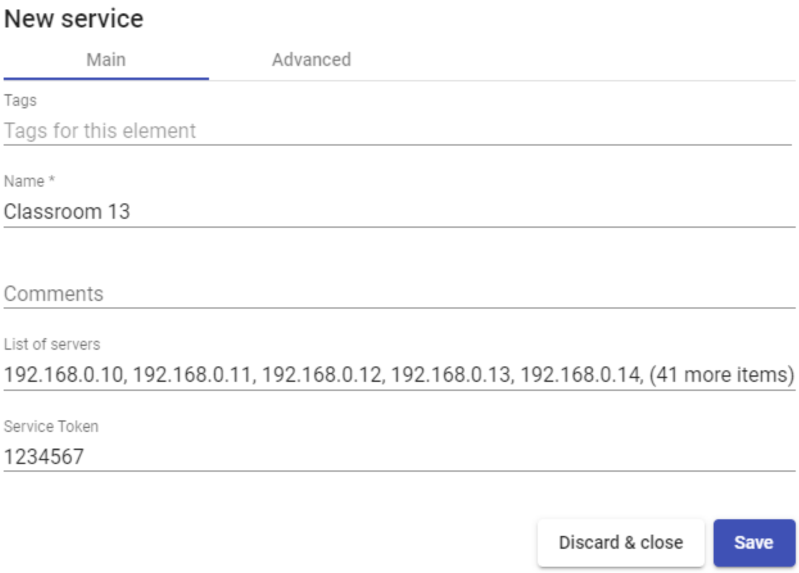
192.168.0.10,192.168.0.11,192.168.0.12,192.16



```
192.168.0.10
192.168.0.11
192.168.0.12
192.168.0.13
192.168.0.14
192.168.0.15
192.168.0.16
192.168.0.17
192.168.0.18
192.168.0.19
192.168.0.20
192.168.0.21
```

Service Token: If there is no token indicated in this field (empty), the system will not control the sessions of the users in the computers. Therefore, when a computer is assigned to a user, this assignment will be maintained until it will be manually deleted by an administrator. If there is a token, the sessions of the users will be controlled. When they log out of the computers, they will be released to be available again for other users to access.

f you indicate a token, it will be necessary for the indicated computers (by means of their IP address) to have installed the UDS Actor that manages static machines (“***UDSActorUnmanagedSetup-….***”).



New service

Tags: Tags for this element

Name *: Classroom 13

Comments

List of servers: 192.168.0.10, 192.168.0.11, 192.168.0.12, 192.168.0.13, 192.168.0.14, (41 more items)

Service Token: 1234567

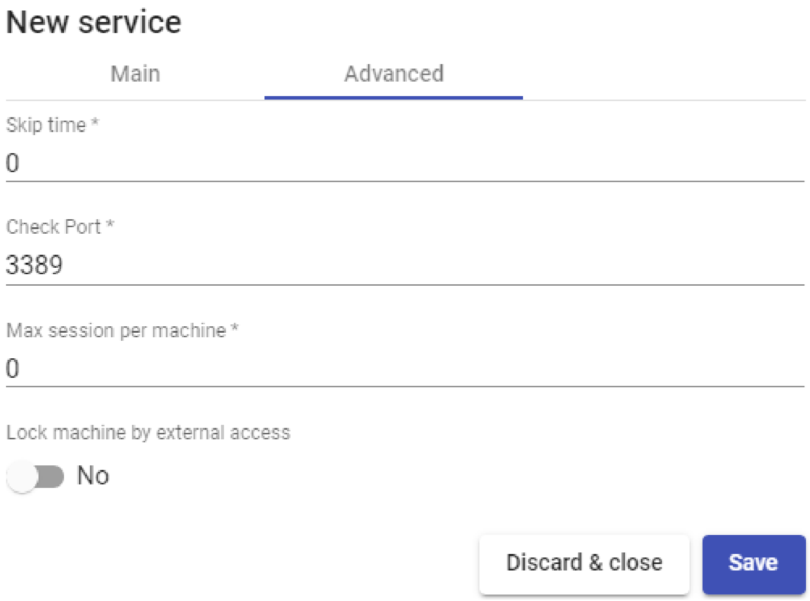
- Advanced:

Skip time: If a port is indicated in the “***Check Port***” field and a machine is not available, you can indicate a time that will prevent a new check of that machine. If you indicate 0, the machines will always be checked. By default, 15 is indicated (this parameter is indicated in minutes).

Check Port: If you indicate a port, before assigning a service to a user, the system checks that the machine is accessible. In case it is not available through the indicated port, the system assigns the next available machine in the list. If no port is indicated, access to the machines will not be verified and will be assigned regardless of their state.

Max sesión per machine: If the “**Lock machine by external Access**”, parameter is enabled, a maximum time can be indicated for UDS to consider the equipment usable again even if access (from outside UDS) of a user has been detected.

Lock machine by external access: If it is enabled and the UDS “unmanage” actor is installed on the computer, UDS will prevent access to the service if there is already a user logged in. For example, a physical machine to which a user has accessed locally (not from UDS).



New service

Main | Advanced

Skip time *: 0

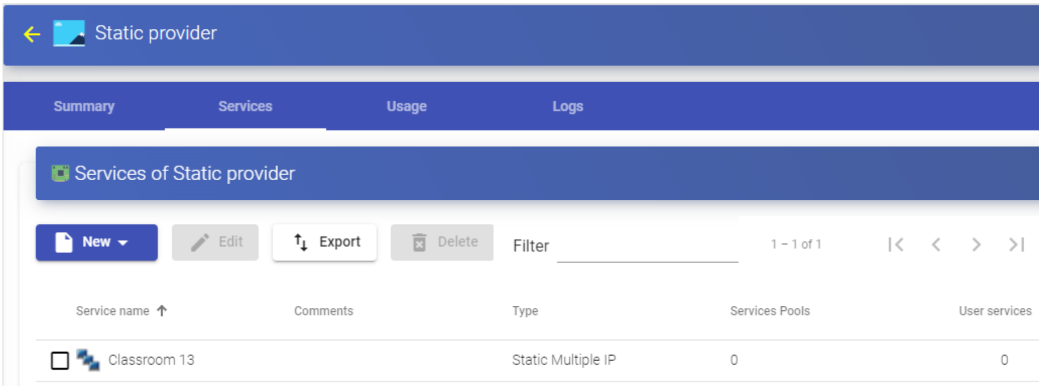
Check Port *: 3389

Max session per machine *: 0

Lock machine by external access: No

Save the configuration and you will have a valid "***Static Multiple IP***" You can register

all the services of the "***Static Multiple IP***" type that you need.



Static provider

Services of Static provider

Service name	Comments	Type	Services Pools	User services
☐ Classroom 13		Static Multiple IP	0	0

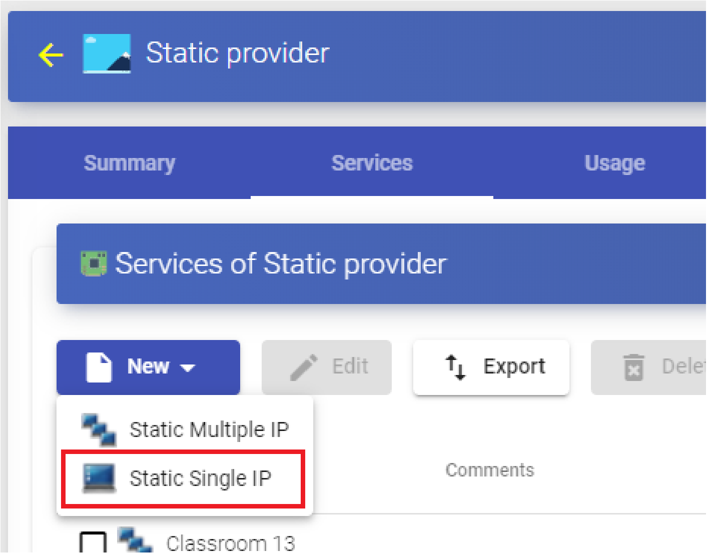
Once you have the full UDS environment configured (Services, Authenticators and Transports) and the first “***Service Pool***”, has been created, users will access the IPs of the different computers registered in the service.

From a “***Service Pool***” it will also be possible to make a selective assignment, indicating which device is assigned to each user.

4.1.9.3 Configure a Service based on “Static Single IP”

This type of service will allow different users to access the same computer (physical or virtual). Each user will start a new session on the computer, as long as it is configured for this purpose

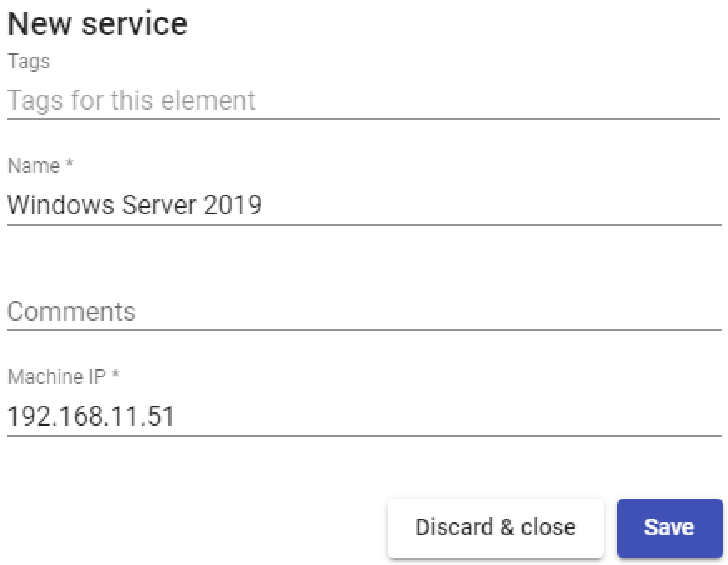
To create a “***Static Single IP***” type base service, access “***Service Providers***”, select the tab “***Services***”, click on “***New***” and select “***Static Single IP***”.



The minimum parameters to configure in this type of service are:

Name: Name of the service.

Machine IP: IP address of the computer to which the users will connect. The machine must allow access through different user sessions.



New service

Tags

Tags for this element

Name *

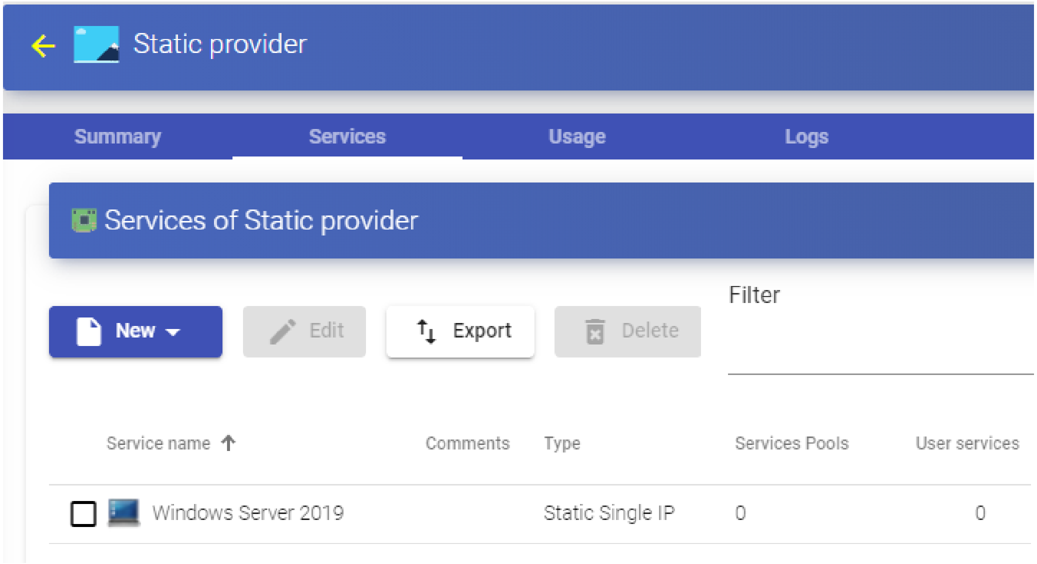
Windows Server 2019

Comments

Machine IP *

192.168.11.51

Save the configuration and you will have a valid "***Static Single IP***" You will be able to register all the services of the "***Static Single IP***" type that you need.



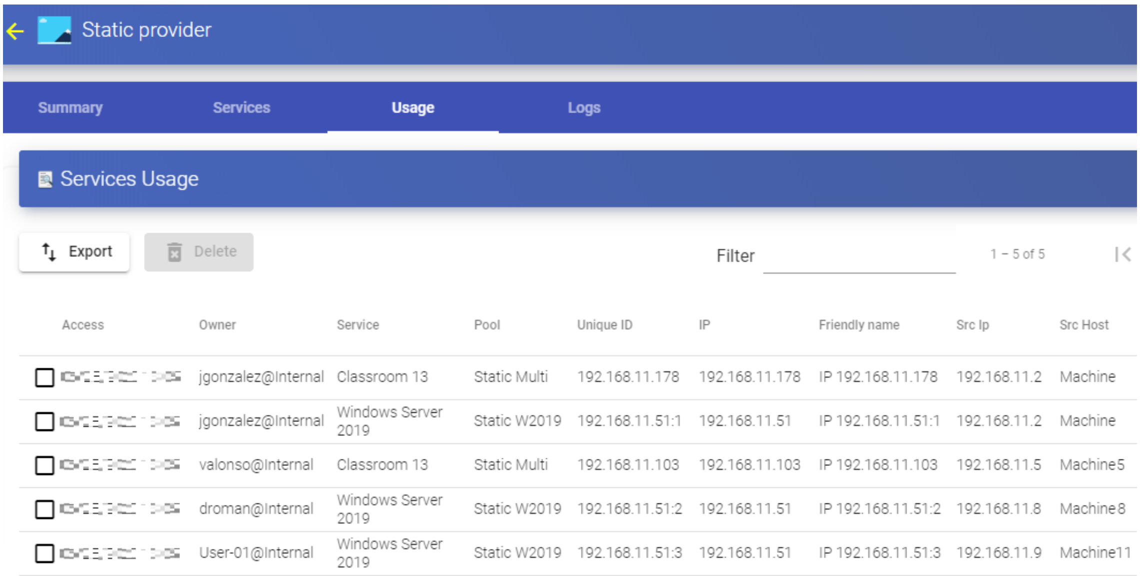
Service name	Comments	Type	Services Pools	User services
□ Windows Server 2019		Static Single IP	0	0

Once you have the full UDS environment configured (Services, Authenticators and Transports) and the first "***Service Pool***", has been created, users will access the IP of the indicated device by starting a new session.

4.1.9.4 Service Usage Summary and Error Logs

Within a "***Service Provider***" you will have a tab called "***Usage***" that will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this "***Service Provider***".

To access this information on the use of services, access the "***Service Providers***" and select the "***Usage***" tab:



	Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□	[redacted]	jgonzalez@Internal	Classroom 13	Static Multi	192.168.11.178	192.168.11.178	IP 192.168.11.178	192.168.11.2	Machine
□	[redacted]	jgonzalez@Internal	Windows Server 2019	Static W2019	192.168.11.51:1	192.168.11.51	IP 192.168.11.51:1	192.168.11.2	Machine
□	[redacted]	valonso@Internal	Classroom 13	Static Multi	192.168.11.103	192.168.11.103	IP 192.168.11.103	192.168.11.5	Machine5
□	[redacted]	droman@Internal	Windows Server 2019	Static W2019	192.168.11.51:2	192.168.11.51	IP 192.168.11.51:2	192.168.11.8	Machine8
□	[redacted]	User-01@Internal	Windows Server 2019	Static W2019	192.168.11.51:3	192.168.11.51	IP 192.168.11.51:3	192.168.11.9	Machine11

You will see:

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator.

Service: Name of the base service belonging to the "***Service Provider*** from which the service was generated.

Pool: Name of the "***Service Pools***" to which the service belongs.

Unique ID: MAC address of the service.

IP: IP address of the service

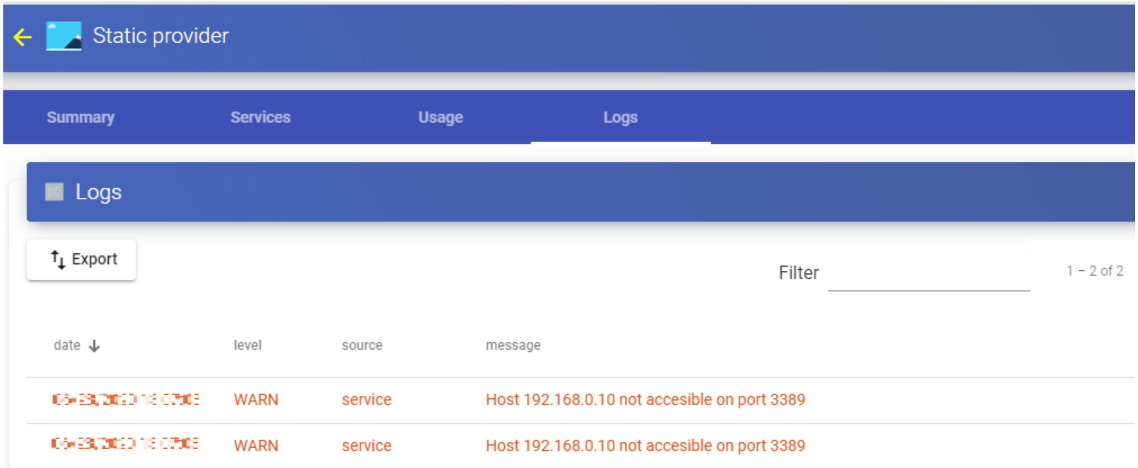
Friendly name: Name of the service. It will also be the DNS name of the UDS selfgenerated virtual machine.

Src Ip: IP address of the connection client accessing the service.

Src Host: DNS name of the connection client that accesses the service. If you cannot access this name, the IP address will be indicated.

It will also be possible to select one or several services to proceed with their elimination.

The "***Logs***" tab will show information about a possible issue that occurred in the "***Service Provider***":



date	level	source	message
[redacted]	WARN	service	Host 192.168.0.10 not accesible on port 3389
[redacted]	WARN	service	Host 192.168.0.10 not accesible on port 3389

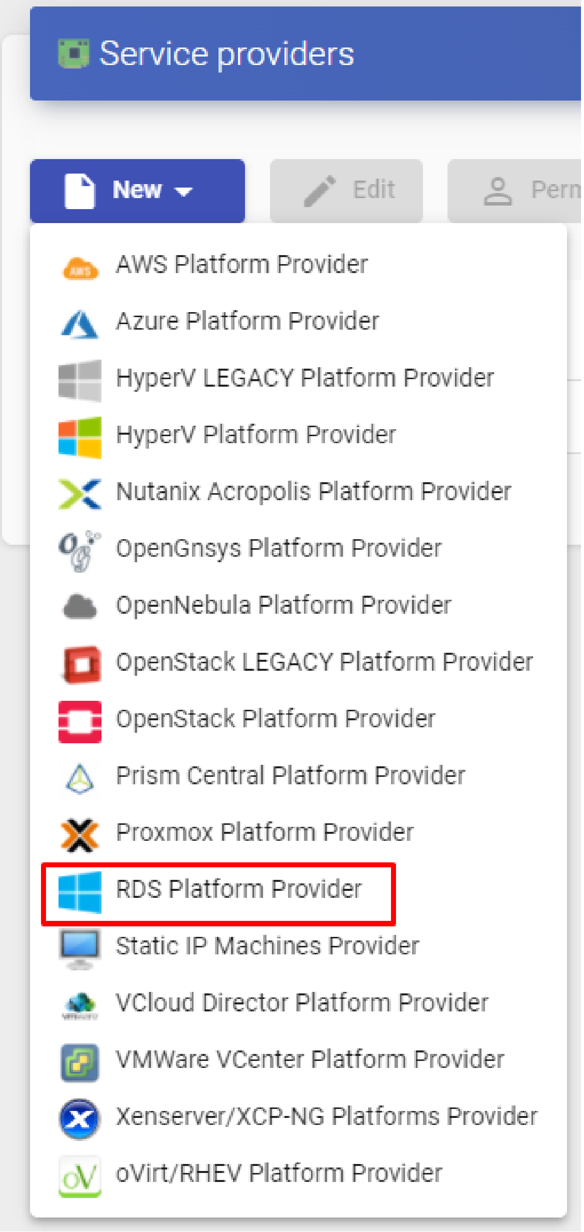
4.1.10 RDS Platform Provider

This type of “***Service provider***” allows the deployment and connection to virtual application sessions through Microsoft Remote Desktop Services (RDS)

Through this provider, users who validate from an authentication system other than "Active Directory" will also be able to access application sessions. It will be necessary to use mapping users that may be previously created in an AD (dedicated to the VDI environment) or that UDS automatically creates these users in an existing AD Server.

4.1.10.1 Register a Service provider “RDS Platform Provider”

Click on "***New***" and select “***RDS Platform Provider***”:


Service providers
New
Edit
Perm
AWS Platform Provider
Azure Platform Provider
HyperV LEGACY Platform Provider
HyperV Platform Provider
Nutanix Acropolis Platform Provider
OpenGnsys Platform Provider
OpenNebula Platform Provider
OpenStack LEGACY Platform Provider
OpenStack Platform Provider
Prism Central Platform Provider
Proxmox Platform Provider
RDS Platform Provider
Static IP Machines Provider
VCloud Director Platform Provider
VMWare VCenter Platform Provider
Xenserver/XCP-NG Platforms Provider
oVirt/RHEV Platform Provider

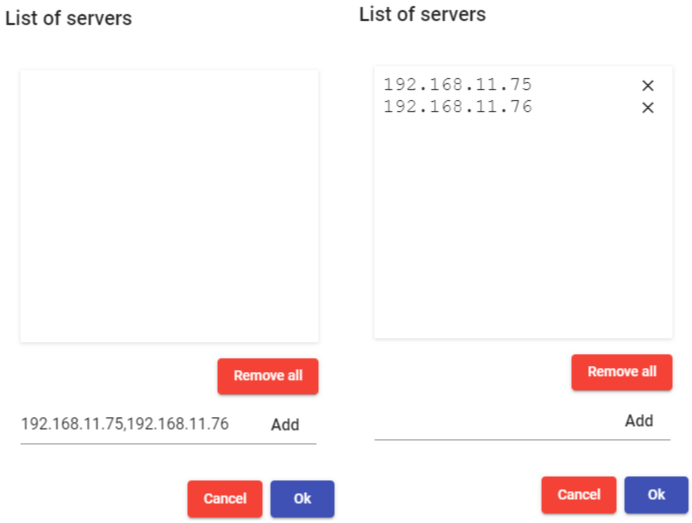
In a “*RDS Platform Provider*” the minimum parameters to be configured are:

- Main:

Name: Service name.

List of servers: ist of Microsoft RDS application servers available to publish applications. In case of indicating more than one server, the connections of the users will be distributed among the different servers.

Enter the different IP addresses separated by commas, and click on “*Add*”:



List of servers

Remove all

192.168.11.75,192.168.11.76 Add

Cancel Ok

List of servers

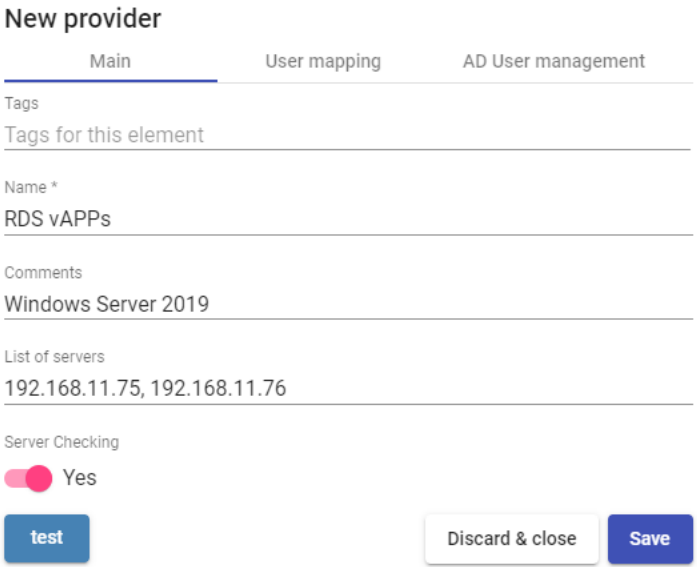
192.168.11.75 ×
192.168.11.76 ×

Remove all

Add

Cancel Ok

Server checking: Checks if the RDS application server is available every time there is a request from a user. In case of not being able to connect to the first server on the list, UDS will look for the next available one to provide the service.



New provider

Main | User mapping | AD User management

Tags: Tags for this element

Name *: RDS vAPPs

Comments: Windows Server 2019

List of servers: 192.168.11.75, 192.168.11.76

Server Checking: Yes

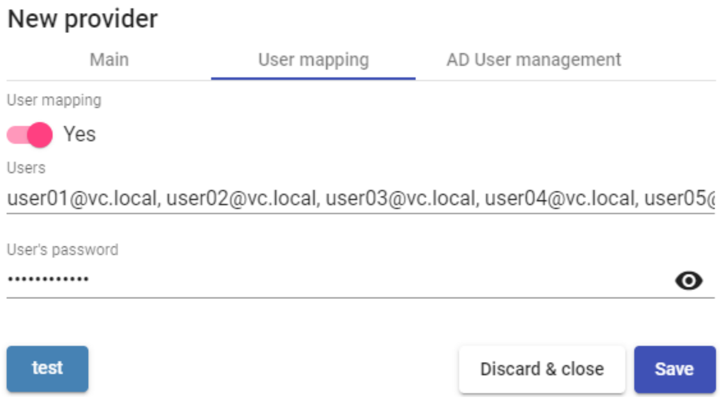
test | Discard & close | Save

NOTE:
Only activate "**User mapping**" in case you need to specify generic users of an AD domain.

User mapping: "*Yes*" indicates that specific users (indicated in the "Users" section) will be used to access the applications. "*No*" will use the user of the UDS login portal to access the applications (in this case it must be an AD user).

Users: Only applicable if "***User mapping***" is set to "***Yes***". belonging to an Active Directory that will be able to log in to the RDS application servers and that will be used by UDS only to execute an application session.

User`s password: Password of all the users indicated in the previous section. All mapping users must have the same password.


New provider

User mapping: Yes

Users: user01@vc.local, user02@vc.local, user03@vc.local, user04@vc.local, user05@

User's password: ••••••••••••

- AD User management:

NOTE:
Only enable "**User auto creation on AD**" in case you need to specify users from an AD domain. These users will be automatically created by UDS.

User auto creation on AD: "*Yes*" Indicates that specific users auto-created by UDS in an AD will be used to access the applications. "*No*" will use the user of the UDS login portal to access the applications (in this case it must be an AD user).

AD Server: IP or name of the Active Directory server where the new users will be created (the server must have the connection via LDAPS enabled).

Port: Port used in the connection.

AD server OU for created users: Organizational unit where the new users will be created

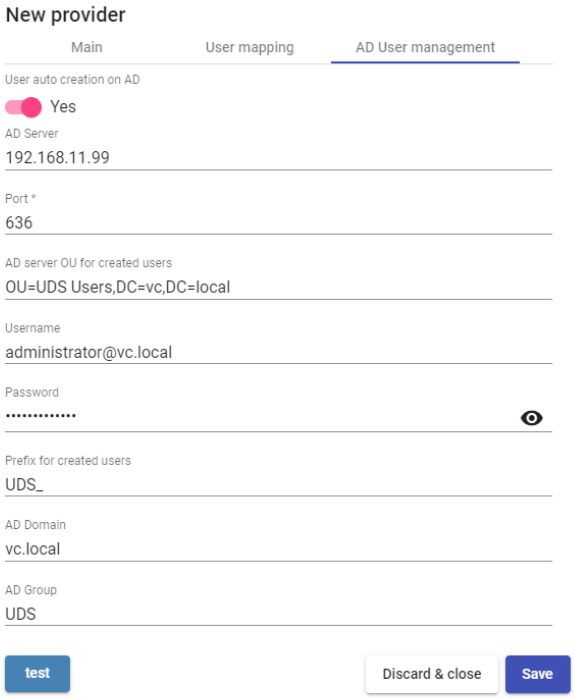
Username: Domain user with permissions to create and delete users. In format: *user@domain.xxx*

Password: Password of the indicated user

Prefix for created users: Prefix that will be added to the name of the user created in the AD. The final name of the created user will be: *prefix*+*prefix_user*.

AD Domain: Name of the domain where the new users will be registered. If it is not indicated, the domain of the field will be used: "***Username***".

AD Group: Name of the group (must exist) to which UDS will add the new users created.



New provider

User auto creation on AD: Yes

AD Server: 192.168.11.99

Port *: 636

AD server OU for created users: OU=UDS Users,DC=vc,DC=local

Username: administrator@vc.local

Password: •••••••••••••

Prefix for created users: UDS_

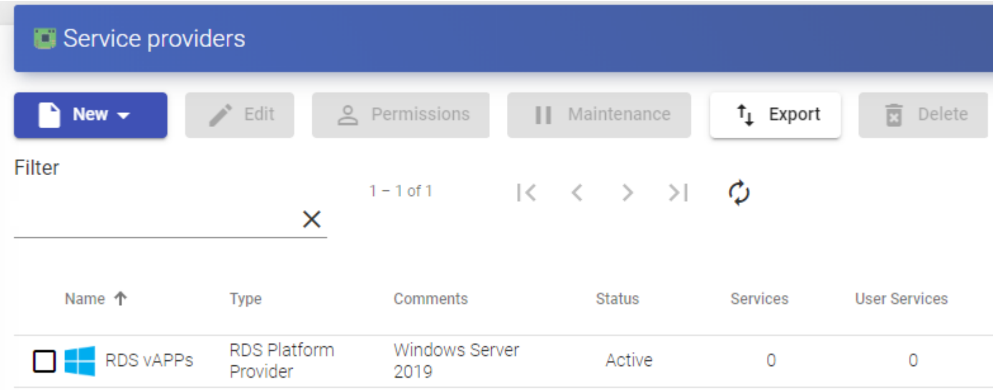
AD Domain: vc.local

AD Group: UDS

NOTE:
Only one of the two methods can be activated for user mapping "User mapping" or "User auto creation on AD".

Using the "*Test*" button you will check that the connection is successful.

Save the configuration and you will have a valid "***Service Providers***" to start registering virtual application sessions.



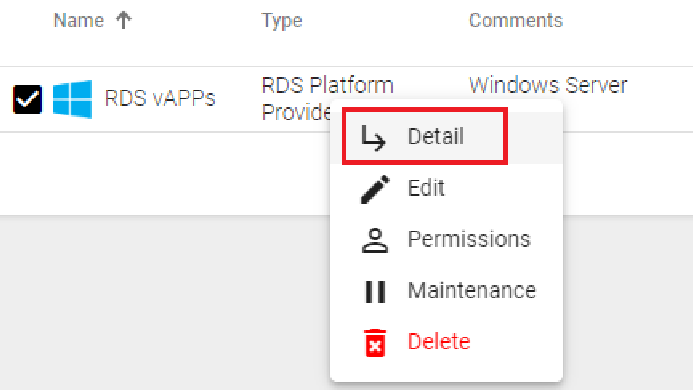
Name ↑	Type	Comments	Status	Services	User Services
□ RDS vAPPs	RDS Platform Provider	Windows Server 2019	Active	0	0

NOTE:
If you need to create new application servers, you can register all the "**Service Providers**" of the "**RDS Platform Provider**" type that you need.

To modify any parameter in an existing "***Service Providers***" you will select it and click on "***Edit***".

Using the "***Enter Maintenance Mode***" button, you can pause all operations performed by the UDS Server on a service provider. It is recommended to put a service provider into maintenance mode in cases where communication with that service provider has been lost or a maintenance outage is planned.

Once the application servers have been integrated into UDS, base services can be created. To do this, double click on the service provider created or on the provider's menu and select "***Detail***":

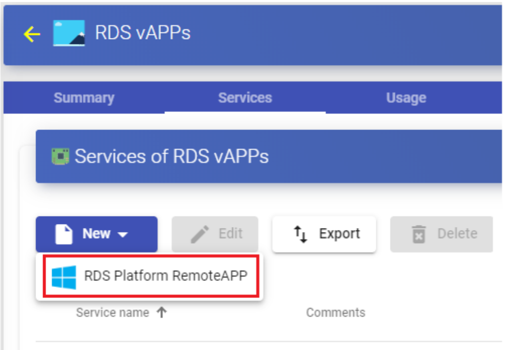


Name ↑	Type	Comments
☑ RDS vAPPs	RDS Platform Provide	Windows Server

4.1.10.2 Configure a Service based on “RDS Platform RemoteAPP”

Once the application servers have been integrated into UDS, and the appropriate UDS Actor installed, "***RDS Platform RemoteAPP***", type base services must be created. There you will indicate the application to be virtualized.

To create base services of the "***RDS Platform RemoteAPP***" type access “***Service Providers***”, select the “***Services***” tab, click on “***New***” and select “***RDS Platform RemoteAPP***”.



The minimum parameters to configure in this type of service are:

- Main:

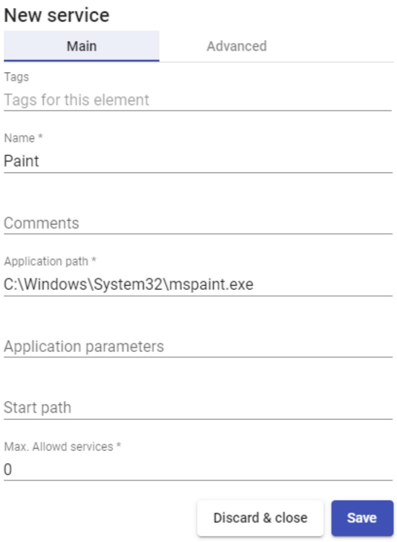
Name: Name of the service.

Application path: Execution path of the application to be virtualized, hosted on the RDS servers.

Application Parameters: Parameters can be passed to any application in this field to customize the execution of the application.

Start Path: Path where the application will be executed.

Max. Allowed services: Maximum number of application sessions (0 = unlimited).


New service

Main | Advanced

Tags: Tags for this element

Name *: Paint

Comments

Application path *: C:\Windows\System32\mspaint.exe

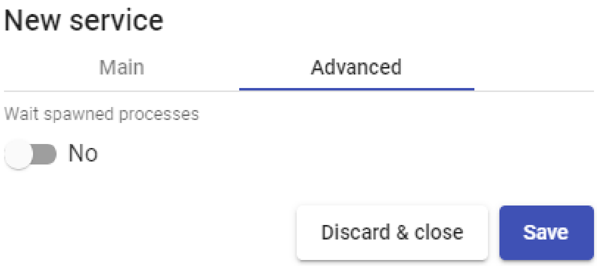
Application parameters

Start path

Max. Allowd services *: 0

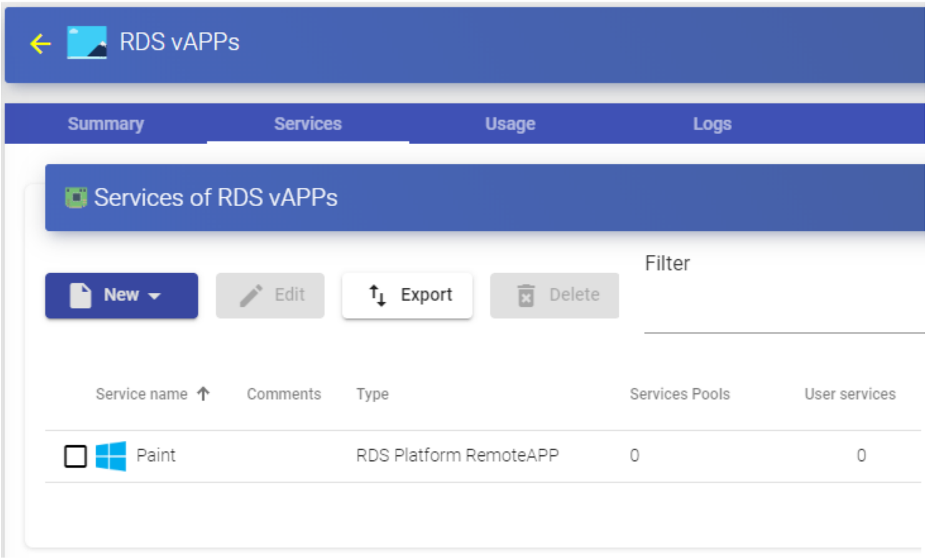
- Advanced:

Wait spawned processes: Waits until all processes derived from the application are finished before considering the application disconnected.


New service

Wait spawned processes: No

Save the configuration and you will have a valid "***RDS Platform RemoteAPP***" ou will be able to register all the "***RDS Platform RemoteAPP***" that you need in the UDS platform.



	Service name ↑	Comments	Type	Services Pools	User services
□	Paint		RDS Platform RemoteAPP	0	0

Once you have the full UDS environment configured (Services, Authenticators, OS Managers and Transports) and created the first "***Service Pool***", you will be able to give access to users to connect with the virtual application sessions.

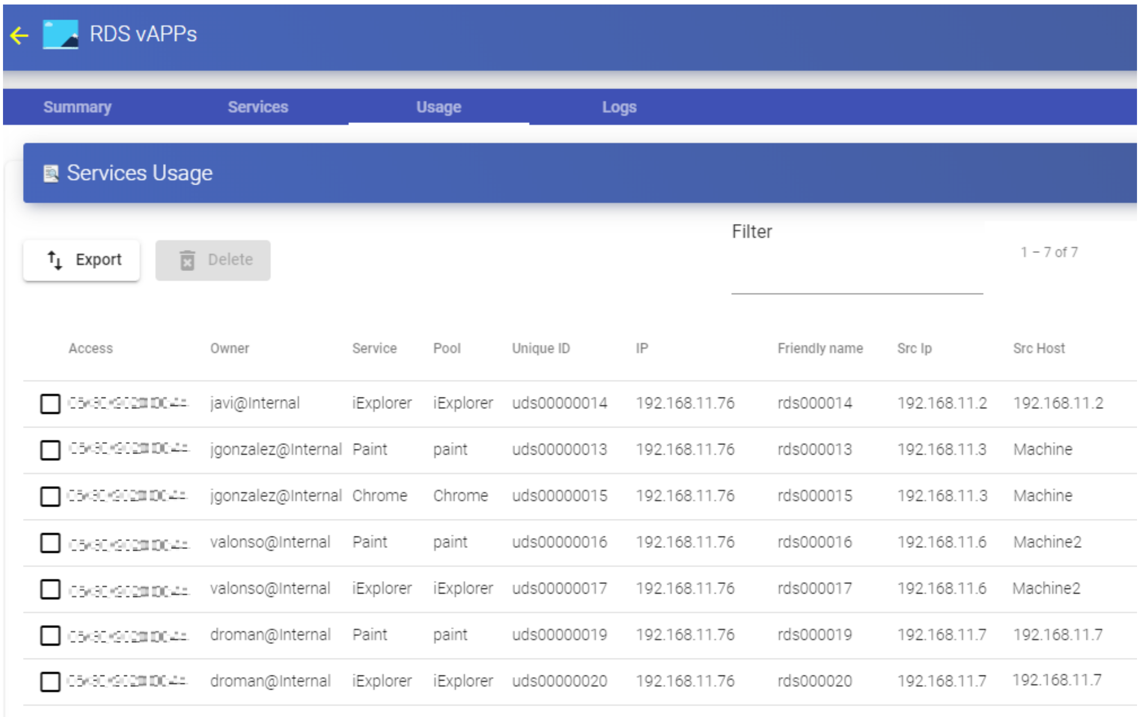
NOTE:
UDS needs one or more external RDS Windows Server 2012/2016/2019/2022 servers to be able to connect and provide applications. The application server must be correctly configured and integrated with the UDS Actor for proper operation.

To configure and integrate RDS with UDS, you can consult this document: **Windows application virtualization with UDS Enterprise 3.6** available in the section documentation of the UDS Enterprise web **www.udsenterprise.com**.

4.1.10.3 Service Usage Summary and Error Logs

Within a "***Service Provider***" you will have a tab called "***Usage***" that will allow you to have a quick view with detailed information and perform basic actions with the services displayed in this "***Service Provider***".

To access this information on the use of services, access "***Service Providers***" and select "***Usage***":



	Access	Owner	Service	Pool	Unique ID	IP	Friendly name	Src Ip	Src Host
□	[illegible]	javi@Internal	iExplorer	iExplorer	uds00000014	192.168.11.76	rds000014	192.168.11.2	192.168.11.2
□	[illegible]	jgonzalez@Internal	Paint	paint	uds00000013	192.168.11.76	rds000013	192.168.11.3	Machine
□	[illegible]	jgonzalez@Internal	Chrome	Chrome	uds00000015	192.168.11.76	rds000015	192.168.11.3	Machine
□	[illegible]	valonso@Internal	Paint	paint	uds00000016	192.168.11.76	rds000016	192.168.11.6	Machine2
□	[illegible]	valonso@Internal	iExplorer	iExplorer	uds00000017	192.168.11.76	rds000017	192.168.11.6	Machine2
□	[illegible]	droman@Internal	Paint	paint	uds00000019	192.168.11.76	rds000019	192.168.11.7	192.168.11.7
□	[illegible]	droman@Internal	iExplorer	iExplorer	uds00000020	192.168.11.76	rds000020	192.168.11.7	192.168.11.7

You will see:

Access: Date and time when the service was accessed.

Owner: User and authenticator assigned to the service in format user@authenticator. If it appears empty, it means that the service has not been assigned to any user and is available in the cache.

Service: Name of the base service belonging to the "***Service Provider***" from which the service was generated

Pool: Name of the "***Service Pools***" to which the service belongs.

Unique ID: ID of the service.

IP: IP address of the service.

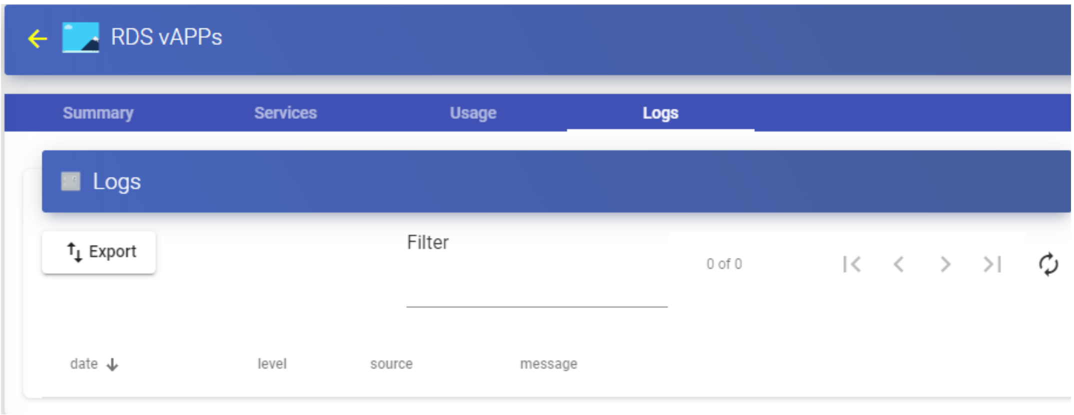
Friendly name: Name of the service. It will also be the DNS name of the UDS selfgenerated virtual machine.

Src Ip: IP address of the connection client accessing the service.

Src Host: DNS name of the connection client that accesses the service. If you cannot access this name, the IP address will be indicated.

It will also be possible to select one or several services to proceed with their elimination.

The "***Logs***" tab will show information about a possible issue that occurred in the "***Service Provider***":



RDS vAPPs
Summary
Services
Usage
Logs
Logs
Export
Filter
0 of 0
date
level
source
message

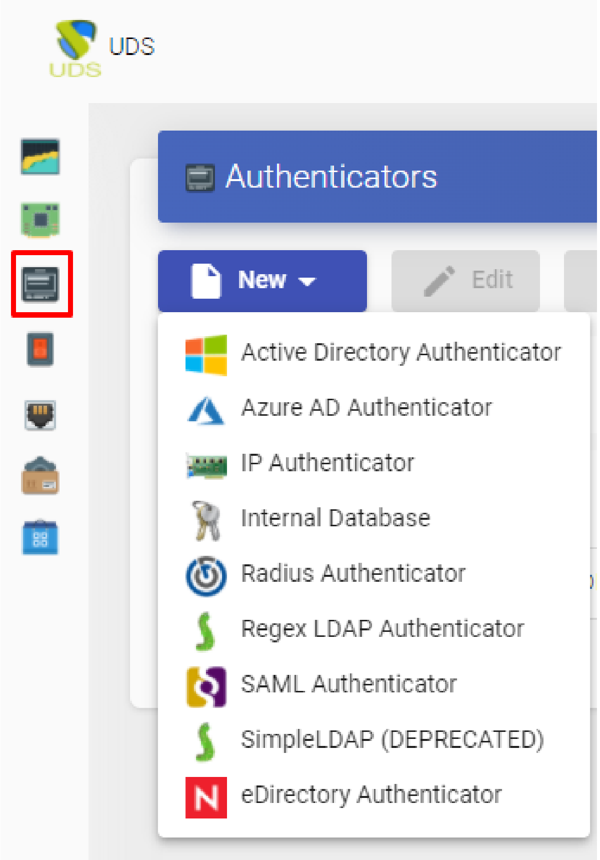
4.2 Authenticators

An “***Authenticator***” is an essential component within a UDS platform. It validates users in the login portal and provide users and user groups permissions to connect to the different virtual desktops and application services.

An "***Authenticator***" is not a necessary component for the creation of a "***Service Pool***", but if at least one is not assigned, there will be no users that can make connections with the services in the UDS platform.

You can choose between many types of “***Authenticators,***” either external (Active Directory, eDirectory, OpenLDAP, etc…) or internal (Internal Database and IP Authentication).

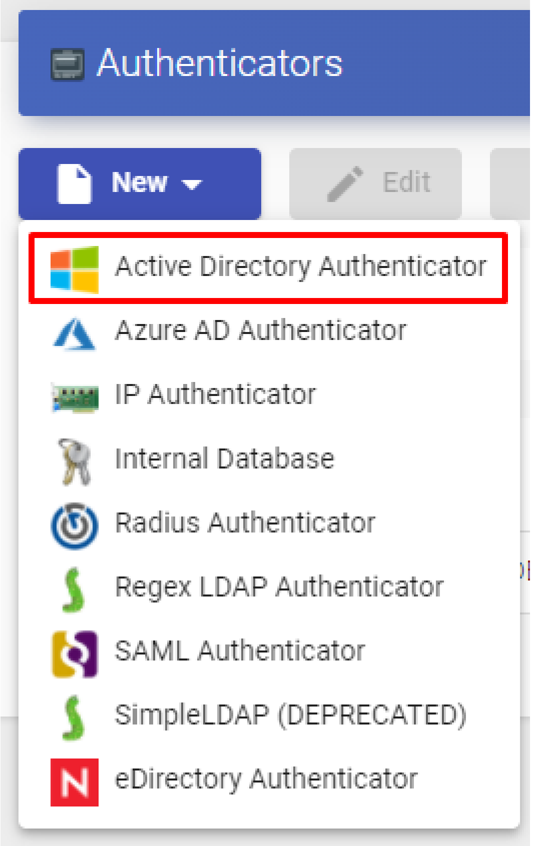
UDS currently supports the following “***Authenticators***”:



NOTE:
You will be able to register all the authenticators, of the same type or different, that you need. If you have more than one authenticator and they are in a visible state, a dropdown menu will be enabled in the login portal to select on which of them the system must validate the user.

4.2.1 Active Directory

This external Authenticator allows access to virtual desktops and applications to users and groups of users belonging to an Active Directory.



In an "***Active Directory Authenticator***" minimal parameter to be configured are:

- Main:

Name: Authenticator name.

Priority: Priority that this authenticator will have. If there are several authenticators, the lower its priority, the higher it will appear in the list of authenticators available in the UDS login portal. This field supports negative values.

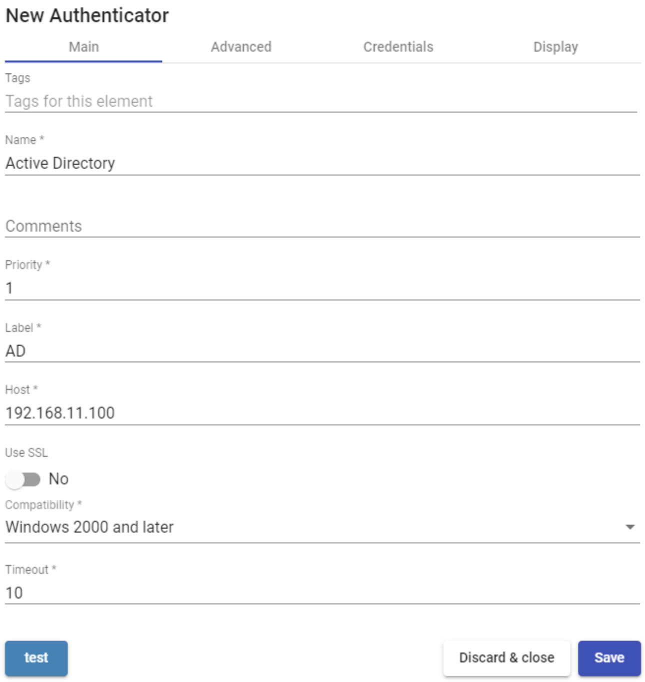
Label: Enables direct validation in the authenticator. It allows the user to be validated in the login portal with said authenticator even if the UDS environment has more authenticators. In order to do this, you will have to access the UDS login portal with the following format: ***UDSServer/uds/page/login/label*** l (For example: https://UDSServer/uds/page/login/AD).

Host: IP address or Active Directory server name (we can directly indicate the name of the AD domain, for example: vc.local).

Use SSL: If enabled, SSL connection will be used against the authenticator.

Compatibility: Select the compatibility level of your Active Directory authenticator.

Timeout: "*Timeout*" for the connection to the authenticator.



New Authenticator

Tags: Tags for this element

Name *: Active Directory

Comments

Priority *: 1

Label *: AD

Host *: 192.168.11.100

Use SSL: No

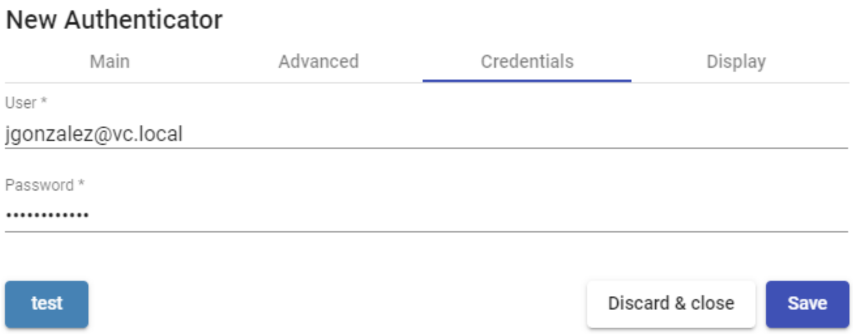
Compatibility *: Windows 2000 and later

Timeout *: 10

- Credentials:

User: User with reading rights on the authenticator in the format: ***usuario@dominio***

Password: User password.



New Authenticator

User *: jgonzalez@vc.local

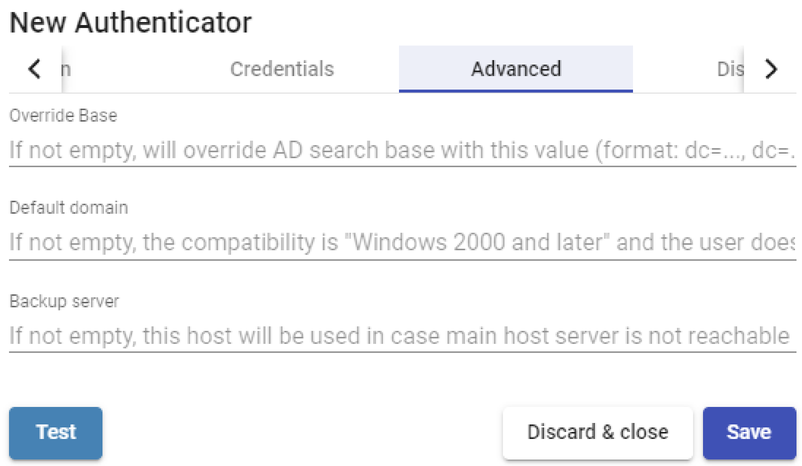
Password *: ••••••••••••

- Advanced:

Overrride Base: This field allows you to use a search base different from the one used by default (the search base by default is extracted from the user indicated in the "***User***" field of the "***Credentials***" section). Fill in this field only in case you need to indicate a specific user search base (for example: dc=vdi2, dc=local).

Default domain: Domain that will be added to the username to login.

Backup server: AD server that will be used if the main server indicated in the "***Host***" field of the "***Main***" ection is not available.



New Authenticator

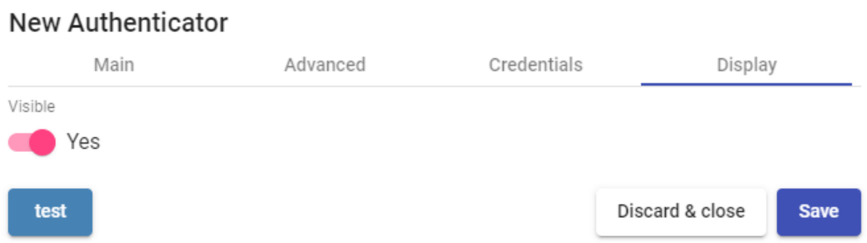
Override Base
If not empty, will override AD search base with this value (format: dc=..., dc=.

Default domain
If not empty, the compatibility is "Windows 2000 and later" and the user does

Backup server
If not empty, this host will be used in case main host server is not reachable

- Display:

Visible: If disabled, the authenticator will not be shown as available on the UDS login page.



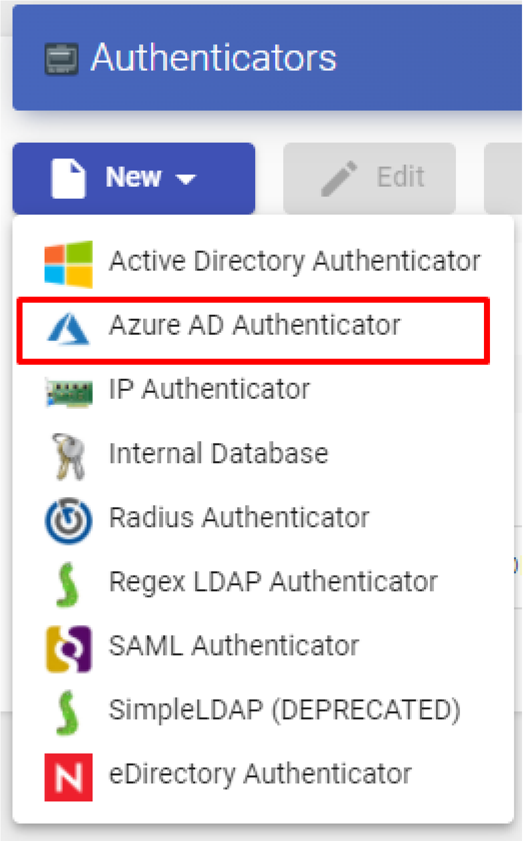
New Authenticator

Visible
Yes

Using the "***Test***" button you will verify that the connection to the authenticator is successful.

4.2.2 Azure AD

This external Authenticator allows users and groups of users belonging to an Azure Active Directory to access virtual desktops and applications.



In an "***Azure AD Authenticator***" the minimum parameters to configure are:

- Main:

Name: Name of the authenticator.

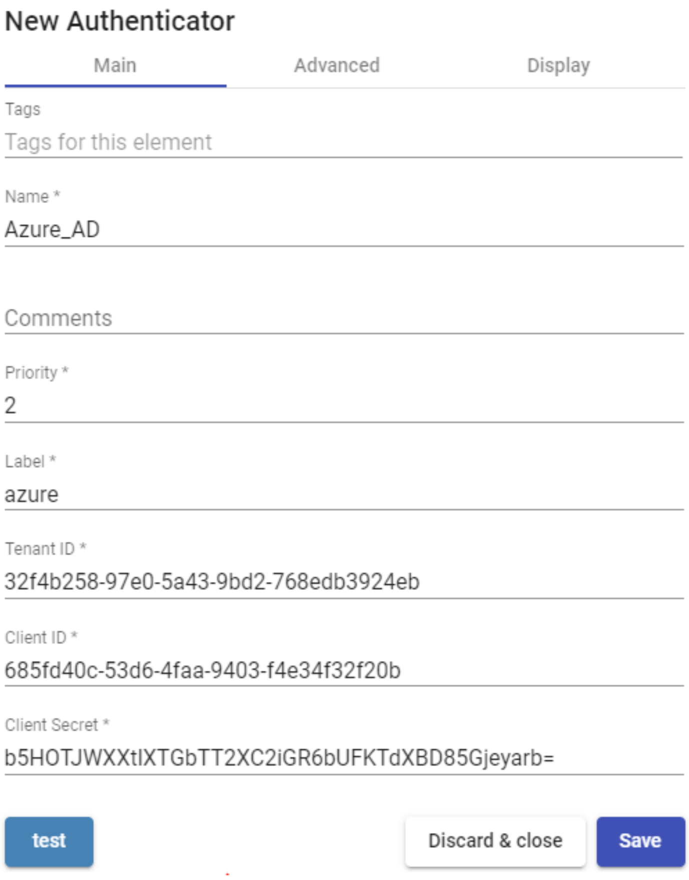
Priority: Priority that this authenticator will have. The lower that priority, the higher it will appear in the list of authenticators available in the user access window. This field admits negative values.

Label: Enables direct validation in this authenticator. It allows the user to login with said authenticator even if the UDS environment has more authenticators. To do this, you will have to access the "login" screen of UDS with the following format: ***UDSServer/uds/page/login/label*** (For example: https://UDSServer/uds/page/login/azure).

Tenant ID: You can obtain this value from the "Azure Active Directory" service, "Properties", "Directory ID".

Client ID: To obtain this value it will be neccessary to access the "Application registration" previously created and copy the value of "Application ID".

Client Secret: This field is automatically filled by UDS once the authenticator is saved, and its content will need to be copied to the "***App registrations***") service) and access "***settings***".



New Authenticator

Tags
Tags for this element

Name *
Azure_AD

Comments

Priority *
2

Label *
azure

Tenant ID *
32f4b258-97e0-5a43-9bd2-768edb3924eb

Client ID *
685fd40c-53d6-4faa-9403-f4e34f32f20b

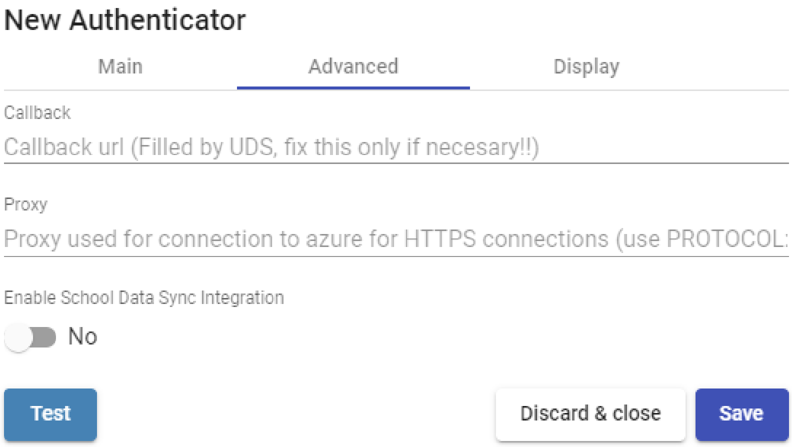
Client Secret *
b5HOTJWXXtIXTGbTT2XC2iGR6bUFKTdXBD85Gjeyarb=

- Advanced:

Callback: This field is automatically filled by UDS once the authenticator is saved and its content will need to be copied to the "***App Registrations***" created in the Azure environment.

Proxy: Proxy server to be used in the connection with the authenticator

Enable School Data Sync Integration: If checked, it will allow integration with the tool "***School Data Sync Integration***" which must be connected to the authenticator "***Azure AD***".


New Authenticator

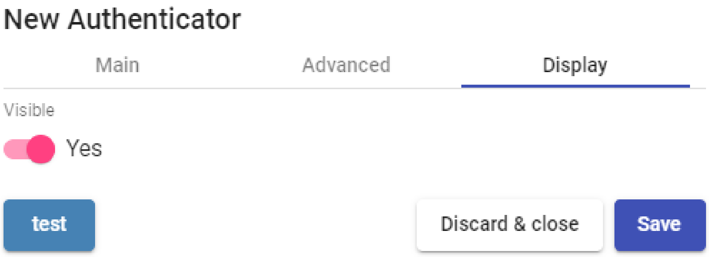
Callback
Callback url (Filled by UDS, fix this only if necesary!!)

Proxy
Proxy used for connection to azure for HTTPS connections (use PROTOCOL:

Enable School Data Sync Integration
No

- Display:

Visible: If disabled, the authenticator will not be shown as available on the UDS login page.


New Authenticator

Visible
Yes

NOTE:

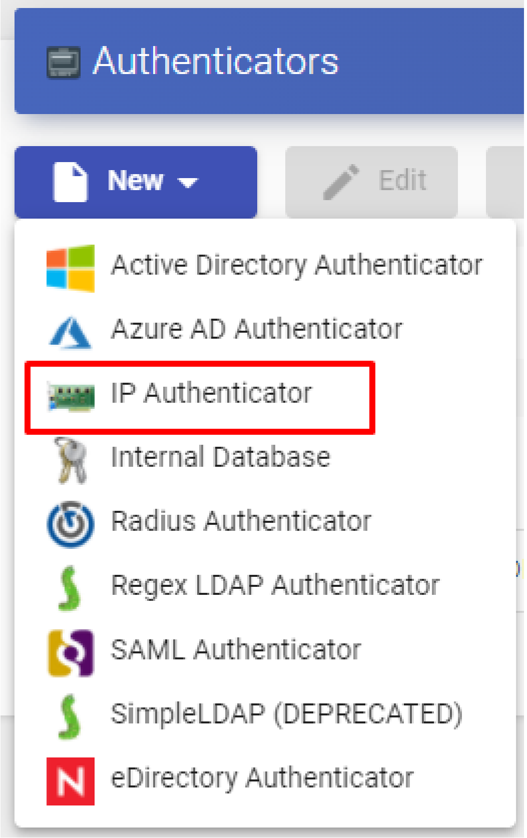
The integration of UDS Enterprise with an Azure Active Directory authenticator requires a series of previous tasks and requirements to be performed in the Azure environment itself, so it is advisable to consult the manua "VDI with UDS Enterprise y Microsoft Azure" available at the documentation of the UDS Enterprise web.

With the "***Test***" button you will check that the connection is successful.

4.2.3 IP

This internal Authenticator allows direct access to connection clients (Single Sign-On), through their IP address, to desktops and virtual applications.

The IP addresses works as the users of other authenticators, allowing the direct validation of the connection clients in the UDS login portal. User groups on an "***IP Authenticator***" can be from specific network ranges to full subnets or specific IPs



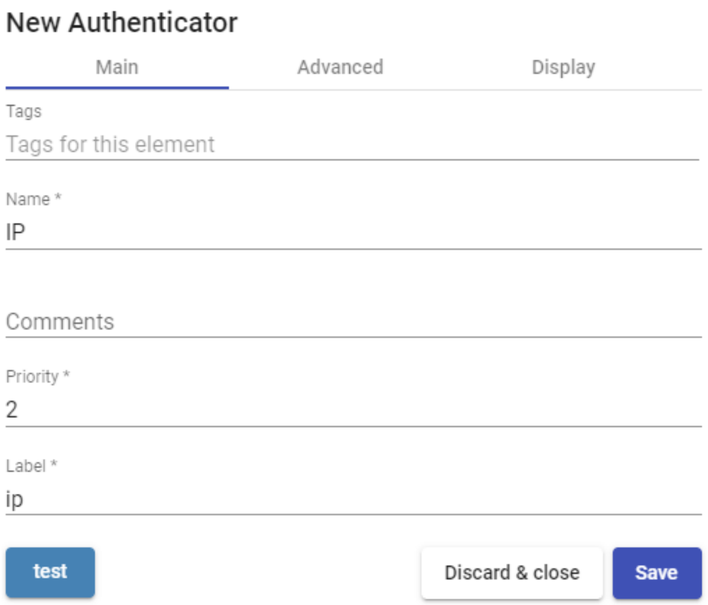
In an “*IP Authenticator*” the minimal parameters to be configured are:

- Main:

Name: Authenticator name.

Priority: The priority of this authenticator. The lower that priority is, the higher it will appear on the list of authenticators available in the user access window. This field admits negative values.

Label: Enables direct validation in the authenticator. It allows to validate this latter in the login page URL without going through the whole dashboard interface using this format: ***UDSServer/uds/page/login/label*** (For example: https://UDSServer/uds/page/login/IP).



New Authenticator

Tags: Tags for this element

Name *: IP

Comments

Priority *: 2

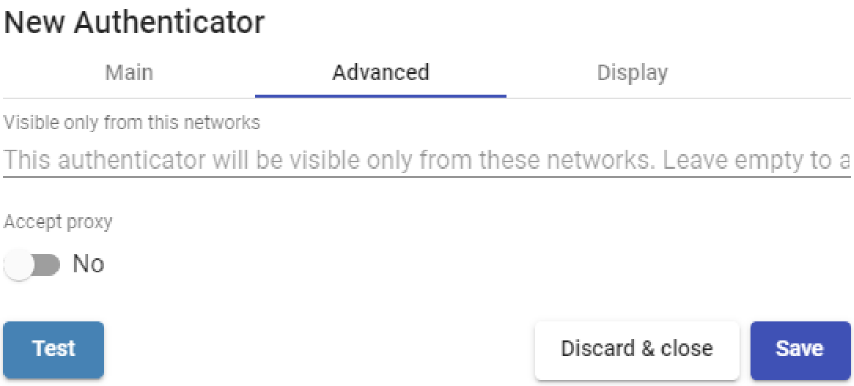
Label *: ip

- Advanced:

Visible only from these networks: Allows you to filter the networks from which the authenticator will be visible.

Accept proxy: You need to enable this option when there is a previous component to the access of UDS server, such as a load balancer.

UDS automatically detects the IP address of the connection client. In environments where there are load balancers configured, this detection is not successful since the IP address corresponds to the detected balancers. Enabling this option will get correct IP detection.



New Authenticator

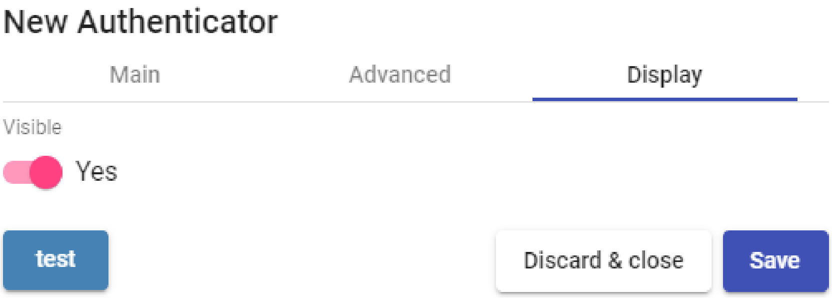
Main | Advanced | Display

Visible only from this networks
This authenticator will be visible only from these networks. Leave empty to a

Accept proxy
No

- Display:

Visible: If disabled, the authenticator will not be shown as available on the UDS login page.



New Authenticator

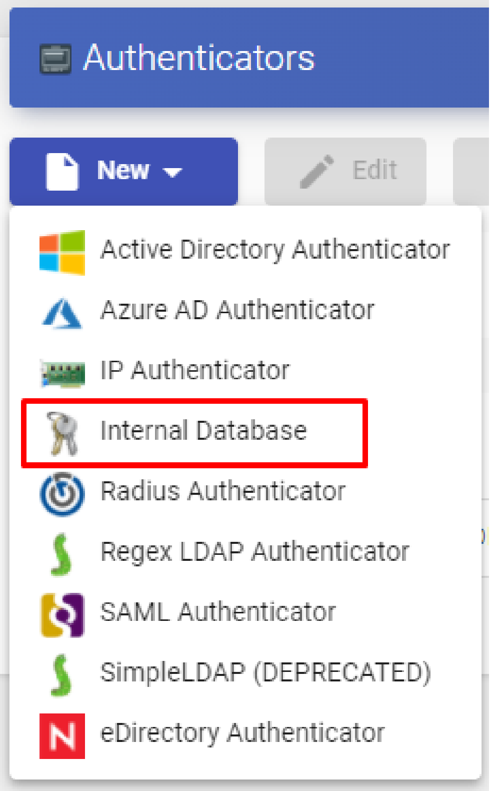
Main | Advanced | Display

Visible
Yes

4.2.4 Internal Database

In environments where no external authenticator is available, it is possible to use the "***Internal Database***". authenticator. This authenticator allows the creation of users and groups manually to access the different desktop services and virtual applications
provided by the UDS platform.

All user and group data are stored in the Database to which the UDS Server is
connected.



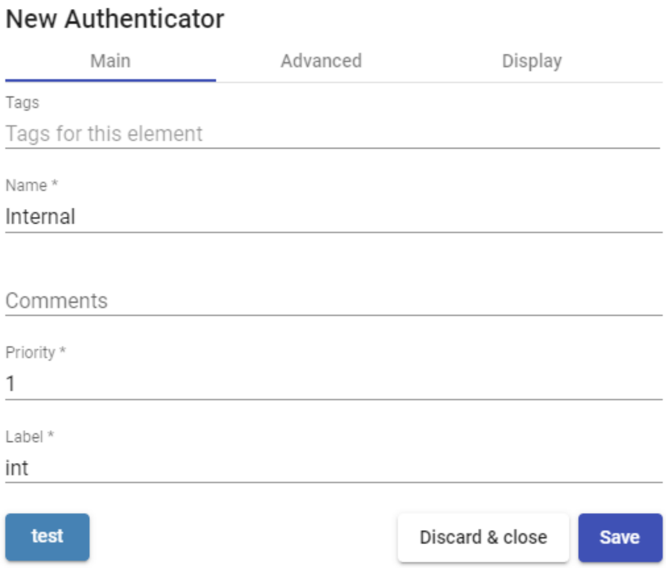
In “***Internal Database***” minimal parameters to be configured are

- Main:

Name: Authenticator name.

Priority: Priority that this authenticator will have. The lower that priority, the higher it will appear on the list of authenticators available in the user access window. This field admits negative values.

Label: Enables direct validation in this authenticator. It allows the user to validate with said authenticator, although the UDS environment has more authenticators. To do this, you will have to access the UDS “login” screen with the following format: ***UDSServer/uds/page/login/label*** (For example: https://UDSServer/uds/page/login/int1).



New Authenticator

Tags
Tags for this element

Name *
Internal

Comments

Priority *
1

Label *
int

- Advanced:

Different user for each host: This option allows connections to virtual desktops using a single connection user, adding a root to the name of an existing user at the time of connection to the virtual desktop. This root is the IP address of the connection client or its DNS name.

The new created username has the following structure:

IP of the client -generic _cenection user

Reverse DNS: It behaves exactly the same as the "*Different user for each host*", option, but the root added to the user is the DNS name of the connection client. A correct DNS resolution is required. Otherwise, the IP address will be used.

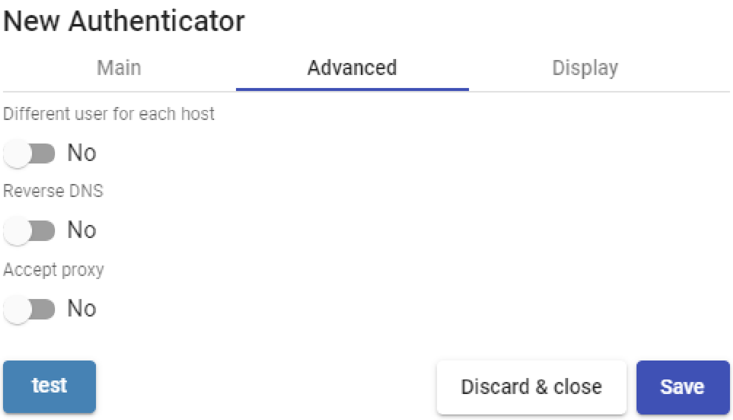
The new user created has the following structure:

Generic_user-connection_client_name

Accept proxy: This option must be enabled when there is a component prior to the access of the UDS Server, such as a load balancer.

By default, UDS automatically detects the IP address of the connection client. In environments where load balancers or other similar elements are configured, this detection is not performed correctly, since the detected IP address corresponds to these balancers. By enabling this option, you will get a correct IP detection.

In environments where the "*Different user for each host*" option is used and there are load balancers, it is necessary to enable this option.


New Authenticator

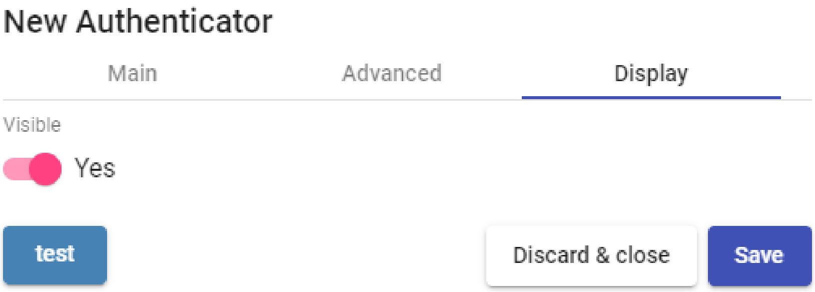
Different user for each host: No

Reverse DNS: No

Accept proxy: No

- Display:

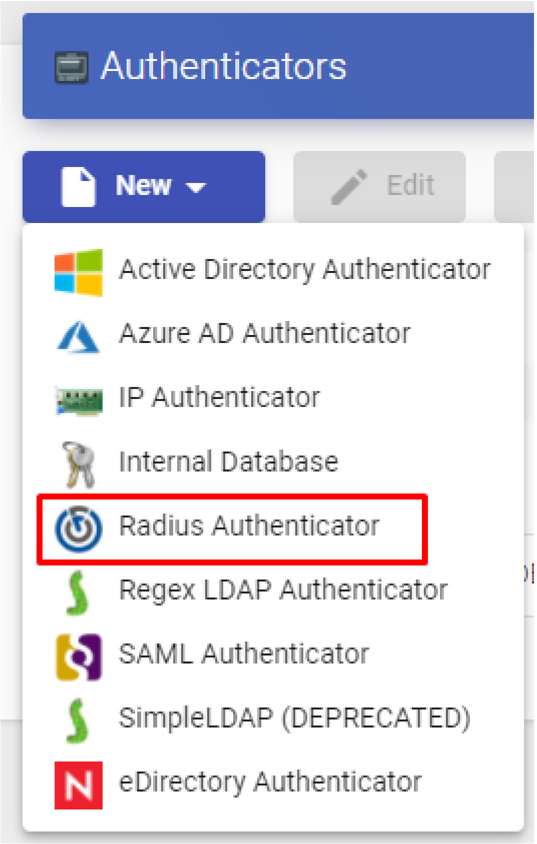
Visible: If disabled, the authenticator will not be shown as available on the UDS login page.


New Authenticator

Visible: Yes

4.2.5 Radius Authenticator

This External Authenticator allows giving access to virtual desktops and applications to users and user groups belonging to a RADIUS-based authenticator.



In an "***Radius Authenticator***" minimal parameters to be configured are:

- Main:

Name: Authenticator name.

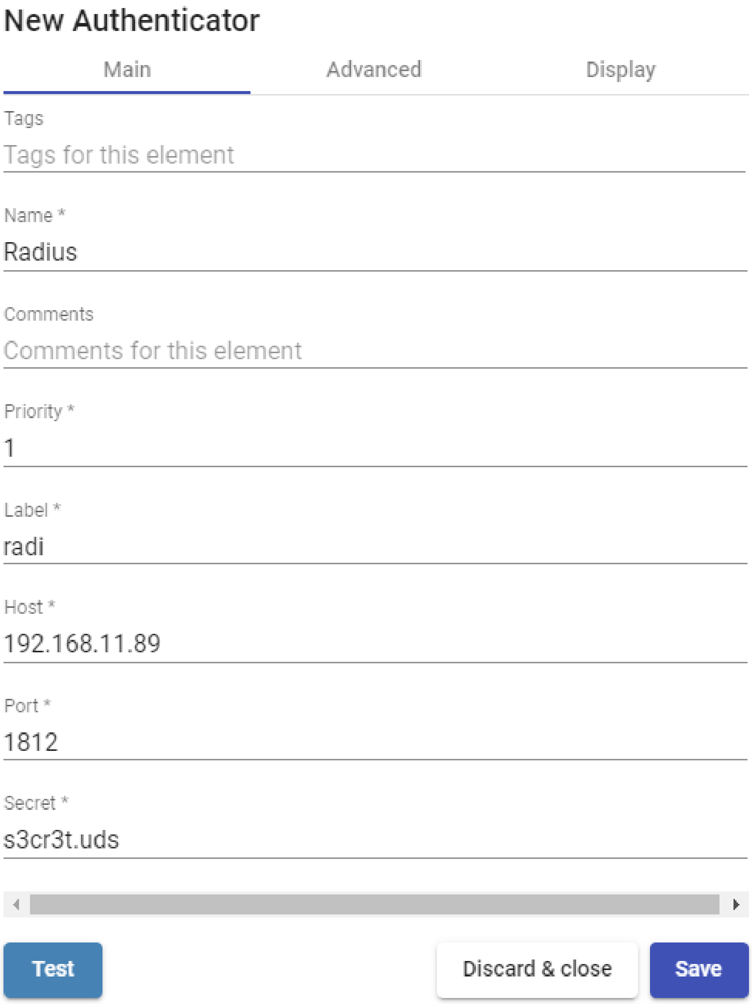
Priority: Priority that this authenticator will have. If there are several authenticators, the lower its priority, the higher it will appear in the list of available authenticators in the UDS login portal. This field admits negative values.

Label: Enables direct validation in this authenticator. It allows the user to validate with said authenticator, although the UDS environment has more authenticators. To do this, you will have to access the login screen of UDS with the following format: ***UDSServer/uds/page/login/label*** (For example: https://UDSServer/uds/page/login/Radi).

Host: IP address or RADIUS server name.

Port: Communication port with the RADIUS server.

Secret: Validation string against the RADIUS server (defined on the RADIUS server itself).



New Authenticator

Tags: Tags for this element

Name *: Radius

Comments: Comments for this element

Priority *: 1

Label *: radi

Host *: 192.168.11.89

Port *: 1812

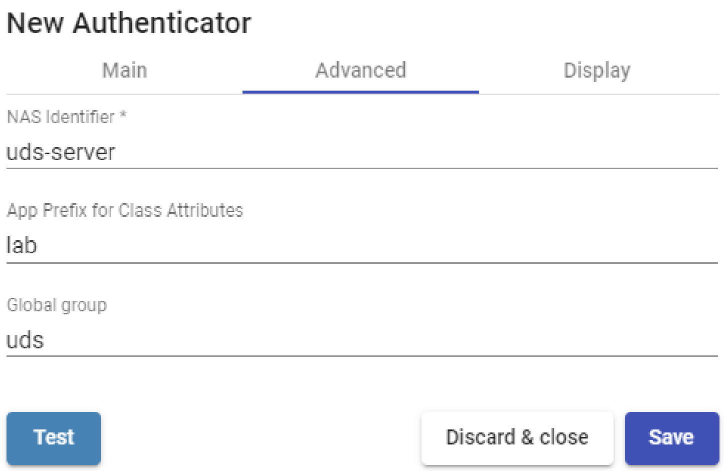
Secret *: s3cr3t.uds

- Advanced:

NAS Identified: Identifies UDS within the RADIUS server, allowing you to filter if necessary.

App Prefix for Class Attributes: Allows filtering which groups we obtain from the “class” attribute of the RADIUS server.

Global group: Allows you to force all users to belong to a group. This allows a RADIUS server (which is still a "simple" authenticator) that does not contain groups, to be able to assign ALL users to a group (even if it also contains groups).


New Authenticator

Main | Advanced | Display

NAS Identifier *
uds-server

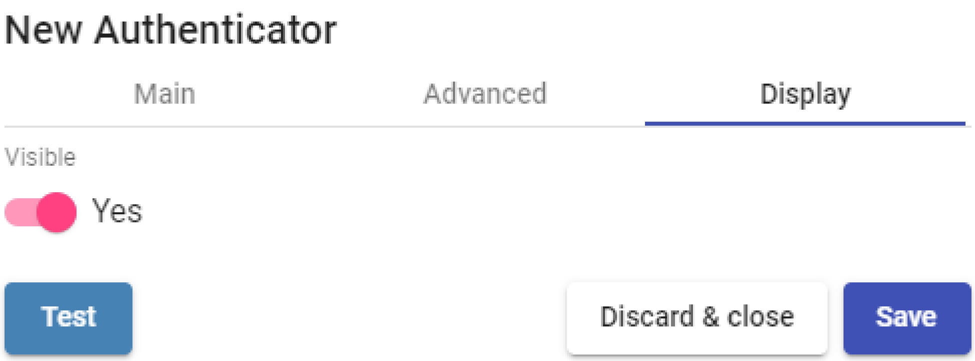
App Prefix for Class Attributes
lab

Global group
uds

NOTE:
By default, UDS will extract from the Radius "Class" Attribute the elements that have the form "group=..."
If we define in "App Prefix for Class Attributes", for example, "lab", UDS will search only for "class" attributes that have the form "labgroup=..."

- Display:

Visible: If disabled, the authenticator will not be shown as available on the UDS login page.


New Authenticator

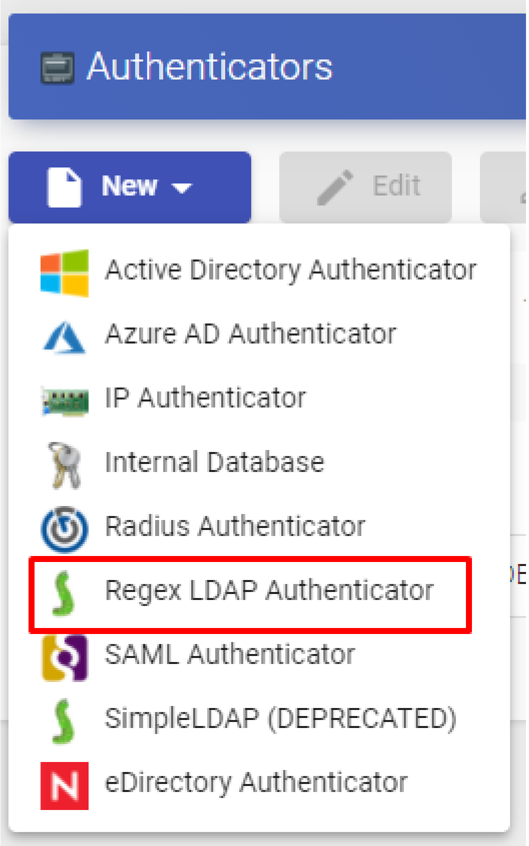
Main | Advanced | Display

Visible
Yes

With the “*Test*” button you can check that the connection is successful.

4.2.6 Regex LDAP

This Authenticator allows users and groups of users, belonging to almost any LDAPbased authenticator, to access virtual desktops and applications.



In a “*Regex LDAP Authenticator*” the minimun parameters to configure are:

- Main:

Name: Name of the authenticator.

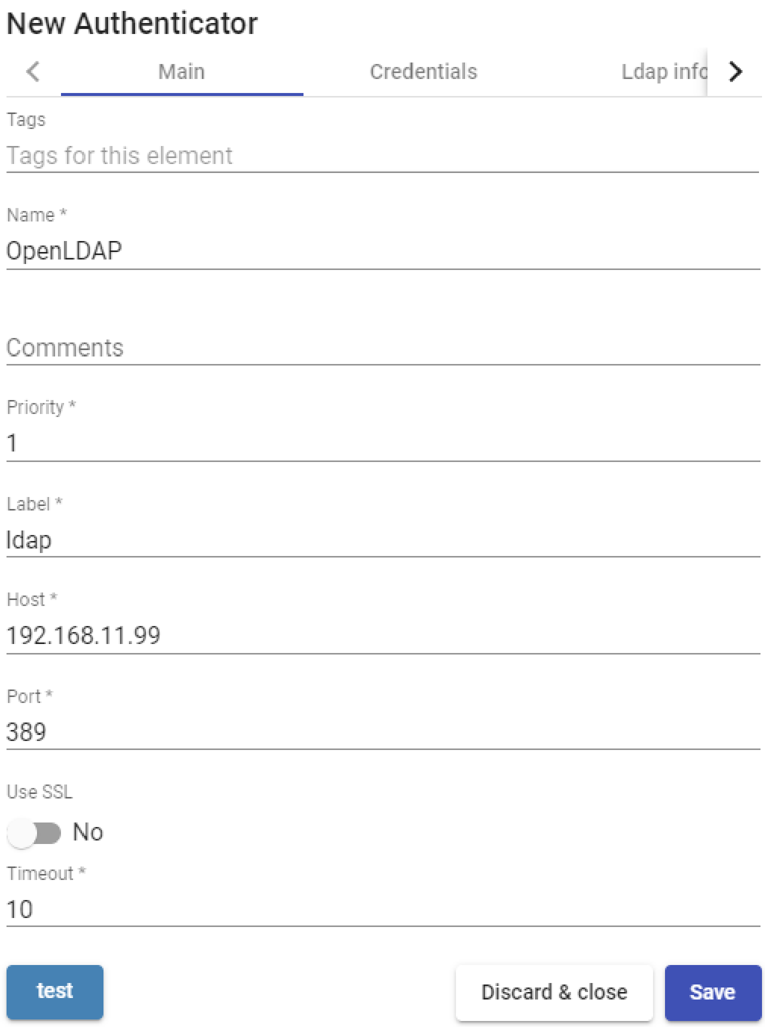
Priority: Priority that this authenticator will have. The lower that priority, the higher it will appear in the list of authenticators available in the user access window. This field admits negative values.

Label: Enables direct validation in this authenticator. It allows the user to validate in the login window with said authenticator even if the UDS environment has more authenticators. To this end, is we will have to access the “login” screen of UDS with the following format: ***UDSServer/uds/page/login/label*** (For example: https://UDSServer/uds/page/login/LDAP).

Host: IP address or LDAP server name.

Use SSL: If enabled, SSL connection will be used against the authenticator.

Timeout: "*Timeout*" for the connection to the authenticator.



New Authenticator

Tags: Tags for this element

Name *: OpenLDAP

Comments

Priority *: 1

Label *: ldap

Host *: 192.168.11.99

Port *: 389

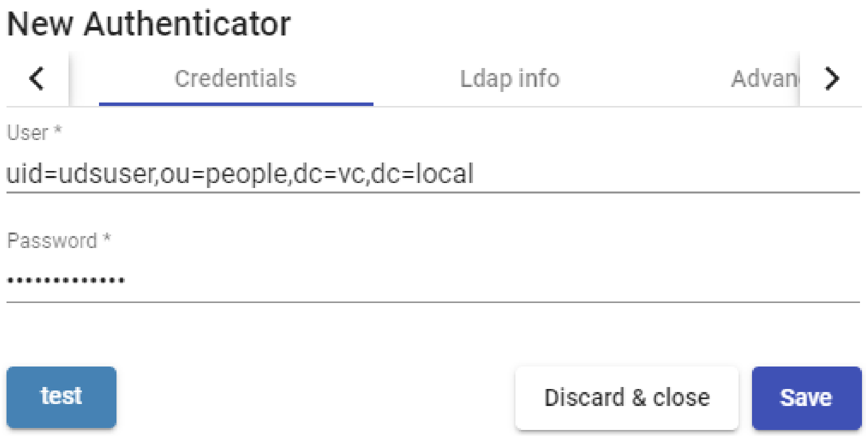
Use SSL: No

Timeout *: 10

- Credentials:

User: User with reading permissions on the authenticator. Format: ***uid=...,ou=....,dc=...,dc=...***

Password: User password.



New Authenticator

User *

uid=udsuser,ou=people,dc=vc,dc=local

Password *

••••••••••••••

- Ldap info:

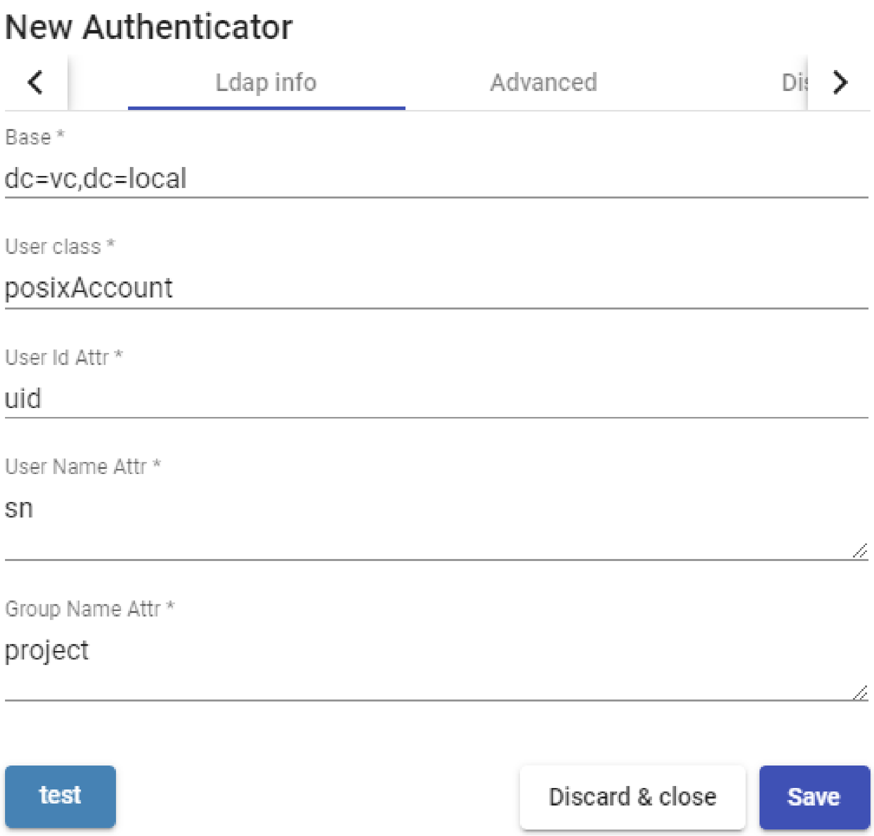
Base: Search directory where the system will locate groups and users to validate in the system.

User class: Common class that all users must have.

User Id Attr: LDAP attribute that will define the name of the user to log in to the UDS access portal.

User Name Attr: LDAP attribute that will define the name of the user to login the UDS access portal. It also allows the use of regular expressions to extract or compose specific values.

Group Name Attr: LDAP attribute that will define a user's membership in a group. Different attributes can be indicated to define different group attributes (one on each line). It also allows the use of regular expressions to extract or compose specific values.


New Authenticator

Base *
dc=vc,dc=local

User class *
posixAccount

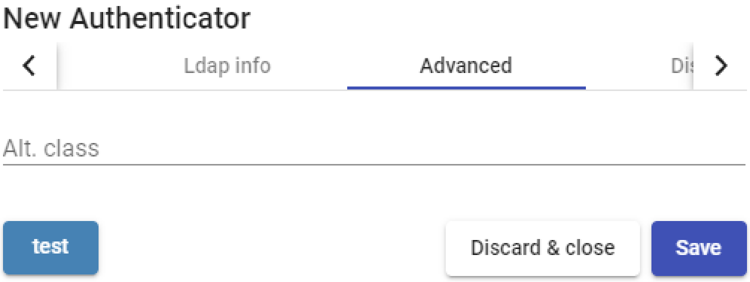
User Id Attr *
uid

User Name Attr *
sn

Group Name Attr *
project

- Advanced:

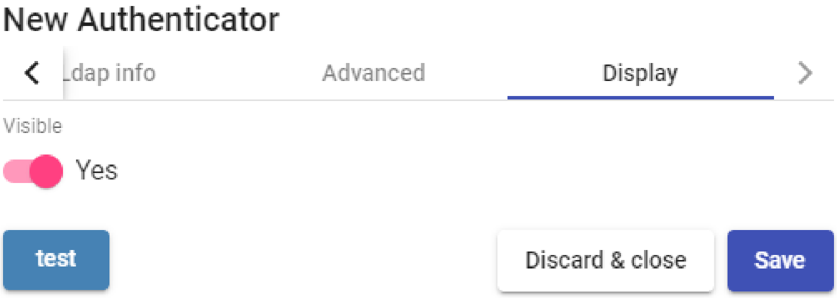
Alt. class: You can indicate more kinds of objects to search for users and user groups.



New Authenticator

- Display:

Visible: If disabled, the authenticator will not be shown as available on the UDS login page.



New Authenticator

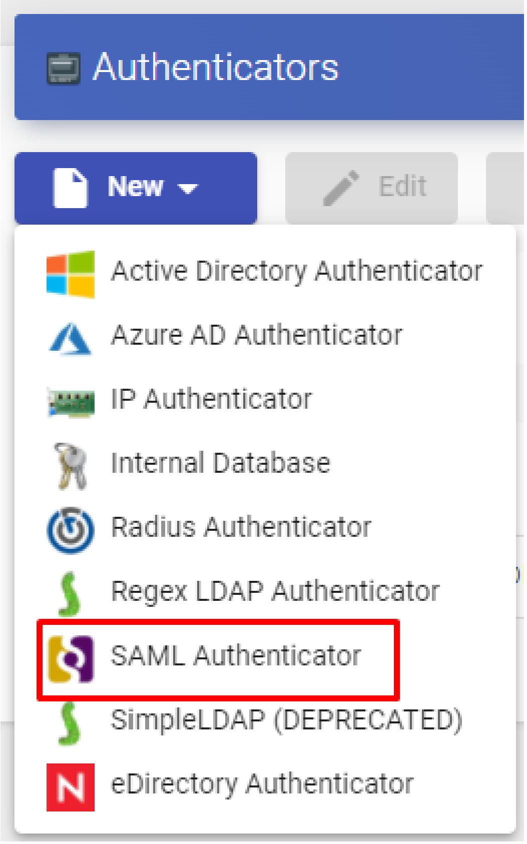
Visible: Yes

With the “*Test*” button you can check that the connection is successful.

4.2.7 SAML

This external Authenticator allows users and groups of users belonging to an identity provider with SAML 2.0 support to access virtual desktops and applications.

SAML is used for the exchange of authentication and authorization data between security domains, that is, between an identity provider (a claim producer) and a service provider (a claim consumer).



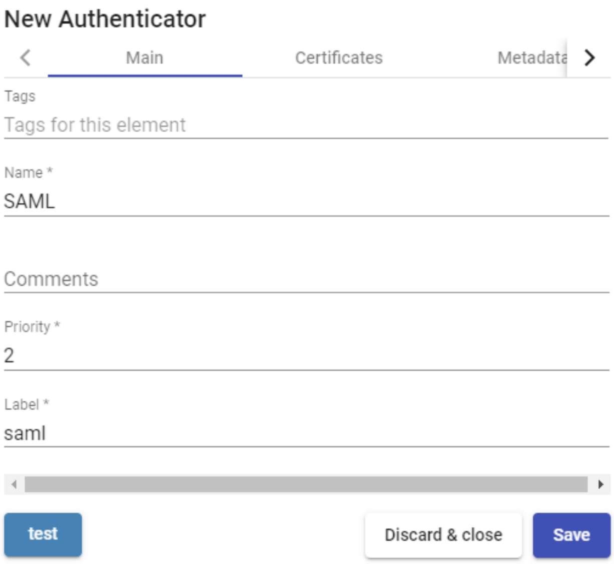
In a "***SAML Authenticator***" minimal parameters to be configured are:

- Main:

Name: Authenticator name (Can't contain spaces).

Priority: Priority that this authenticator will have. The lower that priority, the higher it will appear in the list of authenticators available in the user access window. This field admits negative values.

Label: Enables direct validation in this authenticator. It allows the user to validate in the login window with said authenticator, although the UDS environment has more authenticators. To do this, you will have to access the UDS login screen with the following format: ***UDSServer/uds/page/login/label*** (For example: https://UDSServer/uds/page/login/SAML).



New Authenticator

Tags
Tags for this element

Name *
SAML

Comments

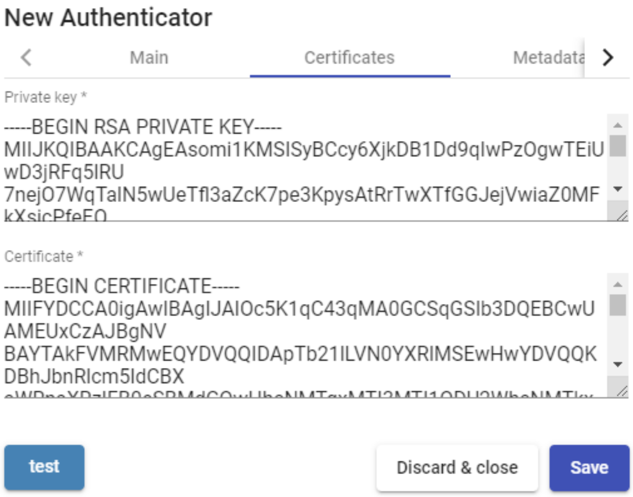
Priority *
2

Label *
saml

- ○ Certificates:

Private key: Private RSA key that is used for signatures and encryptions.

Certificate: Public key that is used by SSL sessions.



New Authenticator

Private key *

```
-----BEGIN RSA PRIVATE KEY-----
MIIJKQIBAAKCAgEAsomi1KMSISyBCcy6XjkDB1Dd9qIwPzOgwTEiU
wD3jRFq5IRU
7nejO7WqTaIN5wUeTfl3aZcK7pe3KpysAtRrTwXTfGGJejVwiaZ0MF
kXsicPfeFQ
```

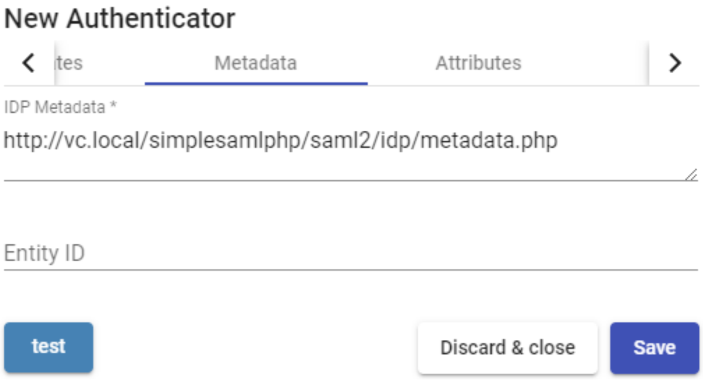
Certificate *

```
-----BEGIN CERTIFICATE-----
MIIFYDCCA0igAwIBAgIJAIOc5K1qC43qMA0GCSqGSIb3DQEBCwU
AMEUxCzAJBgNV
BAYTAkFVMRMwEQYDVQQIDApTb21lLVN0YXRlMSEwHwYDVQQK
DBhJbnRlcm5ldCBX
```

- Metadata:

IDP Metadata: You can indicate a URL or file in XML format.

Entity ID: This field must initially be empty. The URL will be automatically generated when saving the authenticator. The URL generated in this field usually needs to be used to register UDS as SP (service provider) on the SAML server).



New Authenticator

IDP Metadata *
http://vc.local/simplesamlphp/saml2/idp/metadata.php

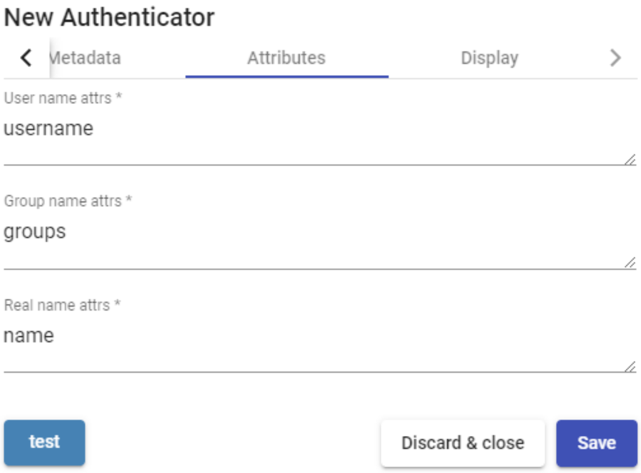
Entity ID

- Attributes:

User name attrs: Attribute that will define the name of the user to perform the login in the UDS access porta.

Group name attrs: Attribute that will define a user's membership in a group. Different attributes can be indicated to define different group attributes (one on each line) and it also allows the use of regular expressions to extract or compose specific values.

Real name attrs: Attribute that defines the username information. It does not affect the UDS login portal.



New Authenticator

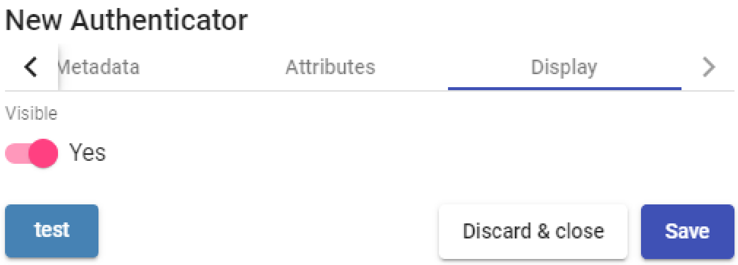
User name attrs *
username

Group name attrs *
groups

Real name attrs *
name

- Display:

Visible: If disabled, the authenticator will not be shown as available on the UDS login page

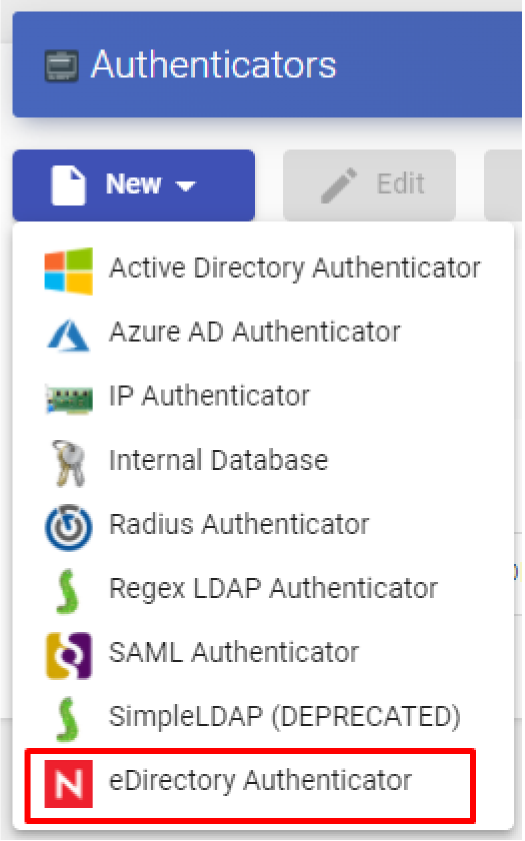


New Authenticator

Visible: Yes

4.2.8 eDirectory

This external Authenticator allows users and groups of users belonging to a Novell network to access virtual desktops and applications.



In a "**eDirectory Authenticator**" minimal parameters to be configured are:

- Main:

Name: Authenticator name.

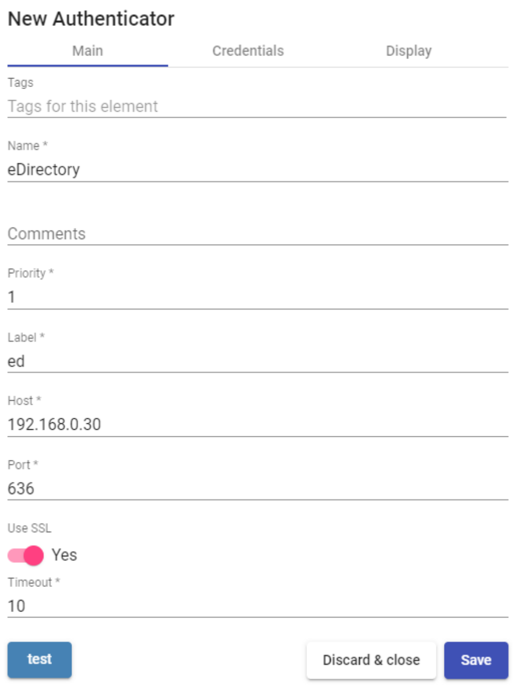
Priority: Priority that this authenticator will have. The lower that priority, the higher it will appear on the list of authenticators available in the user access window. This field admits negative values.

Label: Enables direct validation in this authenticator. It allows the user to validate with said authenticator, although the UDS environment has more authenticators. To do this, you will have to access the login screen of UDS with the following format: ***UDSServer/uds/page/login/label*** (For example: https://UDSServer/uds/page/login/ED).

Host: IP address or eDirectory server name.

Use SSL: If enabled, SSL connection will be used against the authenticator r.

Timeout: "*Timeout*" or the connection with the authenticator.



New Authenticator

Tags: Tags for this element

Name *: eDirectory

Comments

Priority *: 1

Label *: ed

Host *: 192.168.0.30

Port *: 636

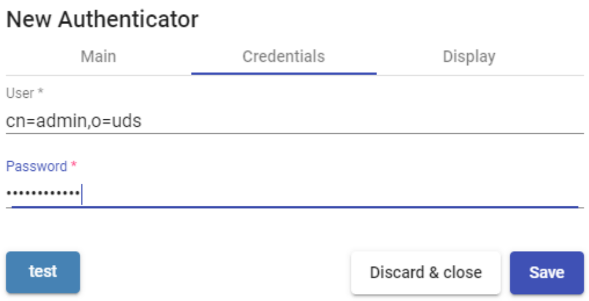
Use SSL: Yes

Timeout *: 10

- Credentials:

User: User with reading rights on the authenticator in the format:*CN=user, O=domain.*

Password: User password.



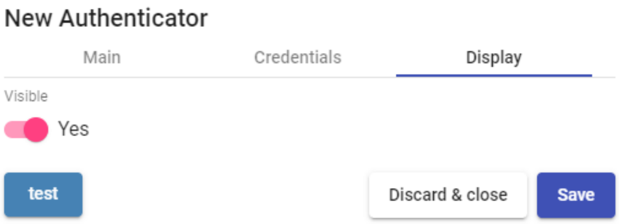
New Authenticator

User *: cn=admin,o=uds

Password *: ••••••••••••

- Display:

Visible: If disabled, the authenticator will not be shown as available on the UDS login page



New Authenticator

Visible

Yes

Clicking on the “***Test***” button, you can check whether the connection has been correctly made.

4.3 Multifactor

Multi-factor authentication (MFA) adds a layer of protection to the sign-in process.

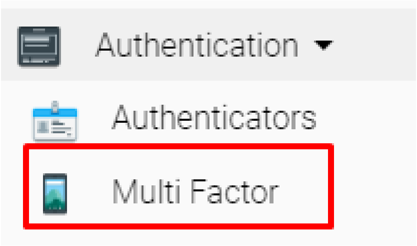
When an account or app is accessed, users must go through additional identity verification.

UDS natively supports several multi-factor authentication systems natively:

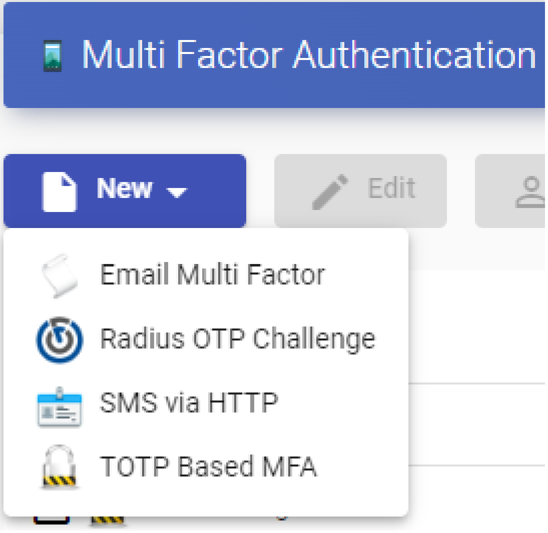
- Email Multi Factor
- Radius OTP Challenge
- SMS via HTTP
- TOTP Based MFA

And it also supports other MFAs integrated into the authenticator itself, so that when the authenticator is incorporated into UDS Enterprise, the MFA is automatically incorporated.

In UDS Enterprise you can perform a double authentication of users natively, through the use of different methods explained below.



A "**Multifactor**" configuration is not a necessary component for the creation of a **"Service Pool**"



Safe Employment Procedure:

It is recommended to use any system, at least one, of multi-factor authentication.

4.1.1 Email Multi Factor

Through this method, the user will first authenticate with his username and password and then be redirected to a second authentication process where he will receive an email with the necessary code to finally authenticate on his UDS Enterprise platform.

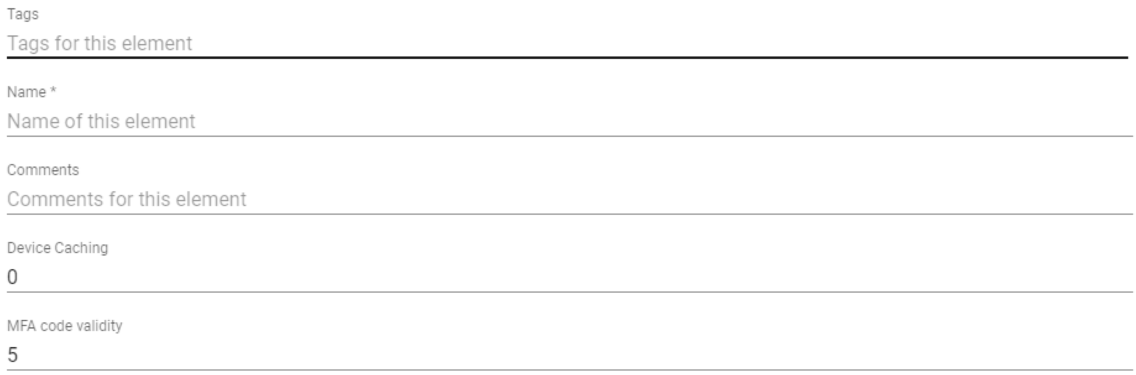
In a "***Multi factor Email"*** The minimum parameters to configure are:

- Main:

Name: Name that the item will be indicated.

Device Caching: Time in hours to cache the device so that MFA is not needed again.

MFA code validity: Time in minutes to allow MFA code use.



Tags
Tags for this element

Name *
Name of this element

Comments
Comments for this element

Device Caching
0

MFA code validity
5

- SMTP Server:

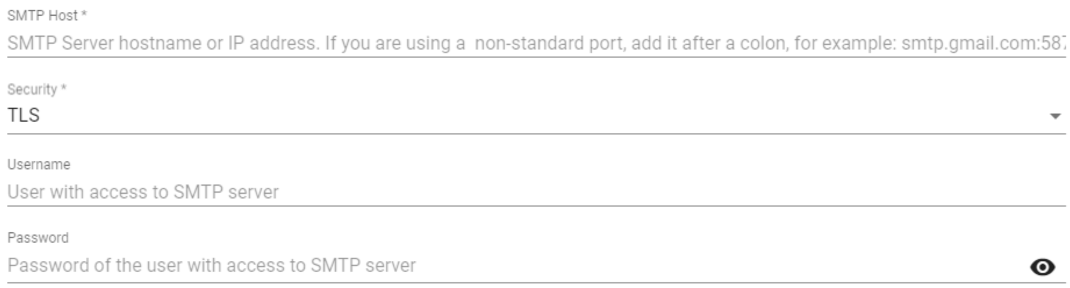
SMTP Host: Host name or IP address of the SMTP server.

Security: Security protocol to be used.

Username: Time in minutes to allow the use of MFA code.

Password: Password of the user with access to the SMTP server

Safe use procedure: Passwords must be of sufficient length and include uppercase, lowercase, numbers and special characters.



SMTP Host *
SMTP Server hostname or IP address. If you are using a non-standard port, add it after a colon, for example: smtp.gmail.com:587

Security *
TLS

Username
User with access to SMTP server

Password
Password of the user with access to SMTP server

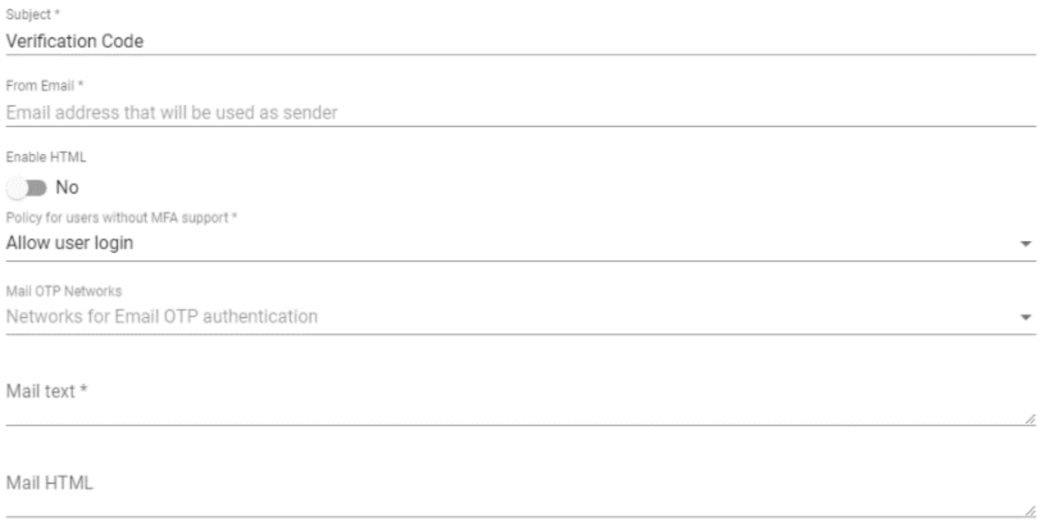
- Config:

Subject: Subject of the email to be sent to users.

From Email: Email address that will be used as a sender.

Policy for users without MFA Support: Policy to be used with those users without MFA configured.

Mail Text: Text that will be displayed in the sent mail.



Subject *
Verification Code

From Email *
Email address that will be used as sender

Enable HTML
No

Policy for users without MFA support *
Allow user login

Mail OTP Networks
Networks for Email OTP authentication

Mail text *

Mail HTML

4.1.2 Radius OTP Challenge

Through this method, the user will first authenticate with his username and password and then be redirected to a second authentication process where he must enter the corresponding code provided by his radius server in order to finally authenticate on his UDS Enterprise platform.

Through this method, the user will first authenticate with his username and password and then be redirected to a second authentication process where he must enter the corresponding code provided by his radius server in order to finally authenticate on his UDS Enterprise platform.

o Main:

Name: Name that will be indicated to the element.

Host: Host name or IP of the Radius server

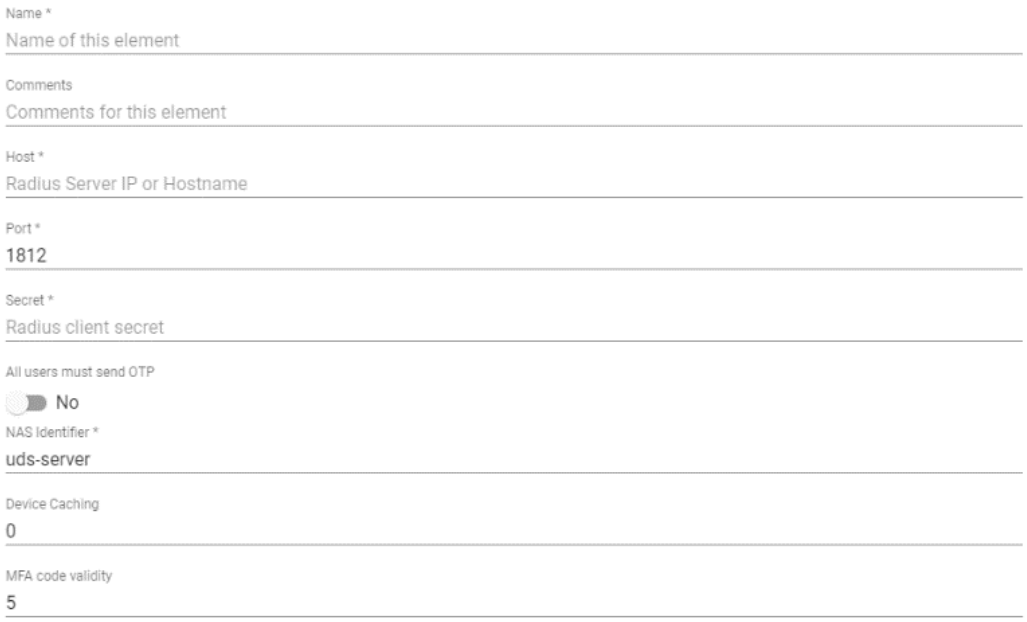
Port: Radius authentication port.

Secret: "Secret" of the Radius client.

NAS Identifier: NAS identifier for Radius Server.

Device Caching: Time in hours to cache the device so that MFA is not needed again.

MFA code validity: Time in minutes to allow the use of the MFA code.



Name *
Name of this element

Comments
Comments for this element

Host *
Radius Server IP or Hostname

Port *
1812

Secret *
Radius client secret

All users must send OTP
No

NAS Identifier *
uds-server

Device Caching
0

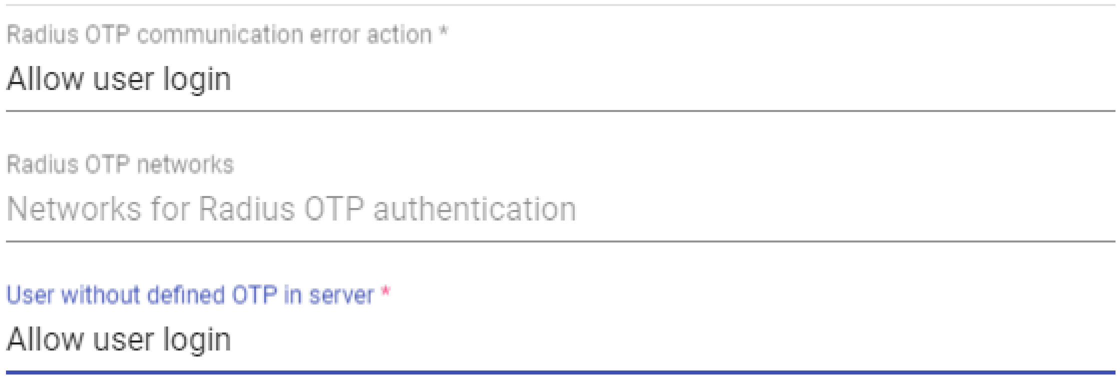
MFA code validity
5

o Config:

Radius OTP communication error action: Action to be performed by the Radius server in the event of an error.

Radius OTP Networks: Networks for Radius OTP authentication

Users without defined OTP in server: Policy that will be used with those users without MFA configured.



Radius OTP communication error action *
Allow user login

Radius OTP networks
Networks for Radius OTP authentication

User without defined OTP in server *
Allow user login

4.1.3 SMS via HTTP

Through this method, the user will first authenticate with his username and password and then be redirected to a second authentication process where he will receive an SMS with the necessary code to finally authenticate on his UDS Enterprise platform.

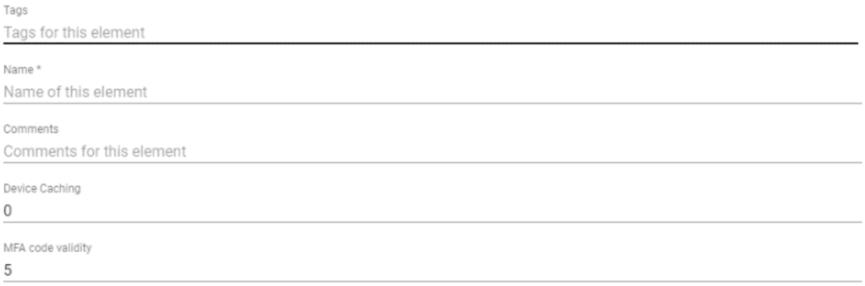
In an "***SMS Via HTTP***" The minimum parameters to configure are

o Main:

Name: Name that the item will be indicated.

Device Caching: Time in hours to cache the device so that MFA is not needed again.

MFA code validity: Time in minutes to allow MFA code use.



Tags
Tags for this element

Name *
Name of this element

Comments
Comments for this element

Device Caching
0

MFA code validity
5

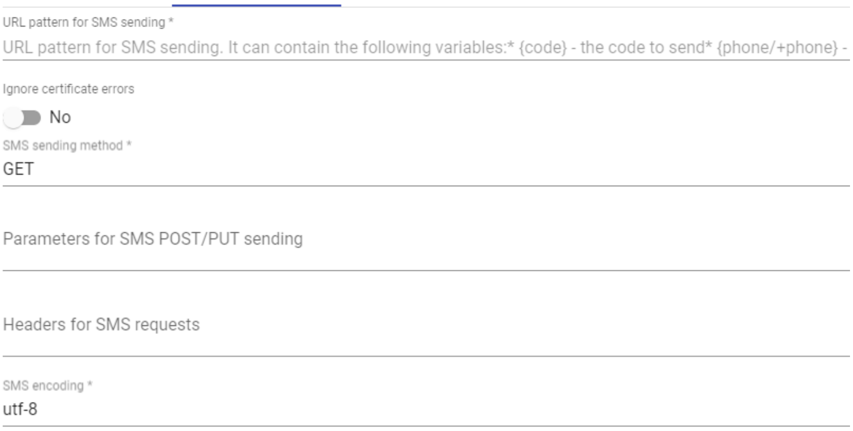
o HTTP Server:

URL pattern for SMS Sending: URL pattern for sending SMS. It can contain the following variables:

* {code} - the code to send
* {phone/+phone} - the phone number
* {username} - the username
* {justUsername} - the username without @.

SMS Sending method: Method that will be used to send SMS.

SMS Enccoding: Encryption to be used for sending SMS.



URL pattern for SMS sending *
URL pattern for SMS sending. It can contain the following variables:* {code} - the code to send* {phone/+phone} -

Ignore certificate errors
No

SMS sending method *
GET

Parameters for SMS POST/PUT sending

Headers for SMS requests

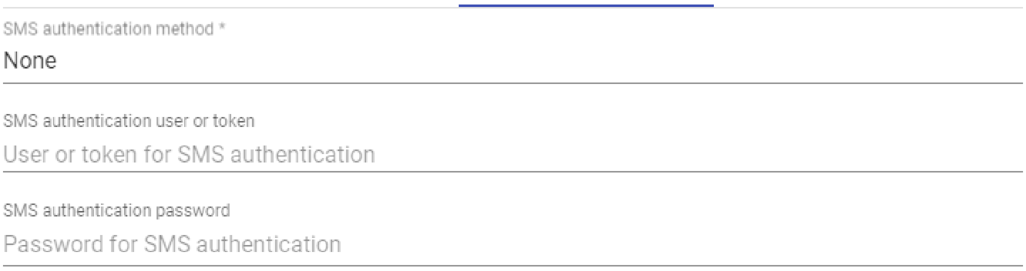
SMS encoding *
utf-8

o HTTP Authentication:

SMS Authentication Method: SMS authentication method

SMS Authentication user or Token: User or token for SMS authentication

SMS Authentication paswword: Password for SMS authentication



SMS authentication method *
None

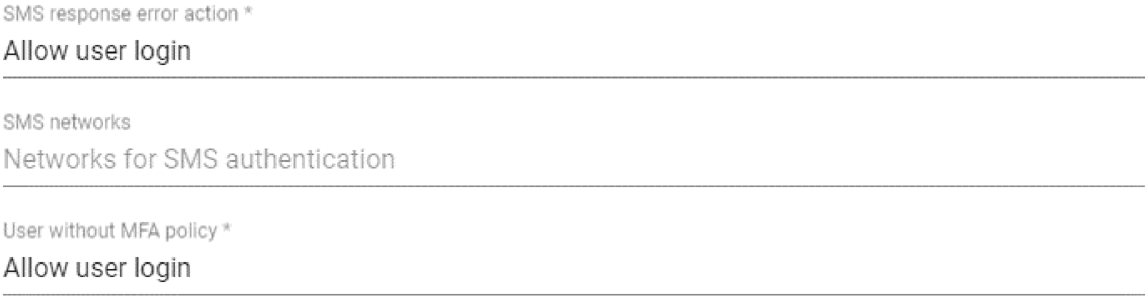
SMS authentication user or token
User or token for SMS authentication

SMS authentication password
Password for SMS authentication

o Config:

SMS response error action: Action to be taken by the server in case of error.

User without MFA policy: Action to be performed on users without an MFA policy configured.



SMS response error action *
Allow user login

SMS networks
Networks for SMS authentication

User without MFA policy *
Allow user login

4.1.4 TOTP Based MFA

Through this method, the user will first authenticate with his username and password and then be redirected to a second authentication process where he must enter the TOTP code generated from time to time in our application such as **Google authenticator**, **Microsoft**, etc. to be able to authenticate finally in your UDS Enterprise platform..

Through this method, the user will first authenticate with his username and password and then be redirected to a second authentication process where he must enter the TOTP code generated from time to time in our application such as **Google authenticator**, **Microsoft**, etc. to be able to authenticate finally in your UDS Enterprise platform.

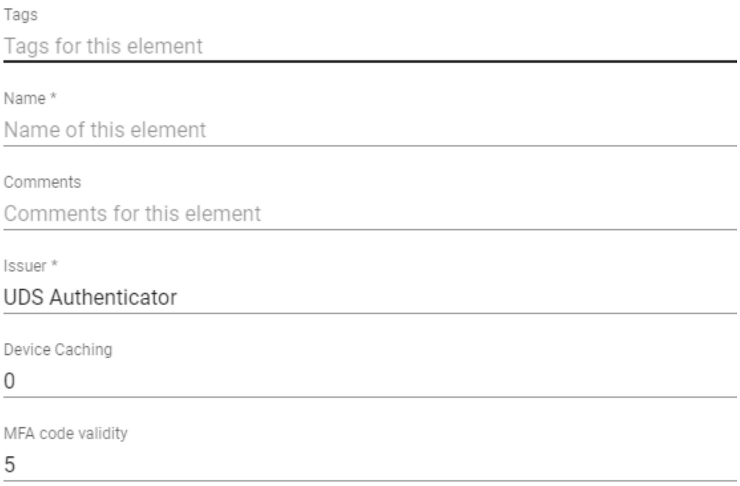
o Main:

Name: Name that the item will be indicated.

Issuer: OTP issuer, once created it cannot be changed

Device Caching: Time in hours to cache the device so that MFA is not needed again.

MFA code validity: Time in minutes to allow MFA code use.



Tags
Tags for this element

Name *
Name of this element

Comments
Comments for this element

Issuer *
UDS Authenticator

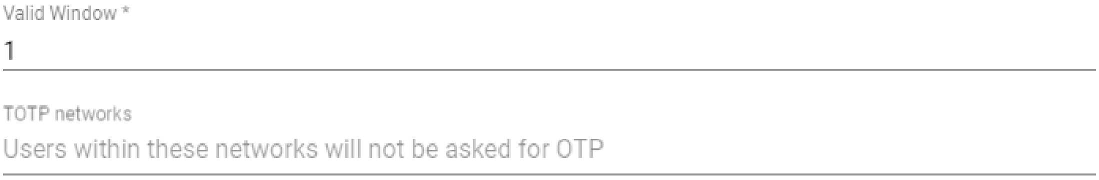
Device Caching
0

MFA code validity
5

o Config:

Valid Window: Number of codes that will be valid before and after the current one.

TOTP networks: The user who is added in these networks will not be asked for OTP.



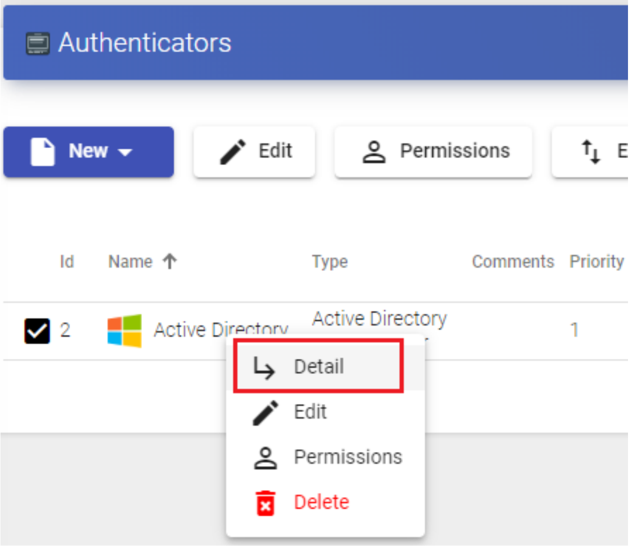
Valid Window *
1

TOTP networks
Users within these networks will not be asked for OTP

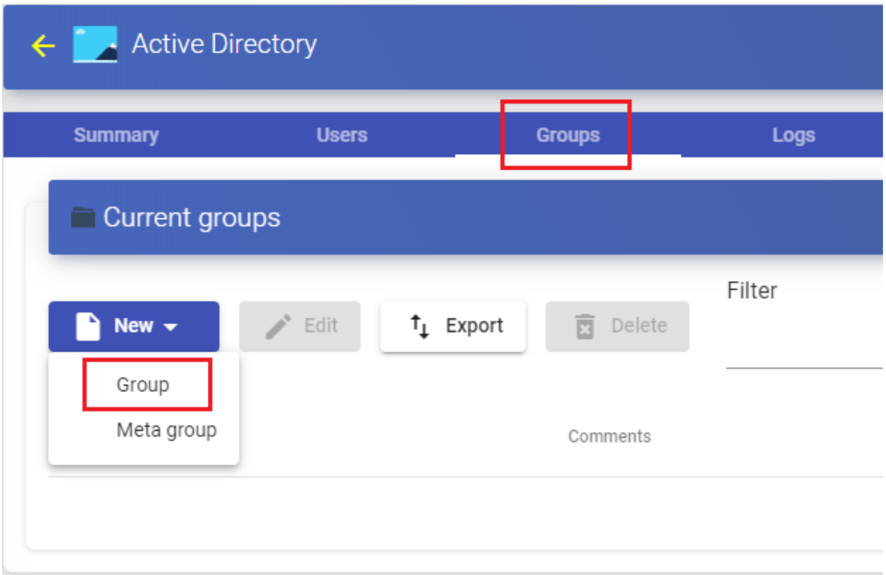
4.5 Configure users, groups, and user metegtoups

Once the authenticator or authenticators have been configured, you must configure the user groups that contain the users to which access to the desktop services is to be granted. It is also possible to create metagroups, which will be used to combine several groups.

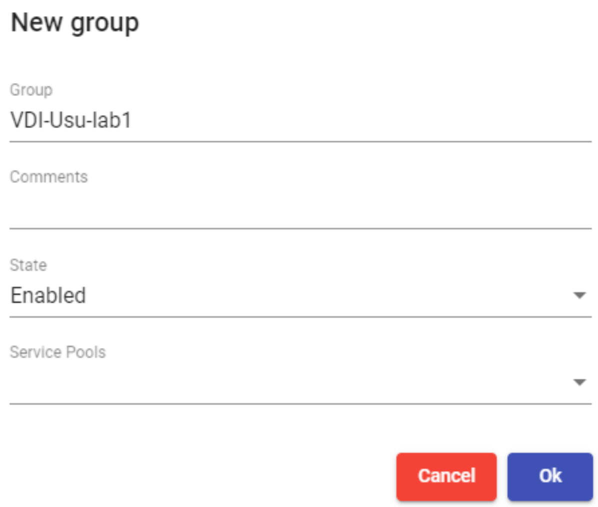
To add groups or metagroups to an authenticator, select it and double click on it, or select "*Detail*" in the provider's menu:



Once inside the authenticator, select the "*Groups*" tab, and in "*New*" sselect "*Group*":



You will indicate the name of the group through the “***Group***”, with its status (enabled or disabled) In addition, you can directly assign it to one or more “***Service Pools***”.



New group

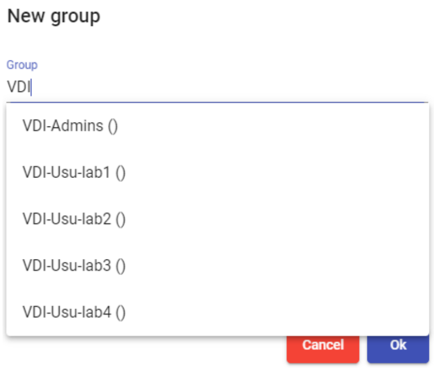
Group: VDI-Usu-lab1

Comments:

State: Enabled

Service Pools:

In some authenticators such as “***Active Directory***”, an automatic search will be performed:



New group

Group: VDI

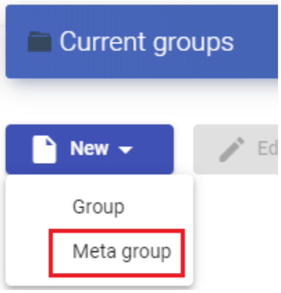
- VDI-Admins ()
- VDI-Usu-lab1 ()
- VDI-Usu-lab2 ()
- VDI-Usu-lab3 ()
- VDI-Usu-lab4 ()

In others, such as “***Regex LDAP***”, “***SAML***”, “***eDirectory***”… it will be necessary to indicate it manually.

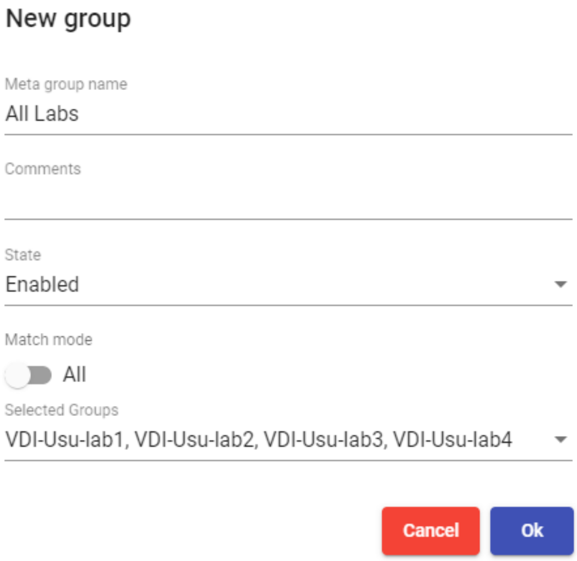
NOTE:
For internal type authenticators such as “Internal Database” and “IP Authenticator”, it will be necessary to create groups manually, since they do not connect to any external authentication system.

Access to the UDS login portal will be granted to all users belonging to a group (of a specific authenticator).

To create a metagroup (group made up of several groups), select the "***Groups***" tab and select "***Meta group***" in "**New**"



You will indicate the name of the metagroup in the "***Meta group name***", field, its status (Enabled or disabled), the operating mode through the "***Match mode***" field and you will also select the groups that will be part of the metagroup.


New group

Meta group name: All Labs

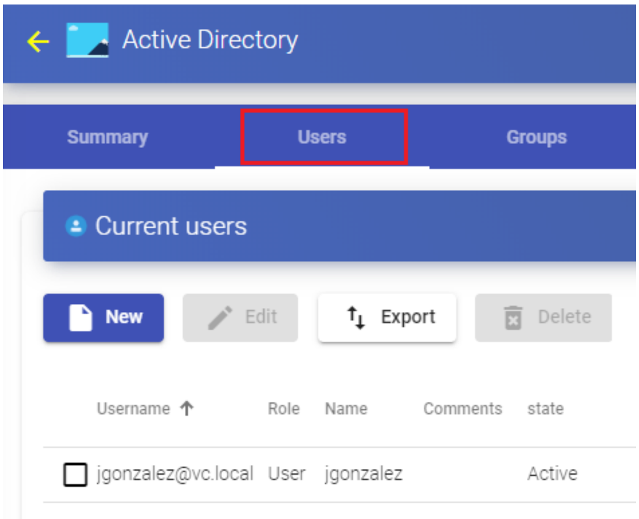
Comments:

State: Enabled

Match mode: All

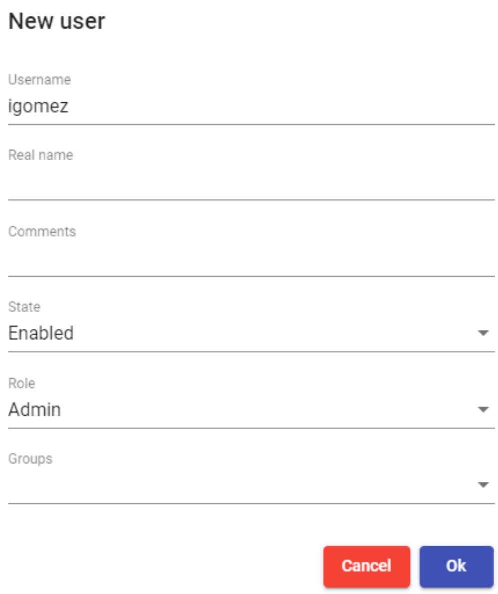
Selected Groups: VDI-Usu-lab1, VDI-Usu-lab2, VDI-Usu-lab3, VDI-Usu-lab4

In the "***Users***" tab of an authenticator, users will be added automatically when they are validated in the UDS login portal, provided that these users belong to existing groups in the authenticator:



Username	Role	Name	Comments	state
☐ jgonzalez@vc.local	User	jgonzalez		Active

If you need to register users manually, to assign special permissions before they connect for the first time, you will click on "***New***" and you will select the user, their status (enabled or disabled) and the access level ("***Role***" field). In case of not using the "***Internal Database***" authenricator, the "***Groups***" field will be left empty, since the system must automatically add the user to their membership group (once the user has been saved, you can edit it and check if it has been assigned correctly to the group).



New user

Username: igomez

Real name:

Comments:

State: Enabled

Role: Admin

Groups:

NOTE:
Users of an "Internal Database" authenticator always have to be manually created.

The access leve "**Admin**" " makes a user an administrator of the environment. "**Staff member**" allows access to UDS Actor downloads and UDS administration in a limited way, based on the permissions assigned. "**User**" will only allow access to the UDS services window (the latter is the default)

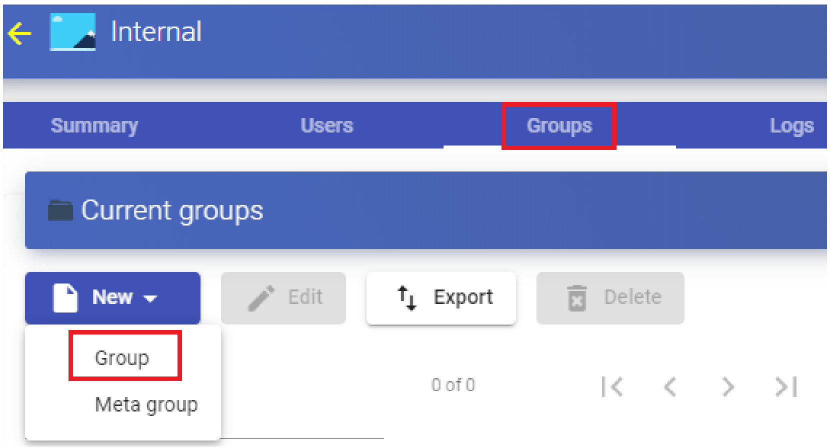
Once the user has been added, you can modify it using the"***Edit***" section.

To delete a user, group or metagroup, select it and click on the "***Delete***". button. If you have registered users in the system who belong to a group, and it is deleted, the users will be left without an assigned group and cannot be validated in the system.

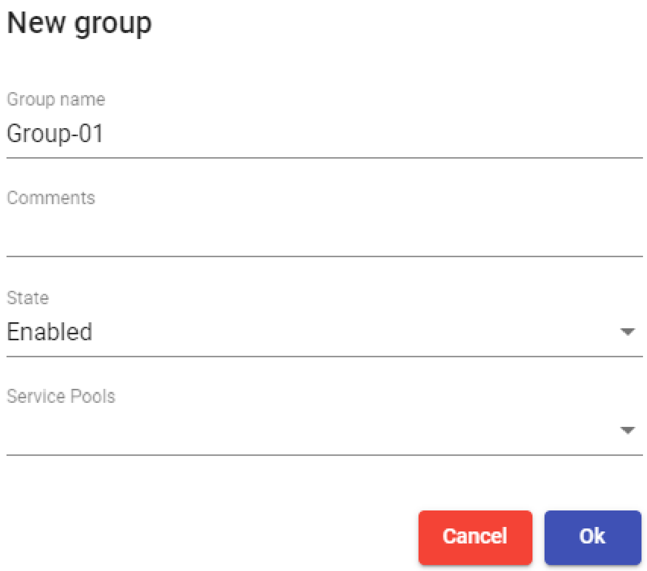
4.5.1 Creation of groups and users "Internal Database"

In an authenticator of type "***Internal Database***" t wil be necessary to create manually groups of users that you will assign to a "***Service Pool***".

Access the "***Internal Database***" authenticator previously created and in the"***Groups***" tab click on"***New - Group***".



You indicate the name of the new group, its status (enabled or disabled) and you can also assign it directly to one or more "***Service Pools***".



New group

Group name
Group-01

Comments

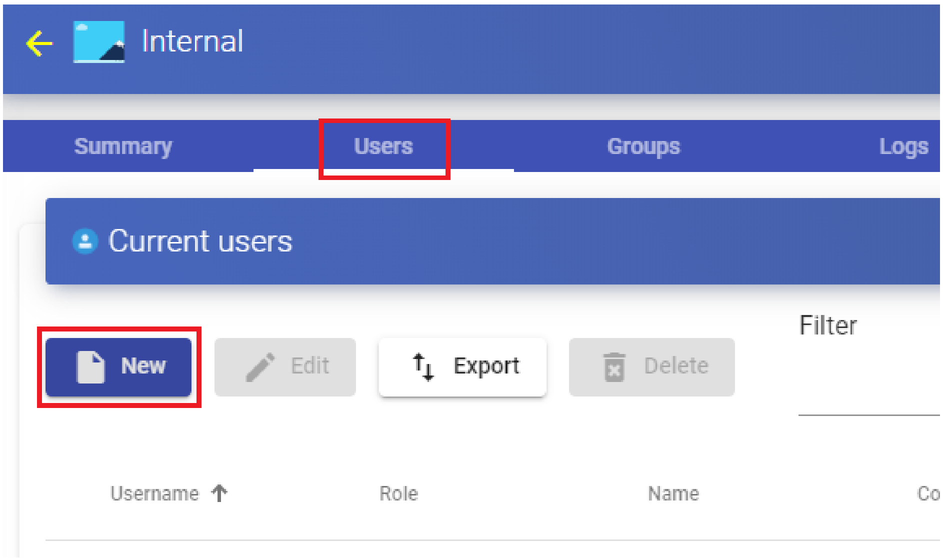
State
Enabled

Service Pools

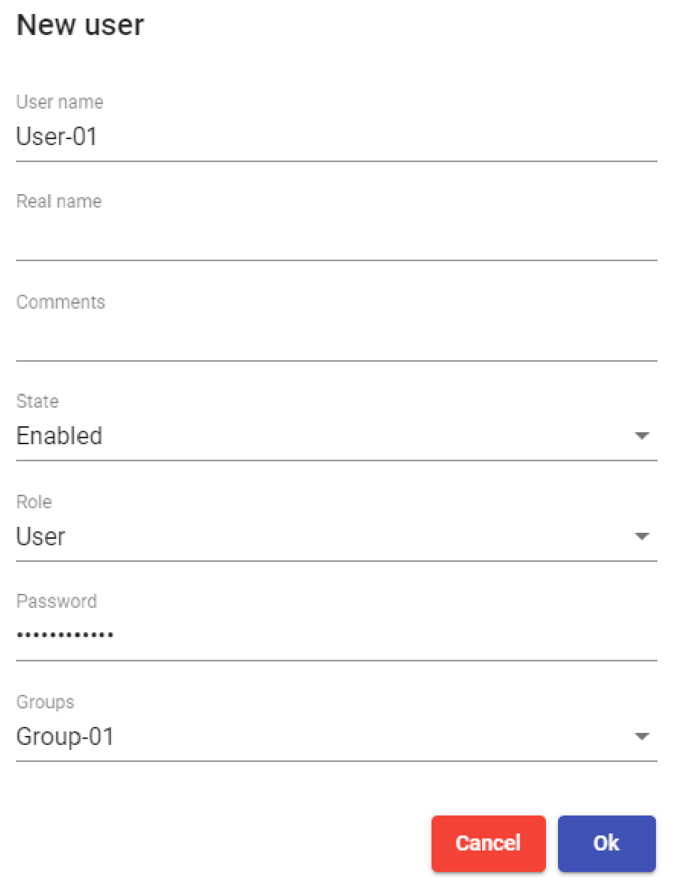
Follow the same procedure if you need to create a metagroup.

Once you have created the group or groups of users, register the users and assign them to one or several groups.

Access the "***Internal Database***" authenticator previously created and in the "***Users***" tab click on "***New***".



Enter the name of the new user, its status (enabled or disabled), the access level (“*Role*” field) and a password. In the “*Groups*” field, indicate which groups he will belong to (you can select one or more of the existing groups).



New user

User name
User-01

Real name

Comments

State
Enabled

Role
User

Password
••••••••••••

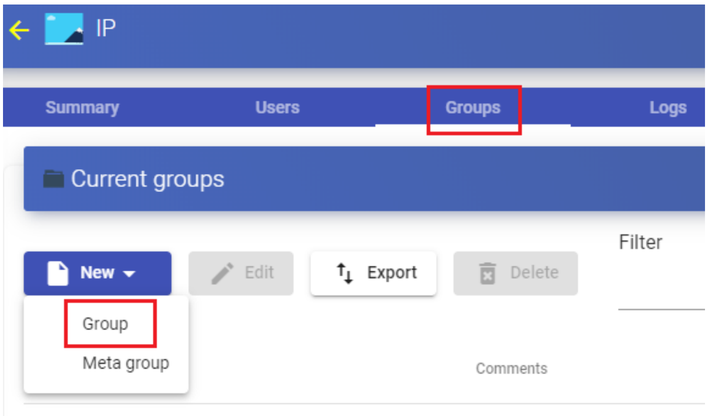
Groups
Group-01

4.5.2 Creation of groups and users "IP Authenticator"

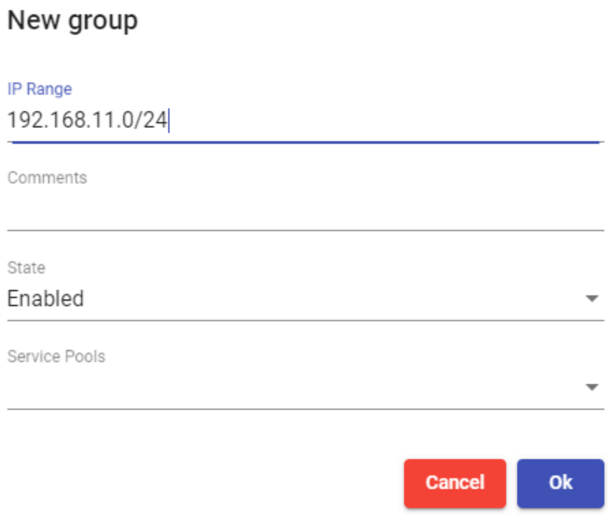
In an "*IP Authenticator*" it wil be necessary to create manually the groups of users. In this case, a group it will be a range of IPs, a complete subnet or a single IP address. In each case you will use the following format:

- Unique IP: xxx.xxx.xxx.xxx (For example:192.168.11.33)
- Complete subnet: xxx.xxx.xxx.xxx/xx (For example: 192.168.11.0/24)
- IP addresses range: xxx.xxx.xxx.xxx-xxx.xxx.xxx.xxx (For example: 192.168.11.1-192.168.11.155)

Access the "*IP Authenticator* authenticator previously created and in the"*Groups*" tab click on "*New-Group*".



Enter a range of IPs, a complete subnet or comma-separated IP addresses ("*IP Range*" field) and their status (enabled or disabled). You can also assign it directly to one or more "*Service Pools*".


New group

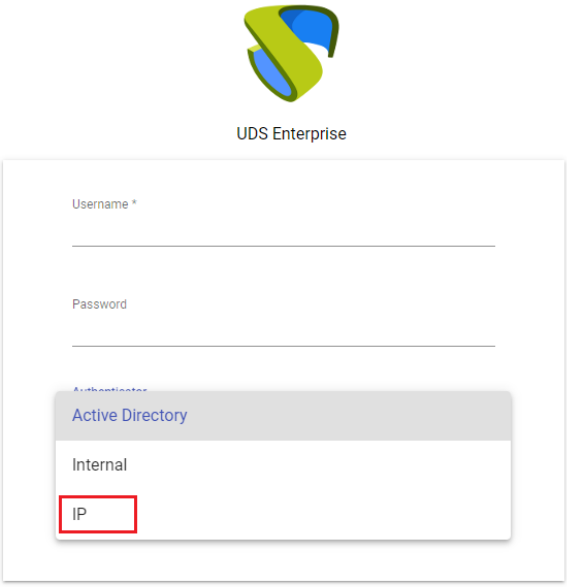
IP Range: 192.168.11.0/24

Comments:

State: Enabled

Service Pools:

When a user selects this authenticator in the UDS login portal (that is, the default authenticator), the system will check the IP address of his connection client. If this address is within the range indicated in the group (“***IP Range***” field), the user will be automatically validated.



UDS Enterprise

Username *

Password

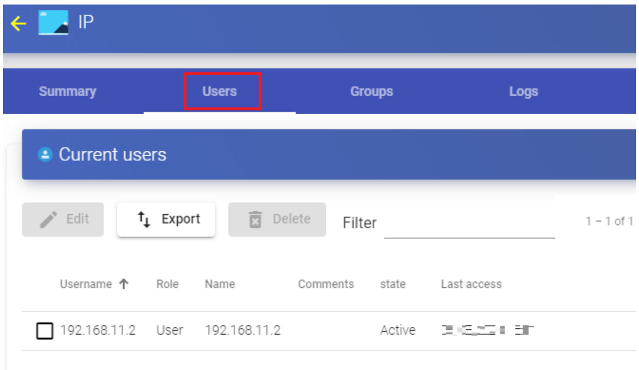
Authenticator

Active Directory

Internal

IP

Once the user is validated in the UDS login portal, his IP address will be automatically registered in the "Users" tab.



IP

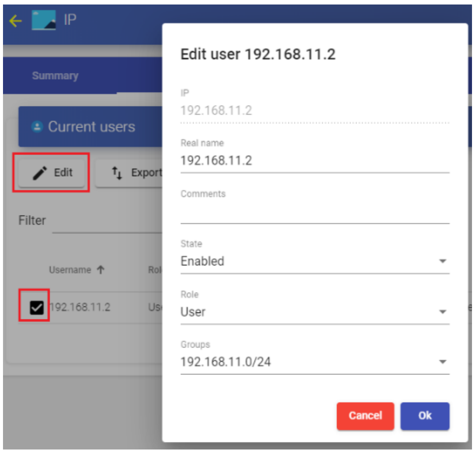
Summary | Users | Groups | Logs

Current users

Edit | Export | Delete | Filter | 1 – 1 of 1

Username	Role	Name	Comments	state	Last access
□ 192.168.11.2	User	192.168.11.2		Active	

If you need to change its status (enabled or disabled) or the access level ("*Role*" field), select it and click on "Edit".



Edit user 192.168.11.2

IP: 192.168.11.2

Real name: 192.168.11.2

Comments:

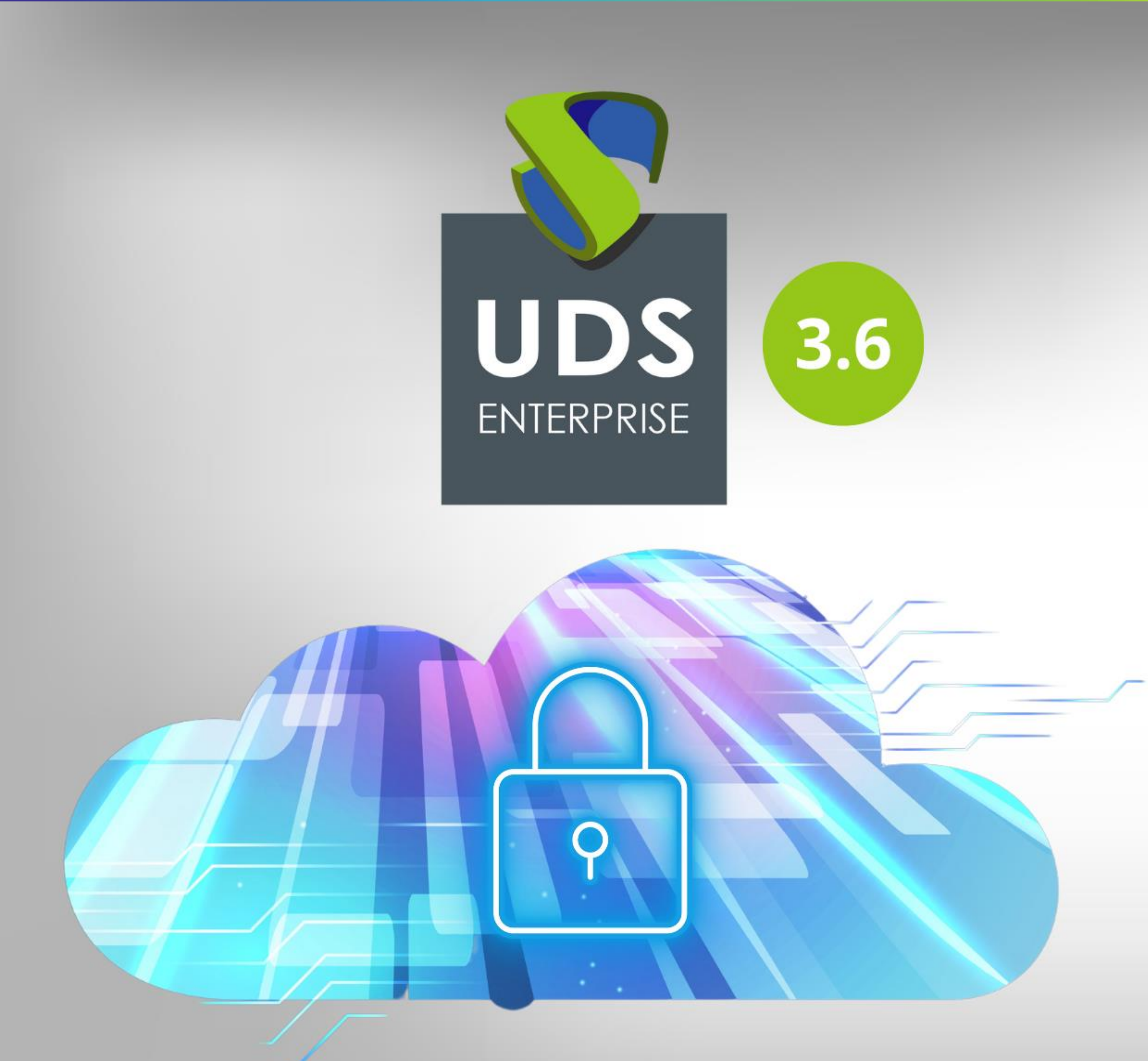
State: Enabled

Role: User

Groups: 192.168.11.0/24

VIRTUAL CABLE

UDS Enterprise 3.6 Installation, Administration and User Guide



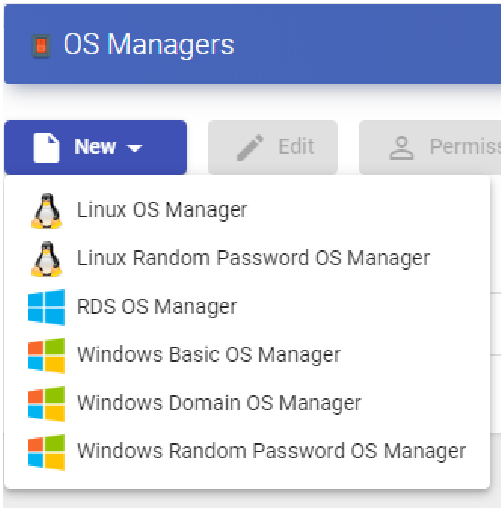
4.6 OS Managers

An "***OS Manager***" runs a previously configured service type.

The UDS Actor, hosted on the virtual desktop or application server, is in charge of the interaction between the O.S. and the UDS Server based on the configurations or type of "***OS Manager***" chosen.

You can register as many "***OS Managers***" as you need in the UDS Enterprise platform.

You can choose different types based on the needs of the services to be deployed.

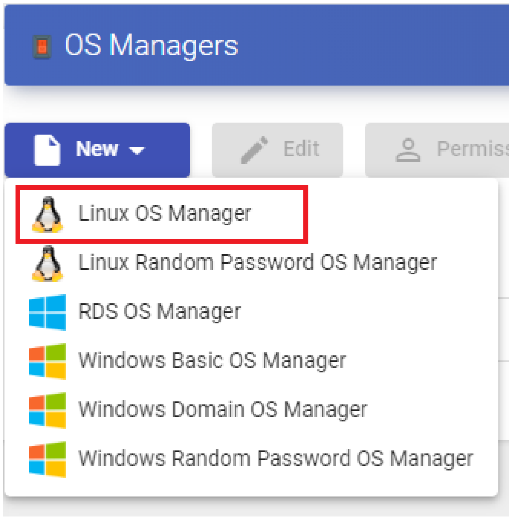

OS Managers
New
Edit
Permiss
Linux OS Manager
Linux Random Password OS Manager
RDS OS Manager
Windows Basic OS Manager
Windows Domain OS Manager
Windows Random Password OS Manager

NOTE:

Any type of service deployed in UDS will require an "**OS Manager**" except when you use the provide "**Static IP Machines Provider**".

4.6.1 Linux

A "***Linux OS Manager***" is used for virtual desktops based on Linux systems. It performs the renaming tasks and session control of the virtual desktops.


OS Managers
New
Edit
Permiss
Linux OS Manager
Linux Random Password OS Manager
RDS OS Manager
Windows Basic OS Manager
Windows Domain OS Manager
Windows Random Password OS Manager

In a "***Linux OS Manager***" minimal parameters to be configured are:

- Main:

Name: Name of the "***OS Manager***".

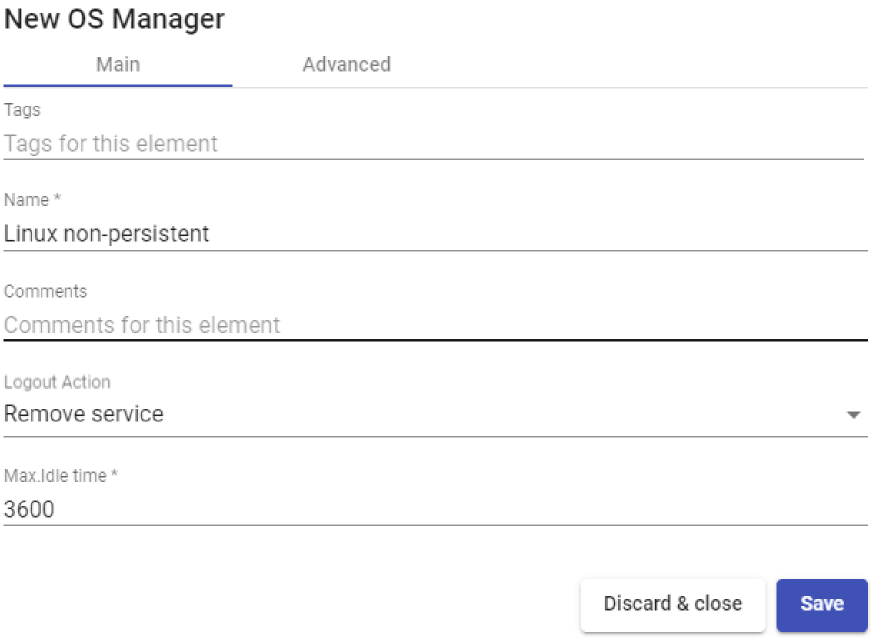
Logout Action: You will indicate the action that UDS will perform on the virtual desktop when a user session is closed:

- **Keep service assigned (Semi persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, you will be assigned the same desktop that you had previously been working with. If a new publication of the "***Service Pool***", is made, when the user logs out his virtual desktop will be deleted, and he will connect to a new one generated in the new version.

- **Remove service (Non-persistent VM):** When a user logs out, the system will destroy the desktop. If this same user requests a virtual machine to the system again, the system will provide a new virtual desktop.

- **Keep service assigned even on new publication (persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, he will be assigned the same desktop that he had previously been working with. If a new publication of the "***Service Pool***", is made, when the user logs out, his virtual desktop will remain assigned and will only be deleted when the administrator indicates it.

Max. Idle time: Maximun time (Indicated in seconds) of inactivity in the virtual desktop. After this time of inactivity, the UDS Actor will automatically close the session. Negative values and less than 300 second disable this option.



New OS Manager

Main | Advanced

Tags: Tags for this element

Name *: Linux non-persistent

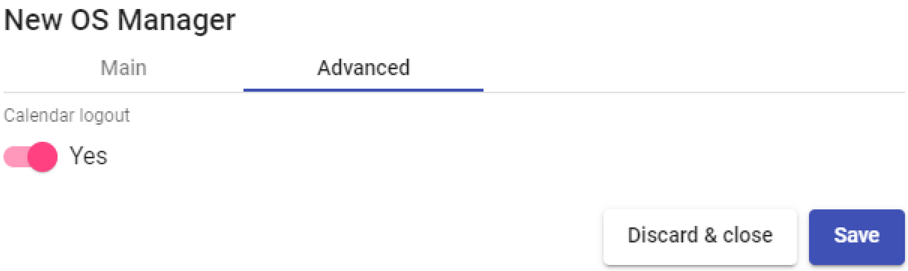
Comments: Comments for this element

Logout Action: Remove service

Max.Idle time *: 3600

- ○ Advanced:

Calendar logout: Allows you to select the behavior that the system will have with a user's session when the end date of a calendar is met. If it is to "*Yes*", When the end date of the calendar assigned to the service is fulfilled, the system will disconnect the user from said service, if he is "*No*", the system will not log the user out, but if the user logs out, or even drops the connection, they won't be able to log back in.



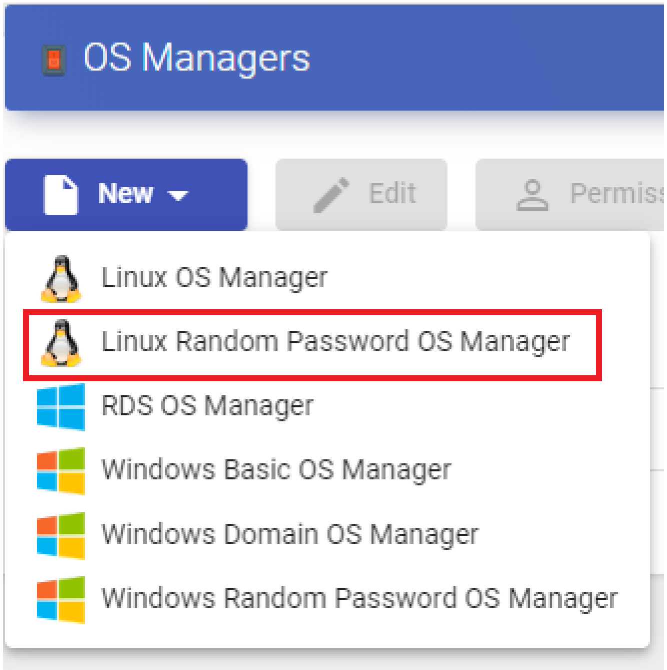
New OS Manager

Main | Advanced

Calendar logout: Yes

4.6.2 Linux Random Password

A "***Linux Random Password OS Manager***" is used for virtual desktops based on Linux systems and that require a higher level of security in user access. It performs the tasks of renaming, session control and changing the password of an existing local user on virtual desktops.


OS Managers
New
Edit
Permiss
Linux OS Manager
Linux Random Password OS Manager
RDS OS Manager
Windows Basic OS Manager
Windows Domain OS Manager
Windows Random Password OS Manager

Through its use, a random password is assigned to an existing local user during the configuration of each new virtual desktop deployed, thus providing a higher level of access security.

In a "***Linux Random Password OS Manager***" minimmal parameters to be configured are:

- Main:

Name: Name of the "***OS Manager***".

Account: Name of the existing local user in the virtual desktop to which UDS will change the password by a self-generated random one.

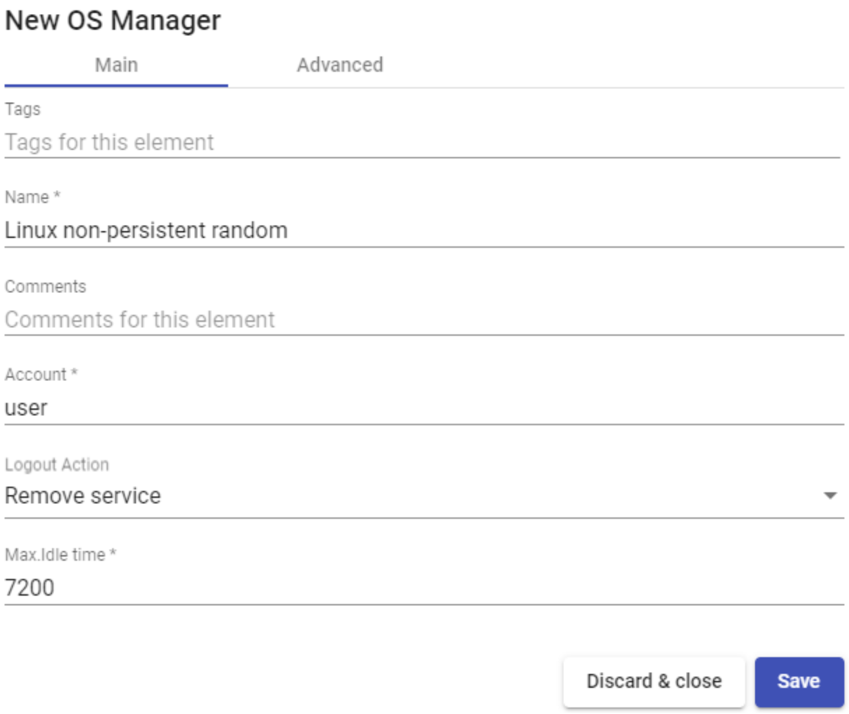
Logout Action: Here you can indicate the action that UDS will perform on the virtual desktop when a user session is closed:

- **Keep service assigned (semi persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, he will be assigned the same desktop he you had previously been working with. If a new publication of the "***Service Pool***", is made, when the user logs out, his virtual desktop will be deleted, and he will connect to a new one generated in the new version.

- **Remove service (non-persistent VM):** When a user logs out, the system will destroy the desktop. If this same user requests a virtual machine to the system again, the system will provide a new virtual desktop.

- **Keep service assigned even on new publication (persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, he will be assigned the same desktop that he had previously been working with. If a new publication of the "***Service Pool***", is made, when the user logs out, his virtual desktop will remain assigned and will only be deleted when the administrator indicates it.

Max. Idle time: Maximun time (Indicated in seconds) of inactivity in the virtual desktop. After this time of inactivity, the UDS Actor will automatically close the session. Negative values and less than 300 second disable this option.



New OS Manager

Tags: Tags for this element

Name *: Linux non-persistent random

Comments: Comments for this element

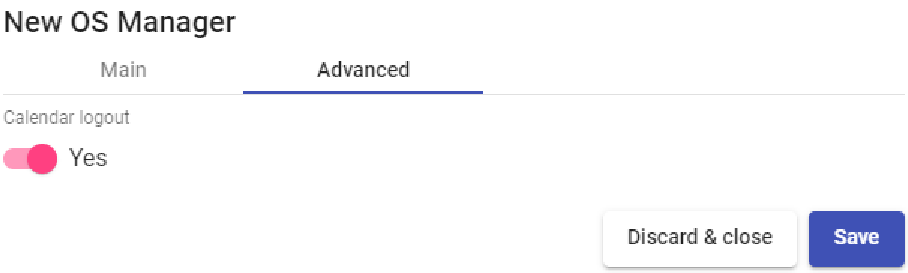
Account *: user

Logout Action: Remove service

Max.Idle time *: 7200

- Advanced:

Calendar logout: Allows you to select the behavior that the system will have with a user's session when the end date of a calendar is met. If it is set to "**Yes**", when the end date of the calendar assigned to the service is fulfilled, the system will disconnect the user from said service, if it is set to "**No**", the system will not disconnect the user, but if it is disconnected, it will log out or even the connection is cut off, you will no longer be able to reconnect.

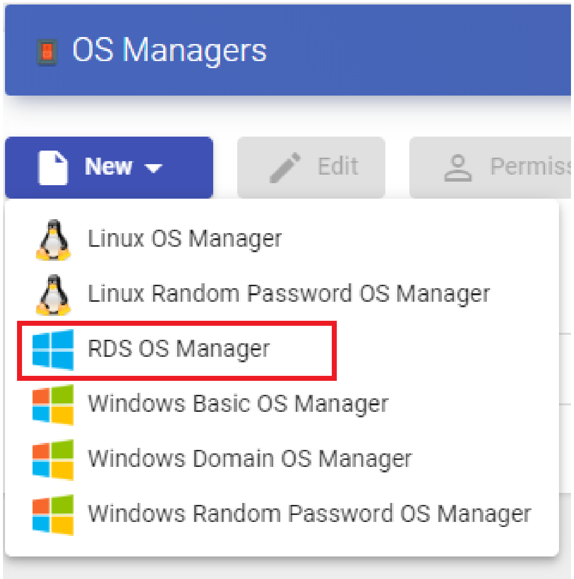


New OS Manager

Calendar logout: Yes

4.6.3 RDS

An "***RDS OS Manager***" is used to configure a “***Service Pool***” that provides virtual application to users.



OS Managers

New

Edit

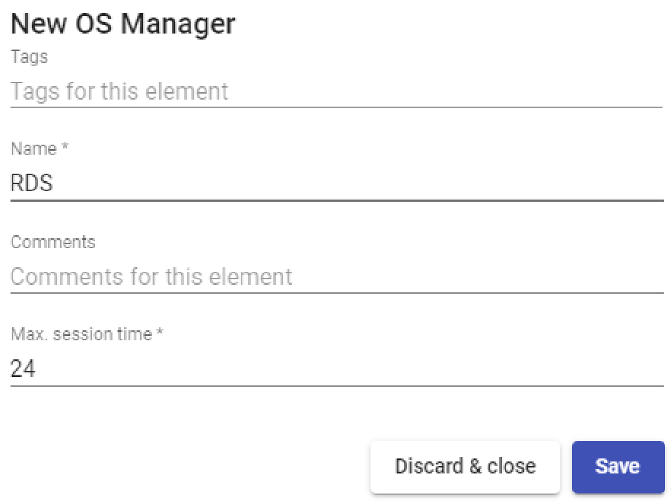
Permiss

- Linux OS Manager
- Linux Random Password OS Manager
- RDS OS Manager
- Windows Basic OS Manager
- Windows Domain OS Manager
- Windows Random Password OS Manager

In a “***RDS OS Manager***” minimal parameters to be configured are:

Name: Name of the "***OS Manager***".

Max. Sesión time: Maximum time that the user session of an application will remain registered in the assigned services tab of a “***Service Pool***” expressed in hours (0 = unlimited). In no case will the user's application session be terminated.



New OS Manager

Tags
Tags for this element

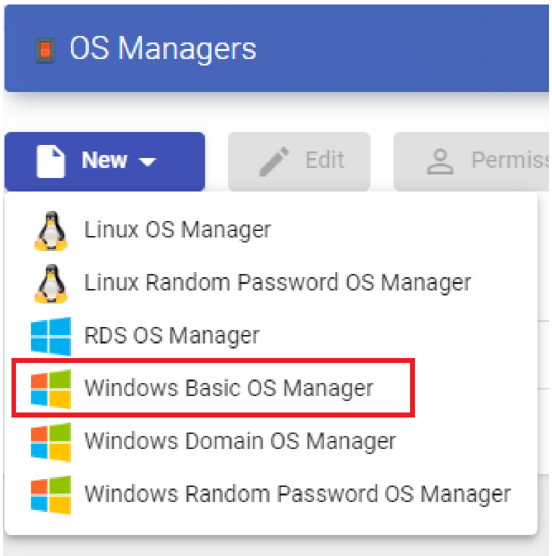
Name *
RDS

Comments
Comments for this element

Max. session time *
24

4.6.4 Windows Basic

A "***Windows Basic OS Manager***" is used for virtual desktops based on Windows systems which aren’t part of an AD domain. It performs the renaming tasks and the session control of the virtual desktops.


OS Managers
New
Edit
Permiss
Linux OS Manager
Linux Random Password OS Manager
RDS OS Manager
Windows Basic OS Manager
Windows Domain OS Manager
Windows Random Password OS Manager

In a “***Windows Basic OS Manager***” minimal parameters to be configured are:

- Main:

Name: Name of the "***OS Manager***".

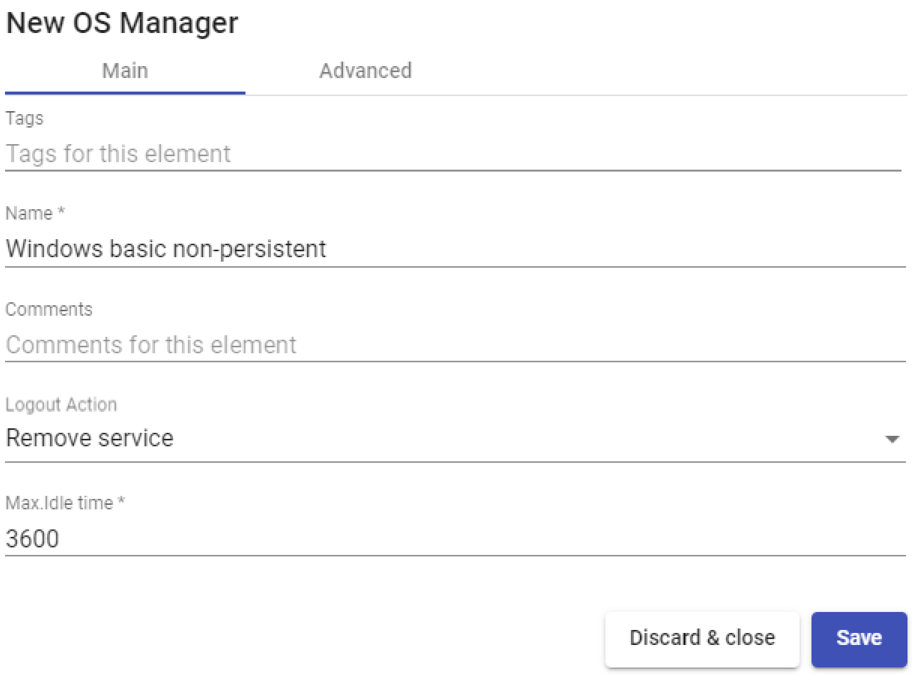
Logout Action: Here you can indicate the action that UDS will perform on the virtual desktop when a user session is closed:

- **Keep service assigned (semi persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, he will be assigned the same desktop that he had previously been working with. If a new publication of the “***Service Pool***”, is made, when the user logs out, his virtual desktop will be deleted, and he will connect to a new one generated in the new version.

- **Remove service (non-persistent VM):** When a user logs out, the system will destroy the desktop. If this same user requests a virtual machine to the system again, the system will provide a new virtual desktop.

- **Keep service assigned even on new publication (persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, he will be assigned the same desktop that he had previously been working with. If a new publication of the “***Service Pool***”, is made, when the user logs out, his virtual desktop will remain assigned and will only be deleted when the administrator indicates it.

Max. Idle time: Maximun time (Indicated in seconds) of inactivity in the virtual desktop. After this time of inactivity, the UDS Actor will automatically close the session. Negative values and less than 300 second disable this option.



New OS Manager

Tags: Tags for this element

Name *: Windows basic non-persistent

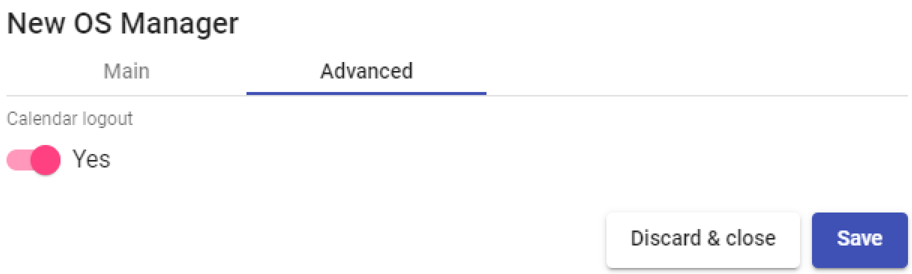
Comments: Comments for this element

Logout Action: Remove service

Max.Idle time *: 3600

- Advanced:

Calendar logout: Allows you to select the behavior that the system will have with a user's session when the end date of a calendar is met. If it is set to “Yes”, when the end date of the calendar assigned to the service is fulfilled, the system will disconnect the user from said service, if it is set to “No”, the system will not disconnect the user, but if it is disconnected, it will log out or even the connection is cut off, you will no longer be able to reconnect.

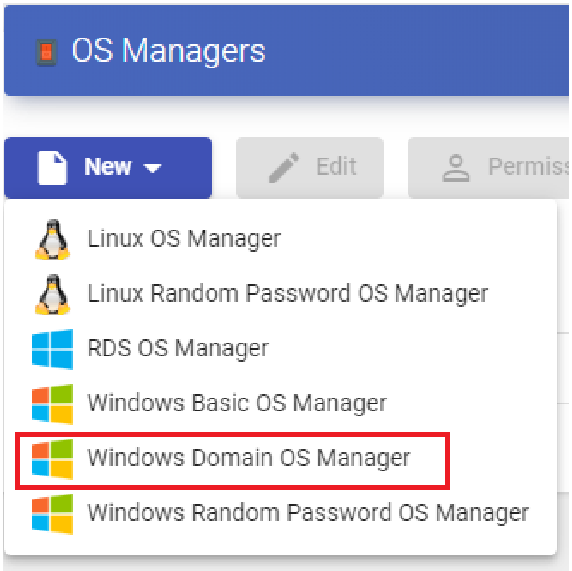


New OS Manager

Calendar logout: Yes

4.6.5 Windows Domain

A "***Windows Domain OS Manager***" is used for virtual desktops based on Windows systems that are part of an AD domain. It performs renaming, AD domain enrollment, and session control on virtual desktops.


OS Managers
New
Edit
Permiss
Linux OS Manager
Linux Random Password OS Manager
RDS OS Manager
Windows Basic OS Manager
Windows Domain OS Manager
Windows Random Password OS Manager

In a "***Windows Domain OS Manager***" minimal parameters to be configured are:

- Main:

Name: Name of the"***OS Manager***".

Domain: Name of the AD domain to which the virtual desktops will join. It is required to use the FQDN format (For example: vc.local), NetBIO is not supported.

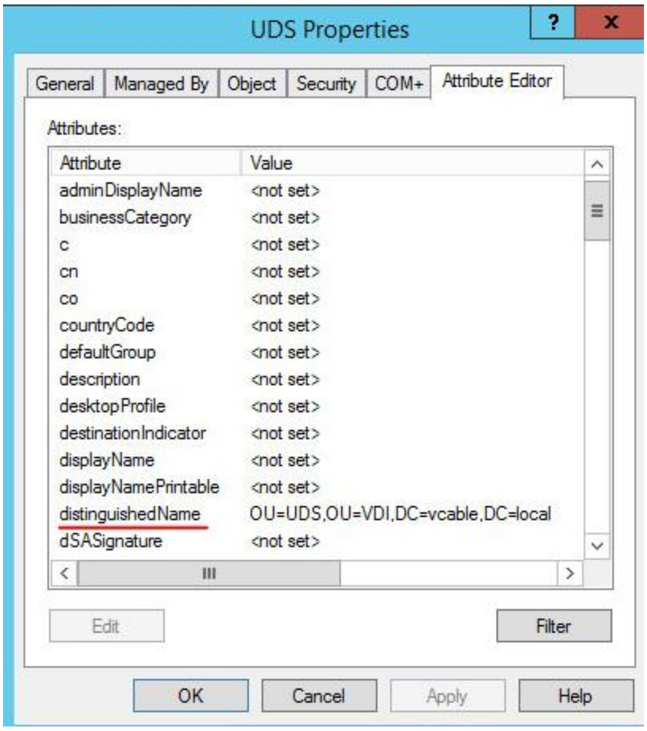
Account: Username with rights to add machines to the domain.

Password: Password of the user in the field "***Account***".

OU: Organizational unit where the virtual desktops will be registered (if none are indicated, the desktops will be registered in the default OU "***Computers***The format of the supported OU is:

OU=name_OU_last_level,…OU=name_OU_first_level,DC=name_domain,DC=extenstion_domain

To avoid errors in the introduction of the format, it is recommended to consult the "***distinguishedName***" field on the properties of the OU attribute.



Attribute	Value
adminDisplayName	<not set>
businessCategory	<not set>
c	<not set>
cn	<not set>
co	<not set>
countryCode	<not set>
defaultGroup	<not set>
description	<not set>
desktopProfile	<not set>
destinationIndicator	<not set>
displayName	<not set>
displayNamePrintable	<not set>
distinguishedName	OU=UDS,OU=VDI,DC=vcable,DC=local
dSASignature	<not set>

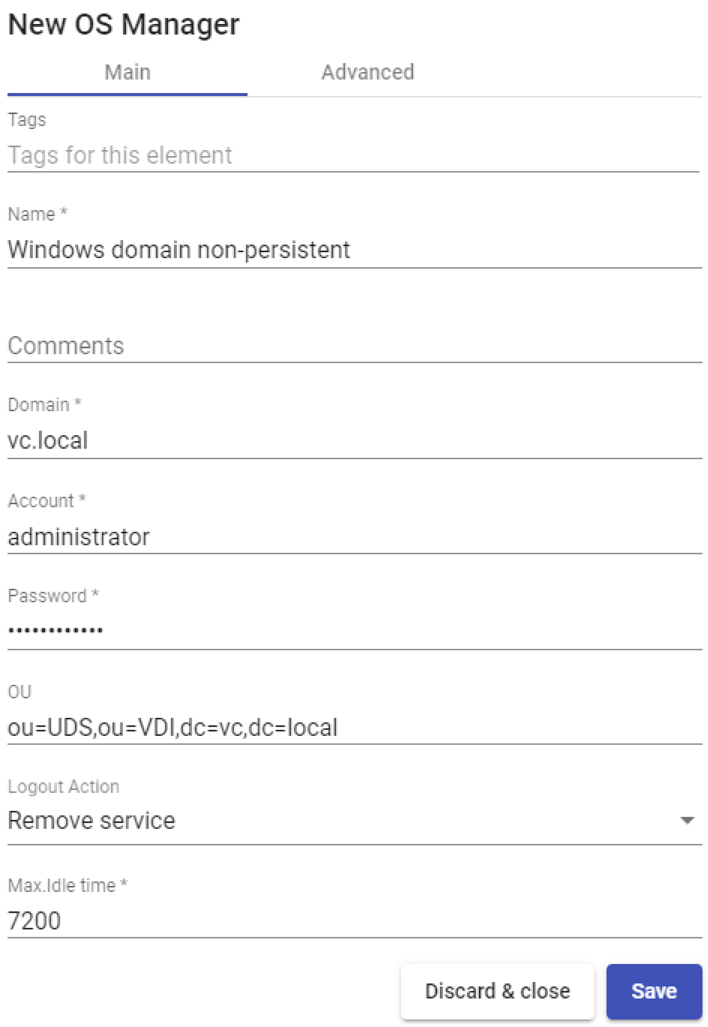
Logout Action: Here you can indicate the action that UDS will perform on the virtual desktop when a user session is closed:

- **Keep service assigned (semi persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, he will be assigned the same desktop that he had previously been working with. If a new publication of the "***Service Pool***", is made, when the user logs out, his virtual desktop will be deleted, and he will connect to a new one generated in the new version.

- **Remove service (non-persistent VM):** When a user logs out, the system will destroy the desktop. If this same user requests a virtual machine to the system again, the system will provide a new virtual desktop.

- **Keep service assigned even on new publication (persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, he will be assigned the same desktop that he had previously been working with. If a new publication of the "***Service Pool***", is made, when the user logs out, his virtual desktop will remain assigned and will only be deleted when the administrator indicates it.

Max. Idle time: Maximun time (Indicated in seconds) of inactivity in the virtual desktop. After this time of inactivity, the UDS Actor will automatically close the session. Negative values and less than 300 second disable this option.



New OS Manager

Tags: Tags for this element

Name *: Windows domain non-persistent

Comments

Domain *: vc.local

Account *: administrator

Password *: ••••••••••••

OU: ou=UDS,ou=VDI,dc=vc,dc=local

Logout Action: Remove service

Max.Idle time *: 7200

- Advanced:

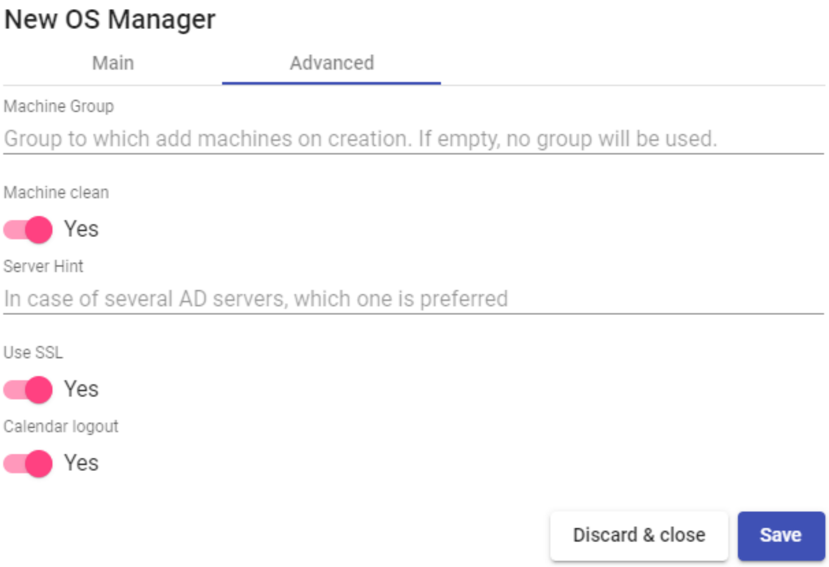
Machine Group: Indicates to which machine group of an AD the virtual desktops generated by UDS will be added.

Machine clean: If enabled, UDS will delete the records of the virtual desktops in the indicated OU once the desktop is deleted. It is necessary that the user indicated in the field "***Account***" have permissions to perform said action on the indicated OU.

Server Hint: In case there are several AD servers, an indication will be given on which one to use preferably.

Use SSL: If enabled, SSL connection will be used against the AD server.

Calendar logout: Allows you to select the behavior that the system will have with a user's session when the end date of a calendar is met. If it is set to "***Yes***", when the end date of the calendar assigned to the service is fulfilled, the system will disconnect the user from said service, if it is "***No***", the system will not log the user out, but if the user logs out, logs out, or even drops the connection, they will no longer be able to log in again.



New OS Manager

Main | Advanced

Machine Group: Group to which add machines on creation. If empty, no group will be used.

Machine clean: Yes

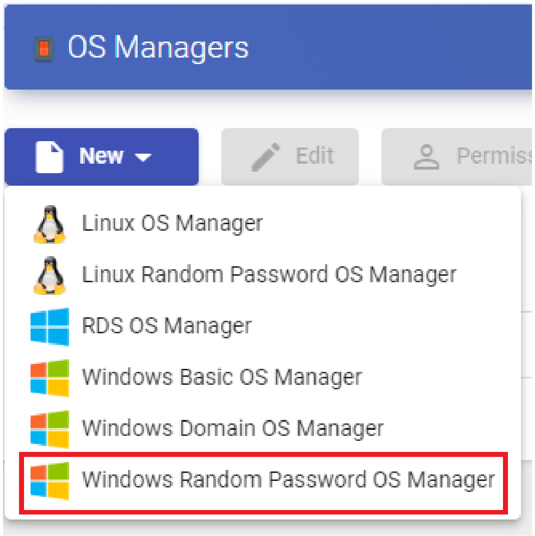
Server Hint: In case of several AD servers, which one is preferred

Use SSL: Yes

Calendar logout: Yes

4.6.6 Windows Random Password

A "***Windows Random Password OS Manager***" is used for virtual desktops based on Windows systems and that require a higher level of security in user access. It performs the tasks of renaming, session control and changing the password of an existing local user on virtual desktops.


OS Managers
New
Edit
Permiss
Linux OS Manager
Linux Random Password OS Manager
RDS OS Manager
Windows Basic OS Manager
Windows Domain OS Manager
Windows Random Password OS Manager

Throught its use, a random password is assigned to an existing local user during the configuration of each new deployed virtual desktop, thus providing a higher level of access security.

In a "***Windows Random Password OS Manager***" " minimal parameters to be configured are:

- Main:

Name: Name of the "***OS Manager***".

Account: Name of an existing local user on the virtual desktop to which UDS will change the password to a self-generated random one.

Password: Password of the user in the field “***Account***”.

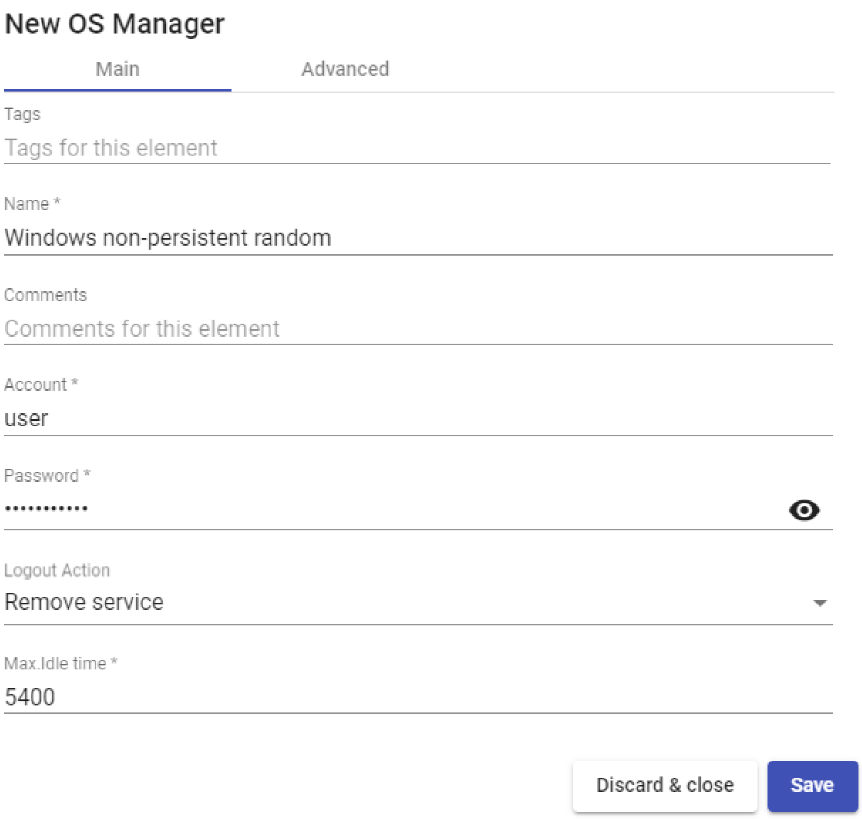
Logout Action: Here you can indicate the action that UDS will perform on the virtual desktop when a user session is closed:

- **Keep service assigned (semi persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, he will be assigned the same desktop that he had previously been working with. If a new publication of the “***Service Pool***”, is made, when the user logs out, his virtual desktop will be deleted and he will connect to a new one generated in the new version

- **Remove service (non-persistent VM):** When a user logs out, the system will destroy the desktop. If this same user requests a virtual machine to the system again, the system will provide a new virtual desktop.

- **Keep service assigned even on new publication ((persistent virtual desktop):** When a user logs out of the virtual desktop, the system will not take any action. When reconnecting, he will be assigned the same desktop that he had previously been working with. If a new publication of the “***Service Pool***”, is made, when the user logs out, his virtual desktop will remain assigned and will only be deleted when the administrator indicates it

Max. Idle time: Maximun time (indicated in seconds) of inactivity in the virtual desktop. After this time of inactivity, the UDS Actor will automatically close the session. Negative values and less than 300 second disable this option.



New OS Manager

Tags: Tags for this element

Name *: Windows non-persistent random

Comments: Comments for this element

Account *: user

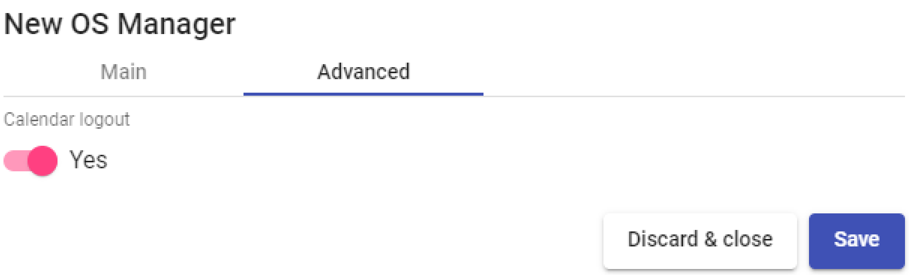
Password *: ••••••••••••

Logout Action: Remove service

Max.Idle time *: 5400

- ○ Advanced:

Calendar logout: Allows you to select the behavior that the system will have with a user's session when the end date of a calendar is met. If it is set to "**Yes**", when the end date of the calendar assigned to the service is fulfilled, the system will disconnect the user from said service, if it is set to "**No**", the system will not disconnect the user, but if it is disconnected, it will log out or even the connection is cut off, you will no longer be able to reconnect.



New OS Manager

Calendar logout: Yes

4.7 Transports

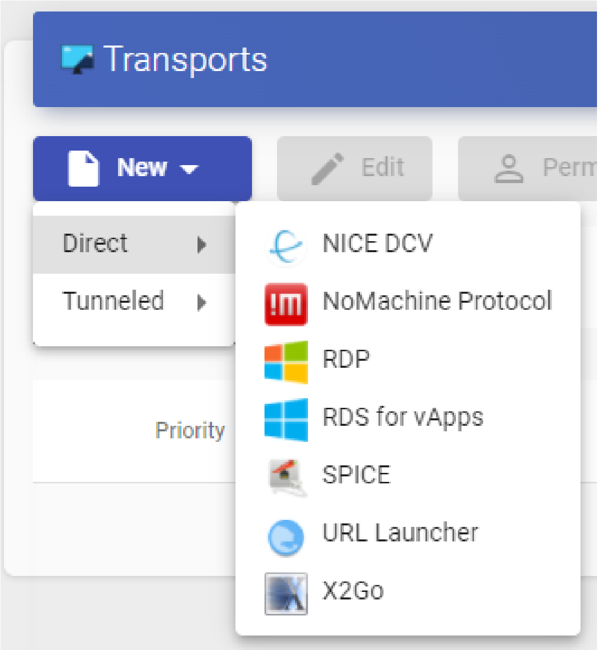
To connect to virtual desktops and applications, it is necessary to create “***Transports***”. They are applications that will be executed on the connection client and will be in charge of providing access to the implemented service.

Depending on the type of virtual desktop that you configure, the location and the device used to connect to your virtual desktops, you will need to create different types of transports.

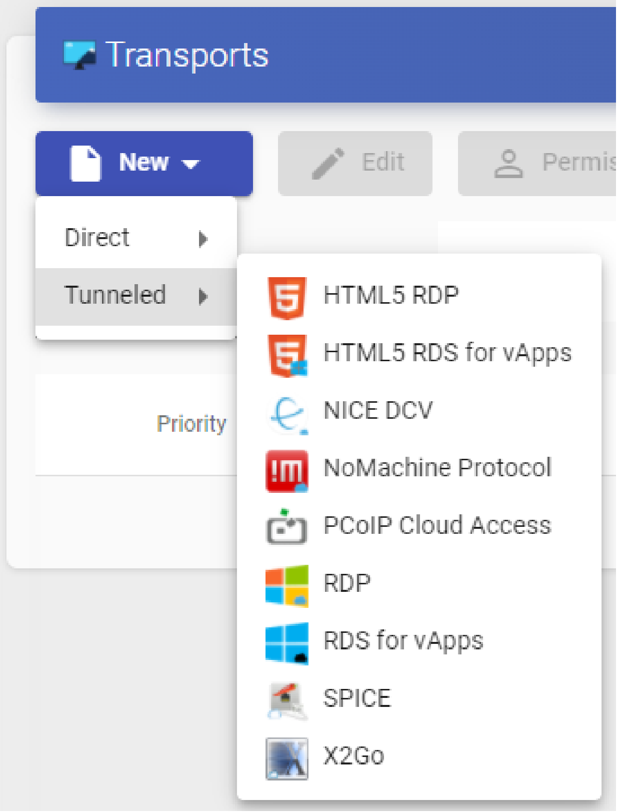
The connection client and the desktop/application server must have installed the connection protocol (client - server) used in the transport for the transport to work correctly.

To access the “***Transports***”, section, go to the “***Conectivity***” section and select “***Transports***”. The following are currently available:

- Direct:



- Tunneled:



The "*Transports*" indicated as "*direct*" ill be used for user access to virtual desktops and applications from an internal LAN, VPN, LAN Extension, etc.....

The "*Transports*" indicated as "*Tunneled*" will be used for user access to virtual desktops and applications from a WAN. These"*Transports*" will be supported by the UDS Tunnel server to make the connection.

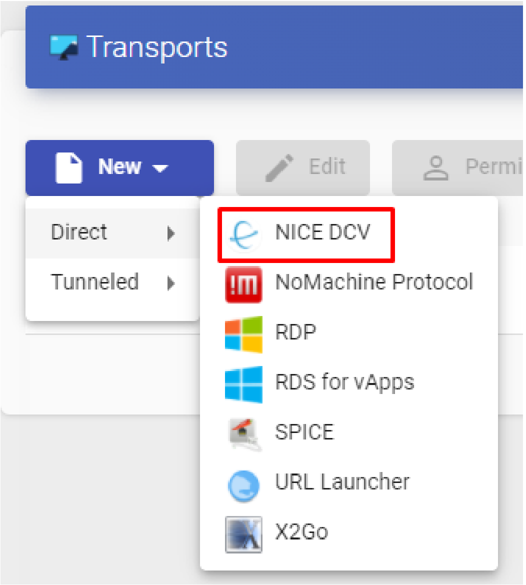
The "*Transport*" can be used for user access to virtual desktops from all types of access (LAN, WAN, etc ...). This "*Transport*" uses the UDS Tunnel server to make the connection against the virtual desktop.

NOTE:

If you need to access from a network that is not your LAN, you will have to use tunnelled transports, which must have the public IP address of the UDS-Tunnel server. The Tunnel server will use two ports depending on the service to provide. When it is a connection via HTML5, you will use port 10443, and when it is any tunnelled connection (RDP, RDS, X2Go, etc…), port 443 will be used.

4.7.1 NICE DCV (direct)

An "***NICE DCV***" trasnport (direct) allows users to access Windows, Linux desktops using NICE DCV protocol. Both connection clients and desktops are required to have NICE DCV software installed and enabled.



In a trasnport "***NICE DCV***" the minimum parameters to configure are:

- Main:

Name: Name of the transport.

Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of service

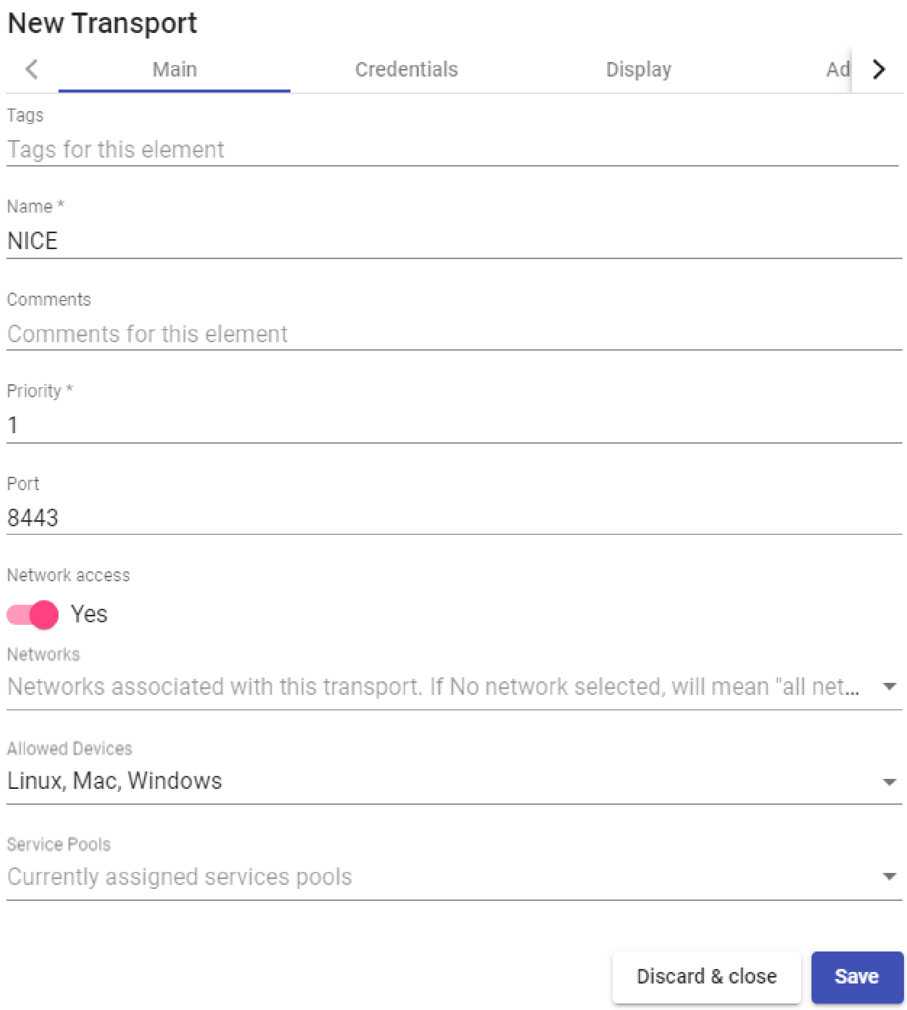
Port: Listening por NICE DCV

Networks Access: Allows or disables user access to a service based on the network from which it is accessing, and the network indicated in the "***Networks***" field.

Networks: Network ranges, subnets or IP addresses indicated in the "***Networks***" of the "***Connectivity***" field. It is used together with the "***Network Access***" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If there is none selected, no filtering is performed.

Service Pools: Allows you to assign this transport directly to one or more "***Service Pools***" previously created.



New Transport

Tags: Tags for this element

Name *: NICE

Comments: Comments for this element

Priority *: 1

Port: 8443

Network access: Yes

Networks: Networks associated with this transport. If No network selected, will mean "all net...

Allowed Devices: Linux, Mac, Windows

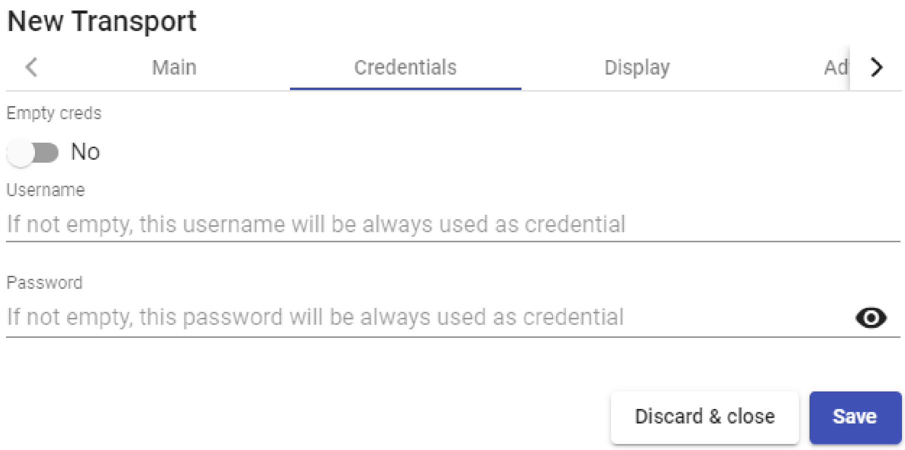
Service Pools: Currently assigned services pools

- Credentials:

Empty creds: If it is set to "*Yes*", when you make the connection with the service, it will ask for the credentials to access the virtual desktop. If it is set to "*No*" the credentials entered in the UDS login portal will be redirected.

Username: Username that will be used to log into the desktop (the user must exist in the desktop). If this field is empty, an attempt will be made to use the UDS portal login user if the "*Empty creds*" field is set to "*No*", or it will ask for credentials to indicate them manually if it is set to "*Yes*".

Password: Password of the user in the "*Username field*".



Empty creds

No

Username

If not empty, this username will be always used as credential

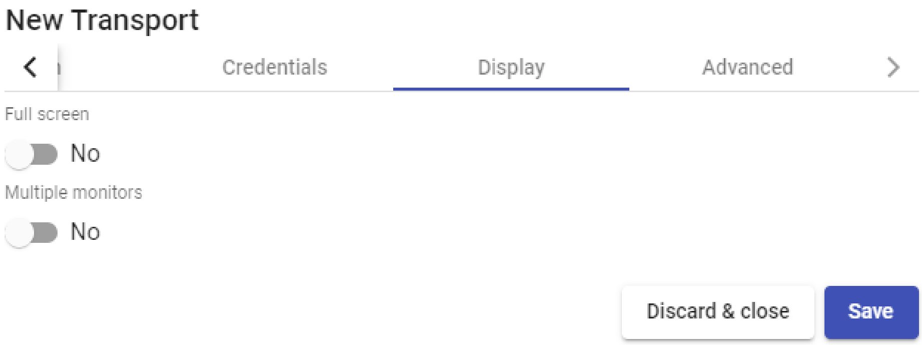
Password

If not empty, this password will be always used as credential

- Display:

Full screen: Indicates if the connection to the service is made in full screen.

Multiple monitors: Indicates if several monitors will be used in the connection with the service.



Full screen

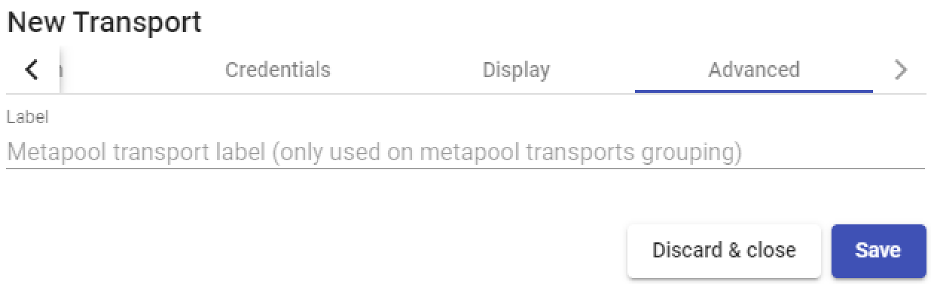
No

Multiple monitors

No

- Advanced:

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.

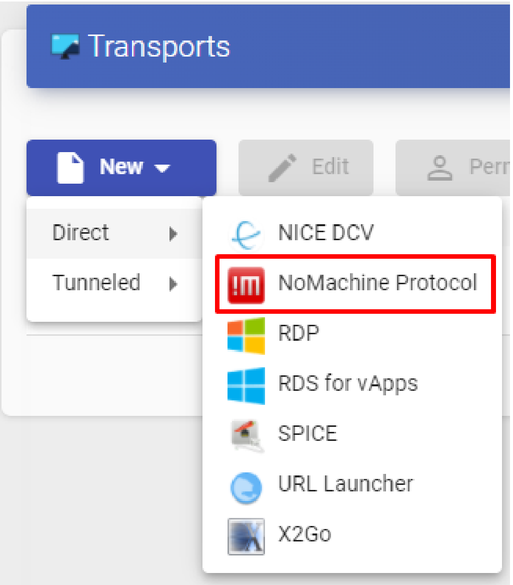


New Transport

Label
Metapool transport label (only used on metapool transports grouping)

4.7.2 NoMachine Protocol (direct)

Un transporte "***NoMachine Protocol***" allows users to access Windows, Linux, and MacOS desktops using the NoMachine protocol (both connection clients and desktops need to have NoMachine software installed).



In a transport "***NoMachine Protocol***" the minimum parameters to configure are:

- Main:

Name: Name of the transport.

Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of service.

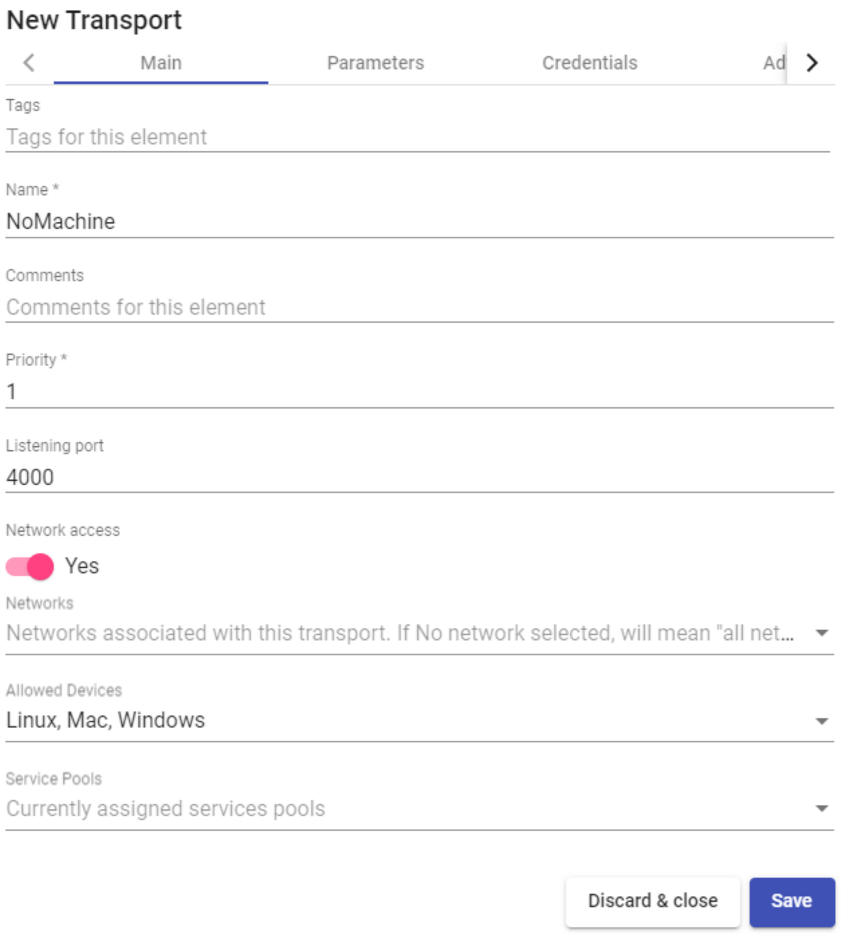
Listening port: NX software listening port.

Networks Access: Allows or disables user access to a service based on the network from which it is accessing, and the network indicated in the "***Networks***" field.

Networks: Network ranges, subnets or IP addresses indicated in the "***Networks***" of the "***Connectivity***" section. It is used together with the "***Network Access***" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If there is none selected, no filtering is performed.

Service Pools: Allows you to assign this transport directly to one or more "***Service Pools***" previously created.



New Transport

Tags: Tags for this element

Name *: NoMachine

Comments: Comments for this element

Priority *: 1

Listening port: 4000

Network access: Yes

Networks: Networks associated with this transport. If No network selected, will mean "all net...

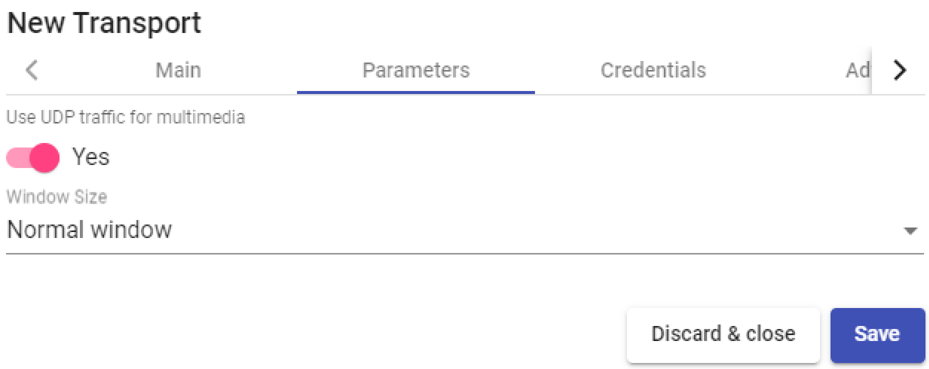
Allowed Devices: Linux, Mac, Windows

Service Pools: Currently assigned services pools

- Parameters:

Use UDP traffic for multimedia: It allows to indicate if the UDP protocol will be used in the multimedia traffic.

Window Size: Indicates the size of the window in the connection to the service.



New Transport

Use UDP traffic for multimedia: Yes

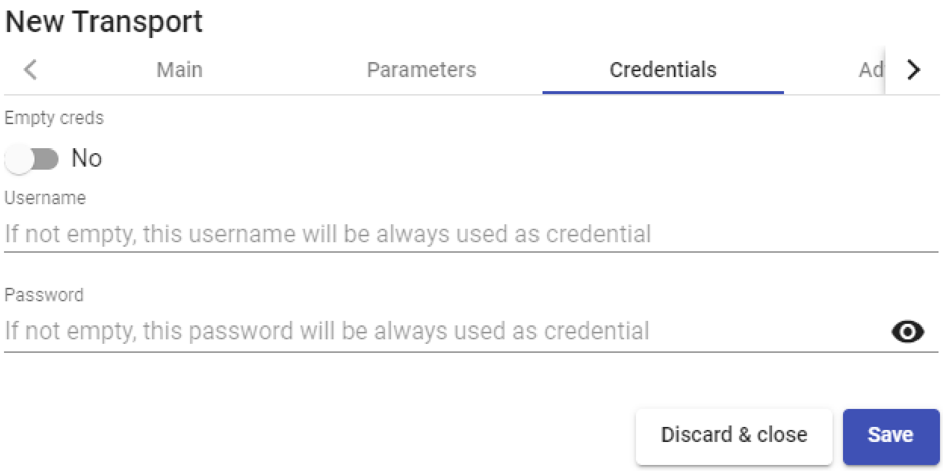
Window Size: Normal window

- Credentials:

Empty creds: If it is set to "*Yes*", when you make the connection with the service, it will ask for the credentials to access the virtual desktop. If it is set to "*No*", he credentials entered in the UDS login portal will be redirected.

Username: Username that will be used to log into the desktop (the user must exist in the desktop). If this field is empty, an attempt will be made to use the UDS portal login user if the "*Empty creds*" field is set to "*No*", or it will ask for credentials to indicate them manually if it is set to "*Yes*".

Password: Password of the user in the "*Username* " field.


New Transport

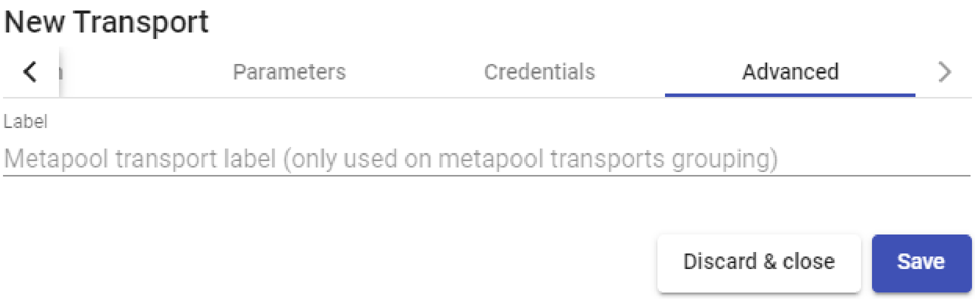
Empty creds: No

Username: If not empty, this username will be always used as credential

Password: If not empty, this password will be always used as credential

- Advanced:

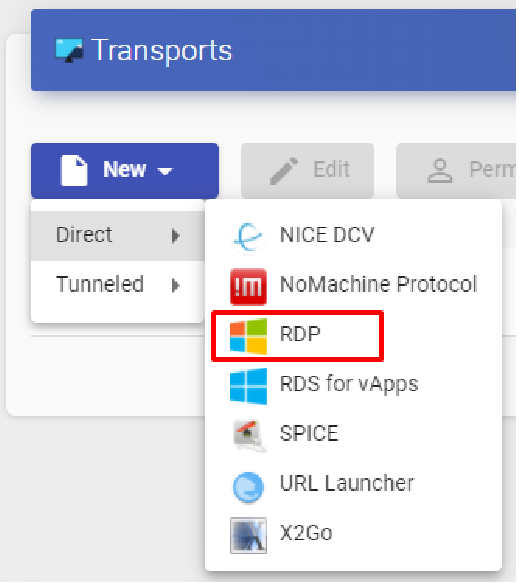
Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.


New Transport

Label: Metapool transport label (only used on metapool transports grouping)

4.7.3 RDP (direct)

An *"RDP"* (direct) transport allows users to access Windows/Linux virtual desktops using the Remote Desktop Protocol (RDP). Both connection clients and virtual desktops must have RDP installed and enabled (for Linux virtual desktops, XRDP must be used).).



In A *"RDP"* (direct) transport, the minimum parameters to configure are:

- Main:

Name: Name of the transport.

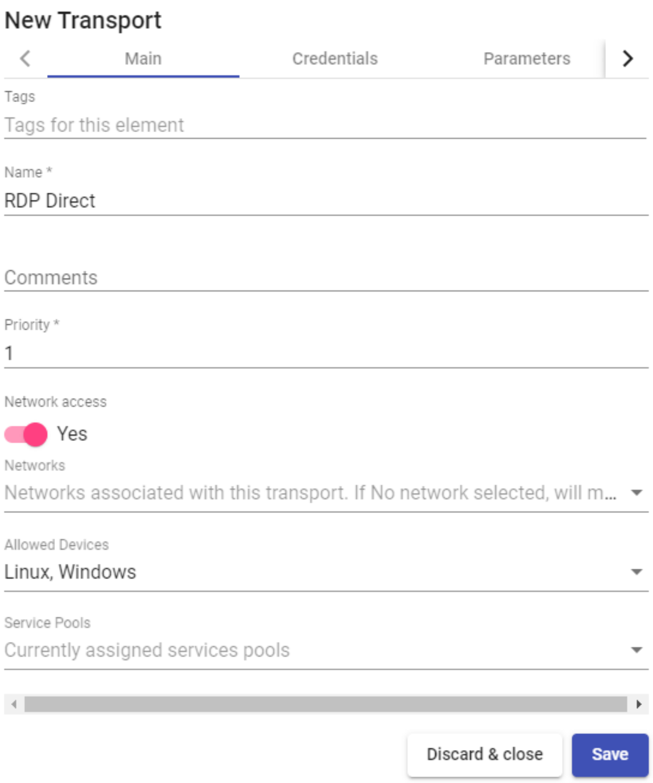
Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of service.

Networks Access: Allows or disables user access to a service based on the network from which he is accessing, and the network indicated in the "*Networks*" field.

Networks: Network ranges, subnets or IP addresses indicated in the "*Networks*" of the "*Connectivity*" section. It is used together with the "*Network Access*" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows you to assign this transport directly to one or more "*Service Pools"* previously created.



New Transport

Tags
Tags for this element

Name *
RDP Direct

Comments

Priority *
1

Network access
Yes

Networks
Networks associated with this transport. If No network selected, will m...

Allowed Devices
Linux, Windows

Service Pools
Currently assigned services pools

- Credentials:

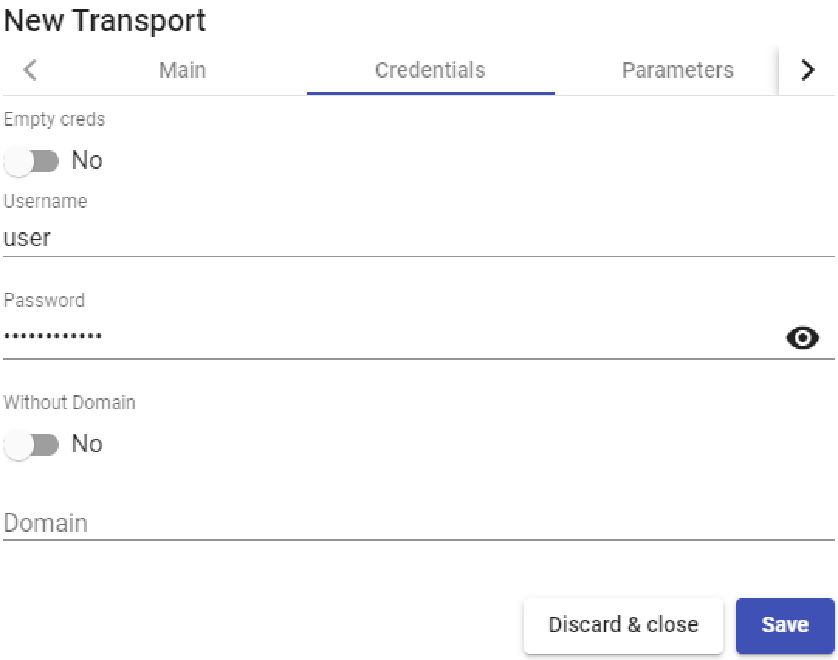
Empty creds: If is set to "*Yes*", when you make the connection with the service, it will ask you for the credentials to access the virtual desktop. If it is set to "*No*", the credentials entered in the UDS login portal will be redirected.

Username: Username that will be used to log into the desktop (the user must exist in the desktop). If this field is empty, an attempt will be made to use the UDS portal login user if the "*Empty creds*" field is set to "*No*", or it will ask for credentials to indicate them manually if it is set to "*Yes*".

Password: Password of the user in the "*Username*" field.

Without Domain: Indicates if the domain name is redirected together with the user.

Domain: Name of the domain that will be sent with the user's credentials.



New Transport

Empty creds: No

Username: user

Password: ••••••••••••

Without Domain: No

Domain

- Parameters:

Allow Smartcards: Enables the redirection of Smartcards.

Allow Printers: Enables printer redirection.

Local drives policy: Enables drive redirection:

- **Allow none:** No drive is redirected.
- **Allow PnP drives:** Only connected drives are redirected during an active session.
- **Allow any drive:** All drives are redirected.

Force drives: Forces the redirection of specific drives. You can specify several separated by commas. (Ex: F:,G:).

Allow Serials: Enable serial port redirection.

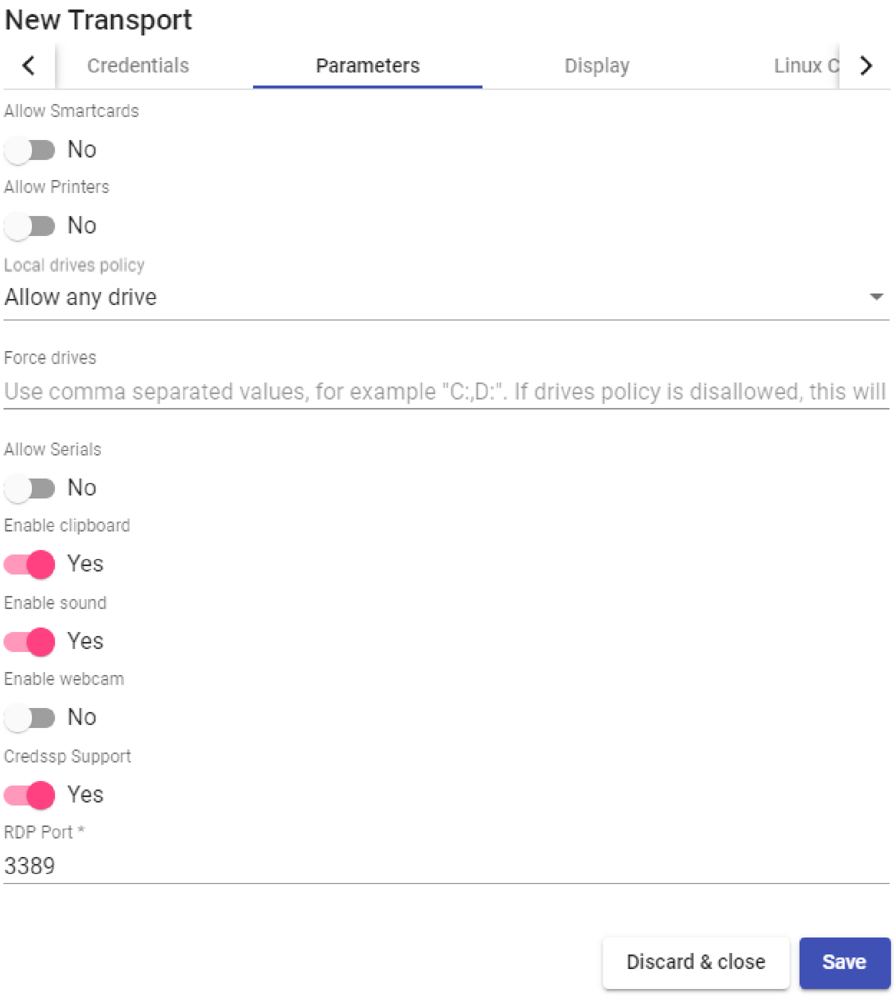
Enable clipboard: If it is activated, it will allow copy/paste between the connection client and the desktop

Enable Sound: If activated, it will allow the redirection of the audio from the desktop to the connection client.

Enable webcam: If enabled, it will allow the redirection of web cameras between the connection client and the desktop.

Credssp Support: If it is activated, it will use “Credential Security Support Provider”.

RDP Port: Connection port against the RDP server



New Transport

Allow Smartcards: No

Allow Printers: No

Local drives policy: Allow any drive

Force drives: Use comma separated values, for example "C:,D:". If drives policy is disallowed, this will

Allow Serials: No

Enable clipboard: Yes

Enable sound: Yes

Enable webcam: No

Credssp Support: Yes

RDP Port *: 3389

- Display

Screen Size: Determines the size of the desktop window.

Color depth: Indicates the colour depth.

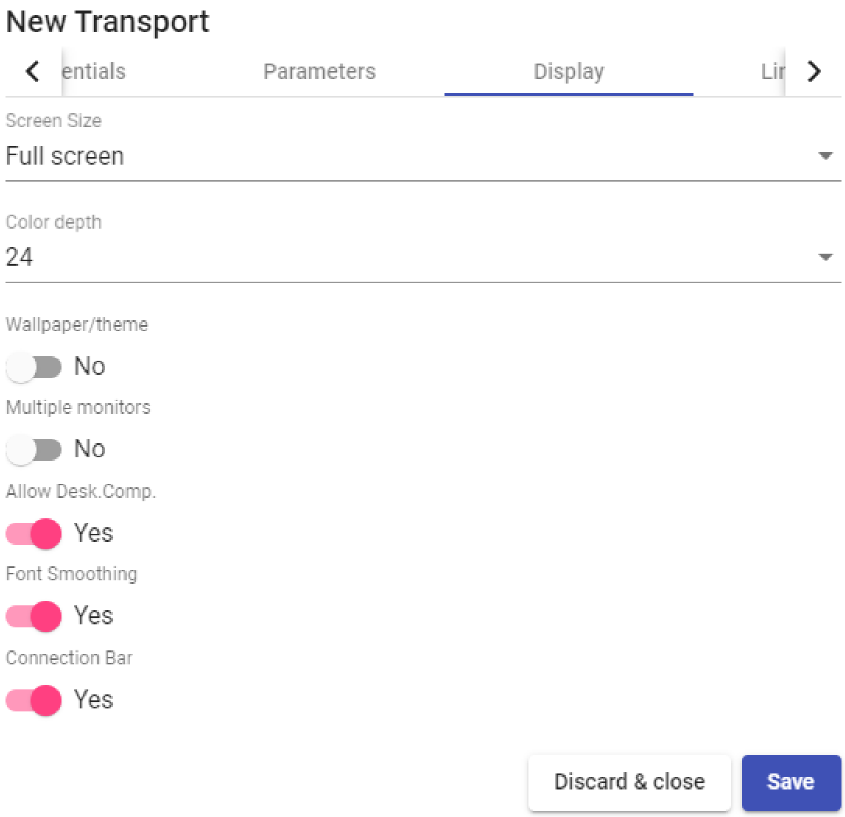
Wallpaper/theme: Displays the desktop background.

Multiple monitors: Allows the use of multiple monitors.

Allow Desk. Comp.: Enables "Desktop Composition".

Font Smoothing: Activates font smoothing.

Connection Bar: Allows you to enable or disable the connection bar.



New Transport

Screen Size: Full screen

Color depth: 24

Wallpaper/theme: No

Multiple monitors: No

Allow Desk.Comp.: Yes

Font Smoothing: Yes

Connection Bar: Yes

- Linux Client (only applies to Linux connection clients):

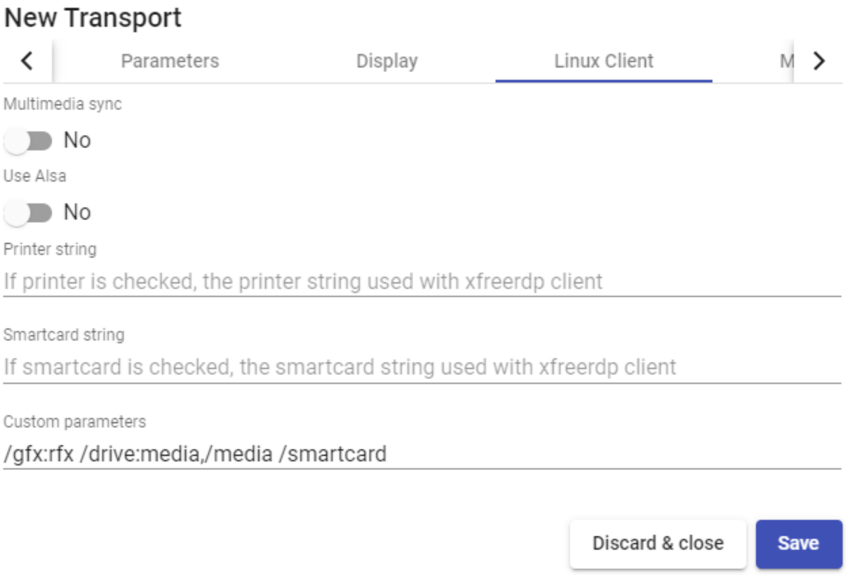
Multimedia sync: Enables the multimedia parameter on the FreeRDP client.

Use Alsa: Enables the use of audio through Alsa.

Printer string: Example: "Zebra","ZDesigner TM400 200 dpi (ZPL)"
("Zebra" is the name of the local printer, "ZDesigner TM400 200 dpi (ZPL)" is the exact name of the printer driver in Windows).

Smartcard string: Example: "Gemalto PC Twin Reader 00 00"
("Gemalto PC Twin Reader 00 00" *is the name of the smartcard).*

Custom parameters: Any parameter supported by the FreeRDP client can be indicated (if several are indicated, they must be separated by spaces). They will be applied when connecting to the virtual desktop.



New Transport

Multimedia sync: No

Use Alsa: No

Printer string: If printer is checked, the printer string used with xfreerdp client

Smartcard string: If smartcard is checked, the smartcard string used with xfreerdp client

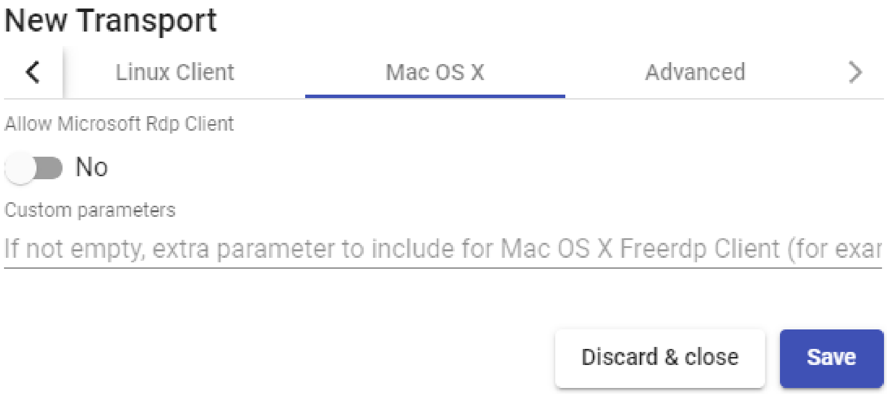
Custom parameters: /gfx:rfx /drive:media,/media /smartcard

NOTE:
Some important parameters are indicated in the capture as an example: /gfx:rfx greatly improves the quality of video and audio, /drive:media,/media allows redirection of local drives connected to the connection client, /smartcard allows redirection of a smartcard…

- Mac OS X (only applies to MacOS connection clients):

Allow Microsoft Rdp Client: Allows you to use the Microsoft RDP client instead of the FreeRDP client. In order to use it, it must be enabled and the FreeRDP client must not be installed on the MacOS connection client computer.

Custom parameters: Any parameter supported by the FreeRDP client can be indicated (if several are indicated, they must be separated by spaces). They will be applied when connecting to the desktop.

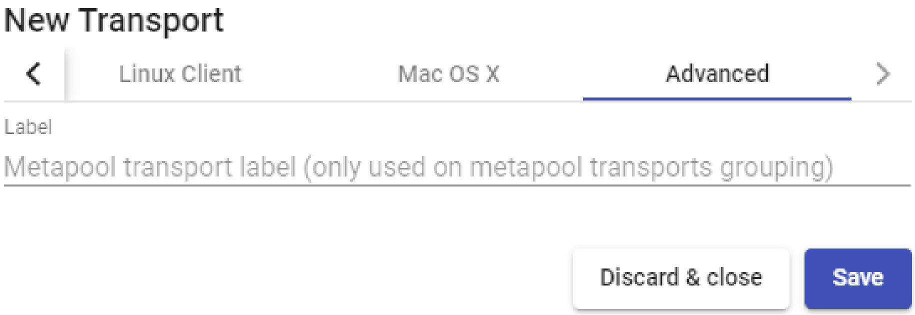

New Transport

Allow Microsoft Rdp Client: No

Custom parameters: If not empty, extra parameter to include for Mac OS X Freerdp Client (for exar

- Advanced:

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.

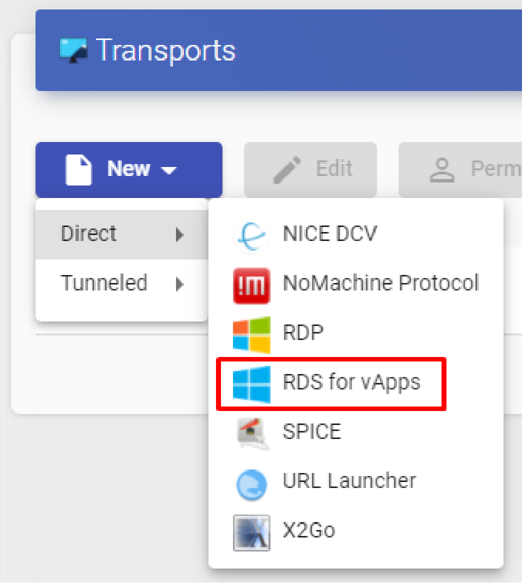

New Transport

Label: Metapool transport label (only used on metapool transports grouping)

4.7.4 RDS For vApps (direct)

A "***RDS for vAPPs***" allows users to access virtual Windows applications using RemoteAPP. The connection clients can be Windows or Linux

A Windows connection client must have RemoteAPP to open virtual applications. A Linux connection client must have the freerdp2 package to open virtual applications.



In a "***RDS for vAPPs***" transport (direct) the minimum parameters to configure are:

- Main:

Name: Name of the transport.

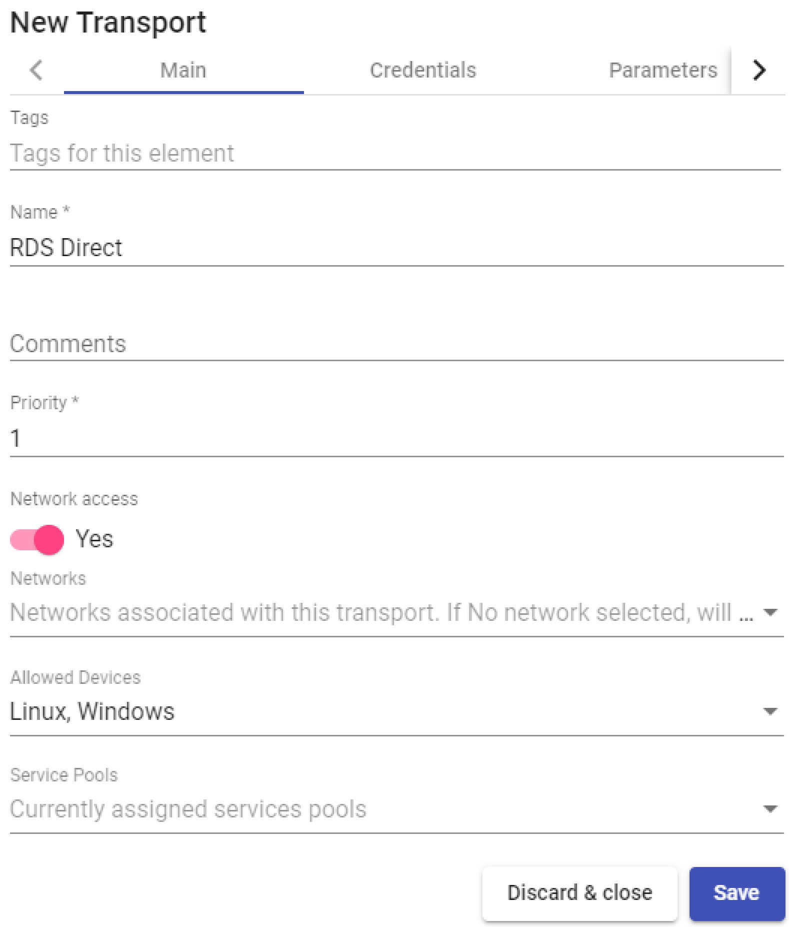
Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of the service.

Networks Access: Allows or disables user access to a service based on the network from which he is accessing, and the network indicated in the "***Networks***" field.

Networks: Network ranges, subnets or IP addresses indicated in the "***Networks***" section "***Connectivity***". It is used together with the "***Network Access***" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "***Service Pools***" previously created.



New Transport

Tags: Tags for this element

Name *: RDS Direct

Comments

Priority *: 1

Network access: Yes

Networks: Networks associated with this transport. If No network selected, will ...

Allowed Devices: Linux, Windows

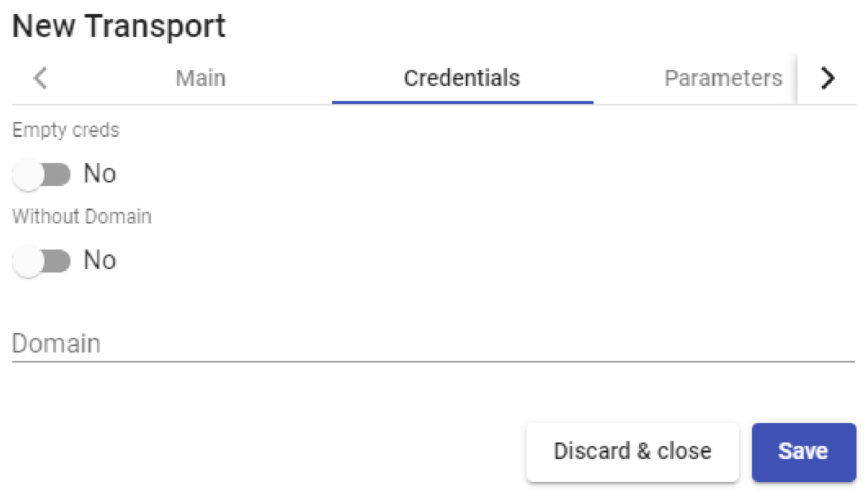
Service Pools: Currently assigned services pools

- Credentials:

Empty creds: If it is set to "***Yes***", when you make the connection to the service, it will ask you for the credentials to access the virtual application. If it is set to "***No***", the credentials entered in the UDS login portal will be redirected.

Without Domain: Indicates if the domain name is redirected together with the user.

Domain: Name of the domain that will be sent with the user's credentials.



New Transport

Empty creds

No

Without Domain

No

Domain

- Parameters:

Allow Smartcards: Enables the redirection of smartcards.

Allow Printers: Enables printer redirection.

Local drives policy: Enables redirection of disk drives:

- **Allow none:** No drive is redirected.
- **Allow PnP drives:** Only connected drives are redirected during an active session.
- **Allow any drive:** All drives are redirected.

Force drives: Forces the redirection of specific drives. You can enter several separated by commas. (Ex: F:, G:).

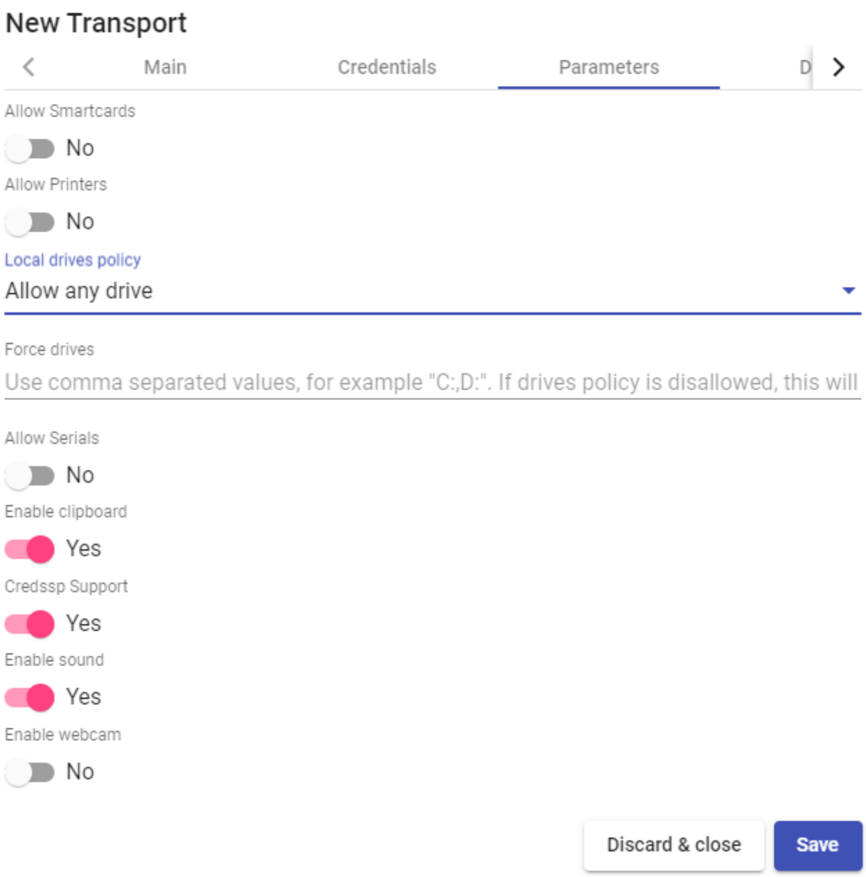
Allow Serials: Enables serial port redirection.

Enable clipboard: If it is activated, it will allow copy/paste between the connection client and the virtual application l.

Credssp Support: If enabled, it will use “Credential Security Support Provider”.

Enable Sound: If activated, it will allow the redirection of the audio from the virtual application to the connection client.

Enable webcam: If activated, it will allow the redirection of webcams between the connection client and the virtual application.



New Transport

Allow Smartcards: No

Allow Printers: No

Local drives policy: Allow any drive

Force drives: Use comma separated values, for example "C:,D:". If drives policy is disallowed, this will

Allow Serials: No

Enable clipboard: Yes

Credssp Support: Yes

Enable sound: Yes

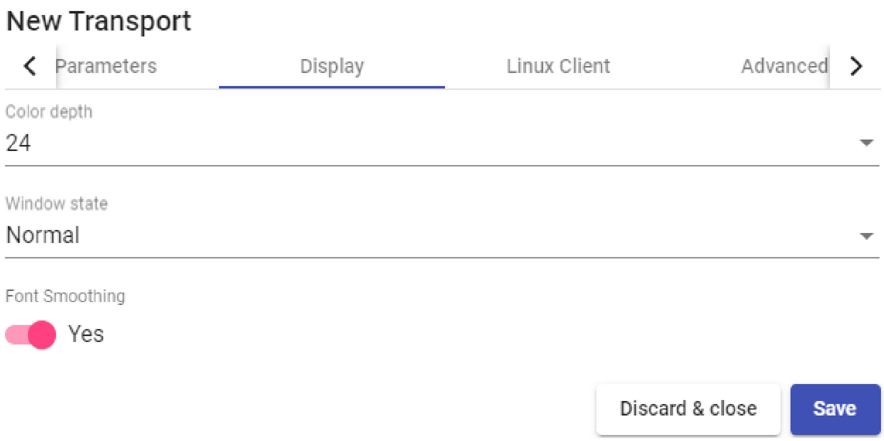
Enable webcam: No

- Display:

Color depth: Indicates the depth of the colour.

Windows state: Indicates the window mode in which the application will start.

Font Smoothing: Enable font smoothing.



New Transport

Color depth: 24

Window state: Normal

Font Smoothing: Yes

- Linux Client:

Execute as shell: Run an application in session mode offering a better visualization.

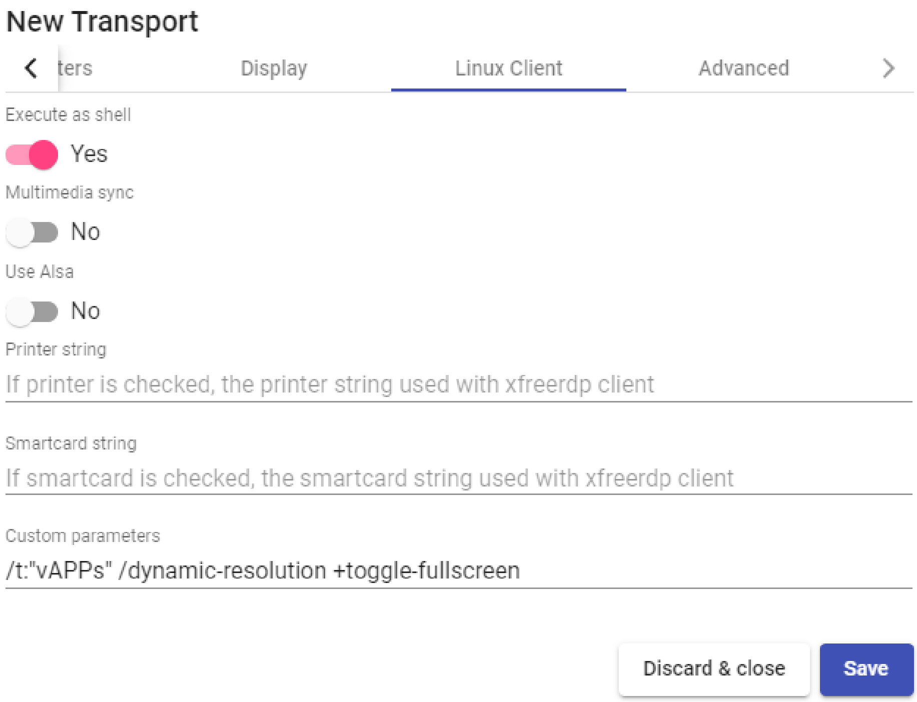
Multimedia sync: Enables the multimedia parameter in FreeRDP.

Use Alsa: Enables the use of audio through Alsa.

Printer string: Example: "Zebra","ZDesigner TM400 200 dpi (ZPL)"
("Zebra" is the name of the local printer, "ZDesigner TM400 200 dpi (ZPL)" is the exact name of the printer driver in Windows).

Smartcard string: Example: "Gemalto PC Twin Reader 00 00"
("Gemalto PC Twin Reader 00 00" *is the name of the smartcard).*

Custom parameters: You can specify any parameter supported by the FreeRDP client. They will be applied when establishing the connection with the virtual application.


New Transport

Execute as shell: Yes

Multimedia sync: No

Use Alsa: No

Printer string: If printer is checked, the printer string used with xfreerdp client

Smartcard string: If smartcard is checked, the smartcard string used with xfreerdp client

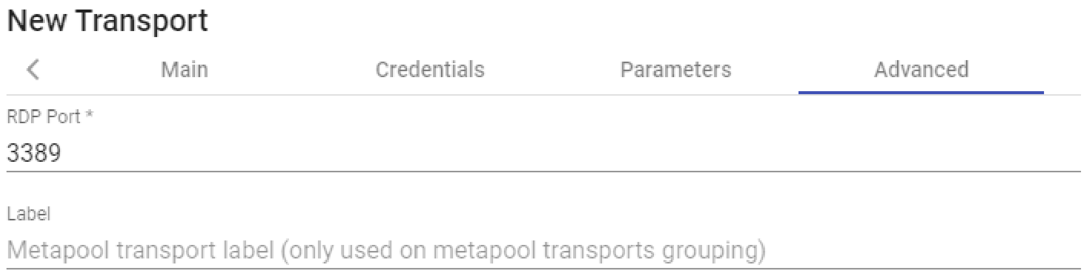
Custom parameters: /t:"vAPPs" /dynamic-resolution +toggle-fullscreen

NOTE:
In the screenshot some important parameters are indicated as an example:/t:"name_aplicacton" allows to force a title to the window (if not indicated, the name will be that of the service pool), /dynamic-resolution +toggle-fullscreen allows to maximize the application window...

- Advanced:

RDP Port: Connection port against RDP server.

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.



New Transport

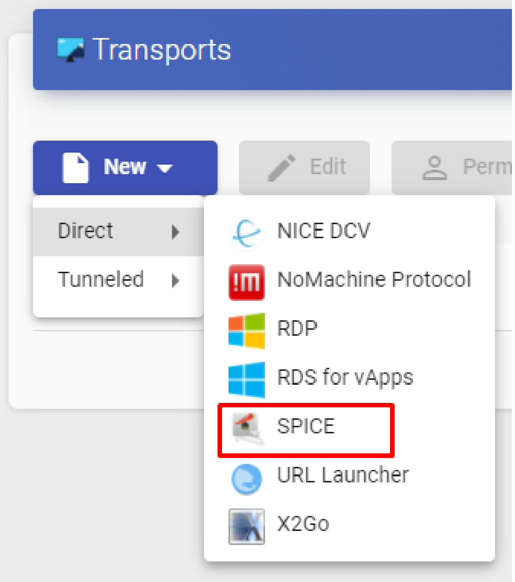
RDP Port *
3389

Label
Metapool transport label (only used on metapool transports grouping)

4.7.5 SPICE (direct)

A "*SPICE*" (direct) allows users to access Windows/Linux virtual desktops using the "*SPICE*". protocol. The connection clients must have the "*SPICE*" client (Virt-Manager).

The "*SPICE*" transport can only be used with a service provider such as oVirt/Red Hat Enterprise Virtualization (RHV) and OpenNebula.



In a "*SPICE*" transport (direct), the minimum parameters to configure are:

- Main:

Name: Name of the transport.

Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of the service.

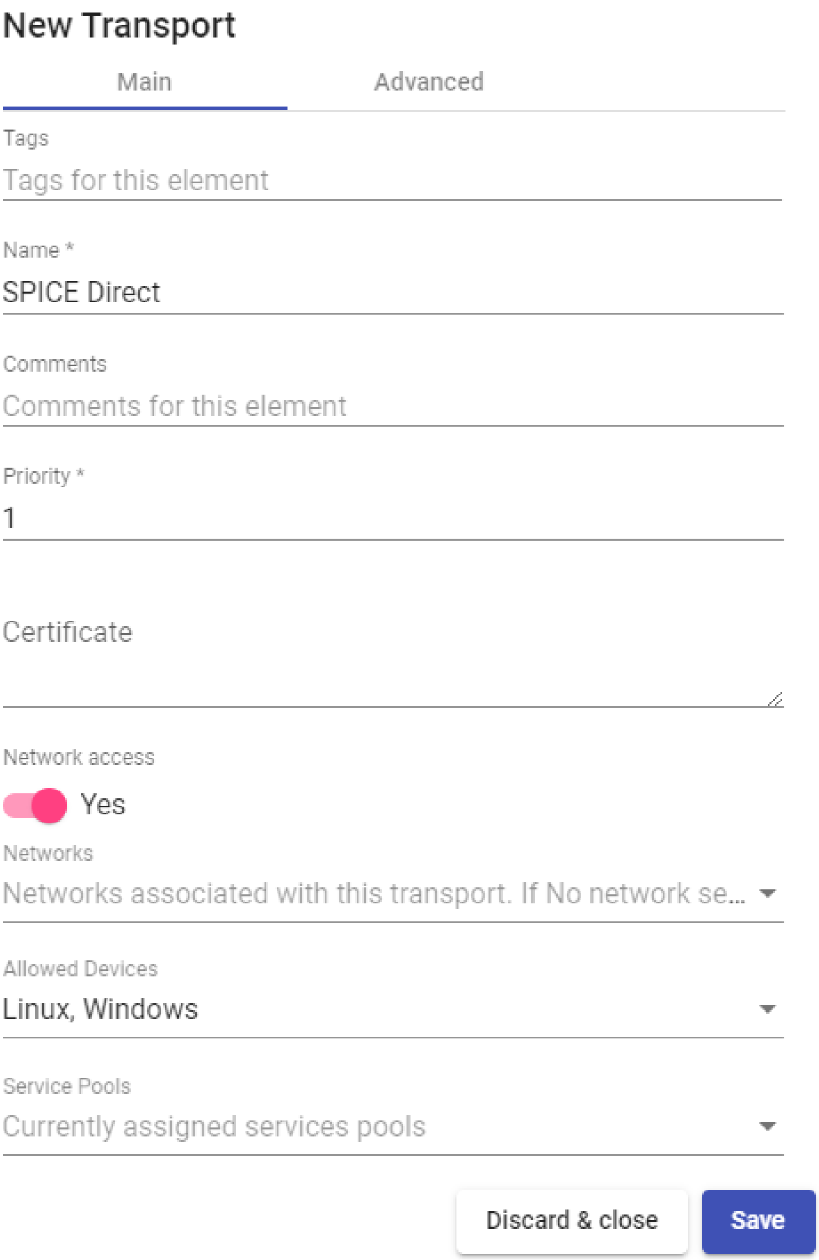
Certificate: Certificate generated in ovirt-engine/RHV-manager or in OpenNebula. It is required to connect to virtual desktops (usually hosted at **/etc/pki/ovirt-engine/certs/ca.cer**).

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the "*Networks*" field.

Networks: Network ranges, subnets or IP addresses indicated in the "*Networks*" of the "*Connectivity*" section. It is used together with the "*Network Access*" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "**Service Pools**" previously created.



New Transport

Tags: Tags for this element

Name *: SPICE Direct

Comments: Comments for this element

Priority *: 1

Certificate

Network access: Yes

Networks: Networks associated with this transport. If No network se...

Allowed Devices: Linux, Windows

Service Pools: Currently assigned services pools

- Advanced:

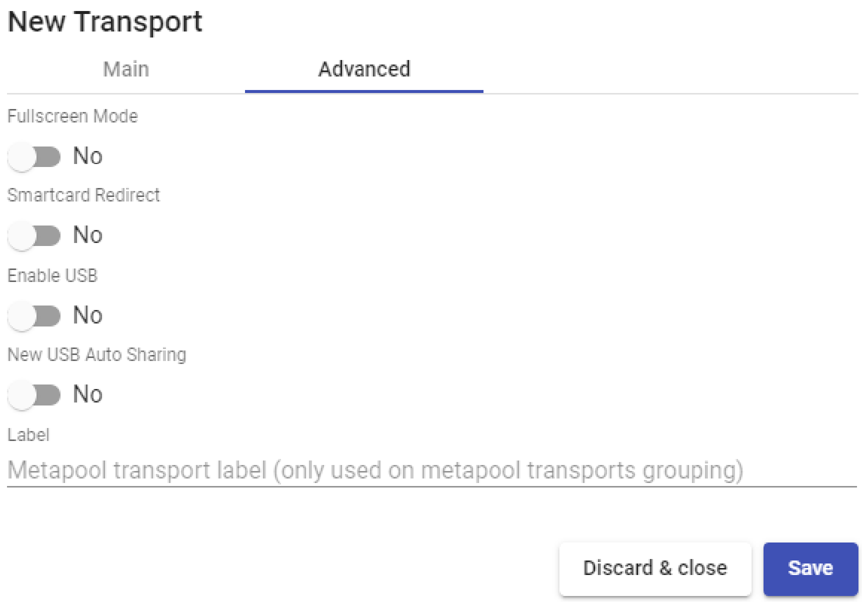
Fullscreen Mode: Enables full screen in the virtual desktop.

Smartcard Redirect: Enables the redirection of smartcards on the virtual desktop.

Enable USB: Allows the redirection of devices connected to a USB port.

New USB Auto Sharing: Allows the redirection of PnP devices connected to a USB port.

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.



New Transport

Main | Advanced

Fullscreen Mode: No

Smartcard Redirect: No

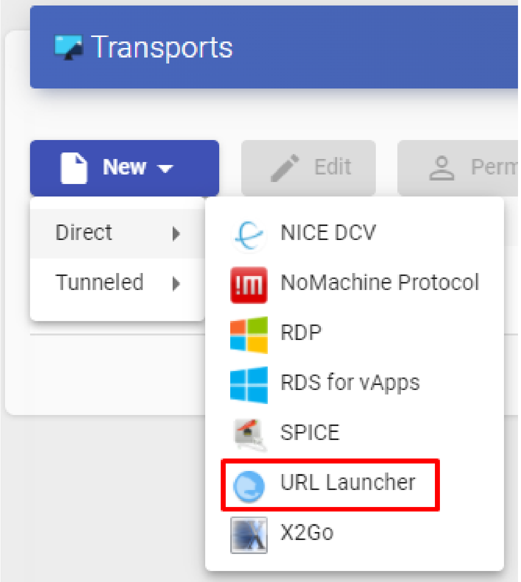
Enable USB: No

New USB Auto Sharing: No

Label: Metapool transport label (only used on metapool transports grouping)

4.7.6 URL Launcher (direct)

A “***URL Launcher***” (direct) allows users to access a specific URL that will be executed in the browser (the default one) of their connection client computer.



In a “***URL Launcher***” transport (direct), the minimum parameters to configure are:

- Main:

Name: Name of the transport.

Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of the service

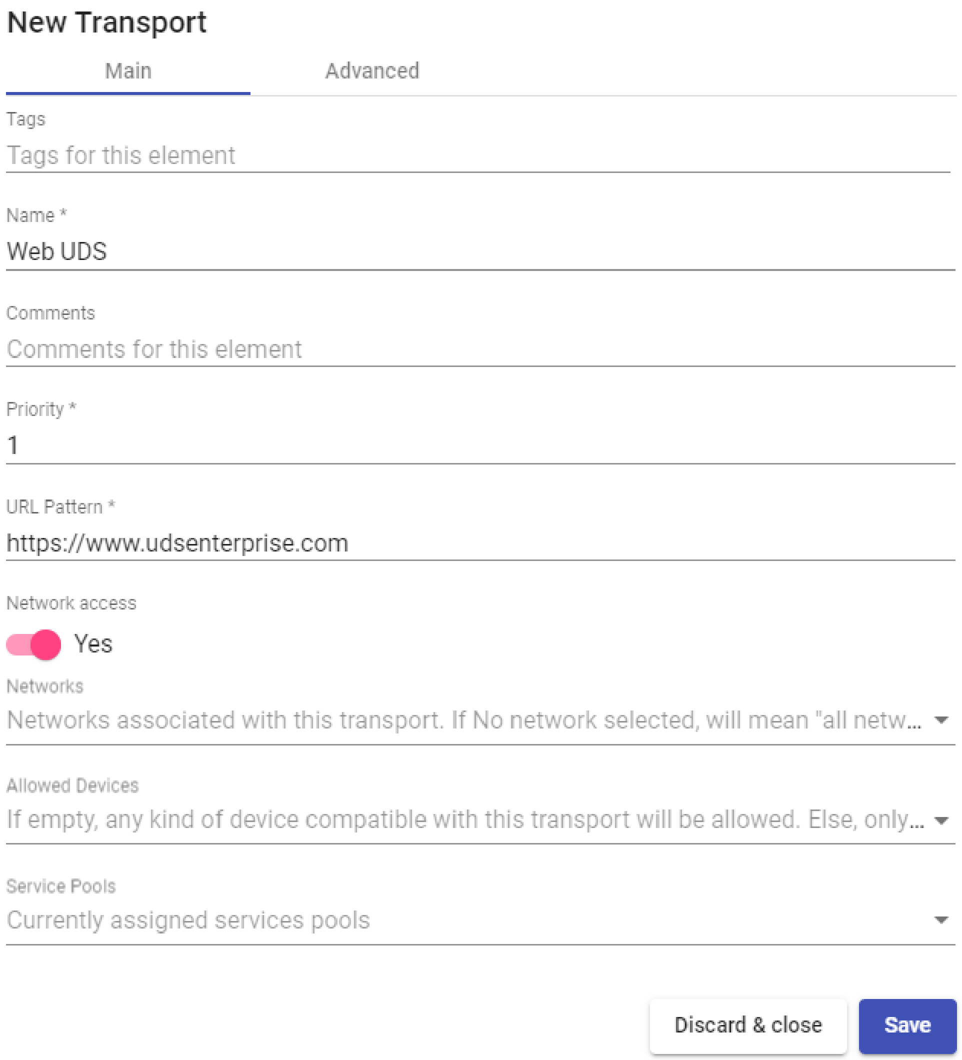
URL Pattern: URL that will launch the browser when the service is accessed. _IP_ can be used to send the IP address specified in the field “**Machine IP**” of type base service “**Static Single IP**” or you can also use _USER_ to send the name of the user that started the service.

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the “***Networks***” field.

Networks: Network ranges, subnets or IP addresses indicated in the “***Networks***” of the “***Connectivity***”. It is used together with the “**Network Access**” field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows you to assign this transport directly to one or more “**Service Pools**” previously created.



New Transport

Tags
Tags for this element

Name *
Web UDS

Comments
Comments for this element

Priority *
1

URL Pattern *
https://www.udsenterprise.com

Network access
Yes

Networks
Networks associated with this transport. If No network selected, will mean "all netw...

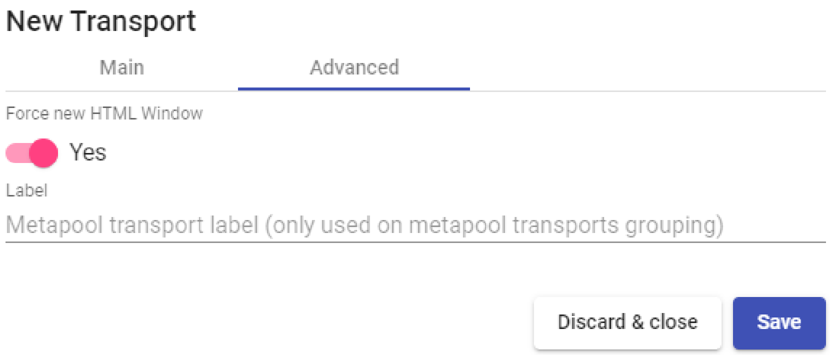
Allowed Devices
If empty, any kind of device compatible with this transport will be allowed. Else, only...

Service Pools
Currently assigned services pools

- Advanced:

Force new HTML Window: If enabled, the URL indicated in the field "**URL Pattern"** will launch in a new browser tab.

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.



New Transport

Force new HTML Window: Yes

Label: Metapool transport label (only used on metapool transports grouping)

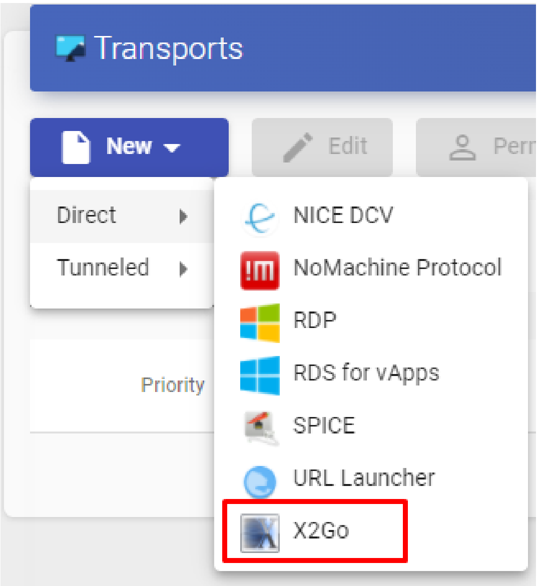
NOTE:

To publish a service pool and associate this transport, it is recommended to use the service provider type "**Static IP Machine Provider**" with a base service of type "**Static Single IP**".

4.7.7 X2Go (direct)

An "*X2Go*" tansport (direct) allows users to access Linux virtual desktops using "*X2Go*".

Both the connection clients (client) and the virtual desktops (server) must have "*X2Go*" installed and enabled.



In an "*X2Go*" transport (direct), the minimum parameters to configure are:

- Main:

Name: Name of the transport.

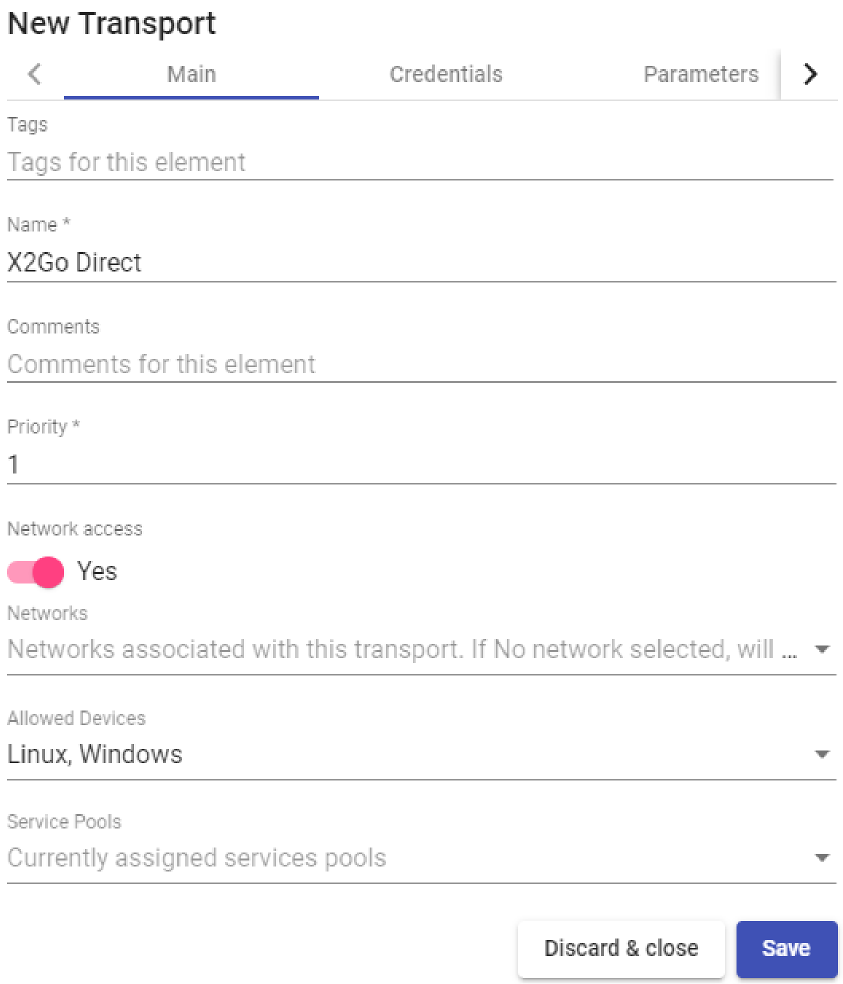
Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of the service.

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the "*Networks*".

Networks: Network ranges, subnets or IP addresses indicated in the "*Networks*" of the "*Connectivity*". section. It is used together with the "*Network Access*" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows you to assign this transport directly to one or more "*Service Pools*" previously created.



New Transport

Main | Credentials | Parameters

Tags: Tags for this element

Name *: X2Go Direct

Comments: Comments for this element

Priority *: 1

Network access: Yes

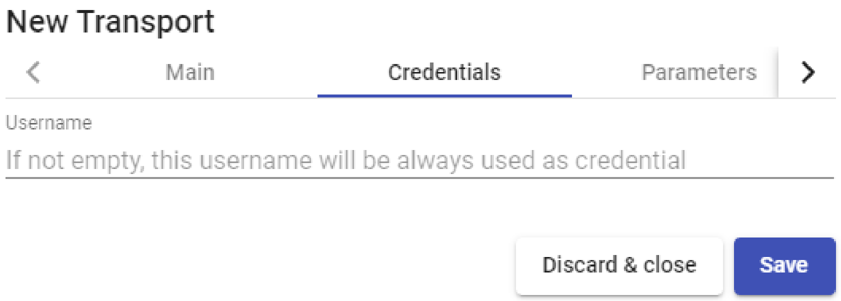
Networks: Networks associated with this transport. If No network selected, will ...

Allowed Devices: Linux, Windows

Service Pools: Currently assigned services pools

- Credentials:

Username: User name that will be used to log into the virtual desktop.



New Transport

Main | Credentials | Parameters

Username: If not empty, this username will be always used as credential

- Parameters:

Screen size: Resolution of the connection window.

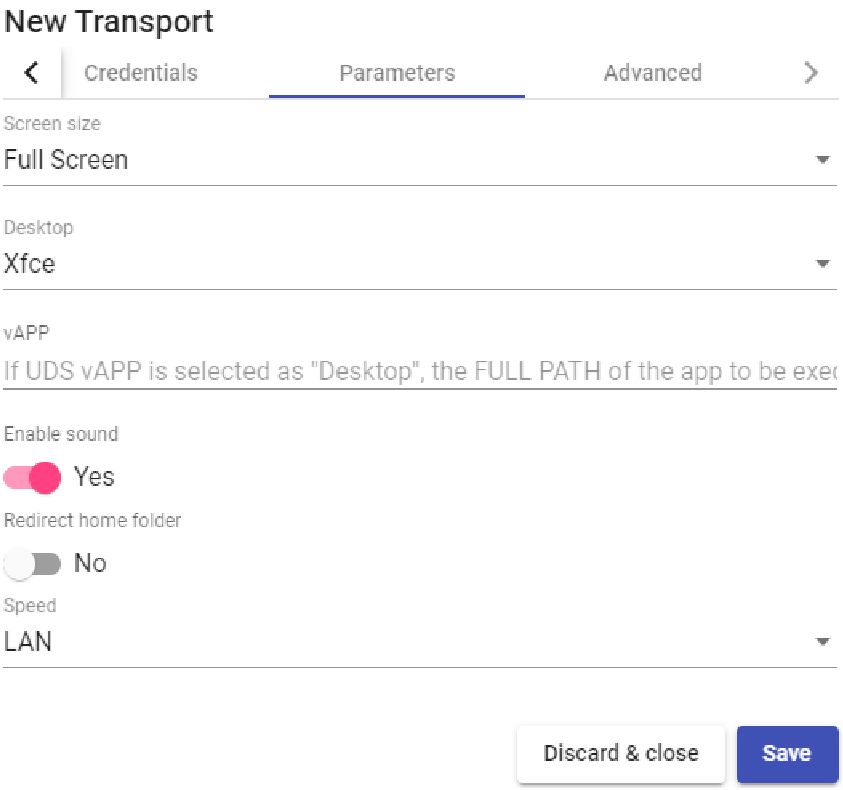
Desktop: Selection of the desktop manager (xfce, Mate, Gnome, etc…) or virtualization of Linux applications (UDS vAPP)

vAPP: Execution path of the application to virtualize (only applies if the parameter "***Desktop"*** is selected "***UDS vAPP***").

Enable sound: Enables sound in the connection.

Redirect home folder: Redirects the user's /home.

Speed: Connection optimization.



New Transport

Screen size: Full Screen

Desktop: Xfce

vAPP: If UDS vAPP is selected as "Desktop", the FULL PATH of the app to be exe

Enable sound: Yes

Redirect home folder: No

Speed: LAN

- Advanced:

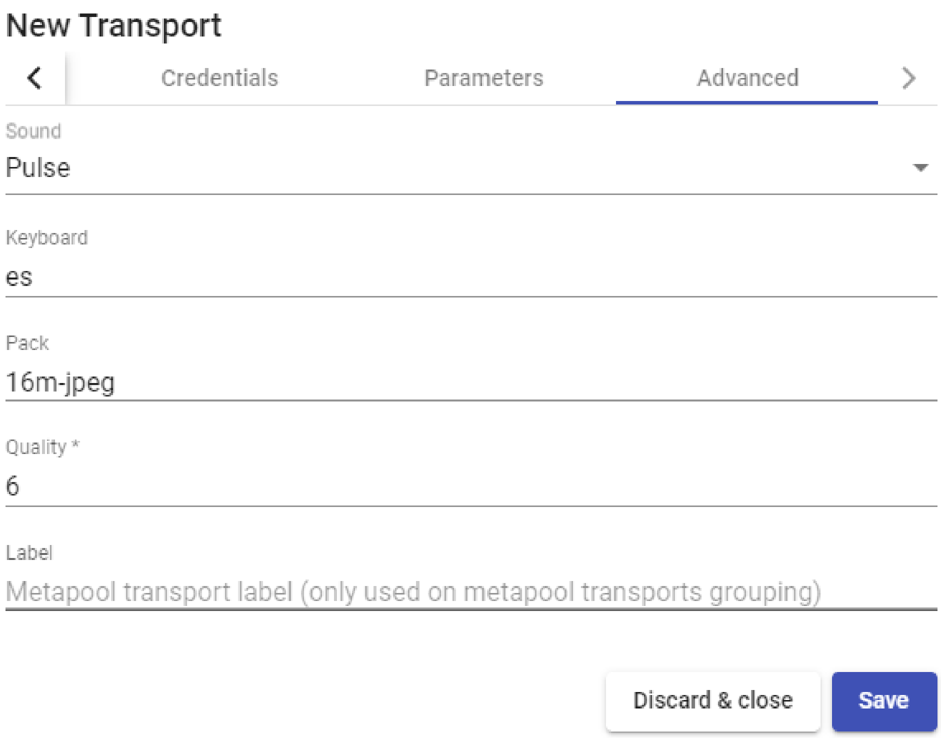
Sound: Selection of the type of sound server.

Keyboard: Keyboard language.

Pack: Method used to compress images.

Quality: Image quality (0-9).

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these tags, we can indicate that a metapool has several transports.



New Transport

Sound: Pulse

Keyboard: es

Pack: 16m-jpeg

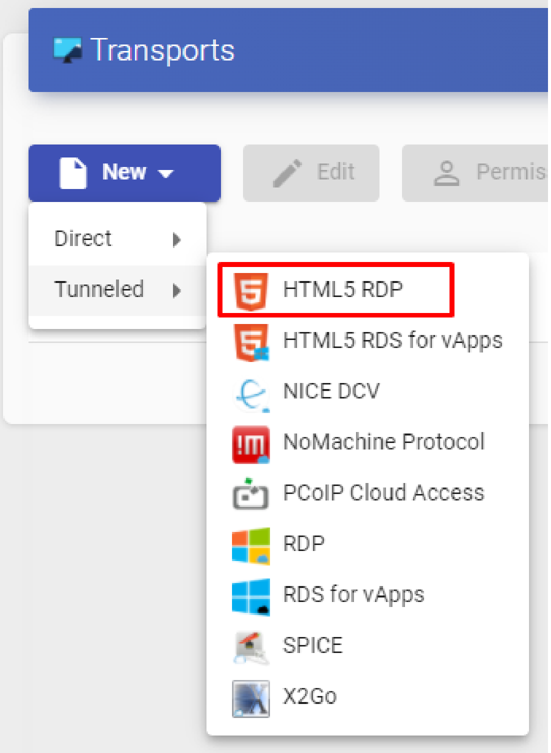
Quality *: 6

Label: Metapool transport label (only used on metapool transports grouping)

4.7.8 HTML5 RDP (tunneled)

An "***HTML5 RDP***" transport allows access to Windows and Linux virtual desktops using the RDP protocol through a web browser that supports HTML5 (for Linux desktops the machines must have the XRDP package installed. For Windows desktops, RDP access must be enabled)).

This transport uses the UDS Tunnel server to make the connection against the virtual desktops. It must be previously configured for its correct operation.



In an “***HTML5 RDP***” transport, the minimum parameters to configure are:

- Main:

Name: Name of the transport.

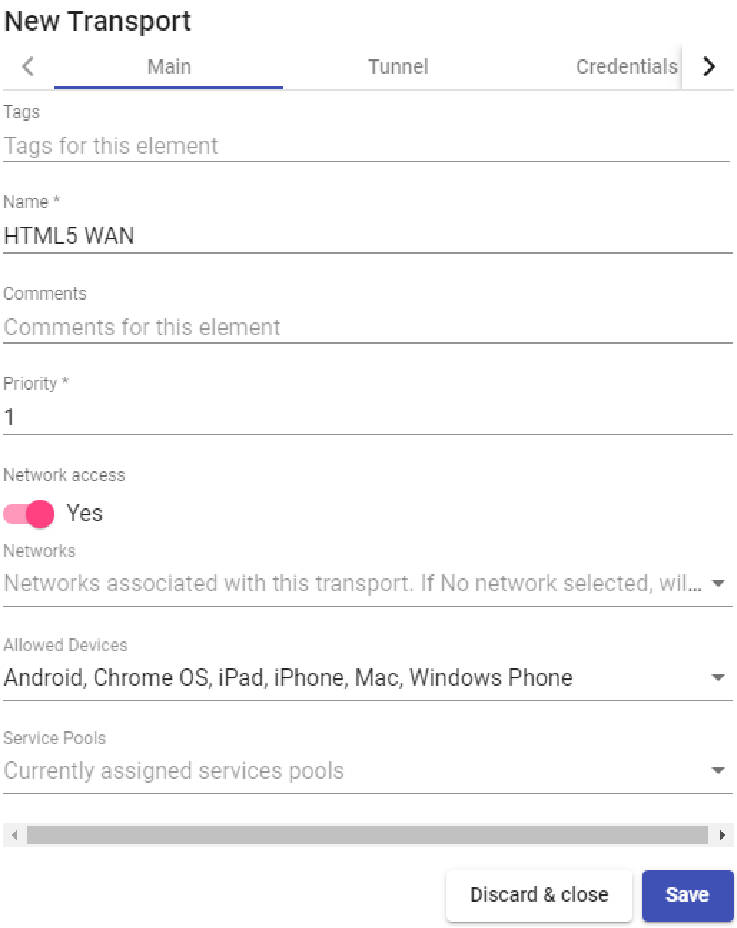
Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of a service.

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the “***Networks***” field.

Networks: Network ranges, subnets or IP addresses indicated in the “***Networks***” of the “***Connectivity***”. section. It is used together with the “***Network Access***” field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "**Service Pools**" previously created.



New Transport

Tags: Tags for this element

Name *: HTML5 WAN

Comments: Comments for this element

Priority *: 1

Network access: Yes

Networks: Networks associated with this transport. If No network selected, wil...

Allowed Devices: Android, Chrome OS, iPad, iPhone, Mac, Windows Phone

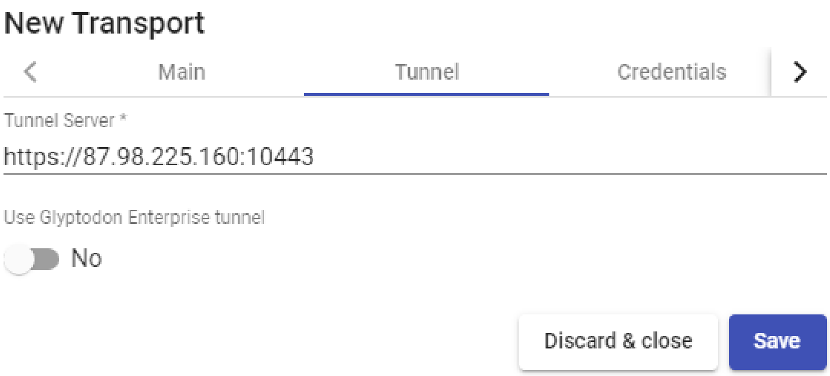
Service Pools: Currently assigned services pools

- Tunnel:

Tunnel Server: IP address or name with the connection port of the UDS Tunnel server. If access to the desktop is done from a WAN, the public IP address or name of the UDS Tunnel server must be entered. Format:

https://*IP_Tunnel*:10443

Use Glyptodon Enterprise tunnel: Allows to use the Glyptodon Enterprise server tunnel for HTML5 connections



New Transport

Tunnel Server *
https://87.98.225.160:10443

Use Glyptodon Enterprise tunnel
No

- Credentials:

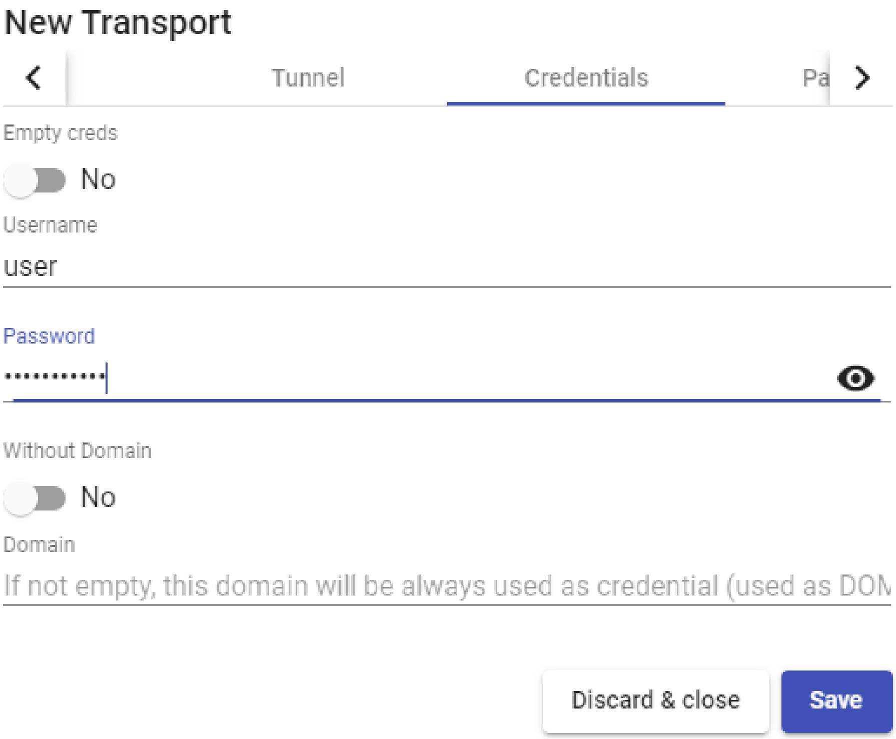
Empty creds: If it is set to “***Yes***”, when you make the connection with the service, it will ask you for the credentials to access the virtual desktop. If it is set to “***No*** the credentials entered in the UDS login portal will be redirected.

Username: Username that will be used to log into the desktop (the user must exist in the desktop). If this field is empty, it will try to use the UDS portal login user if the “***Empty creds***” field is “***No***”, or it will ask for credentials to indicate them manually if it is “***Yes***”.

Password: Password of the user in the “***Username***” field.

Without Domain: Indicates if the domain name is redirected together with the user.

Domain: A domain name that will be sent with the user's credentials.


New Transport

Empty creds: No

Username: user

Password: •••••••••••

Without Domain: No

Domain: If not empty, this domain will be always used as credential (used as DOM

- Parameters:

Show wallpaper: Shows the wallpaper.

Allow Desk.Comp.: Enables “**Desktop Composition**”.

Font Smoothing: Activates font smoothing (improves display).

Enable Audio: Enables redirection of audio (speaker) in the virtual desktop.

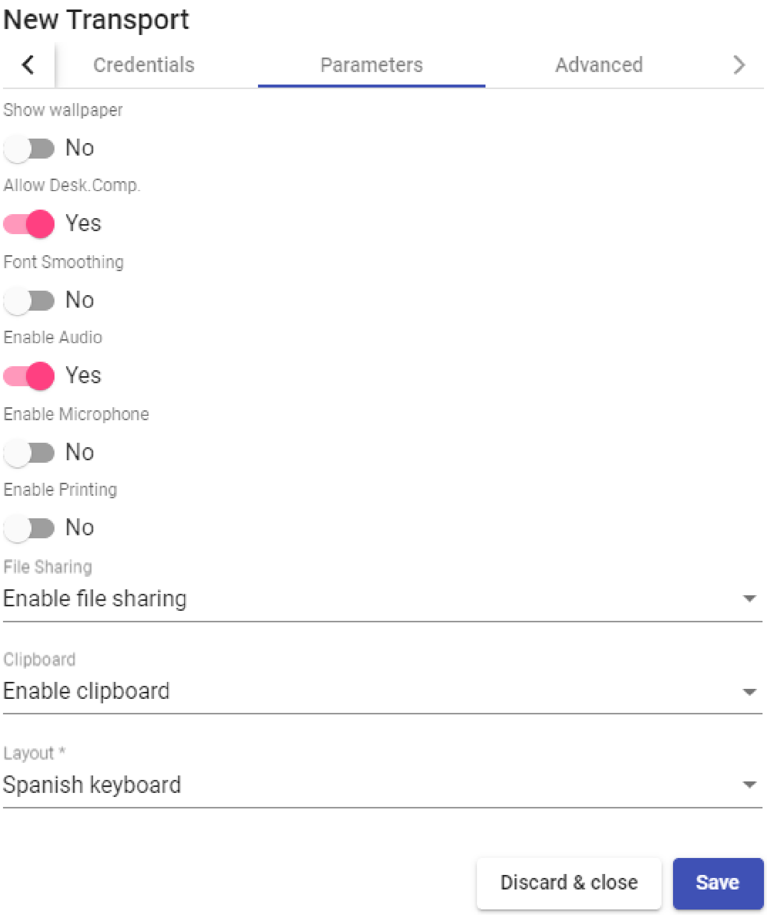
Enable Microphone: Enable audio redirection (Microphone) on desktop.

Enable Printing: Enables printing in the virtual desktop. A printer will be automatically enabled to print documents in pdf format and download them to the connection client.

File Sharing: It enables a temporary repository (located on the UDS Tunnel server) to be able to upload or download files between the virtual desktop and the connection client.

Clipboard: Enables the ability to copy and paste text between the connection client and the desktop.

Layout: Keyboard language to be enabled on the desktop.



New Transport

Show wallpaper: No

Allow Desk.Comp.: Yes

Font Smoothing: No

Enable Audio: Yes

Enable Microphone: No

Enable Printing: No

File Sharing: Enable file sharing

Clipboard: Enable clipboard

Layout *: Spanish keyboard

- ○ Advanced:

Ticket Validity: Indicates the validity time (in seconds) of the ticket generated by UDS in the connection client for the HTML5 connection.

Force new HTML Window Forces each connection that is started to be in a new window.

Security: Indicates the security level of the connection. If you want to use NLA, it is necessary to redirect valid credentials (you will not be able to request credentials from the user by enabling the option "***Empty creds***"). If you want to use RDP security with O.S Windows, it will be necessary to disable NLA on the desktop, both at the remote desktop configuration level and at the registry level:

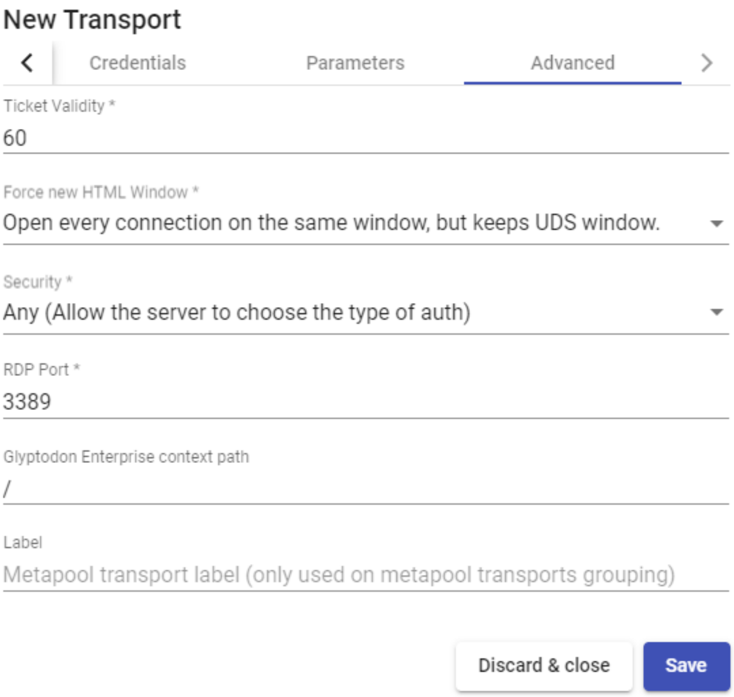
https://www.udsenterprise.com/es/wiki/Troubleshooting/Windows/Windows10-HTML5/

It is recommended to use the option "***Any***", which provides greater flexibility.

RDP Port: Connection port against the RDP server

Glyptodon Enterprise context path: In case of using the Glyptodon Enterprise tunnel and it was not in the default route, we must indicate the new route.

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.


New Transport

Ticket Validity *
60

Force new HTML Window *
Open every connection on the same window, but keeps UDS window.

Security *
Any (Allow the server to choose the type of auth)

RDP Port *
3389

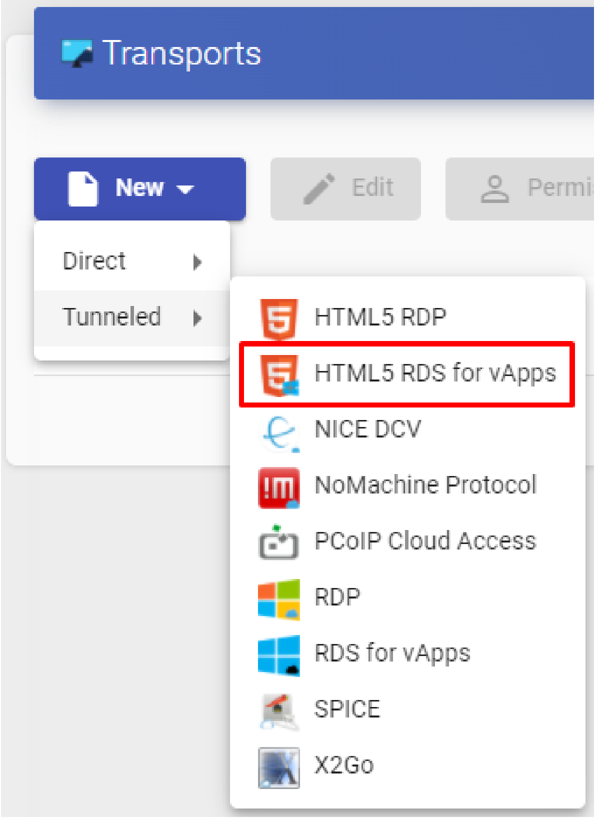
Glyptodon Enterprise context path
/

Label
Metapool transport label (only used on metapool transports grouping)

4.7.9 HTML5 RDP For vApps (tunneled)

An "***HTML5 RDP for vAPPs***" " transport allows access to Windows virtual applications via RemoteAPP through a web browser that supports HTML5. The connection client can have any O.S. that includes a browser with HTML5 support.

This transport uses the UDS Tunnel server to make the connection. It must be previously configured for its correct operation.



In an “***HTML5 RDP***” transport, the minimum parameters to configure are:

- Main:

Name: Name of the transport.

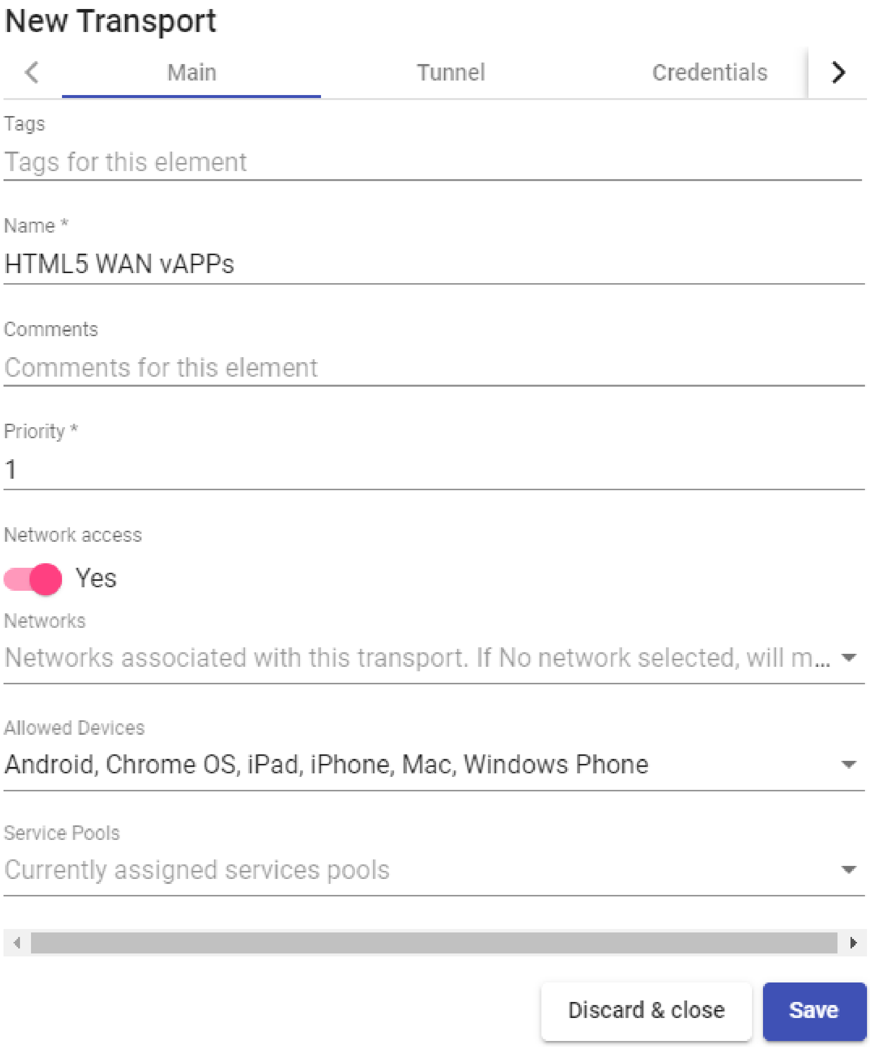
Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of a service.

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the “***Networks***”.

Networks: Network ranges, subnets or IP addresses indicated in the “***Networks***” of the “***Connectivity***”. section. It is used together with the “***Network Access***” field to allow or disable user access to a service based on his network location

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more “***Service Pools***” previously created.



New Transport

Tags: Tags for this element

Name *: HTML5 WAN vAPPs

Comments: Comments for this element

Priority *: 1

Network access: Yes

Networks: Networks associated with this transport. If No network selected, will m...

Allowed Devices: Android, Chrome OS, iPad, iPhone, Mac, Windows Phone

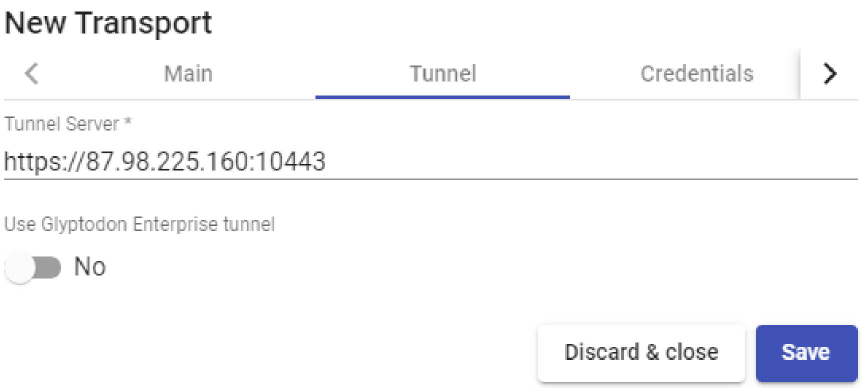
Service Pools: Currently assigned services pools

- Tunnel:

Tunnel Server: IP address or name with the connection port of the UDS Tunnel server. If access to the desktop is done from a WAN, the public IP address or name of the UDS Tunnel server must be entered. Format:

https://*IP_Tunnel*:10443

Use Glyptodon Enterprise tunnel: Allows to use the Glyptodon Enterprise server tunnel for HTML5 connections.


New Transport

Tunnel Server *
https://87.98.225.160:10443

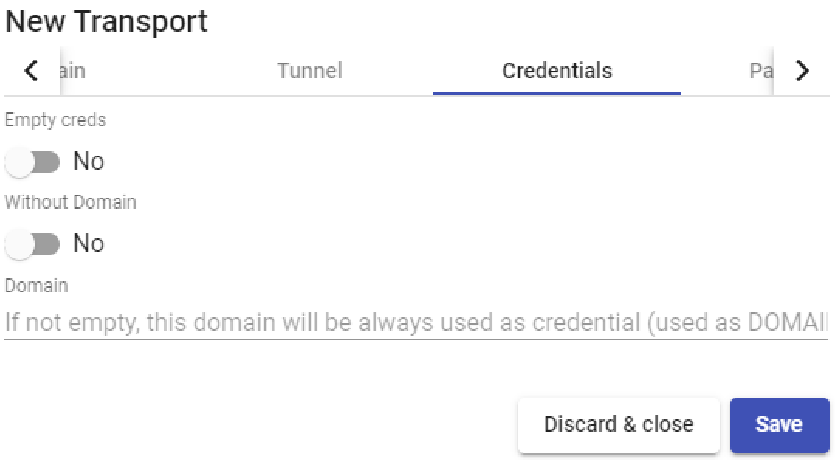
Use Glyptodon Enterprise tunnel
No

- Credentials:

Empty creds: If it is set to "***Yes***", when you make the connection with the service it will ask for the credentials. If it is set to "***No***", the credentials entered in the UDS login portal or those indicated in the "***mapping users***" will be redirected.

Without Domain: Indicates if the domain name is redirected together with the user.

Domain: Name of the domain that will be sent with the user's credentials (normally it is not necessary to indicate the domain since it is already defined together with the user's name).


New Transport

Empty creds
No

Without Domain
No

Domain
If not empty, this domain will be always used as credential (used as DOMAI

- Parameters:

Show wallpaper: Shows the wallpape.

Allow Desk.Comp.: Enables “***Desktop Composition***”.

Font Smoothing: Activates font smoothing (improves display).

Enable Audio: Enables audio redirection (speaker) in the virtual application.

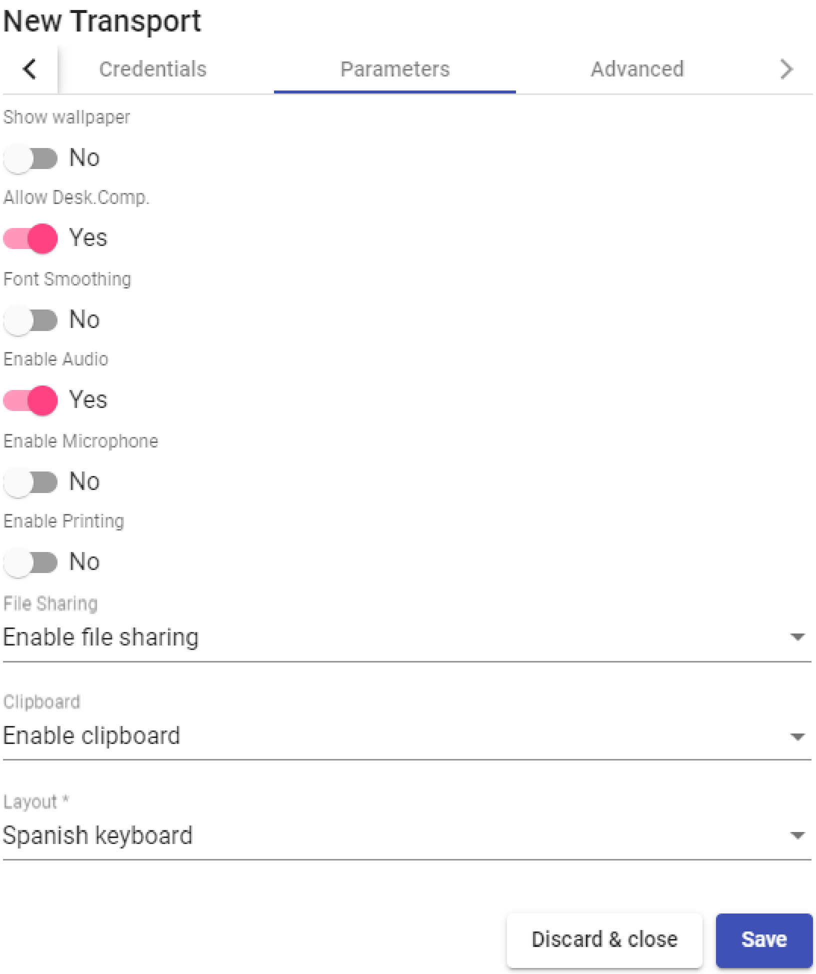
Enable Microphone: Enable audio redirection (Microphone) in the app.

Enable Printing: Enables printing in the virtual application. A printer will be automatically enabled to print documents in pdf format and download them to the connection client.

File Sharing: Enables a temporary repository (located on the UDS Tunnel server) to upload or download files between the virtual application and the connection client computer.

Clipboard: Enables the ability to copy and paste text between the connection client and the application.

Layout: Keyboard language to be enabled in the app.



New Transport

Show wallpaper: No

Allow Desk.Comp.: Yes

Font Smoothing: No

Enable Audio: Yes

Enable Microphone: No

Enable Printing: No

File Sharing: Enable file sharing

Clipboard: Enable clipboard

Layout *: Spanish keyboard

- Advanced:

RDP Port: Connection port against RDP server

Ticket Validity: Indicates the validity time (in seconds) of the ticket generated by UDS in the connection client.

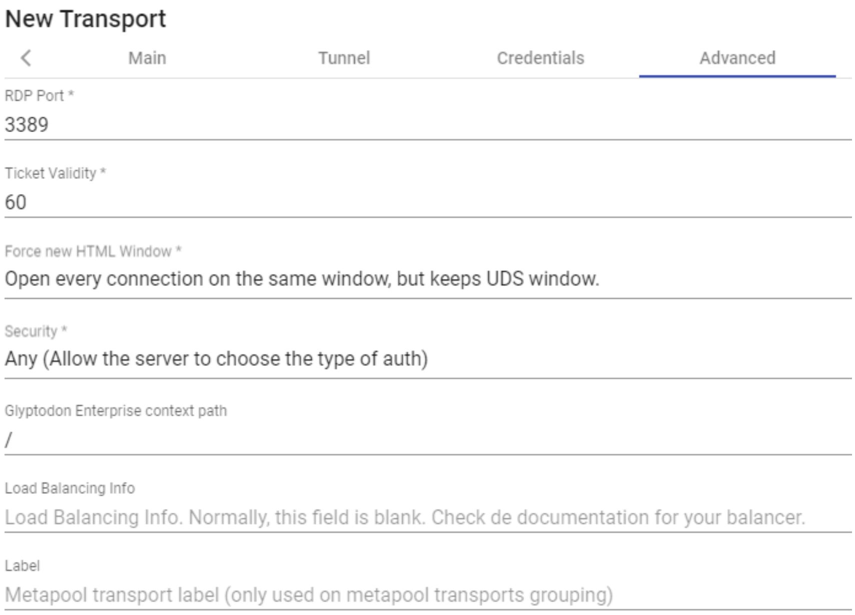
Force new HTML Window Forces each new connection to be in a new window.

SecurityIndicates the security level of the connection. If you want to use NLA, it is necessary to redirect valid credentials (you will not be able to request credentials from the user by enabling the option "***Empty creds***").

It is recommended to use the option "***Any***", which provides greater flexibility.

Glyptodon Enterprise context path: In case of using the Glyptodon Enterprise tunnel and it was not in the default route, we must indicate the new route.

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.



New Transport

RDP Port *
3389

Ticket Validity *
60

Force new HTML Window *
Open every connection on the same window, but keeps UDS window.

Security *
Any (Allow the server to choose the type of auth)

Glyptodon Enterprise context path
/

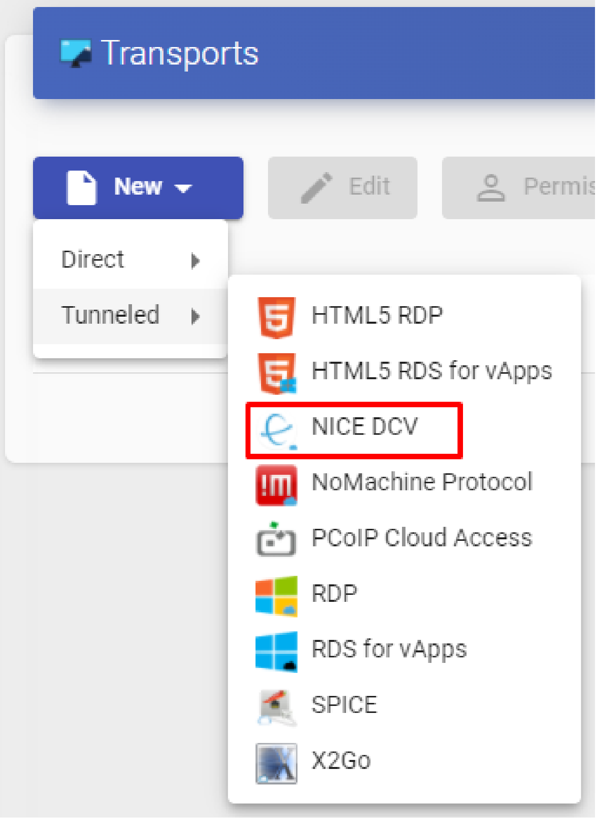
Load Balancing Info
Load Balancing Info. Normally, this field is blank. Check de documentation for your balancer.

Label
Metapool transport label (only used on metapool transports grouping)

4.7.10 NICE DCV (tunneled)

A transport "***NICE DCV***" (tunneled) allows users to access Windows and Linux desktops located on a WAN using the NICE DCV protocol. Both connection clients and desktops are required to have NICE DCV software installed and enabled.

This transport uses the UDS Tunnel server to make the connection against the desktops, having to be previously configured for its correct operation.



In a "***NICE DCV***" (tunneled) transport, the minimum parameters to configure are:

- Main:

Name: Name of the transport.

Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of a service.

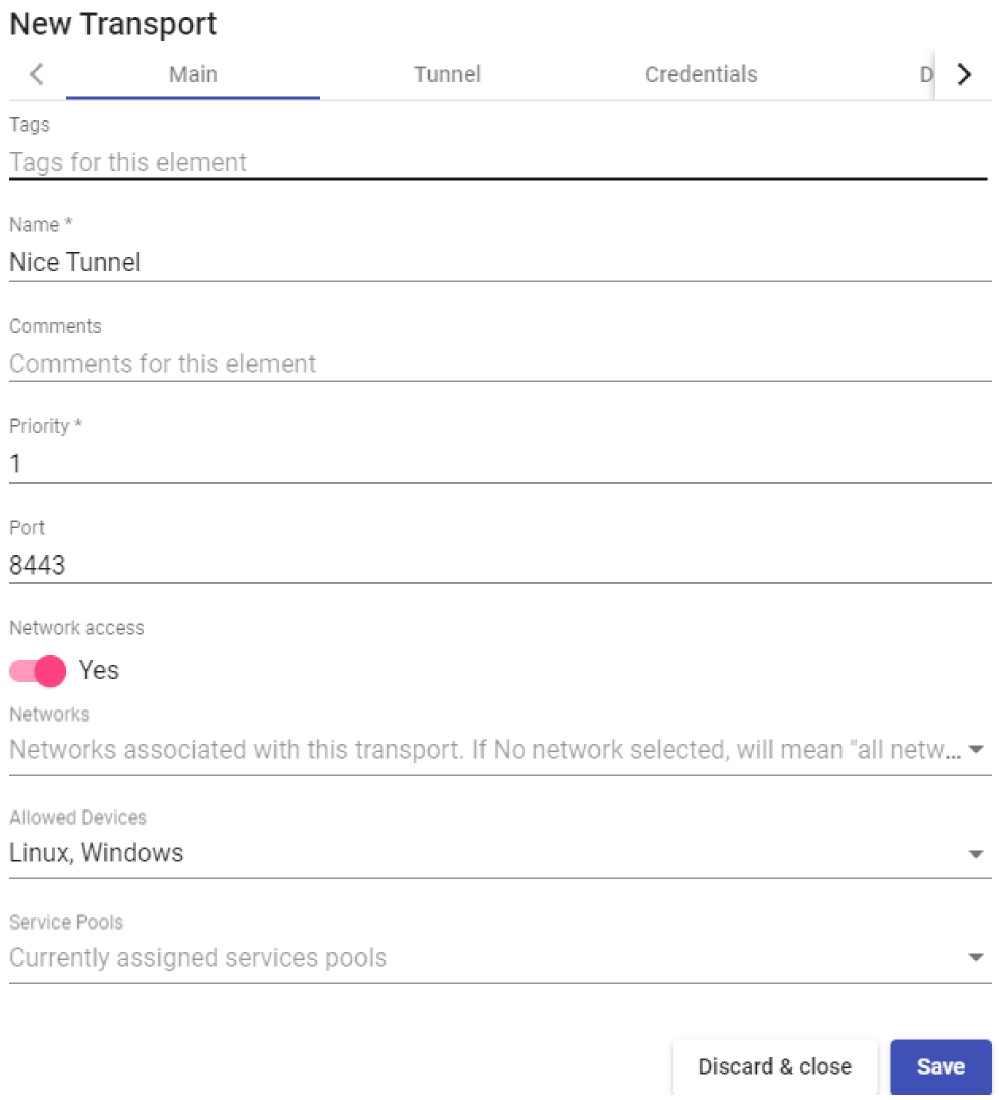
Port: NICE DCV listening port

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the "***Networks***" field.

Networks: Network ranges, subnets or IP addresses indicated in the "***Networks***" of the "***Connectivity***" section.it is used together with "***Network Access***" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "***Service Pools***" previously created.


New Transport

Tags
Tags for this element

Name *
Nice Tunnel

Comments
Comments for this element

Priority *
1

Port
8443

Network access
Yes

Networks
Networks associated with this transport. If No network selected, will mean "all netw...

Allowed Devices
Linux, Windows

Service Pools
Currently assigned services pools

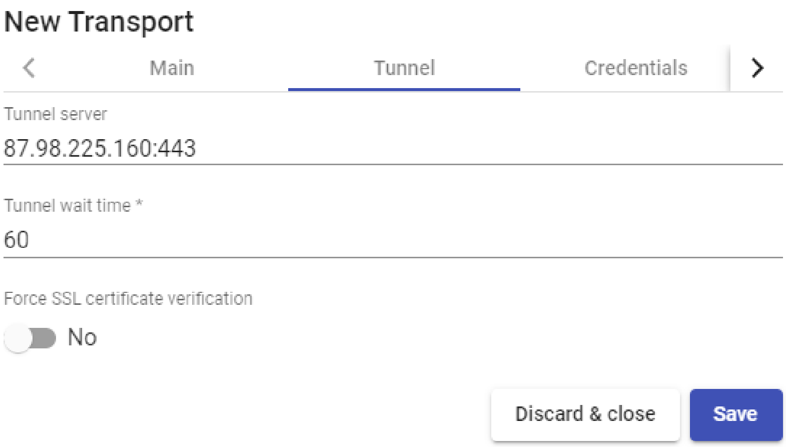
- Tunnel:

Tunnel Server: IP address or name with the connection port of the UDS Tunnel server. If access to the desktop is done from a WAN, the public IP address or name of the UDS Tunnel server must be entered. Format:

IP_Tunnel:443

Tunnel wait time: Validity time of the UDS Tunnel server ticket for the connection.

Force SSL certificate verification: Enables certificate verification. The UDS Tunnel server must have a valid certificate installed.



New Transport

Tunnel server: 87.98.225.160:443

Tunnel wait time *: 60

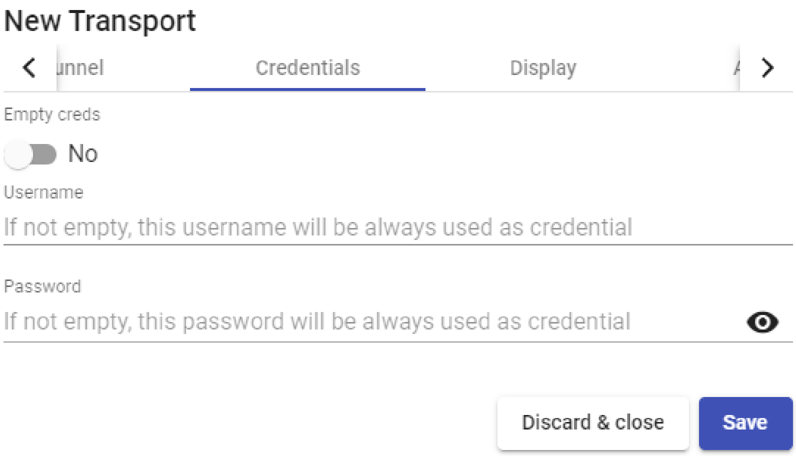
Force SSL certificate verification: No

- Credentials:

Empty creds: If it is set to "*Yes*", when you make the connection with the service it will ask for the credentials. If it is set to "*No*" the credentials entered in the UDS login portal will be redirected.

Username: Username to be used to log in to the desktop (the user must exist on the desktop). If this field is empty, an attempt will be made to use the UDS portal login user if the field "*Empty creds*" It's in "*No*", or it will ask for credentials to indicate them manually if it is "*Yes*".

Password: User password of the field "*Username*".



New Transport

Empty creds: No

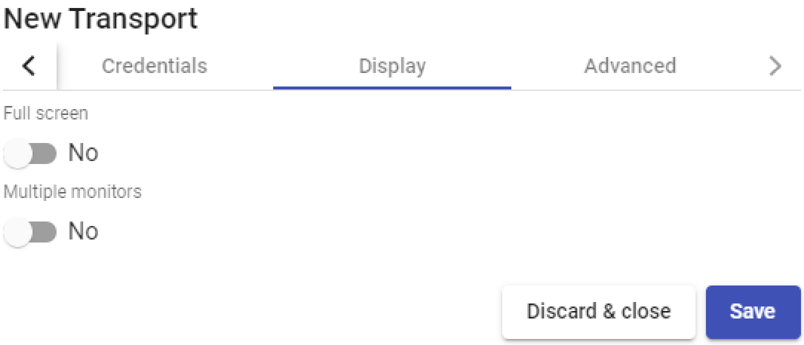
Username: If not empty, this username will be always used as credential

Password: If not empty, this password will be always used as credential

- Display:

Full screen: Indicates if the connection to the service is made in full screen.

Multiple monitors: Indicates if several monitors will be used in the connection with the service.



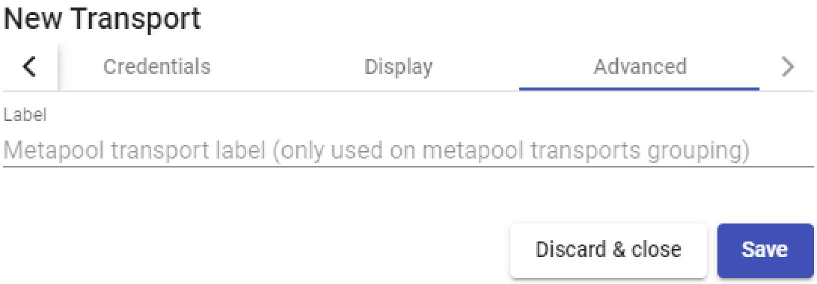
New Transport

Full screen: No

Multiple monitors: No

- Advanced:

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.



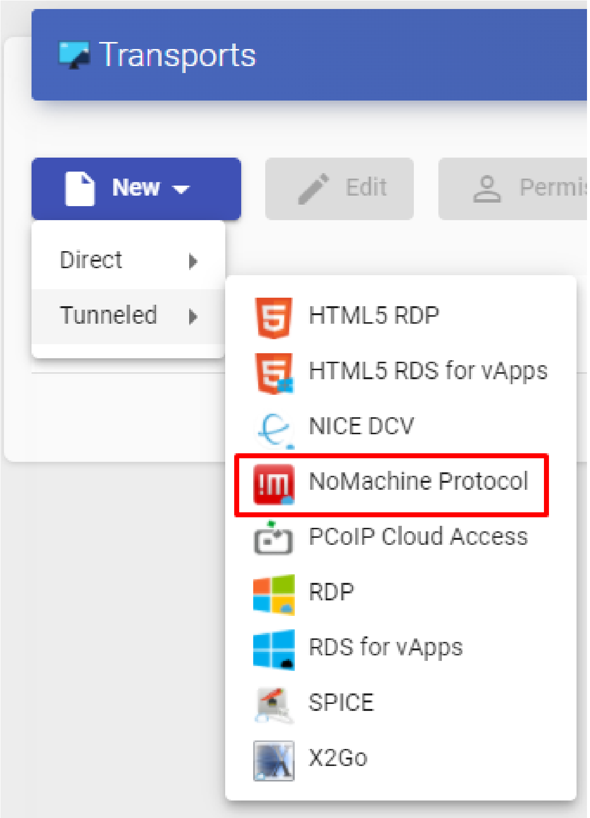
New Transport

Label: Metapool transport label (only used on metapool transports grouping)

4.7.11 NoMachine Protocol (tunneled)

A "***NoMachine Protocol***" (tunneled) allows users located on a WAN to access Windows, Linux, and MacOS desktops using the NoMachine protocol (both connection clients and desktops require NoMachine software to be installed).

This transport uses the UDS Tunnel server to make the connection against the desktops, having to be previously configured for its correct operation.



In a transport "***NoMachine Protocol***" (tunneled) the minimum parameters to configure are:

- Main:

Name: Name of the transport.

Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of a service.

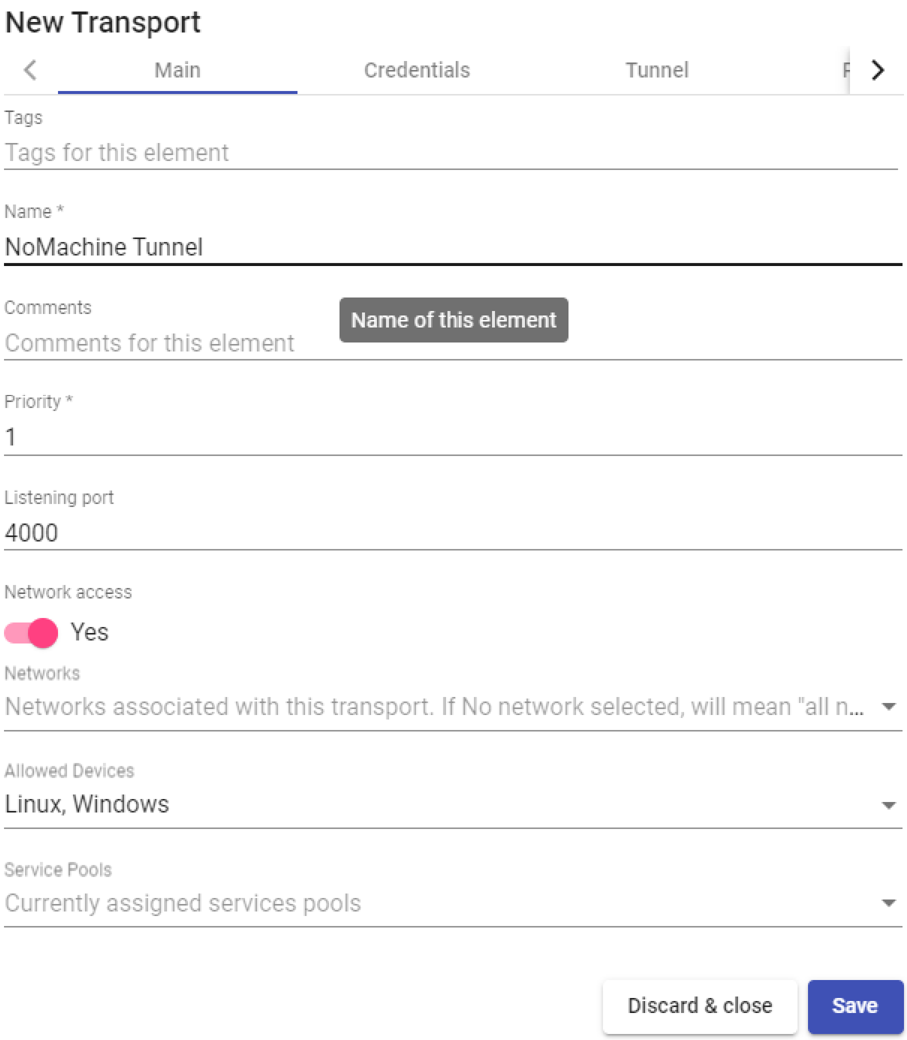
Listening port: NoMachine software listening port.

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the "***Networks***" field.

Networks: Network ranges, subnets or IP addresses indicated in the "***Networks***" of the "***Connectivity***" section. It is used together with the "***Network Access***" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "***Service Pools***" previously created.



New Transport

Tags: Tags for this element

Name *: NoMachine Tunnel

Comments: Comments for this element

Priority *: 1

Listening port: 4000

Network access: Yes

Networks: Networks associated with this transport. If No network selected, will mean "all n...

Allowed Devices: Linux, Windows

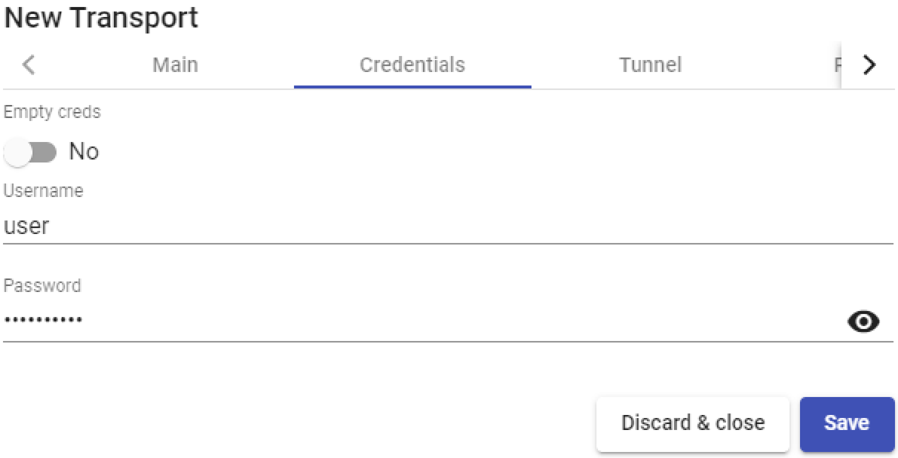
Service Pools: Currently assigned services pools

- Credentials:

Empty creds: If it is set to "***Yes***", when you make the connection with the service, it will ask you for the credentials to access the virtual desktop. If it is set to "***No***", the credentials entered in the UDS login portal will be redirected.

Username: Username that will be used to log into the desktop (the user must exist on the desktop). If this field is empty, an attempt will be made to use the UDS portal login user if the "***Empty creds***" field is set to "***No***", or it will ask for credentials to indicate them manually if it is set to "***Yes***".

Password: Password of the user in the "*Username* "field.


New Transport

Empty creds

No

Username

user

Password

••••••••••

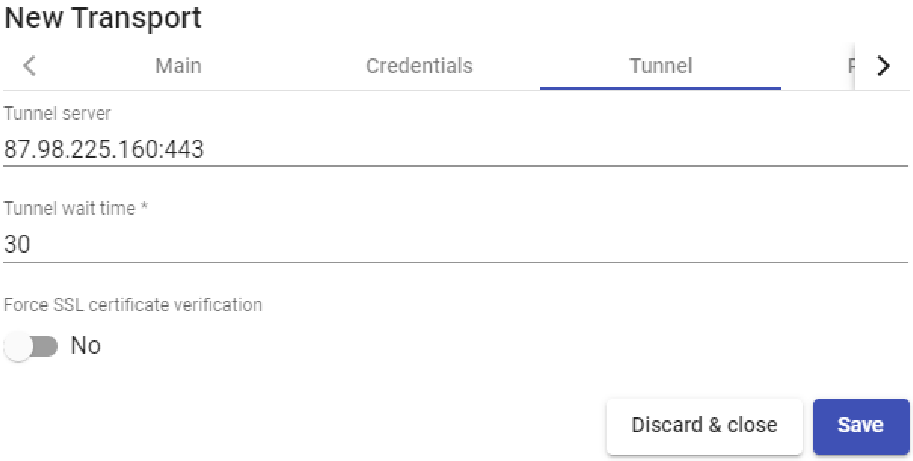
- Tunnel:

Tunnel Server: IP address or name with the connection port of the UDS Tunnel server. If access to the desktop is from a WAN, the public IP address or name of the UDS Tunnel server must be entered. Format:

IP_Tunnel:443

Tunnel wait time: Validity time of the UDS Tunnel server ticket for the connection.

Force SSL certificate verification: Enables certificate verification. The UDS Tunnel server must have a valid certificate installed.


New Transport

Tunnel server

87.98.225.160:443

Tunnel wait time *

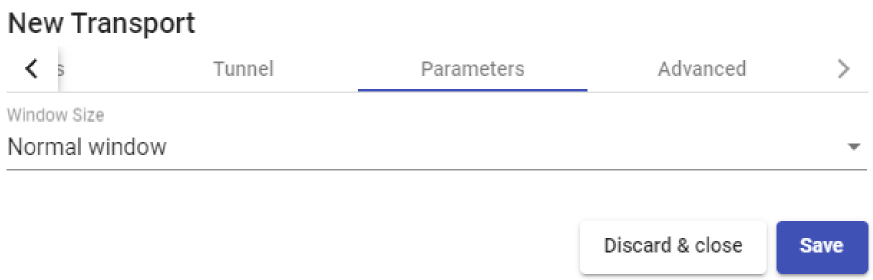
30

Force SSL certificate verification

No

- Parameters:

Window Size: Indicates the size of the window in the connection to the service.

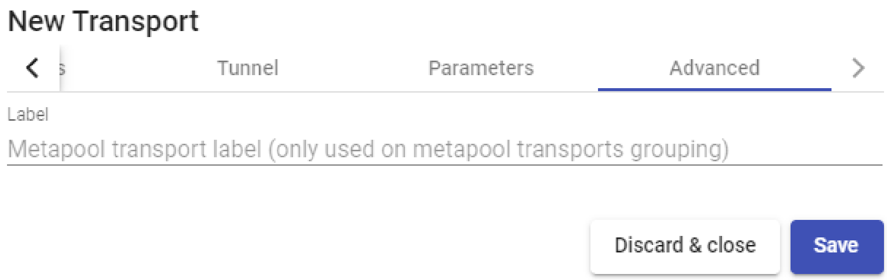


New Transport

Window Size: Normal window

- Advanced:

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.



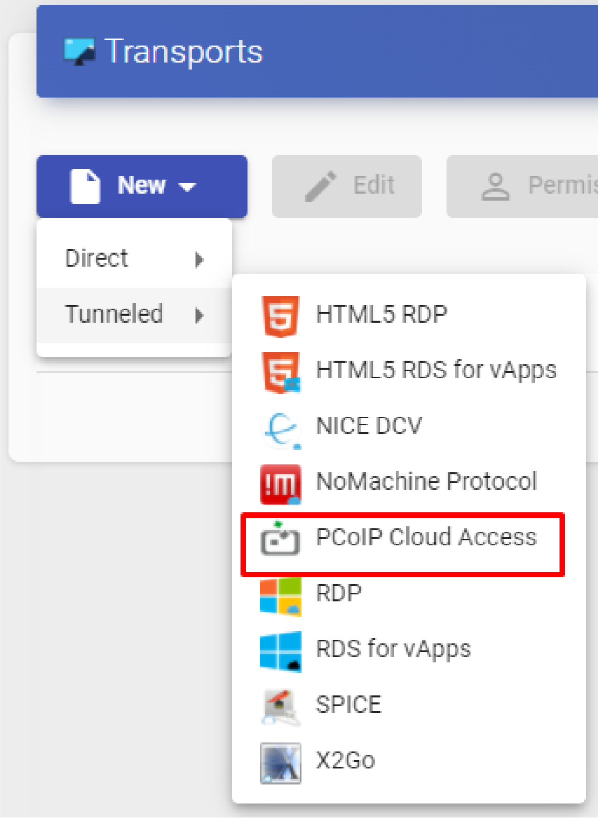
New Transport

Label: Metapool transport label (only used on metapool transports grouping)

4.7.12 PCoIP Cloud Access (tunneled)

A "***PCoIP Cloud Access***" transport allows access to Windows/Linux virtual desktops by users located on a WAN using the Teradici PCoIP protocol. Both the virtual desktops and the connection clients must have the PCoIP server and client installed and enabled respectively.

Additionally, it will be necessary to have previously installed and configured the rest of the elements that make up the PCoIP Cloud Access suite (License Server, Connection Manager and Security Gateway).



In a "***PCoIP Transport (tunneled)***" the minimum parameters to configure are:

- Main:

Name: Nombre del transporte.

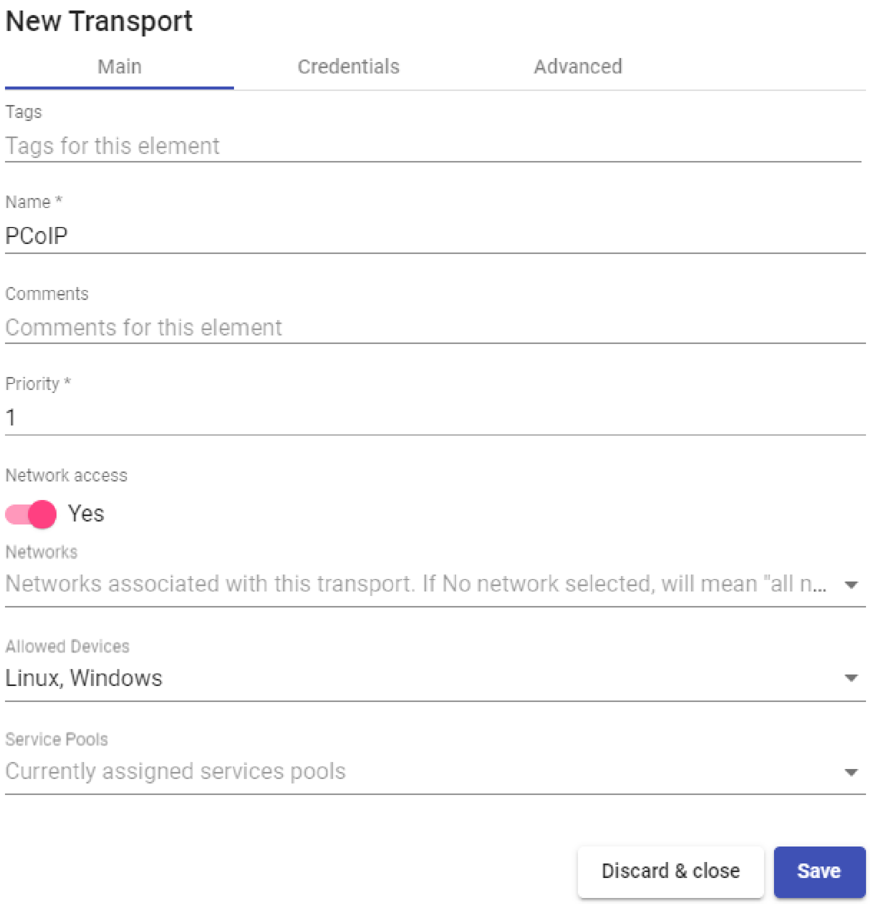
Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of a service.

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the "***Networks***" field.

Networks: Network ranges, subnets or IP addresses indicated in the "***Networks***" of the "***Connectivity***" field. It is used together with the "***Network Access***" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none is selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "***Service Pools***" previously created.



New Transport

Tags
Tags for this element

Name *
PCoIP

Comments
Comments for this element

Priority *
1

Network access
Yes

Networks
Networks associated with this transport. If No network selected, will mean "all n...

Allowed Devices
Linux, Windows

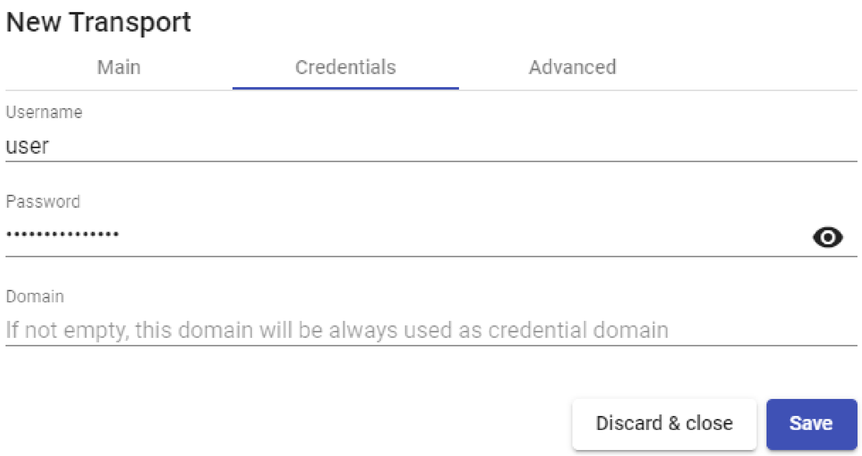
Service Pools
Currently assigned services pools

- Credentials:

Username: Username that will be used to log into the desktop. If this field is empty, the user's name will be requested when making the connection

Password: Password of the user in the "***Username***" field.

Domain: Domain name that will be sent with the user's credentials.



New Transport

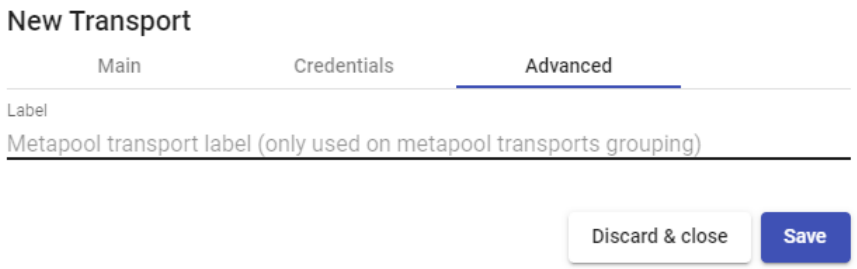
Username
user

Password
•••••••••••••••

Domain
If not empty, this domain will be always used as credential domain

- Advanced:

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.



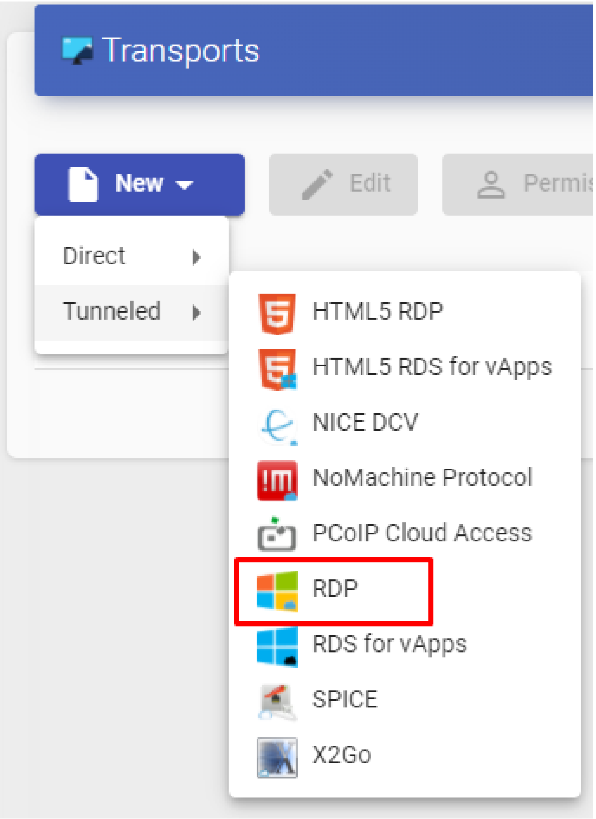
New Transport

Label
Metapool transport label (only used on metapool transports grouping)

4.7.13 RDP (tunneled)

An “*RDP (tunneled)*” transport allows access to Windows/Linux virtual desktops by users located on a WAN using the Remote Desktop Protocol (RDP). Both the connection clients and the virtual desktops must have RDP installed and enabled (if connection clients with Linux OS are used, the “*FreeRDP*” client will be needed and if the connection is made to Linux virtual desktops “*XRDP*” must be installed and configured).

This transport uses the UDS Tunnel server to make the connection against the virtual desktops. It must be previously configured for its correct operation.



In an “*RDP (tunneled)*” transport, the minimum parameters to configure are:

- Main:

Name: Name of the transport.

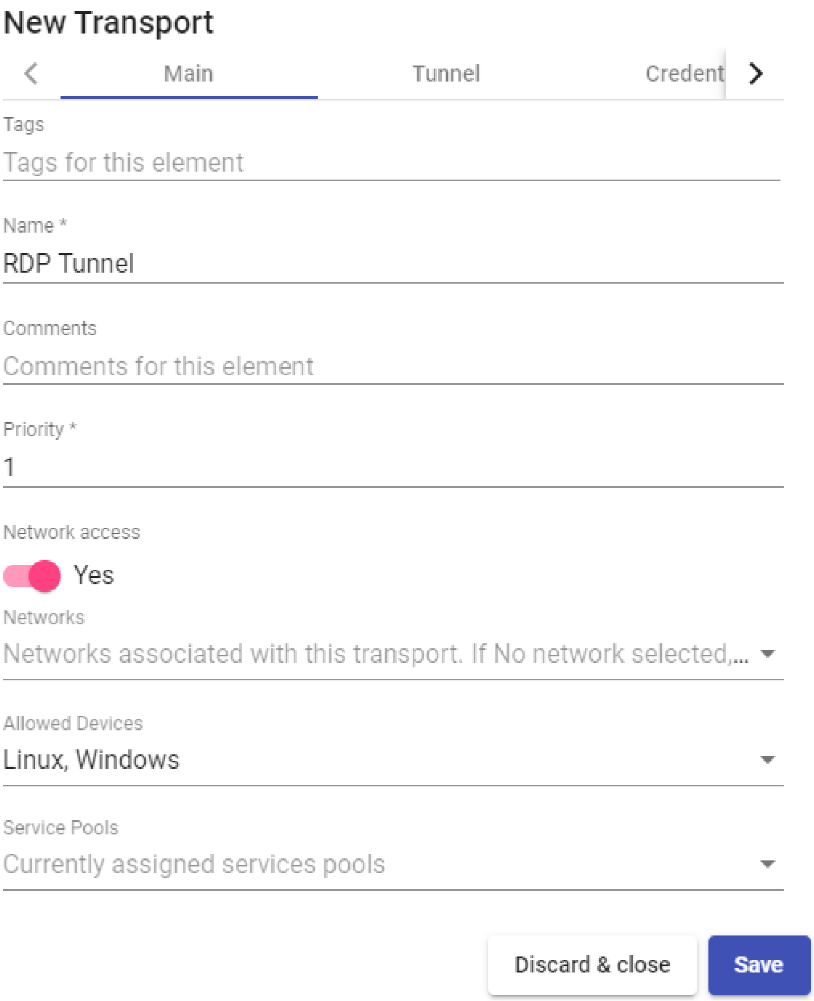
Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of a service.

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the “*Networks*” field.

Networks: Network ranges, subnets or IP addresses indicated in the "***Networks***" of the "***Connectivity***" field. It is used together with the "***Network Access***" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "***Service Pools***" previously created.



New Transport

Tags
Tags for this element

Name *
RDP Tunnel

Comments
Comments for this element

Priority *
1

Network access
Yes

Networks
Networks associated with this transport. If No network selected,...

Allowed Devices
Linux, Windows

Service Pools
Currently assigned services pools

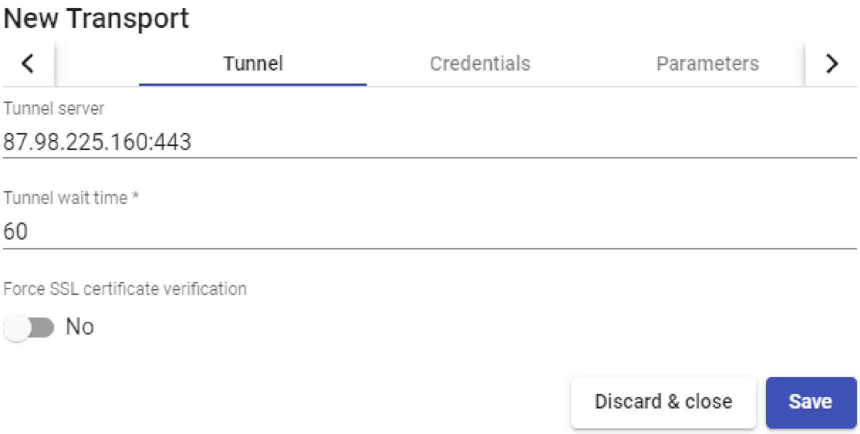
- Tunnel:

Tunnel Server: IP address or name with the connection port of the UDS Tunnel server. If access to the desktop is done from a WAN, the public IP address or name of the UDS Tunnel server must be entered. Formato:

IP_Tunnel:443

Tunnel wait time: UDS Tunnel server ticket validity time for the connection.

Force SSL certificate verification: Enables certificate verification. The UDS Tunnel server must have a valid certificate installed.


New Transport

Tunnel server: 87.98.225.160:443

Tunnel wait time *: 60

Force SSL certificate verification: No

- ○ Credentials:

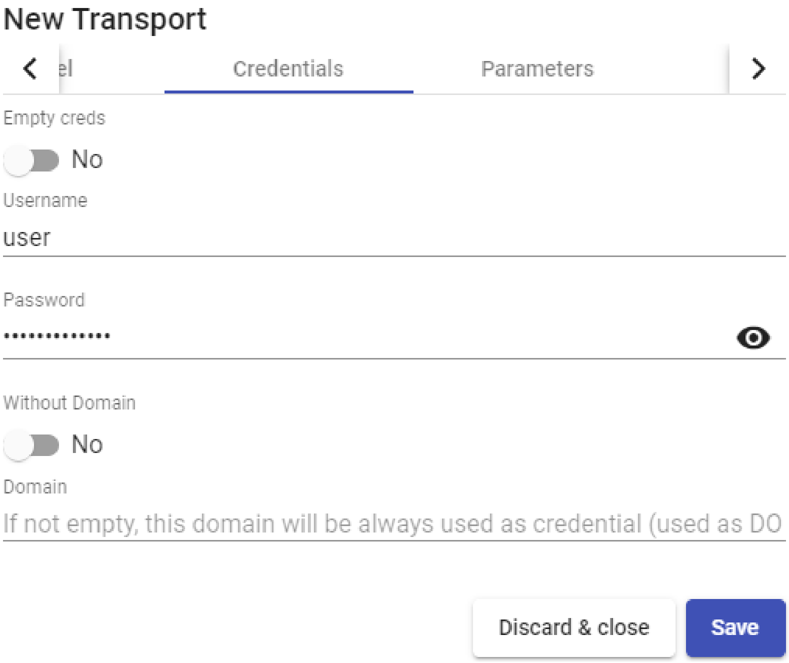
Empty creds: If it is set to "*Yes*", when you make the connection with the service, it will ask you for the credentials to access the virtual desktop. If it is set to "*No*", the credentials entered in the UDS login portal will be redirected.

Username: Username that will be used to log into the desktop (the user must exist on the desktop). If this field is empty, it will try to use the UDS portal login user if the "*Empty creds*" field is "*No*", or it will ask for credentials to indicate them manually if it is "*Yes*".

Password: Password of the user in the "*Username*" field.

Without Domain: Indicates if the domain name is redirected together with the user.

Domain: Name of the domain that will be sent with the user's credentials.


New Transport

Empty creds: No

Username: user

Password: ••••••••••••••

Without Domain: No

Domain: If not empty, this domain will be always used as credential (used as DO

- Parameters:

Allow Smartcards: Enables the redirection of Smartcards.

Allow Printers: Enables printer redirection.

Local drives policy: Enables redirection of disk drives:

- **Allow none:** No drive is redirected.
- **Allow PnP drives:** Only connected drives are redirected during an active session.
- **Allow any drive:** All drives are redirected.

Force drives: Forces the redirection of specific drives. You can enter several separated by commas. (Ex: F:,G:).

Allow Serials: Enables serial port redirection.

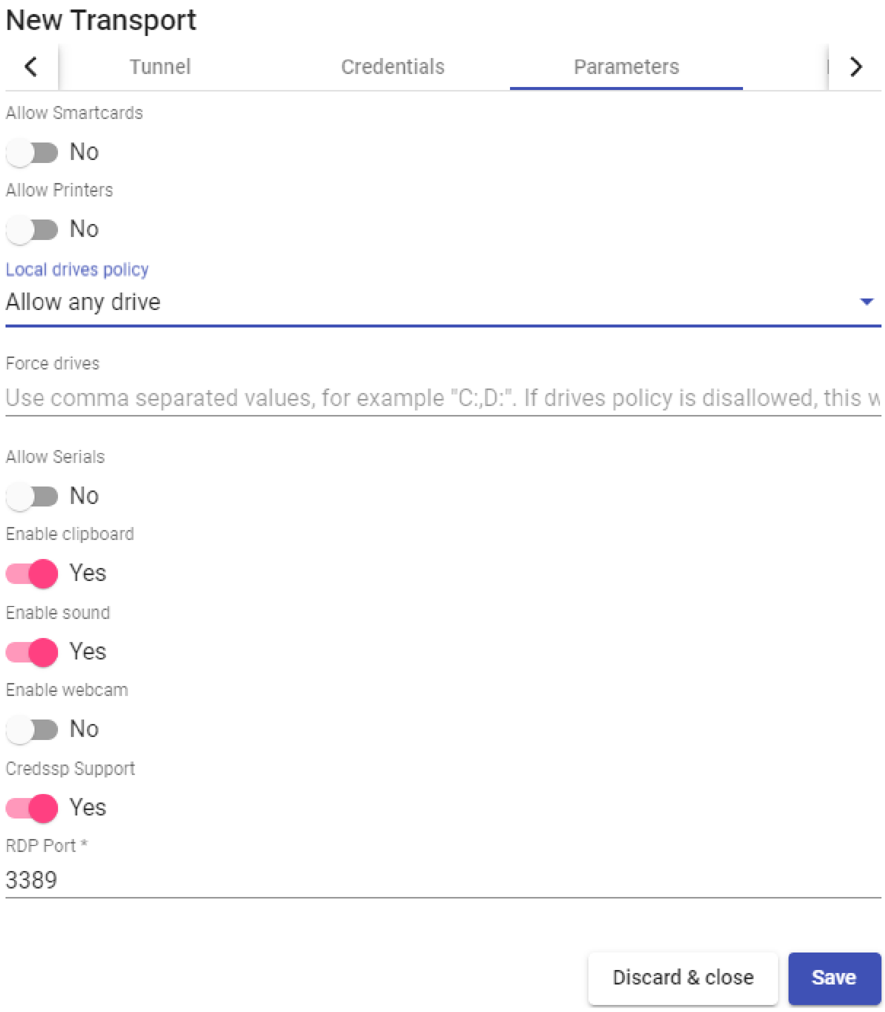
Enable clipboard: If it is activated, it will allow copy/paste between the connection client and the desktop.

Enable Sound: If activated, it will allow the redirection of the audio from the desktop to the connection client.

Enable webcam: If it is activated, it will allow the redirection of web cameras between the connection client and the writer.

Credssp Support: If enabled, it will use “Credential Security Support Provider”.

RDP Port: Connection port against the RDP server



New Transport

Allow Smartcards: No

Allow Printers: No

Local drives policy: Allow any drive

Force drives: Use comma separated values, for example "C:,D:". If drives policy is disallowed, this w

Allow Serials: No

Enable clipboard: Yes

Enable sound: Yes

Enable webcam: No

Credssp Support: Yes

RDP Port *: 3389

- Display:

Screen Size: Indicates the size of the desktop window.

Color depth: Indicates the depth of the colour.

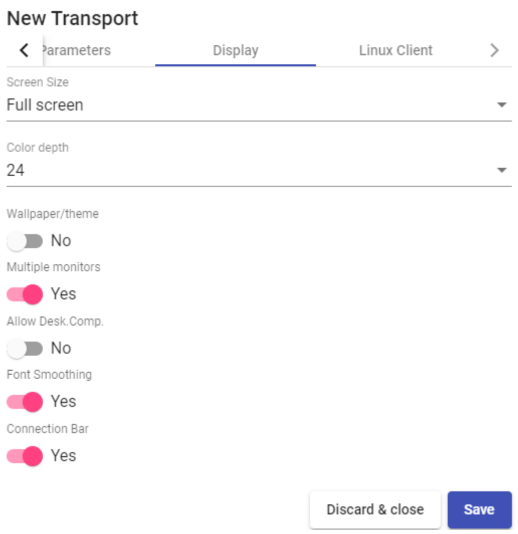
Wallpaper/theme: Displays the desktop background.

Multiple monitors: Allows the use of multiple monitors.

Allow Desk. Comp.: Enables “Desktop Composition”.

Font Smoothing: Activates font smoothing.

Connection Bar: Allows to enable or disable the connection bar.



New Transport

Screen Size: Full screen

Color depth: 24

Wallpaper/theme: No

Multiple monitors: Yes

Allow Desk.Comp.: No

Font Smoothing: Yes

Connection Bar: Yes

- Linux Client (only applies to Linux connection clients):

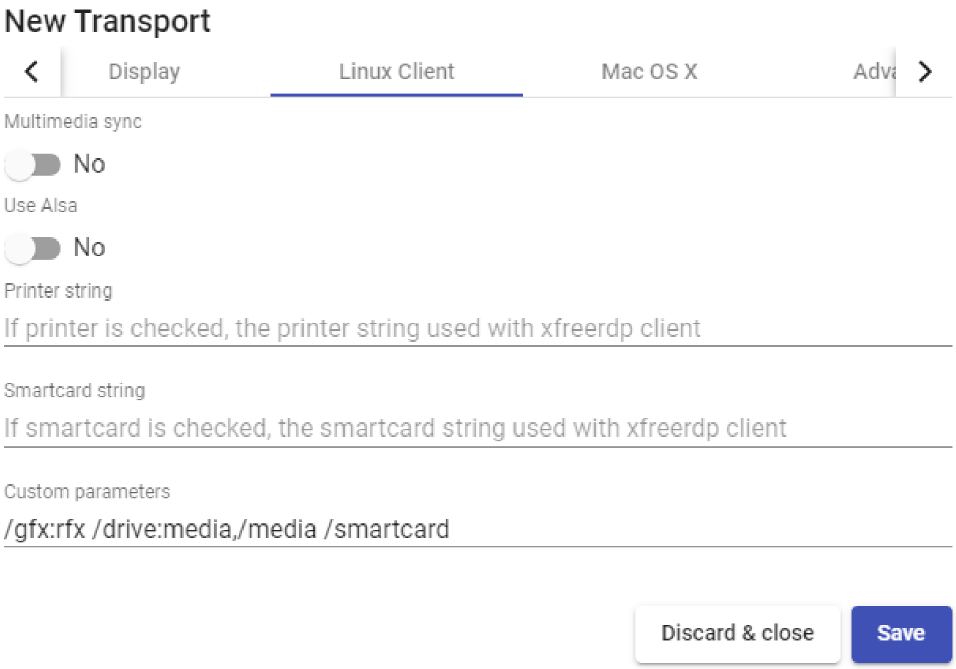
Multimedia sync: Enables the multimedia parameter on the FreeRDP client.

Use Alsa: Enables the use of audio through Alsa.

Printer string: Example: "Zebra","ZDesigner TM400 200 dpi (ZPL)"
("Zebra" is the name of the local printer, "ZDesigner TM400 200 dpi (ZPL)" is the exact name of the printer driver in Windows).

Smartcard string: Example: "Gemalto PC Twin Reader 00 00"
("Gemalto PC Twin Reader 00 00" *is the name of the smartcard).*

Custom parameters: You can specify any parameter supported by the FreeRDP client. (If several are indicated, they must be separated by spaces). They will be applied when connecting to the virtual desktop**.**



New Transport

Multimedia sync

No

Use Alsa

No

Printer string

If printer is checked, the printer string used with xfreerdp client

Smartcard string

If smartcard is checked, the smartcard string used with xfreerdp client

Custom parameters

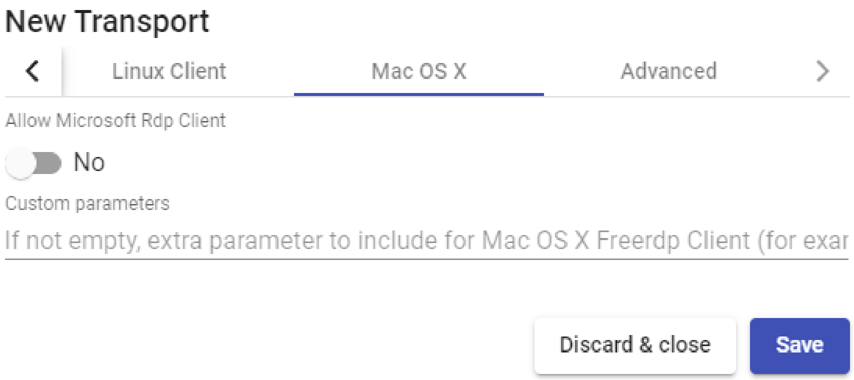
/gfx:rfx /drive:media,/media /smartcard

NOTE:
The screenshot shows some important parameters as an example: /gfx:rfx greatly improves video and audio quality, /drive:media,/media allows to redirect connected local drives in connection client, /smartcard allows to redirect a smartcard …

- Mac OS X (only applies to MacOS connection clients):

Allow Microsoft Rdp Client: Allows you to use the Microsoft RDP client instead of the FreeRDP client. In order to use it, it must be enabled and the FreeRDP client must not be installed on the MacOS connection client computer.

Custom parameters: Any parameter supported by the FreeRDP client can be indicated (if several are indicated, they must be separated by spaces). They will be applied when connecting to the desktop.

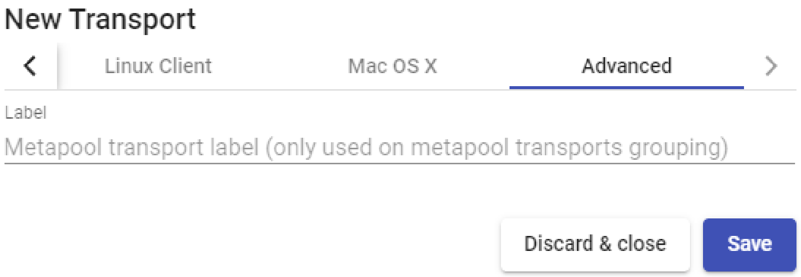


Allow Microsoft Rdp Client: No

Custom parameters: If not empty, extra parameter to include for Mac OS X Freerdp Client (for exar

- Advanced:

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these labels, we can indicate that a metapool has several transports.



Label: Metapool transport label (only used on metapool transports grouping)

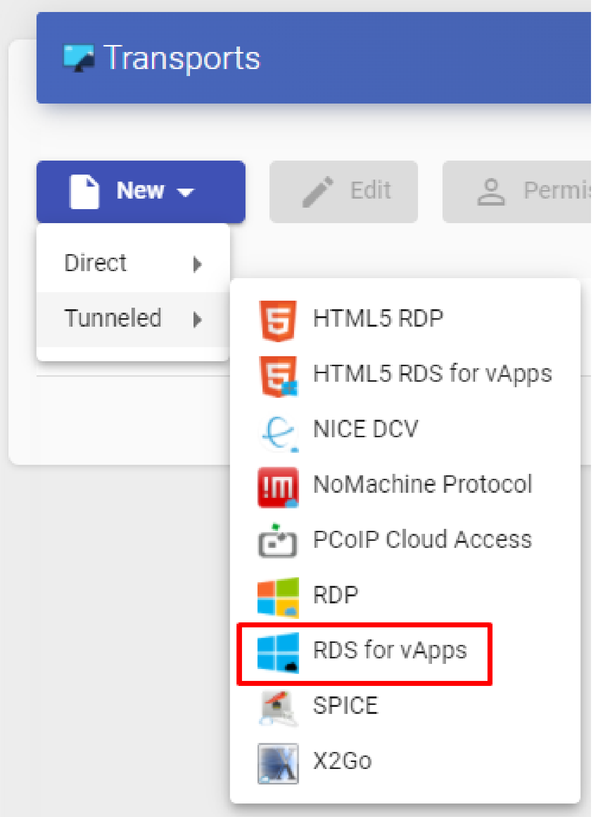
4.7.14 RDS For vApps (tunneled)

An "***RDS Transport (tunneled)***" allows access to virtual Windows applications by users located on a WAN using RemoteAPP. Connection clients can have Windows or Linux systems.

.

A Windows connection client must have RemoteAPP to open virtual applications. A Linux connection client must have the freerdp2 package to open virtual applications.

This transport uses the UDS Tunnel server to make the connection to the virtual applications. It must be previously configured for its correct operation.



In an "***RDS Transport (tunneled)***" he minimum parameters to configure are:

- Main:

Name: Name of the transport.

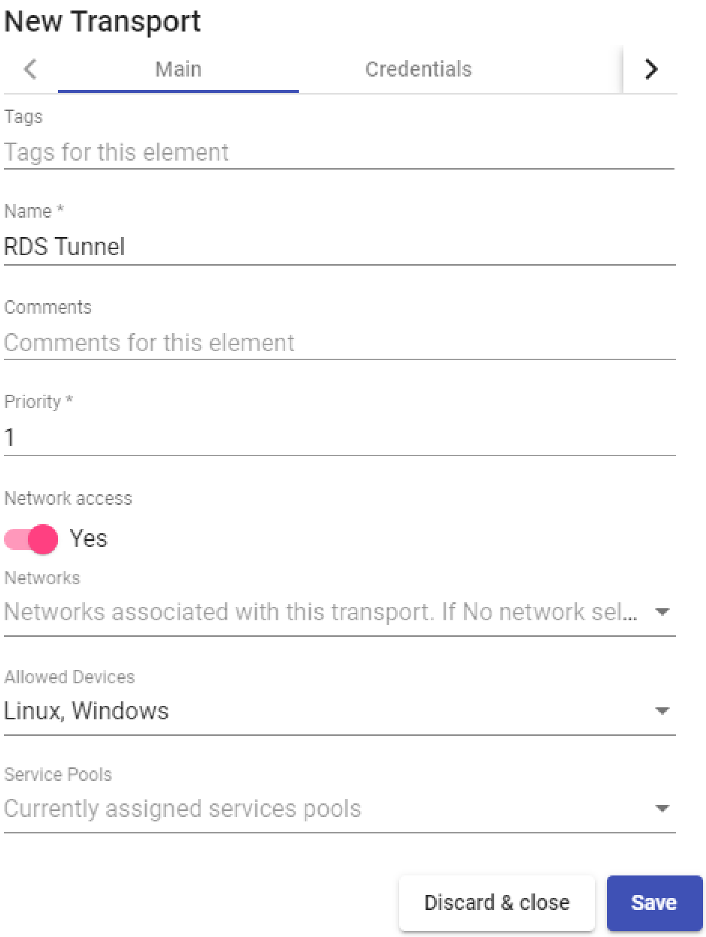
Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of a service

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the "***Networks***" field.

Networks: Network ranges, subnets or IP addresses indicated in the "*Networks*" of the "*Connectivity*" field. t is used together with the "*Network Access*" field to allow or disable user access to a service based on his network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "*Service Pools*" previously created.



New Transport

Tags: Tags for this element

Name *: RDS Tunnel

Comments: Comments for this element

Priority *: 1

Network access: Yes

Networks: Networks associated with this transport. If No network sel...

Allowed Devices: Linux, Windows

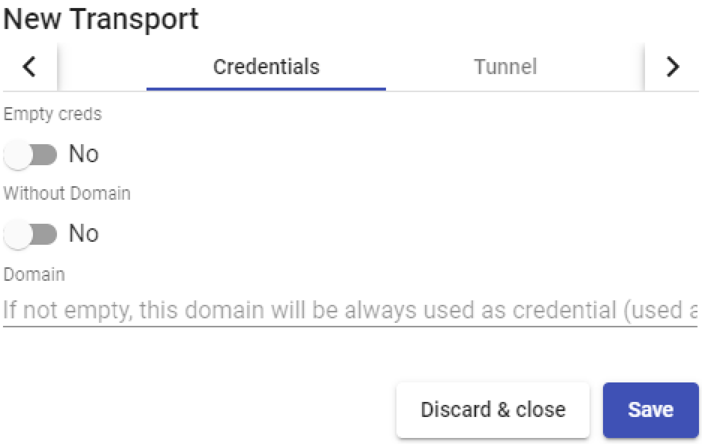
Service Pools: Currently assigned services pools

- Credentials:

Empty creds: If it is set to "*Yes*", when you make the connection to the service, it will ask you for the credentials to access the virtual application. If it is set to "*No*", the credentials entered in the UDS login portal will be redirected.

Without Domain: Indicates if the domain name is redirected together with the user.

Domain: Domain name that will be sent with the user's credentials.



New Transport

Empty creds

○ No

Without Domain

○ No

Domain

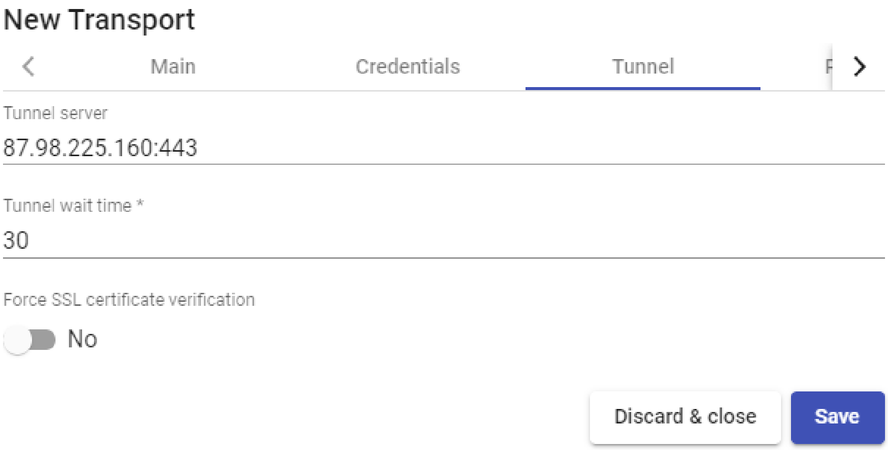
If not empty, this domain will be always used as credential (used a

- Tunnel:

Tunnel Server: IP address or name with the connection port of the UDS Tunnel server. If access to the desktop is done from a WAN, the public IP address or name of the UDS Tunnel server must be entered. Formato: *IP_Tunnel*:443 (default port).

Tunnel wait time: UDS Tunnel server ticket validity time for the connection.

Force SSL certificate verification: Enables certificate verification. The UDS Tunnel server must have a valid certificate installed.



New Transport

Tunnel server

87.98.225.160:443

Tunnel wait time *

30

Force SSL certificate verification

○ No

- Parameters:

Allow Smartcards: Enables the redirection of Smartcards.

Allow Printers: Enables printer redirection.

Local drives policy: Enables drive redirection:

- **Allow none:** No drive is redirected.
- **Allow PnP drives:** Only connected drives are redirected during an active session.

- ○ **Allow any drive:** All drives are redirected.

Force drives: Forces the redirection of specific drives. You can specify several separated by commas. (Ex: F:,G:)

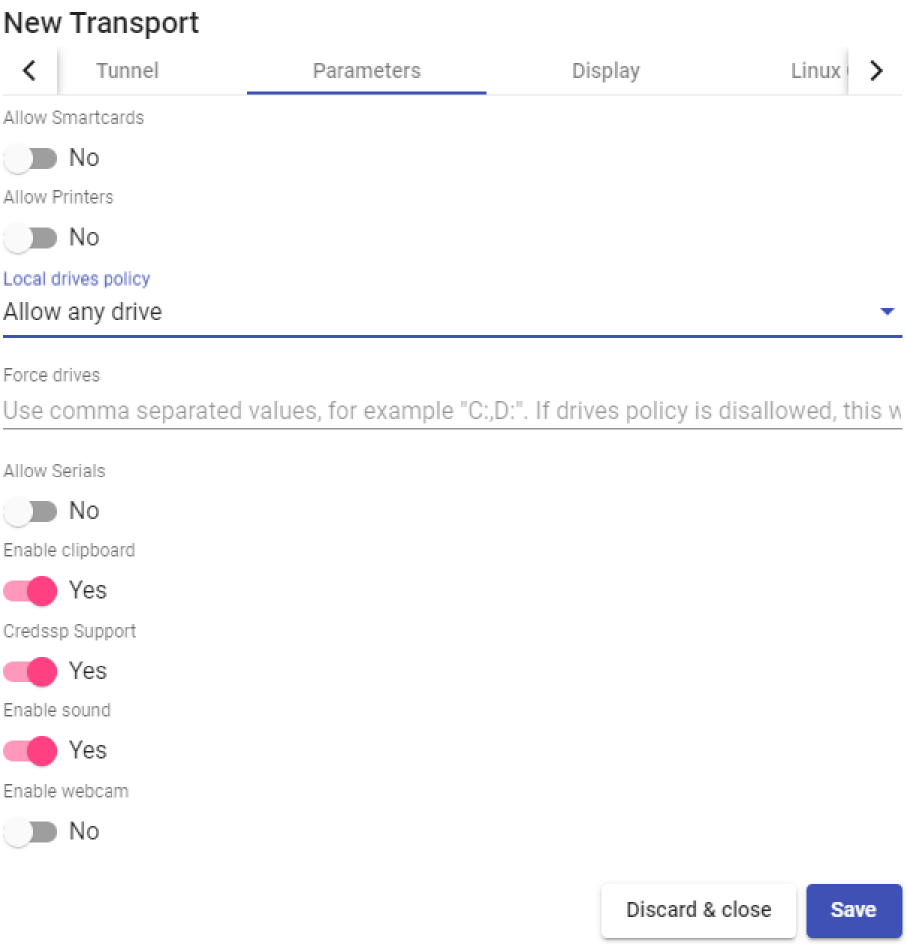
Allow Serials: Enables serial port redirection.

Enable clipboard: If activated, it will allow copy/paste between the connection clients and the virtual application.

Credssp Support: If it is activated, it will use “Credential Security Support Provider”.

Enable Sound: If enabled, it will allow the redirection of the audio from the virtual application to the connection client.

Enable webcam: If activated, it will allow the redirection of webcams between the connection client and the virtual application.



New Transport

Allow Smartcards: No

Allow Printers: No

Local drives policy: Allow any drive

Force drives: Use comma separated values, for example "C:,D:". If drives policy is disallowed, this w

Allow Serials: No

Enable clipboard: Yes

Credssp Support: Yes

Enable sound: Yes

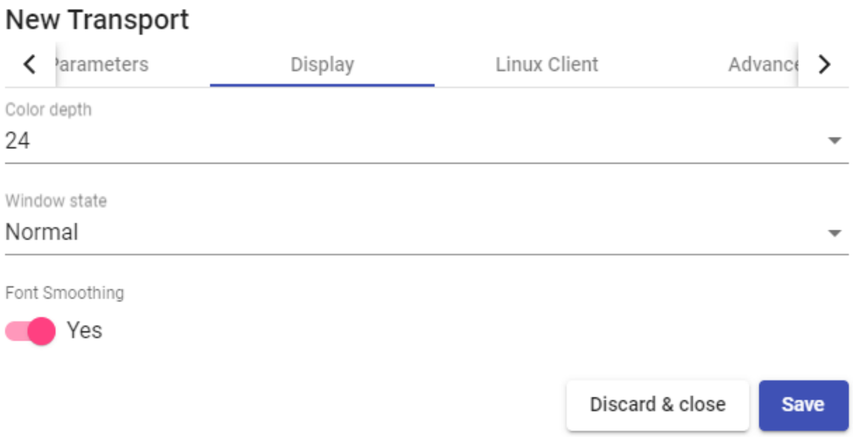
Enable webcam: No

- Display:

Color depth: Indicates the depth of the color.

Windows state: Indicates the window mode in which the application will start.

Font Smoothing: Enable font smoothing.



Color depth: 24

Window state: Normal

Font Smoothing: Yes

- Linux Client:

Execute as shell: Run an application in session mode offering a better visualization.

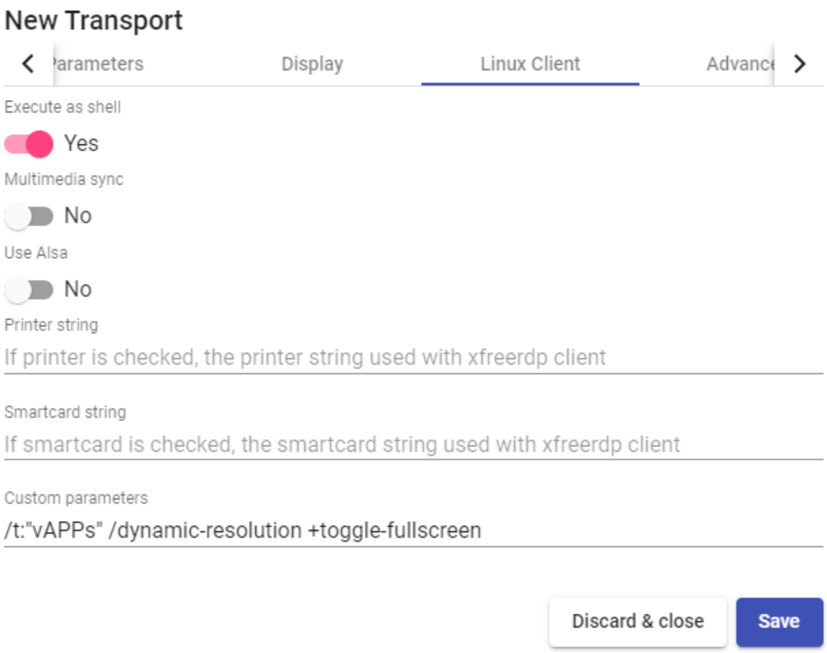
Multimedia sync: Enables multimedia parameter in FreeRDP.

Use Alsa: Enables the use of audio through Alsa.

Printer string: Example: "Zebra","ZDesigner TM400 200 dpi (ZPL)"
("Zebra" is the name of the local printer, "ZDesigner TM400 200 dpi (ZPL)" is the exact name of the printer driver in Windows).

Smartcard string: Example: "Gemalto PC Twin Reader 00 00"
("Gemalto PC Twin Reader 00 00" *is the name of the smartcard).*

Custom parameters: You can specify any parameter supported by the FreeRDP client. They will be applied when establishing the connection with the virtual application.



Execute as shell: Yes

Multimedia sync: No

Use Alsa: No

Printer string: If printer is checked, the printer string used with xfreerdp client

Smartcard string: If smartcard is checked, the smartcard string used with xfreerdp client

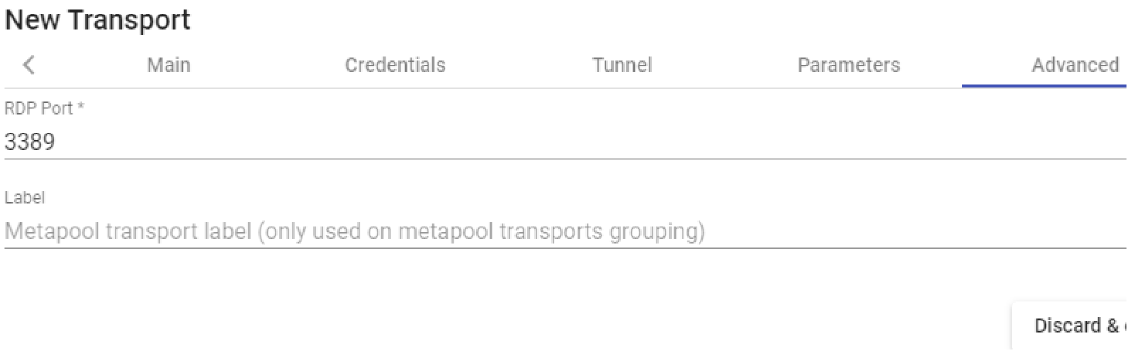
Custom parameters: /t:"vAPPs" /dynamic-resolution +toggle-fullscreen

NOTE:
The screenshot shows some important parameters as an example: /t:"name_aplication" allows you to force a title to the window (if not indicated, the name will be that of the service pool), /dynamic-resolution +toggle-fullscreen allows you to maximize the application window…

- Advanced:

RDP Port: Connection port against RDP server

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these tags, we can indicate that a metapool has several transports.



RDP Port *: 3389

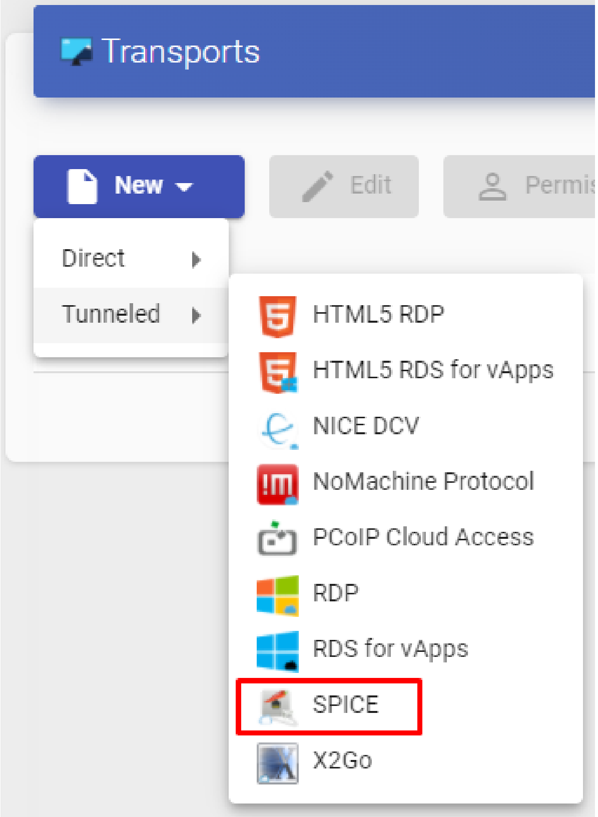
Label: Metapool transport label (only used on metapool transports grouping)

4.7.15 SPICE (tunneled)

An "***SPICE (tunneled)***" ransport allows access to Windows/Linux virtual desktops by users located on a WAN using the SPICE protocol. Connection clients must have the SPICE client (Virt-Manager) installed.

The SPICE transport can only be used with a service provider such as oVirt/Red Hat Enterprise Virtualization (RHV) and OpenNebula.

This transport uses the UDS Tunnel server to make the connection to the virtual applications. It must be previously configured for its correct operation.



In a "***SPICE (tunneled)***" transport the minimum parameters to configure are:

- Main:

Name: Name of the transport.

Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of a service.

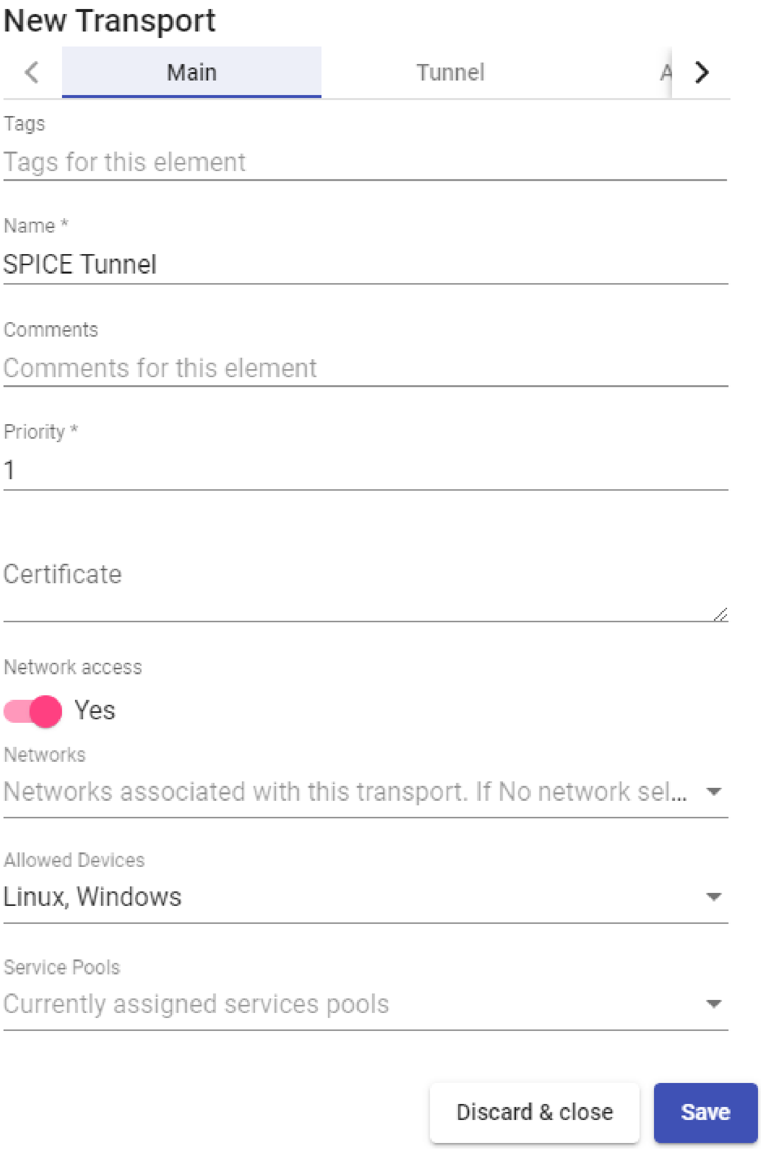
Certificate: Certificate generated in ovirt-engine / RHV-manager or OpenNebula necessary to connect with virtual desktops (usually hosted at **/etc/pki/ovirt-engine/certs/ca.cer**).

Networks Access: Allows or disables user access to a service based on the network from which he is accessing, and the network indicated in the "***Networks***" field.

Networks: Network ranges, subnets or IP addresses indicated in the "***Networks***" of the "***Connectivity***" field. It is used together with the "**Network Access**" field to allow or disable user access to a service based on their network location.

Allowed Devices: Enables access to the service only with selected devices. If none are selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "**Service Pools**" previously created.



New Transport

Tags: Tags for this element

Name *: SPICE Tunnel

Comments: Comments for this element

Priority *: 1

Certificate

Network access: Yes

Networks: Networks associated with this transport. If No network sel...

Allowed Devices: Linux, Windows

Service Pools: Currently assigned services pools

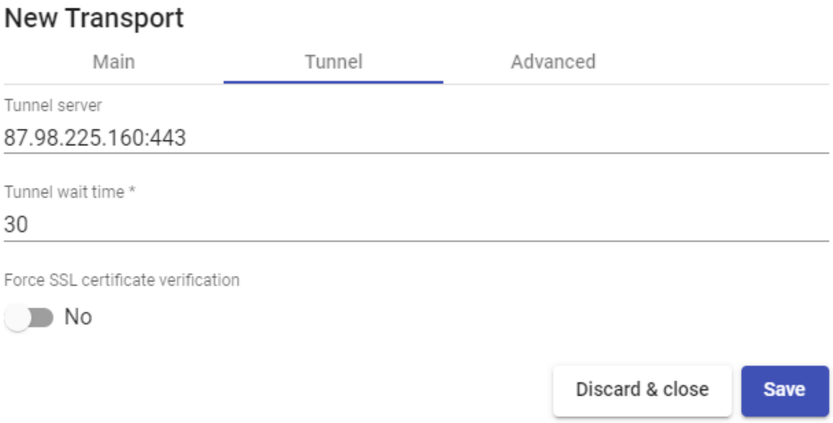
- Tunnel:

Tunnel Server: IP address or name with the connection port of the UDS Tunnel server. If access to the desktop is done from a WAN, the public IP address or name of the UDS Tunnel server must be entered. Format:

IP_Tunnel:443

Tunnel wait time: Validity time of the UDS Tunnel server ticket for the connection.

Force SSL certificate verification: Enables certificate verification. The UDS Tunnel server must have a valid certificate installed.



New Transport

Tunnel server: 87.98.225.160:443

Tunnel wait time *: 30

Force SSL certificate verification: No

- Advanced:

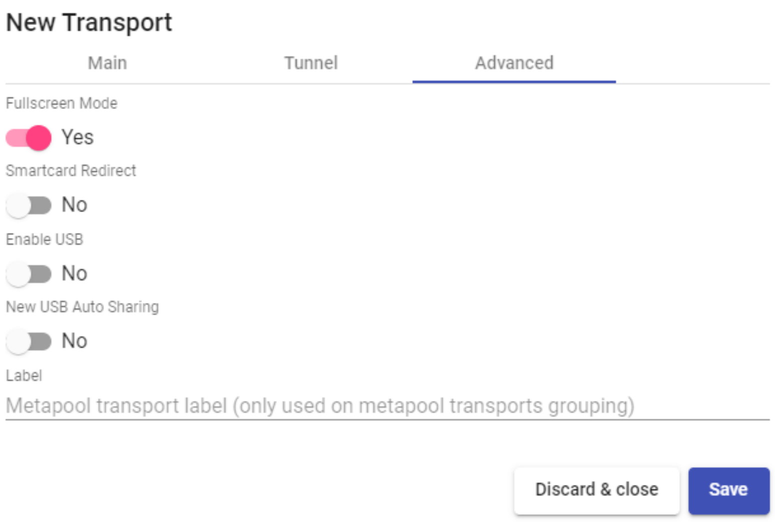
Fullscreen Mode: Enables the full screen when connecting to the virtual desktop.

Smartcard Redirect: Enables the redirection of smartcards on the virtual desktop.

Enable USB: Allows the redirection of devices connected to a USB port.

New USB Auto Sharing: Allows the redirection of PnP devices connected to a USB port.

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these tags, we can indicate that a metapool has several transports.



New Transport

Fullscreen Mode: Yes

Smartcard Redirect: No

Enable USB: No

New USB Auto Sharing: No

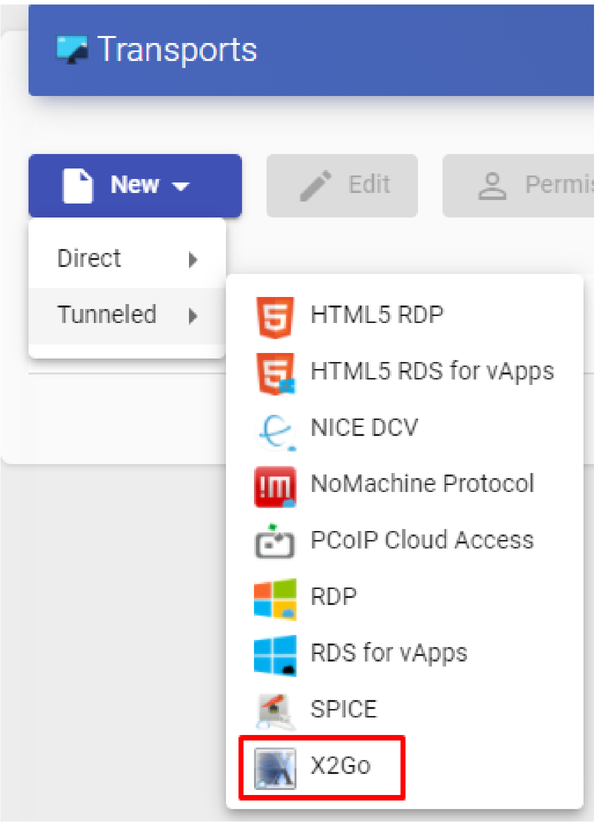
Label: Metapool transport label (only used on metapool transports grouping)

4.7.16 X2Go (tunneled)

An "*X2Go (tunneled)*" transport allows access to Linux virtual desktops by users using the X2Go software.

Both connection clients (client) and virtual desktops (server) must have X2Go installed and enabled.

This transport uses the UDS Tunnel server to make the connection against the virtual desktops. It must be previously configured for its correct operation.



In an "*X2Go (tunneled)*" transport the minimum parameters to configure are:

- Main:

Name: Name of the transport.

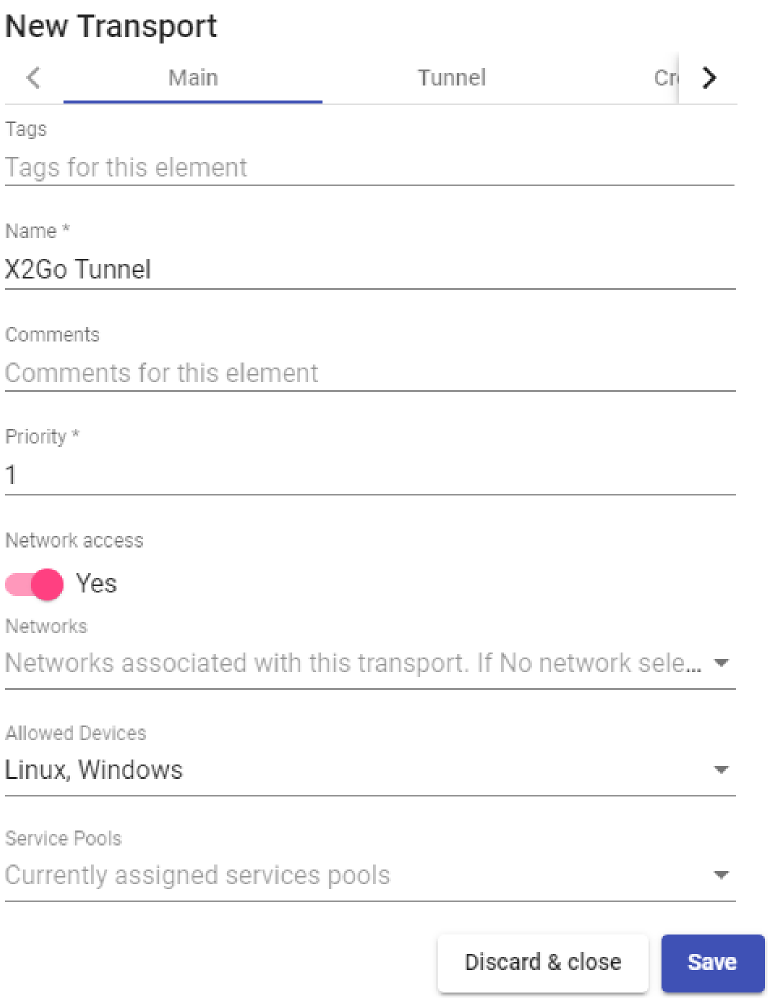
Priority: Priority that the transport will have. The lower that priority, the higher it will appear in the list of available transports for a service. The transport with the lowest priority will be the one used by default when clicking on the image of a service.

Networks Access: Allows or disables user access to a service based on the network from which it is being accessed and the network indicated in the "*Networks*" field.

Networks: Network ranges, subnets or IP addresses indicated in the "***Networks***" of the "***Connectivity***" field. It is used together with the "***Network Access***" field to allow or disable user access to a service based on their network location.

Allowed Devices: Enables access to the service only with selected devices. If none is selected, no filtering is performed.

Service Pools: Allows to assign this transport directly to one or more "***Service Pools***" created previously.



New Transport

Tags
Tags for this element

Name *
X2Go Tunnel

Comments
Comments for this element

Priority *
1

Network access
Yes

Networks
Networks associated with this transport. If No network sele...

Allowed Devices
Linux, Windows

Service Pools
Currently assigned services pools

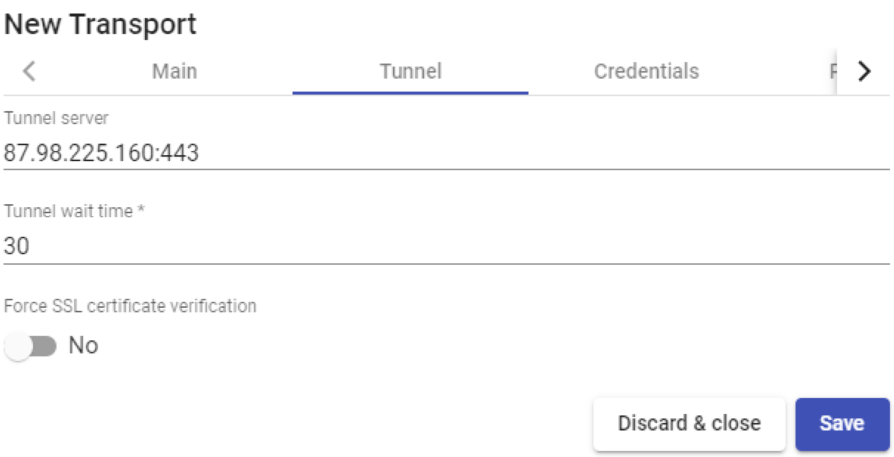
- Tunnel:

Tunnel Server: P address name with the connection port of the UDS Tunnel server. If access to the desktop is from a WAN, the public IP address or name of the UDS Tunnel server must be entered. Format:

IP_Tunnel:443

Tunnel wait time: Validity time of the UDS Tunnel server ticket for the connection.

Force SSL certificate verification: Enables certificate verification. The UDS Tunnel server must have a valid certificate installed.



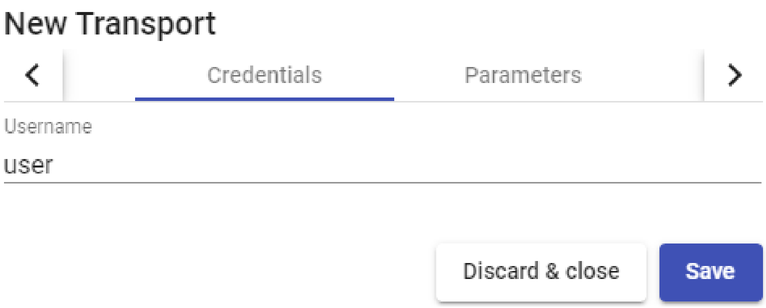
Tunnel server: 87.98.225.160:443

Tunnel wait time *: 30

Force SSL certificate verification: No

- Credentials:

Username: User name that will be used to log into the virtual desktop.



Username: user

- Parameters:

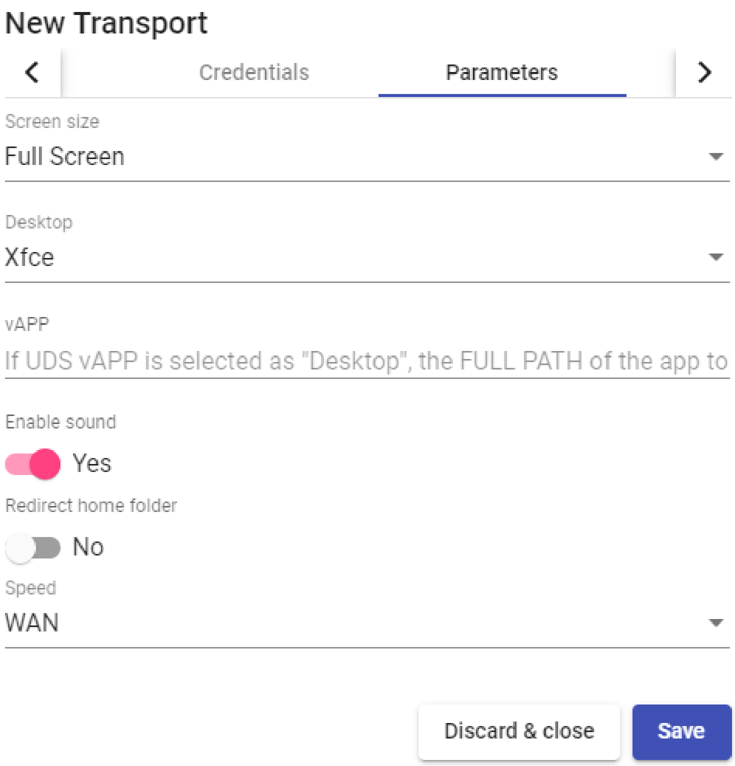
Desktop: Selection of the desktop manager (xfce, Mate, Gnome, etc…) or virtualization of Linux applications (UDS vAPP).

vAPP: Execution path of the application to be virtualized (only applicable if the parameter “Desktop” is selected “UDS vAPP”).

Enable sound: Enables sound.

Redirect home folder: Redirects the user's /home.

Speed: Optimization of the connection.



New Transport

Screen size: Full Screen

Desktop: Xfce

vAPP: If UDS vAPP is selected as "Desktop", the FULL PATH of the app to

Enable sound: Yes

Redirect home folder: No

Speed: WAN

- Advanced:

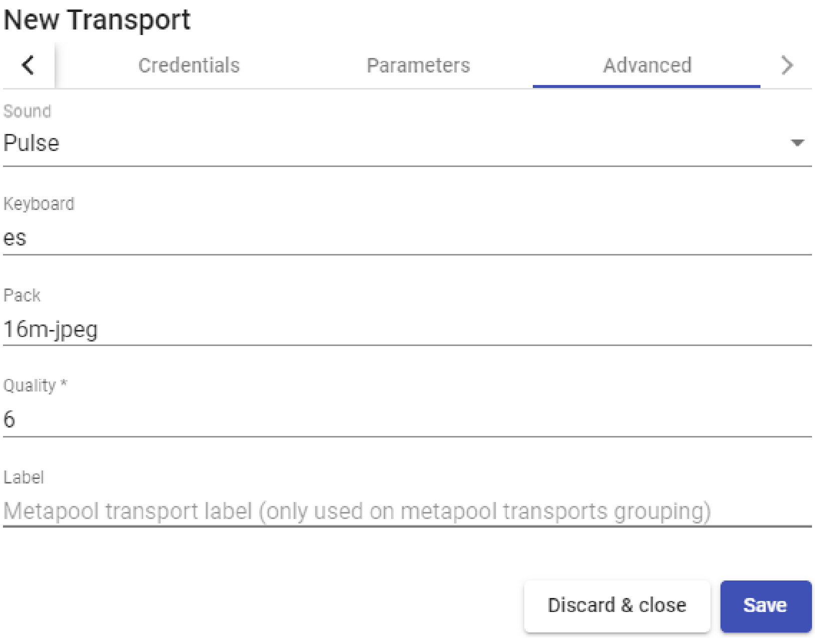
Sound: Selection of the type of audio server.

Keyboard: Keyboard language.

Pack: Method used to compress images

Quality: Image quality (0-9)

Label: It allows to group transports to be shown, through the name of a label, in a meta pool. By using these tags, we can indicate that a metapool has several transports.



New Transport

Sound: Pulse

Keyboard: es

Pack: 16m-jpeg

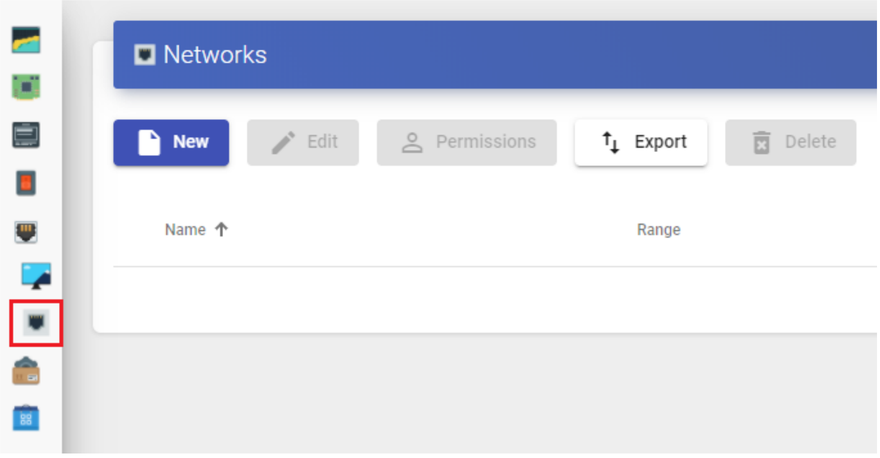
Quality *: 6

Label: Metapool transport label (only used on metapool transports grouping)

4.8 Networks

UDS allows you to register different networks to view or hide the access of connection clients to virtual desktops or applications (when accessing the UDS login portal, the IP address of the connection client is detected). These networks will be the ones that together with the "***Transport***" will define what type of access users will have to their virtual desktops or applications generated by UDS.

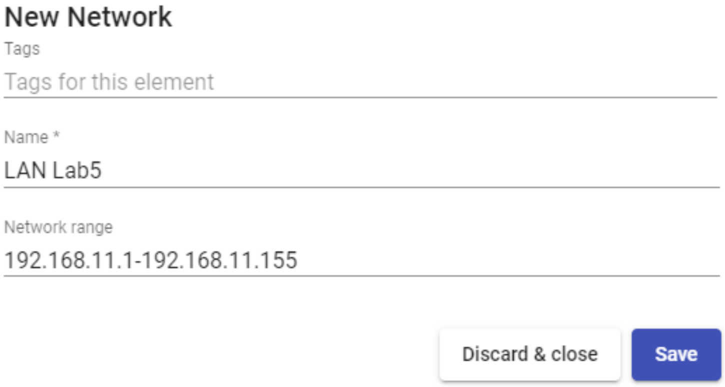
To add a network, go to the"***Connectivity***" section and select “***Networks***”.



Indicate a descriptive name and a network range, complete subnet or IP address.

The following formats are supported:

- Unique IP address: xxx.xxx.xxx.xxx (For example: 192.168.11.33).
- Entire subnet: xxx.xxx.xxx.xxx/x (For example: 192.168.11.0/24).
- IP address range: xxx.xxx.xxx.xxx-xxx.xxx.xxx.xxx (For example: 192.168.11.1-192.168.11.155).



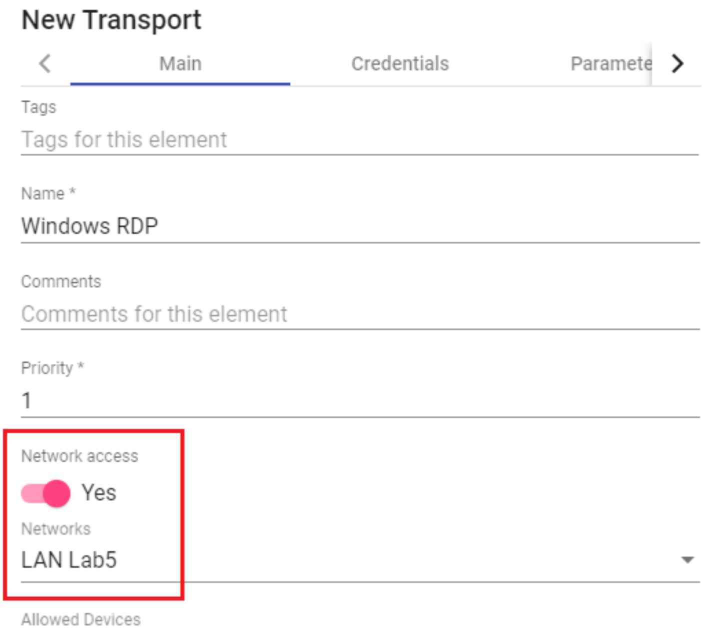
New Network

Tags: Tags for this element

Name *: LAN Lab5

Network range: 192.168.11.1-192.168.11.155

The defined networks will appear available in the transports. You can configure whether a connection client that is in that network displays the transport or not:



New Transport

Tags: Tags for this element

Name *: Windows RDP

Comments: Comments for this element

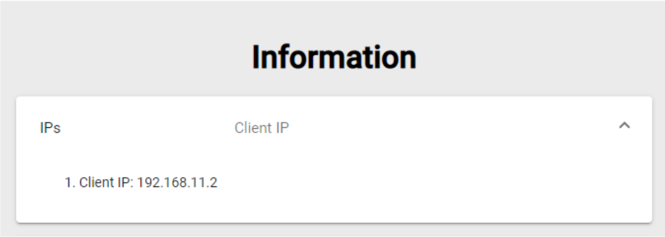
Priority *: 1

Network access: Yes

Networks: LAN Lab5

Allowed Devices

If a user has administration rights, he will see the IP address that UDS detects in the connection client in the user's services dashboard.

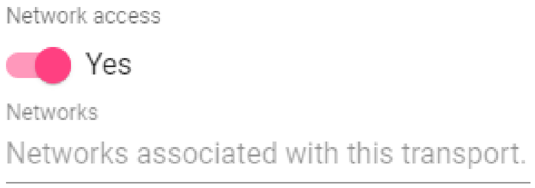


Information

IPs — Client IP

1. Client IP: 192.168.11.2

If no networks are defined on a transport, the system will not limit access to desktop services and virtual applications from any location



Network access

Yes

Networks

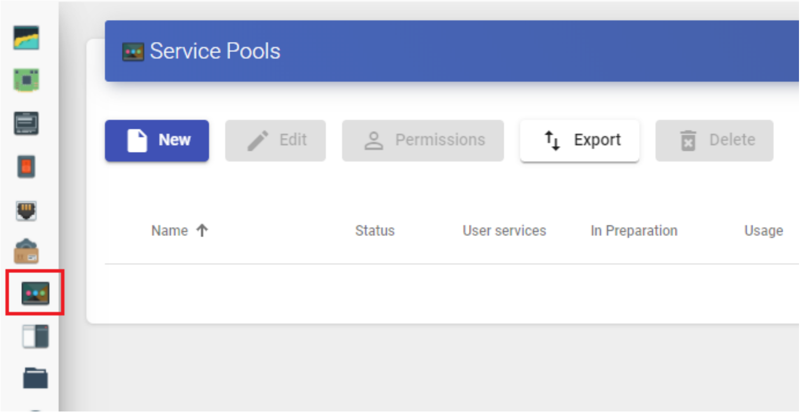
Networks associated with this transport.

4.9 Service Pools

The creation of a "*Service Pool*" will allow the deployment of desktop services or virtual applications, which will be available for access by different groups of users.

The necessary elements to create a "**Service Pools**" are a "**Base Service**" (composed of a "**Service Providers**" + a service created in it) and an "**OS Manager**". Once created, you will have to assign one or several user groups and one or more transports to enable user access.

To create a"*Service Pool*" go to the"*Pools*" section and select"*Service Pool*".



To configure a"*Service Pool*" it will be necessary to indicate:

- Main:

Name: Name of the "*Service Pool*" (this name will be the one shown to a user to access his desktop or virtual application).

In this section you can add variables to display information about the services:

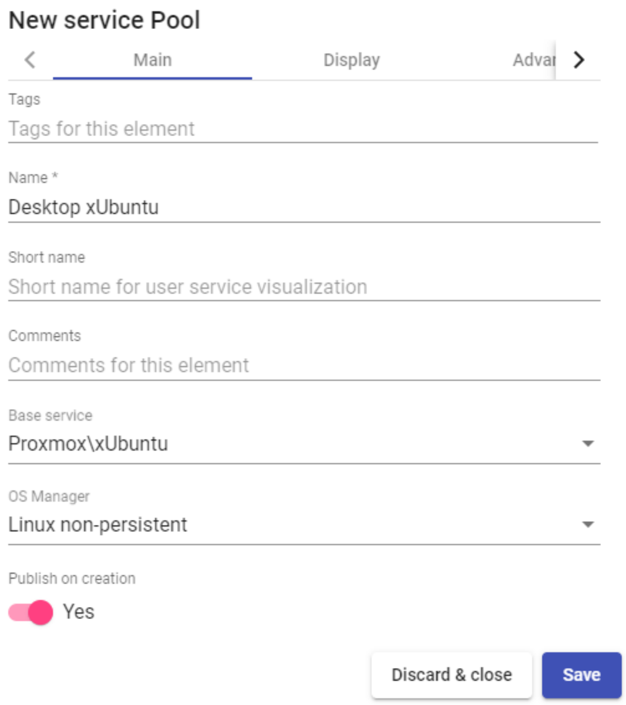
- **{use}**: Indicates the percentage of pool use (calculated based on the maximum services to be provided and the services assigned).
- **{total}**: Total number of machines (data extracted from the maximum services to be provided from the service pool).
- **{usec}**: Number of machines being used by users in the pool.
- **{left}**: Number of machines available in the pool for user connection.

Short name: If indicated; it will be the name of the service that will be shown to the user. When hovering over it, the content of the "***Name***" field will appear.

Base Service: Base service to be used (virtual desktop or application). It is made up of a service provider and a base service previously configured in the "***Services***".

OS Manager: "***OS Manager***" previously created whose configuration will be applied to each of the generated virtual desktops. In the case of publishing a vAPP service, it will also be required. But if you use a "***Static IP***", type service, this field will not be used.

Publish on creation: If enabled, when we save the service pool, the system will automatically launch the first publication. If it is set to "***No***", it will be necessary to launch the publication of the service manually (from the "***Publications***" tab).



New service Pool

Tags: Tags for this element

Name *: Desktop xUbuntu

Short name: Short name for user service visualization

Comments: Comments for this element

Base service: Proxmox\xUbuntu

OS Manager: Linux non-persistent

Publish on creation: Yes

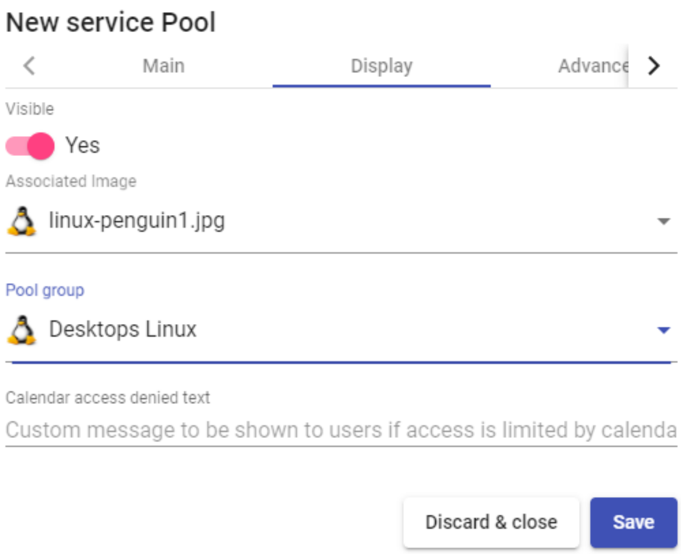
- Display:

Visible: If disabled, the"**Service Pool**" will not be shown as available to users on the UDS services page (“***User mode***”).

Associated Image: Image associated to the service. It has to be previously added to the image repository, accessible from the “***Tools***” – “***Gallery***” section.

Pool group: Allows to group different services. To assign a “***Pool group***”, it must be previously created in the “***Pools***” – “***Groups***” section.

Calendar Access denied text: Text that will be displayed when a service has access denied by the application of an access calendar.



New service Pool

Visible: Yes

Associated Image: linux-penguin1.jpg

Pool group: Desktops Linux

Calendar access denied text: Custom message to be shown to users if access is limited by calenda

- Advanced:

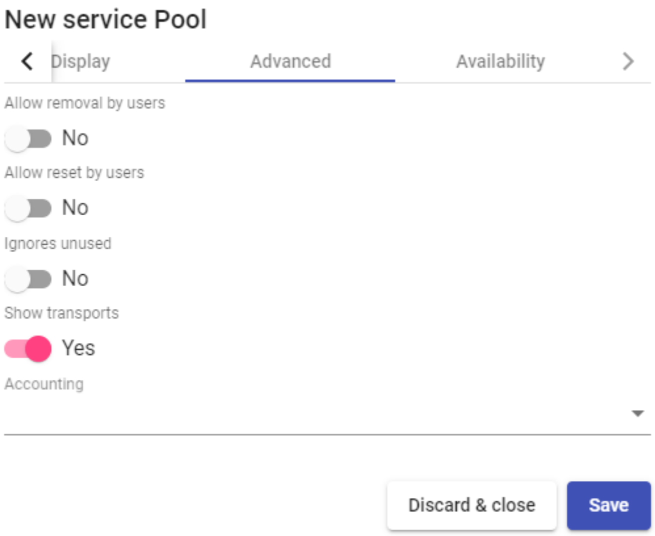
Allow removal by users: If enabled, users can remove the services assigned to them. If the service is a virtual desktop auto-generated by UDS, it will be deleted and a new one will be assigned to it on the next connection. If it is another type of service (vAPP / Static IP), the assignment will only be removed and a new one will be assigned on the next connection.

Allow reset by users: If it is activated, the user will be able to restart or reset the services assigned to him (only applies to virtual desktops auto-generated by UDS).

Ignores unused: If enabled, non-persistent user services that are not in use will not be removed.

Show transports: With this option activated, all the transports assigned to the service will be displayed. If it is not activated, only the default transport with the highest priority (The lowest number in the “***priority***” field of transport) will be displayed.

Accounting: Assigning a service to a previously created “***Accounts***” (“***Pools***” – “***Accounts***”)



New service Pool

Allow removal by users

No

Allow reset by users

No

Ignores unused

No

Show transports

Yes

Accounting

- Availability:

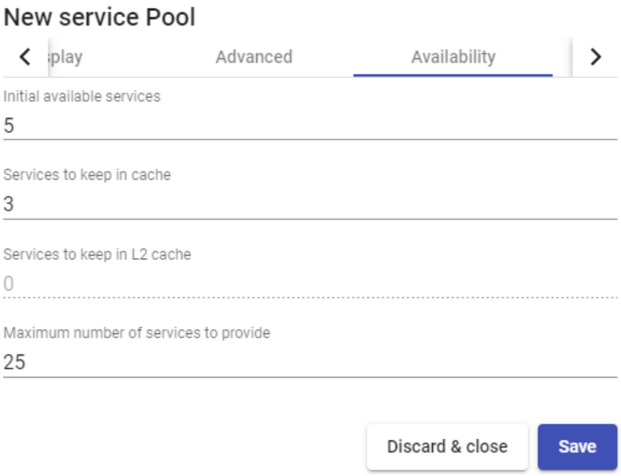
Initial available services: The minimum number of virtual desktops created, configured and assigned/available for the service.

Services to keep in cache: Number of virtual desktops available. These will always be configured and ready to be assigned to a user (they will be automatically generated until the maximum number of machines indicated in the"***Maximum number of services to provide***" field is reached).

Services to keep in L2 cache: Number of virtual desktops in sleep or shutdown state. These desktops will be configured and ready for allocation when the system demands new cached desktops.

The virtual desktops generated at the L2 cache level will be cached as soon as the system demands them. They will never be directly assigned to users.

Maximum number of services to provide: Maximum number of virtual desktops created by the system in the"***Service Pool***" (desktops generated in L2 cache will not be counted).



New service Pool

Initial available services: 5

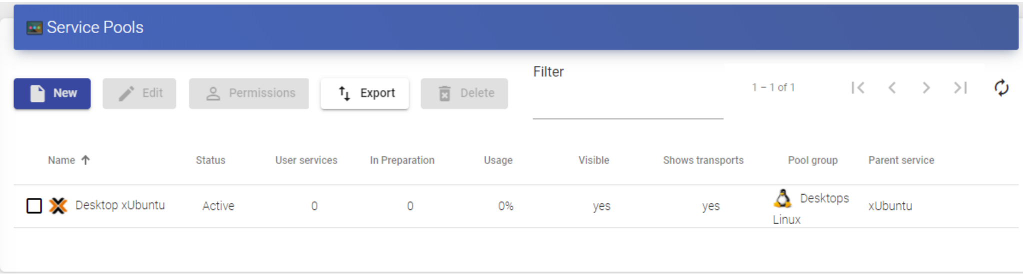
Services to keep in cache: 3

Services to keep in L2 cache: 0

Maximum number of services to provide: 25

Save the “***Service Pool***” and the system will start to generate virtual desktops based on the configured cache (Availability tab).

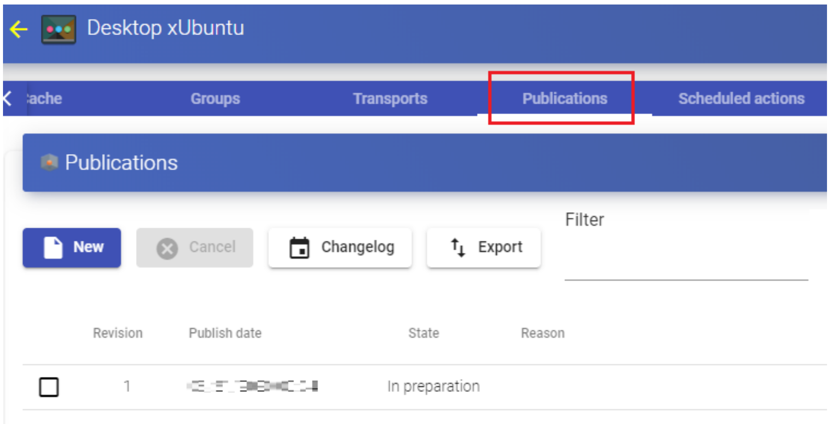
Using the "***Delete***" button you can completely delete a"***Service Pool***" and with "***Edit***" you can modify it.



Service Pools

Name ↑	Status	User services	In Preparation	Usage	Visible	Shows transports	Pool group	Parent service
□ Desktop xUbuntu	Active	0	0	0%	yes	yes	Desktops Linux	xUbuntu

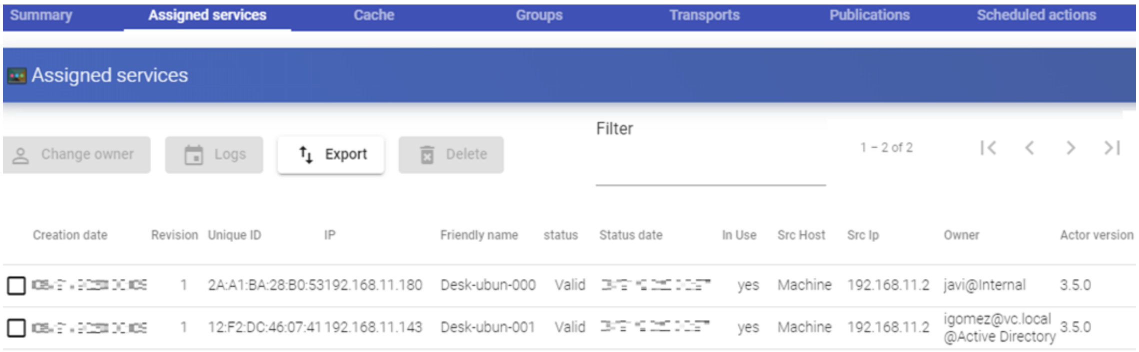
If you access the “***Service Pool***” created, in the “***publications***” section (if you have checked the "***Publish on creation***"), he system will start with the publication of the service generating the base machine on which the virtual desktops will be based.



	Revision	Publish date	State	Reason
□	1	[redacted]	In preparation	

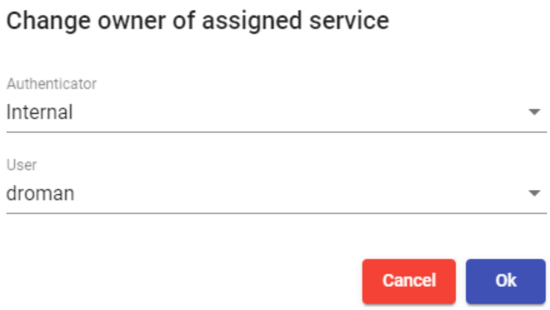
Once you have created a"*Service Pool*", if you access it, you will find the following control and configuration menus:

- **Assigned Services:** Virtual desktops that have been assigned to users. Displays information about the desktop creation date, the revision (or publication) number on which the desktop is generated, the MAC address of the VM's network card, the DNS and IP name of the virtual desktop, the status of the desktop, if it is in use, the name and IP of the connection client, the owner of the machine and the version of the UDS Actor installed on the template machine.



	Creation date	Revision	Unique ID	IP	Friendly name	status	Status date	In Use	Src Host	Src Ip	Owner	Actor version
□	[redacted]	1	2A:A1:BA:28:B0:53	192.168.11.180	Desk-ubun-000	Valid	[redacted]	yes	Machine	192.168.11.2	javi@Internal	3.5.0
□	[redacted]	1	12:F2:DC:46:07:41	192.168.11.143	Desk-ubun-001	Valid	[redacted]	yes	Machine	192.168.11.2	igomez@vc.local @Active Directory	3.5.0

Selecting the virtual desktop and clicking on "*Change owner*", you can change the user assigned to the desktop

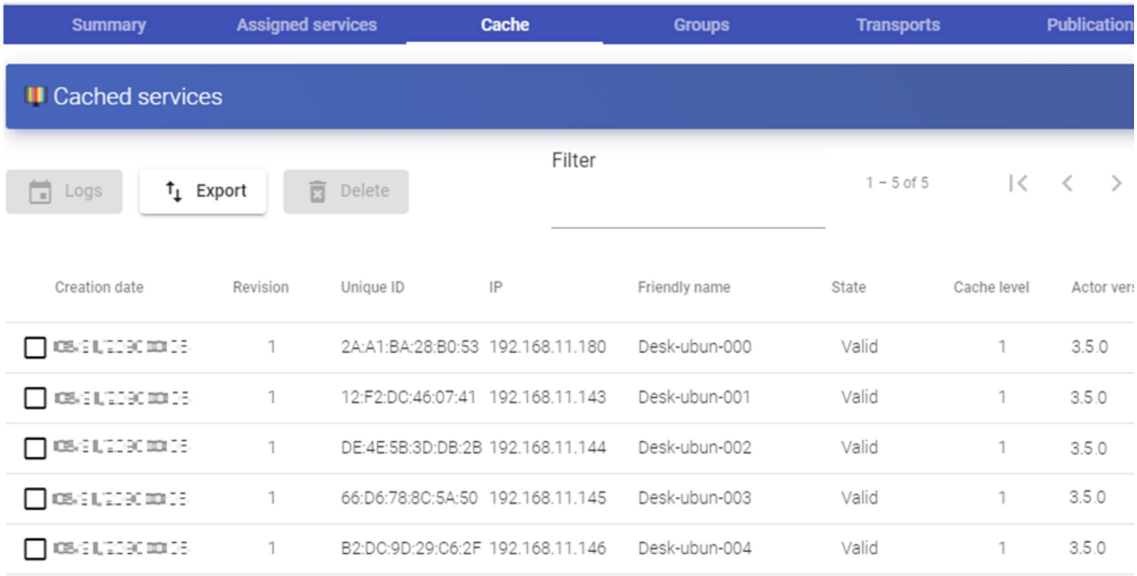


Authenticator
Internal

User
droman

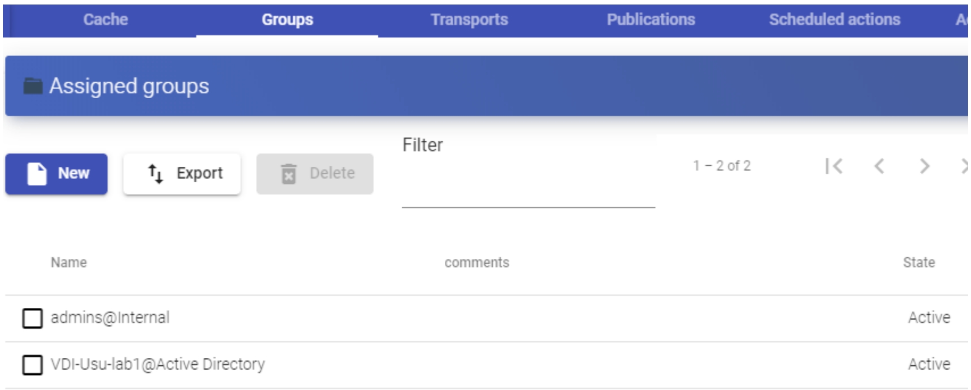
By clicking on "*Delete*" you can delete it manually and on "*Logs*" you will see all the information reported by the "*Actor UDS*" installed on the desktop.

- **Cache**: Virtual desktops available for user connection, (including L2 cache machines). These desktops will go through different states:
  - **In Preparation**: In this state, the virtual desktops are being created on the virtualization platform.
  - **Waiting OS:** In this state, the virtual desktops are being configured with the parameters indicated in the "***OS Manager***" (name change, inclusion in the domain, etc ...)
  - **Valid:** When a virtual desktop is in this state, it will mean that it is available for user access.



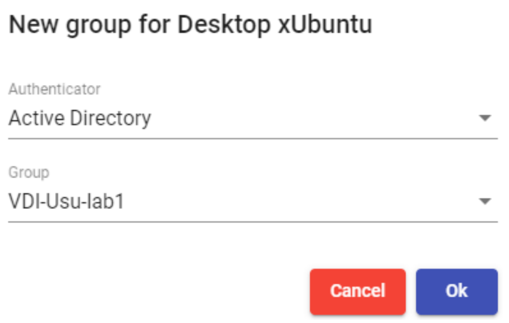
	Creation date	Revision	Unique ID	IP	Friendly name	State	Cache level	Actor vers
□	[illegible]	1	2A:A1:BA:28:B0:53	192.168.11.180	Desk-ubun-000	Valid	1	3.5.0
□	[illegible]	1	12:F2:DC:46:07:41	192.168.11.143	Desk-ubun-001	Valid	1	3.5.0
□	[illegible]	1	DE:4E:5B:3D:DB:2B	192.168.11.144	Desk-ubun-002	Valid	1	3.5.0
□	[illegible]	1	66:D6:78:8C:5A:50	192.168.11.145	Desk-ubun-003	Valid	1	3.5.0
□	[illegible]	1	B2:DC:9D:29:C6:2F	192.168.11.146	Desk-ubun-004	Valid	1	3.5.0

- Groups: To allow users to connect, it is necessary to assign access groups or metagroups. These groups or metagroups must be created in the "Authenticators" section and you can assign one or more access groups or metagroups to each "Service Pool".



	Name	comments	State
□	admins@Internal		Active
□	VDI-Usu-lab1@Active Directory		Active

Select the "**Authenticator**" and based on your choice, choose the "**Group Name**".

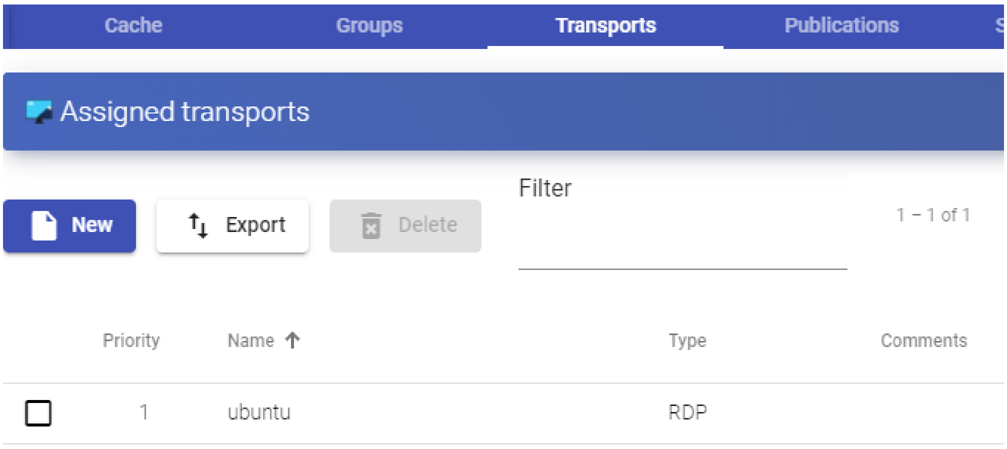


New group for Desktop xUbuntu

Authenticator: Active Directory

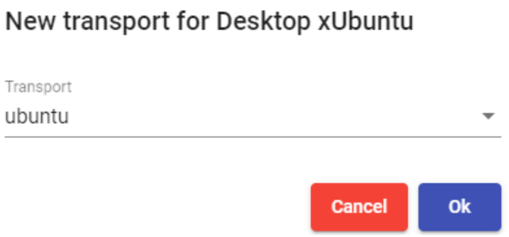
Group: VDI-Usu-lab1

- **Transports:** The “Transports” to make the connection with the virtual desktop (Previously added in the “Transports” section) will be indicated. The "Transports" with the lowest priority will be the ones configured by default by the system. To use the rest of the transports, the user will have to open the drop-down menu on the virtual desktop access screen and select the one that corresponds.



	Priority	Name	Type	Comments
□	1	ubuntu	RDP	

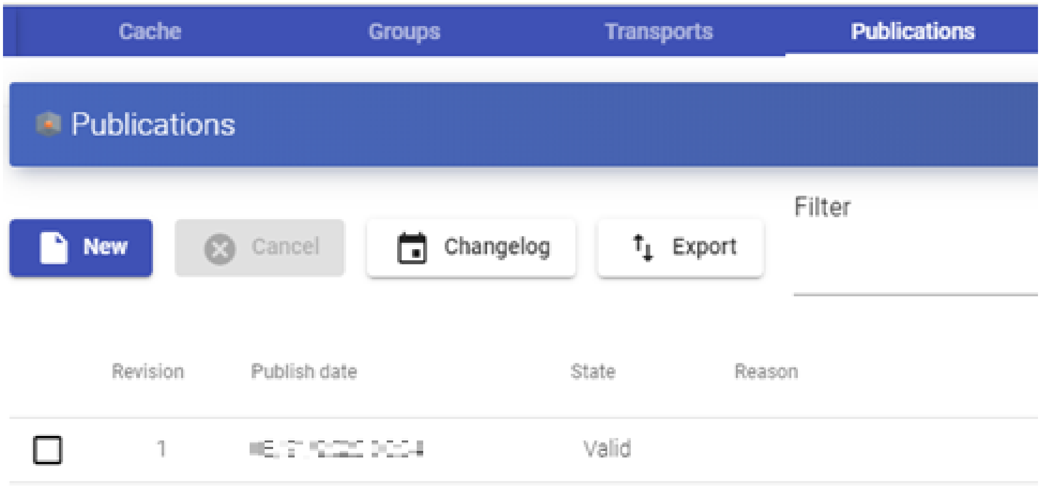
Select the "Transport" that you want to use in this "Service Pool" and save.



New transport for Desktop xUbuntu

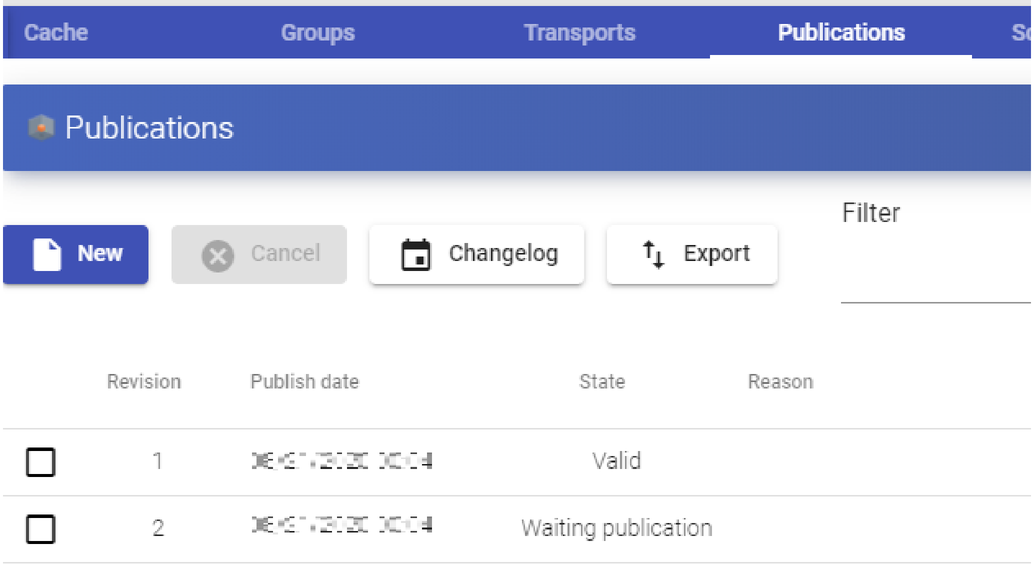
Transport: ubuntu

- **Publications:** From this menu, you can make a new publication of the service (for example, if you have updated your base machine with new applications or OS patches and you want all your virtual desktops to take these changes). Once the publishing process is finished, the entire system cache will be regenerated with the new desktops based on this latest publication.



	Revision	Publish date	State	Reason
□	1	[redacted]	Valid	

If you make a new publication, a new base machine will be generated and, once available, the system will proceed to eliminate the virtual desktops of the previous version and generate new ones based on the new publication



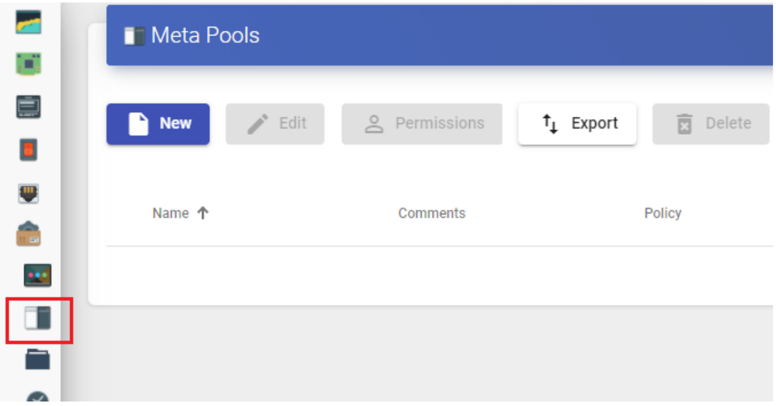
	Revision	Publish date	State	Reason
□	1	[redacted]	Valid	
□	2	[redacted]	Waiting publication	

4.10 Meta Pools

The creation of a "**Meta Pool**" will allow access to desktop services or vApps made up of different "**Services Pools**". These Pools will work together providing different services in a completely transparent way for users.

The "**Service Pools**" that form a "**Meta Pool**" will work under a policy that will allow the provision of services according to the needs of the Pool. Currently, the supported policies will be defined by priorities, platform capacity and use.

To create a "**Meta Pool**", go to the "**Pools**" section and select "**Meta Pools**".



To configure a "***Meta Pool***" it will be necessary to indicate:

- Main:

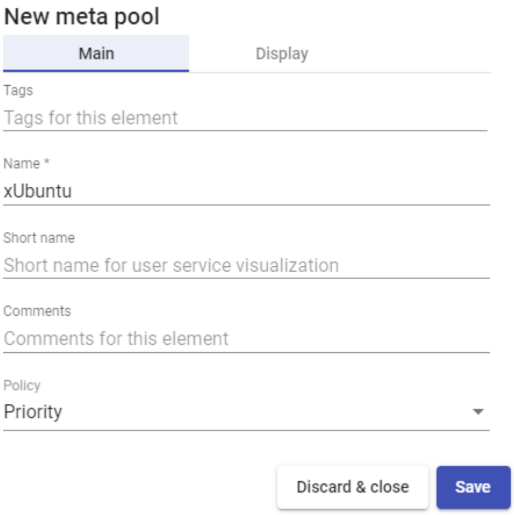
Name: Name of the "**Meta Pool**" (this name will be the one that is shown to a user to access his service: virtual desktop or application)

Short name: If indicated, it will be the name of the service that will be shown to the user. When hovering over it, the content of the "**Name**" field will appear".

Policy: Policy that will be applied when generating services in the "**Services Pools**" that are part of the "**Meta Pool**".

- **Evenly distributed**: The services will be created and consumed equally in all the "**Services Pool**" that make up the "**Meta Pool**".
- **Priority**: The services with the highest priority will be created and consumed from the "**Service Pool**" (the priority is defined by the "**priority**" field. The lower the value of this field, the more priority the element will have). When the "**Service Pool**" reaches the maximum number of services, the services of the next one will be consumed.

- **Greater % available**: The services will be created and consumed from the "**Service Pool**" that has the highest percentage of free use.



New meta pool

Tags: Tags for this element

Name *: xUbuntu

Short name: Short name for user service visualization

Comments: Comments for this element

Policy: Priority

- ○ Display:

Associated Image: Image associated to the "**Meta Pool**". It has to be previously added to the image repository and accessible from the "**Tools**" – "**Gallery**" section.
.

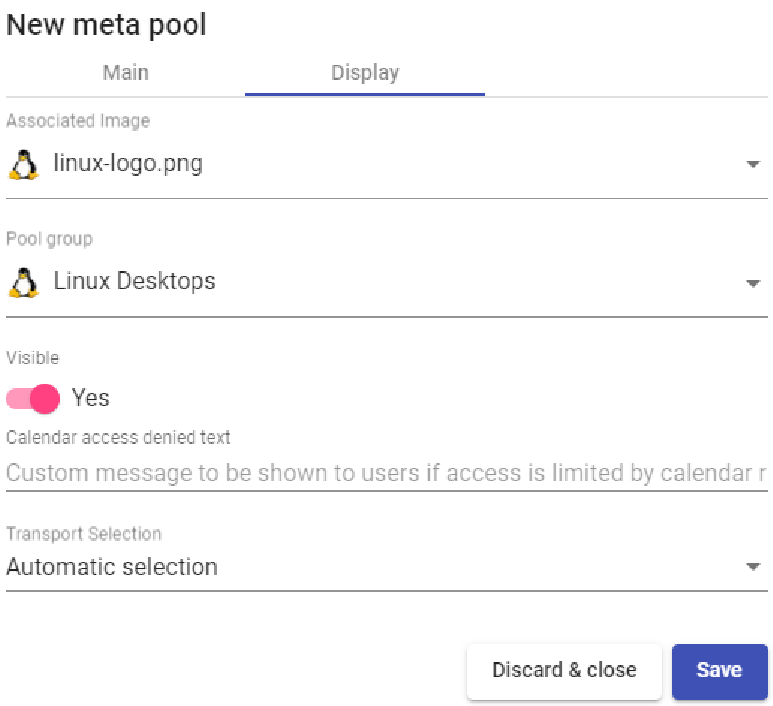
Pool group: Enables the ability to group different "**Meta Pools**" in order to assign a "**Pool group**". It must be previously created in the "**Pools**" – "Groups" section.

Visible: If disabled, the "**Meta Pool**" will not be shown as available to users on the UDS services page ("**User mode**").

Calendar Access denied text: Text that will be displayed when the "**Meta Pool**" has access denied by the application of an access calendar

Transport Selection: It will indicate how the transports will be assigned to the "***meta pool***":

- **Automatic selection**: The transport available and with the lowest priority assigned to the "**Service Pool**" will be available in the "**meta pool**". Transport selection is not allowed.
- **Use only common transports**: Those existing transports that are shared by all the "**Service Pool**" will be available in the "**meta pool**".
- **Group Transports by label**: Those transports that have different and grouped "**labels**" will be available in the "**meta pool**" (this field is inside each "**Transport**" in the "**advanced**" tab).



New meta pool

Associated Image: linux-logo.png

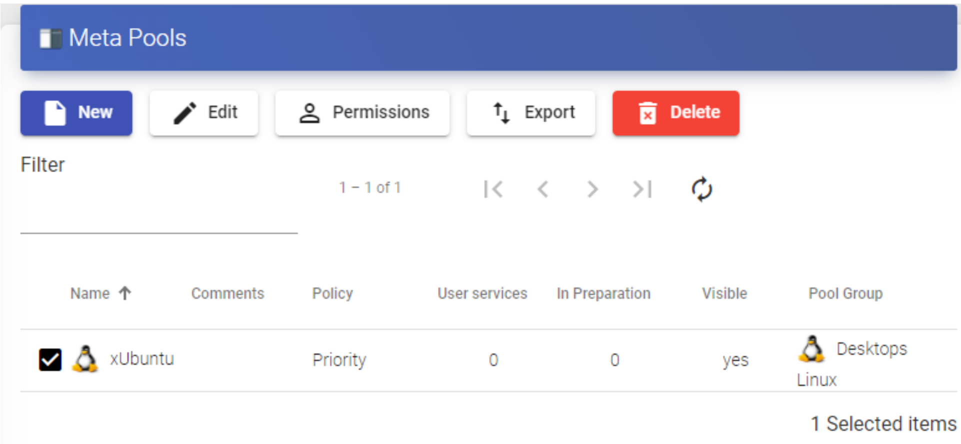
Pool group: Linux Desktops

Visible: Yes

Calendar access denied text: Custom message to be shown to users if access is limited by calendar r

Transport Selection: Automatic selection

Save the configuration and you will have a valid “**Meta Pool**” to start registering “**Services Pools**”.



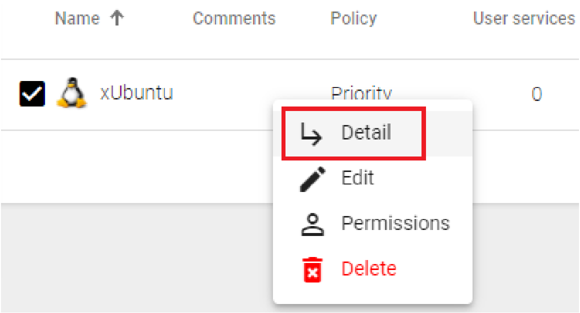
Meta Pools

Name	Comments	Policy	User services	In Preparation	Visible	Pool Group
☑ xUbuntu		Priority	0	0	yes	Desktops Linux

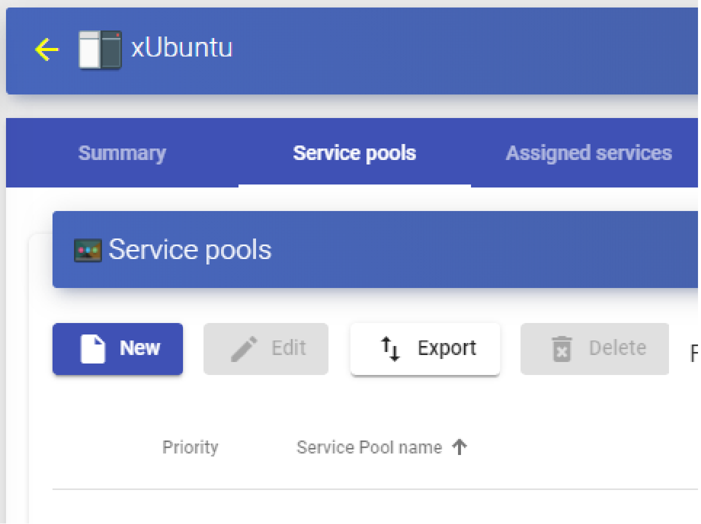
1 Selected items

To modify any parameter in an existing “**Meta Pool**”, select it and click on “**Edit**”.

Once created, you must add “**Services Pools**”. To do this, double click on the created “**Meta Pool**” or select “**Detail**” in the provider menu:



Click on “**New**” to add all the “**Services Pools**” that the “**Meta Pool**” will contain. You can add as many as you need, combining services hosted on different virtualization platforms (VMware, KVM, Azure, etc…), application servers and static devices.

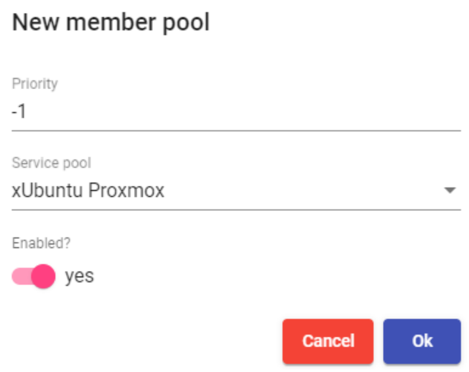


To add a “**Service Pool**” you must indicate the following parameters:

Priority: Priority that the “**Service Pool**” will have in the “**Meta Pool**”. The lower the value, the more priority it has with respect to the rest of the elements.

Service pool: Name of the “**Service Pool**” that you want to add. It must be previously created

Enabled: Enables or disables the visibility of the “**Meta Pool**”



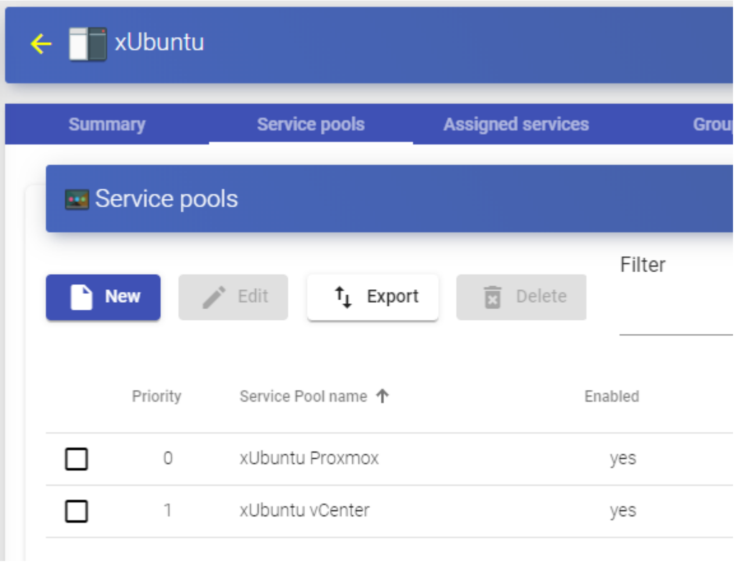
New member pool

Priority: -1

Service pool: xUbuntu Proxmox

Enabled? yes

You can add as many as you need, combining services hosted on different virtualization platforms (VMware, KVM, Azure, etc…), application servers and static devices.



	Priority	Service Pool name	Enabled
□	0	xUbuntu Proxmox	yes
□	1	xUbuntu vCenter	yes

Like in a “**Service Pool**”, here you will also have the following information and configuration tabs:

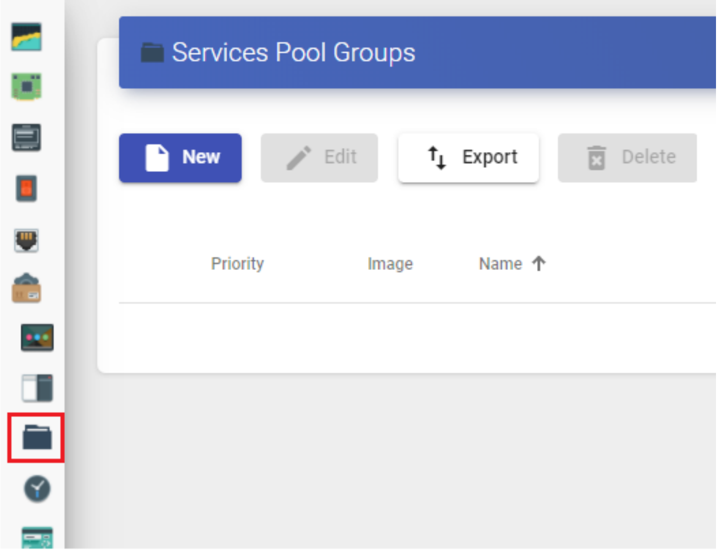
- **Assigned services:** Shows the services assigned to users, allowing their manual removal and reassignment to another user.
- **Groups:** Indicates which user groups of the different authenticators registered in the system will have access to the service.
- **Access calendars:** Allows to apply a previously created access calendar.

- **Logs:** Shows all the issues that occurred in the “***Meta Pool***”.

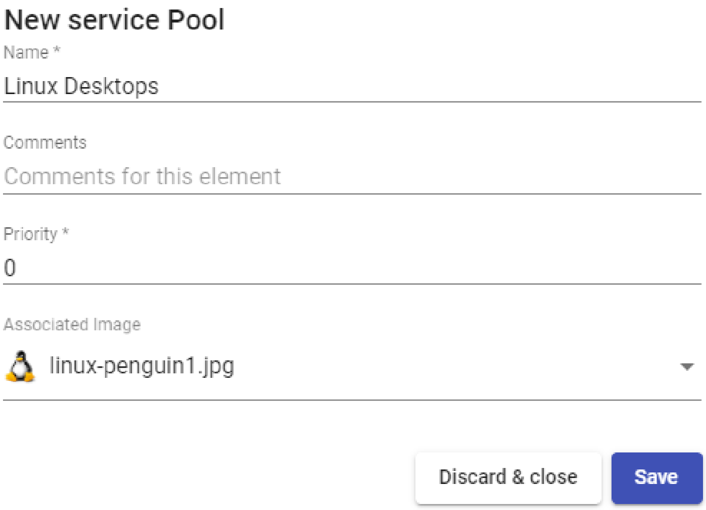
4.11 Groups

UDS allows you to group services to facilitate their access and location. Additionally, each service grouping can be assigned a name and an image. If “**Groups**” are not defined, the services will be located in the default site, which is created by the system

To create “**Groups**”, go to the “Pools” section and select “**Groups**”:



Select **“New**” and indicate a descriptive name. Assign the priority of the pool group (the lower the value, the more priority it will have, concerning the rest of the elements.) and associate an image:


New service Pool

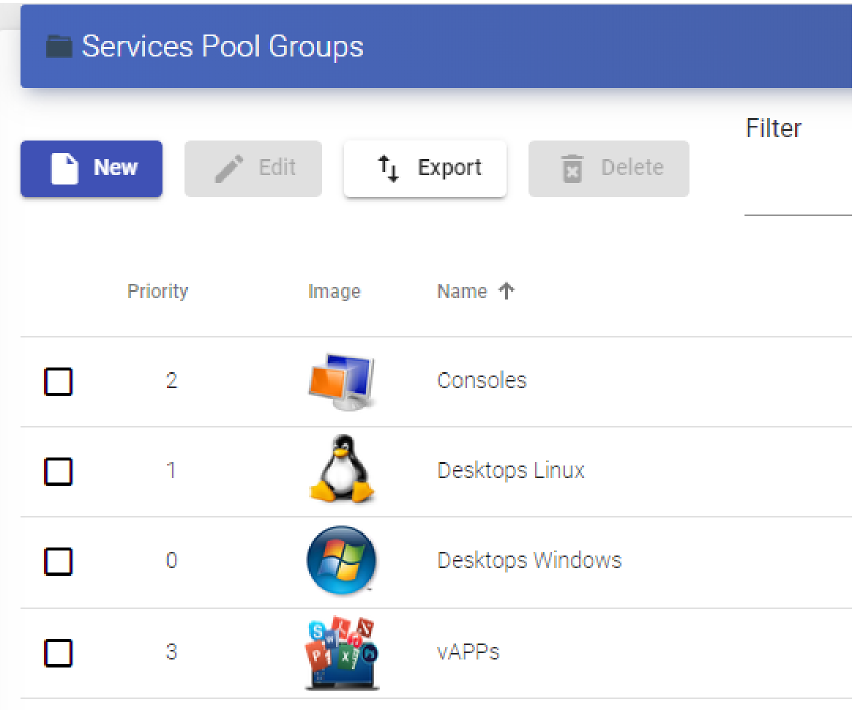
Name *
Linux Desktops

Comments
Comments for this element

Priority *
0

Associated Image
linux-penguin1.jpg

Once created, it will be available for assignment to a "*Service Pool*".



Services Pool Groups

	Priority	Image	Name ↑
□	2		Consoles
□	1		Desktops Linux
□	0		Desktops Windows
□	3		vAPPs

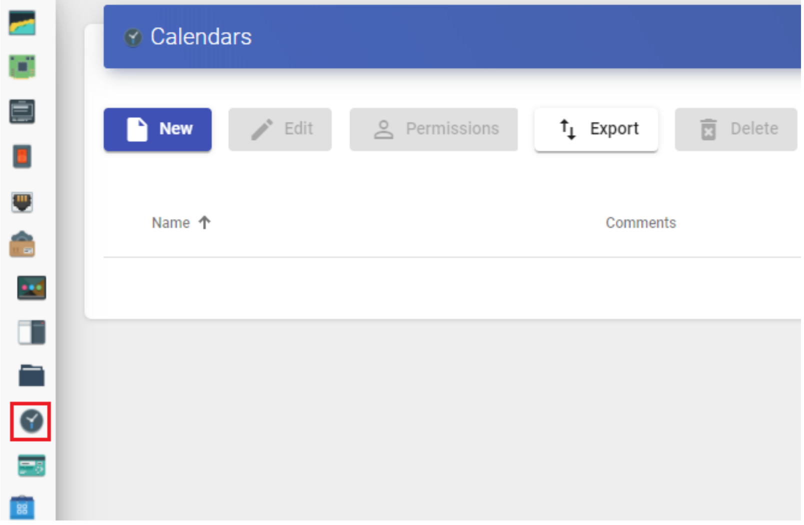
4.12 Access Calendars and scheduled tasks

UDS Enterprise incorporates a system to allow or deny access through calendars. They allow enabling or restricting user access to desktop services and virtual applications by dates and time slots.

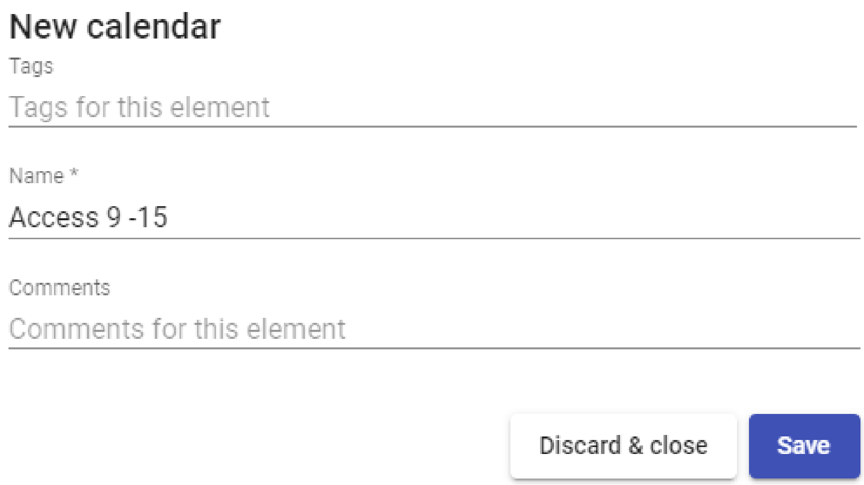
With the use of calendars, it is also possible to schedule and automate certain tasks on a “**Service Pool**”, such as making new publications, adjusting the system cache values, adding or removing groups and transports or changing the maximum number of services.

4.12.1 Calendars

To create “**Calendars**”, go to the “Pools” section and select “**Calendars**”.



Indicate a descriptive name to identify the calendar.



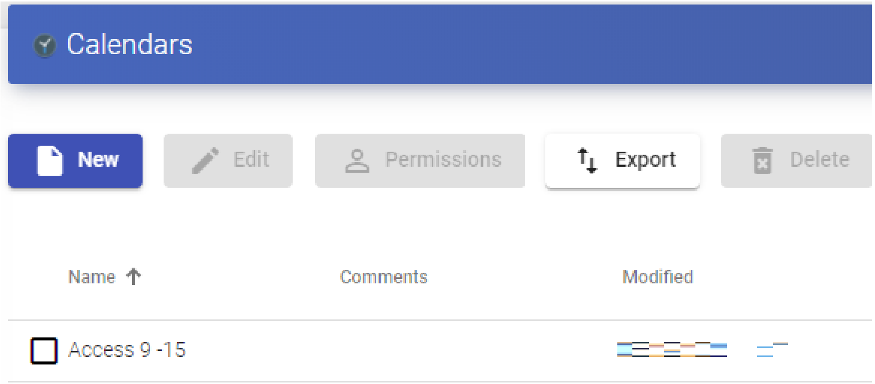
New calendar

Tags: Tags for this element

Name *: Access 9 -15

Comments: Comments for this element

Save and you will already have a valid calendar to start creating the rules that you will later apply to a service through the “**Services Pool**”.

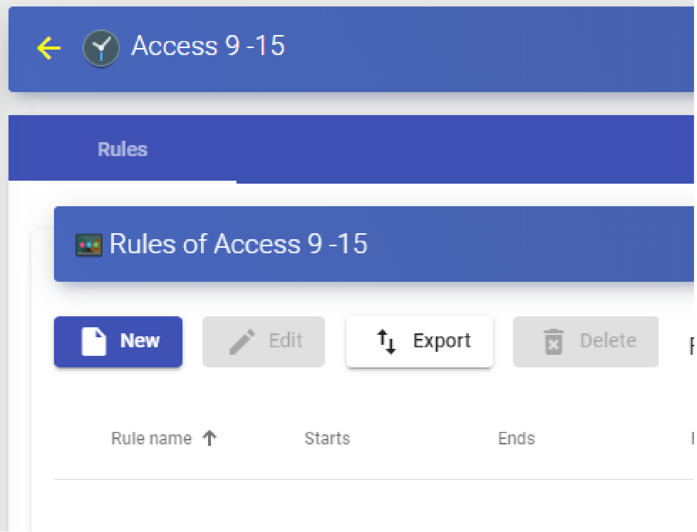


Calendars

Name ↑	Comments	Modified
□ Access 9 -15		

In a "Calendar", you can register various types of rules to schedule the availability of services at certain times.

To create a rule, access the calendar and click on “***New***”.



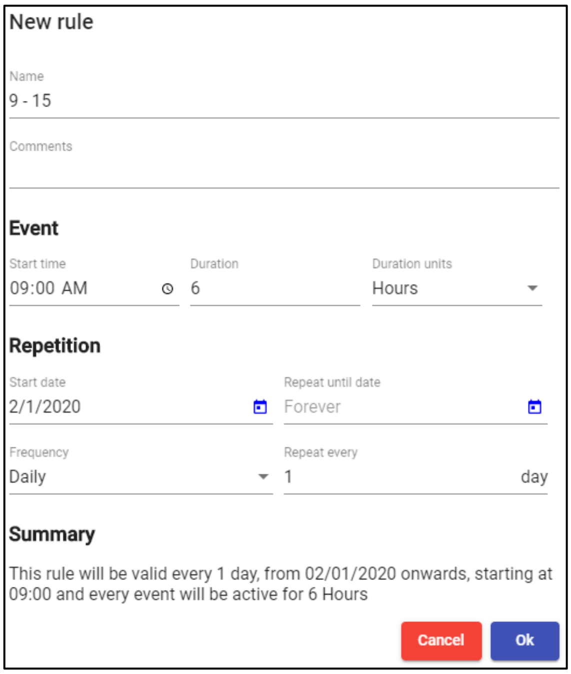
The minimum parameters to configure in a "**Rule**" are:

Name: Name of the rule.

Event: Configuration of the execution periods. For this end, indicate the start time and the duration of the event (in minutes, hours, days and months.

Repetition: In this section, you can configure that the rule is repeated in days, weeks, months, years, and even allows to specify working days. Finally, you can indicate repetition intervals per day.

Summary: Shows a summary of all the configuration previously made.



New rule

Name: 9 - 15

Comments:

Event

Start time	Duration	Duration units
09:00 AM	6	Hours

Repetition

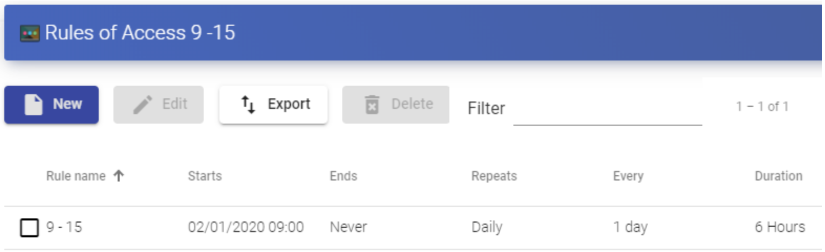
Start date	Repeat until date
2/1/2020	Forever

Frequency	Repeat every
Daily	1 day

Summary

This rule will be valid every 1 day, from 02/01/2020 onwards, starting at 09:00 and every event will be active for 6 Hours

Upon saving you will have a valid rule to be assigned to a "**Service Pool**" (virtual desktop and/or application).



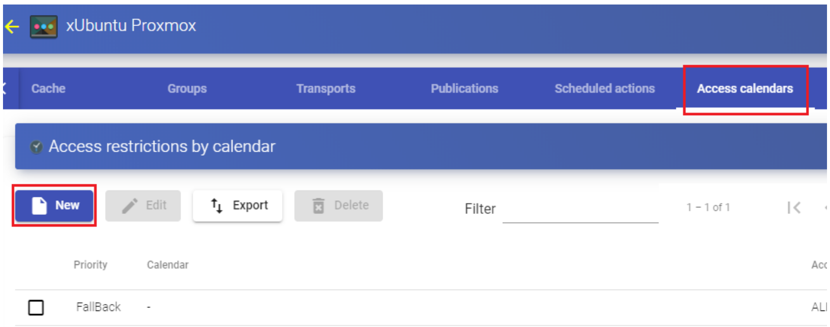
Rules of Access 9 -15

Rule name	Starts	Ends	Repeats	Every	Duration
□ 9 - 15	02/01/2020 09:00	Never	Daily	1 day	6 Hours

4.12.1.1 Enable or deny user access

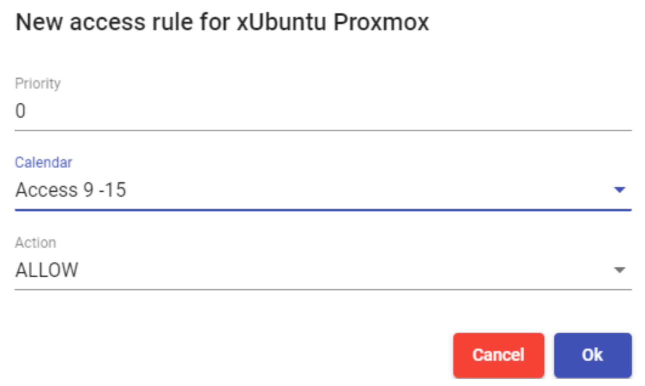
Once the rules in the calendars are configured, you can use them to enable or deny user access to desktop services and virtual applications.

To apply these calendars with their rules, select a "**Service Pool**", go to the "**Access Calendars**" tab and click on "**New**":



	Priority	Calendar	Acc
□	FallBack	-	ALl

Indicate the priority of access, select an existing calendar and check the action to be applied when accessing the service

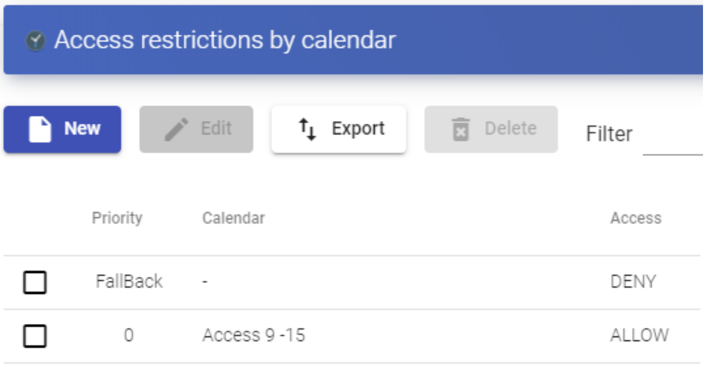

New access rule for xUbuntu Proxmox

Priority: 0

Calendar: Access 9 -15

Action: ALLOW

Upon saving you will have a “**Service Pool**” with a configured access calendar.



	Priority	Calendar	Access
□	FallBack	-	DENY
□	0	Access 9 -15	ALLOW

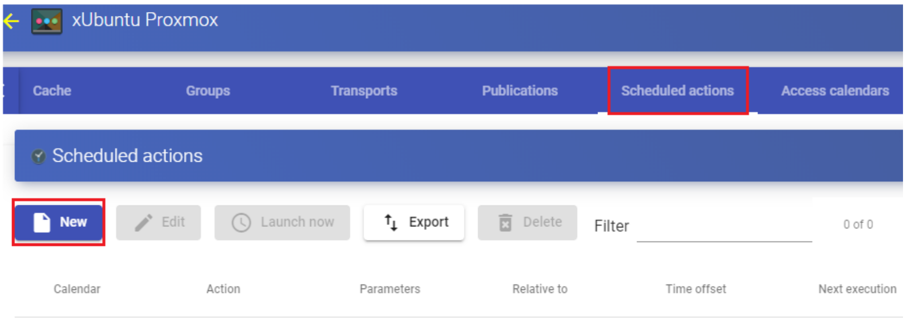
NOTE:

La You will have to adjust the default rule "FallBack" based on the needs of the service to allow or deny access to the service when the calendar does not apply.

4.12.1.2 Scheduled Actions:

Once the rules in the calendars have been configured, you can use them to schedule certain tasks on a "**Service Pool**".

To apply these calendars with their rules, select a "**Service Pool**", go to the "**Scheduled actions**" tab and click on "**New**".



Indicate an existing calendar, the time during which the action will be executed and select the action to be carried out:

Set initial services: Resets the minimum virtual desktops created and configured.

Set cache size: Resets the virtual desktops available in the system cache. These desktops will be configured and ready for assignment to a user.

Set máximum number of services: Modifies the maximum number of virtual desktops in the "***Service Pool***".

Publish: Creation of a new publication in a "***Service Pool***".

Add a transport: Adds an existing transport in a "***Service Pool***".

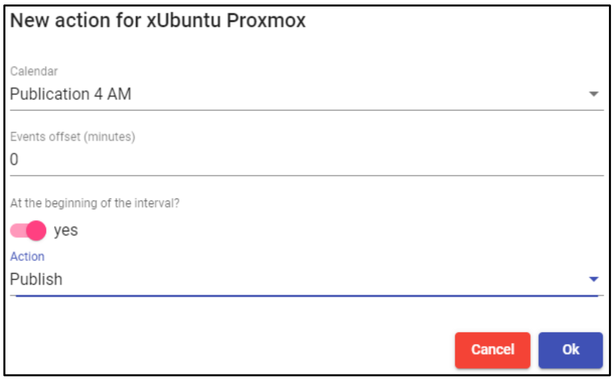
Remove a transport: Removes transport from a "***Service Pool***".

Add a group: Adds existing group in a "***Service Pool***".

Remove a group: Removes group from a "***Service Pool***".

Sets the ignore unused: Sets the "***Ignores unused***" option.

Remove ALL assigned user service: Removes all the services assigned to users in a "***Service Pool***".



New action for xUbuntu Proxmox

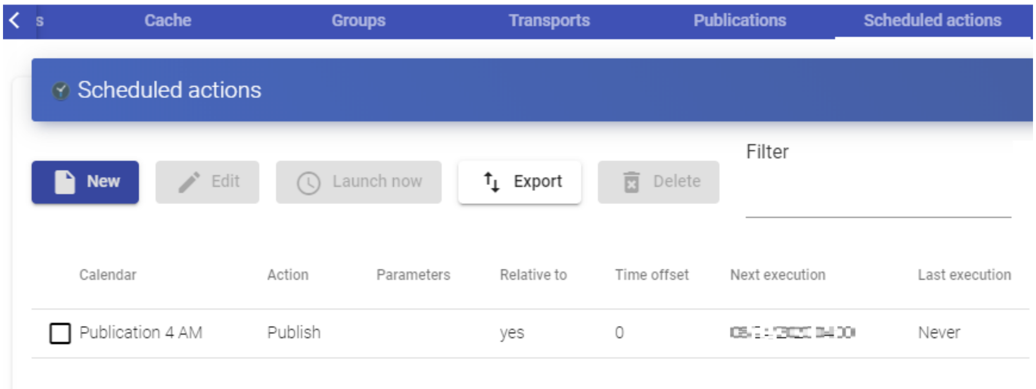
Calendar: Publication 4 AM

Events offset (minutes): 0

At the beginning of the interval?: yes

Action: Publish

We save and we will have a scheduled task that performs a specific action on a "**Service Pool**".



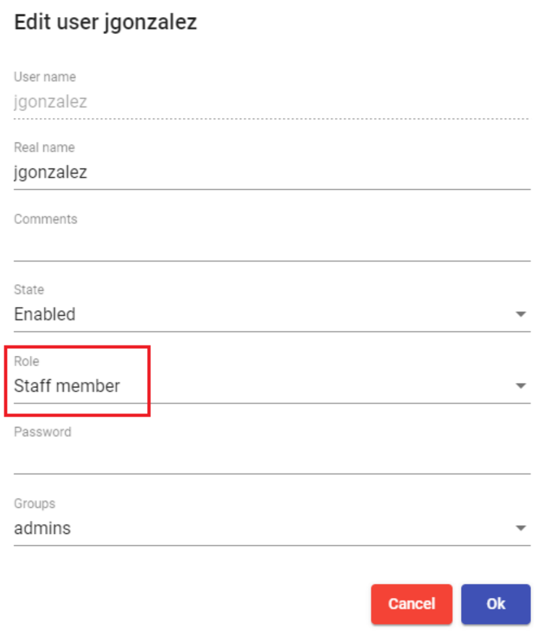
Scheduled actions

	Calendar	Action	Parameters	Relative to	Time offset	Next execution	Last execution
□	Publication 4 AM	Publish		yes	0	[illegible]	Never

4.13 Configure Permisions

Within the UDS Enterprise administration, it is possible to assign access and management permissions to the different elements, to users and groups of users. The permissions will be assigned directly on each element and will also apply to its subelements.

To allow a user to access the administration and apply for these permissions, the usermust have the "**Staff member**" option enabled:



Edit user jgonzalez

User name: jgonzalez

Real name: jgonzalez

Comments:

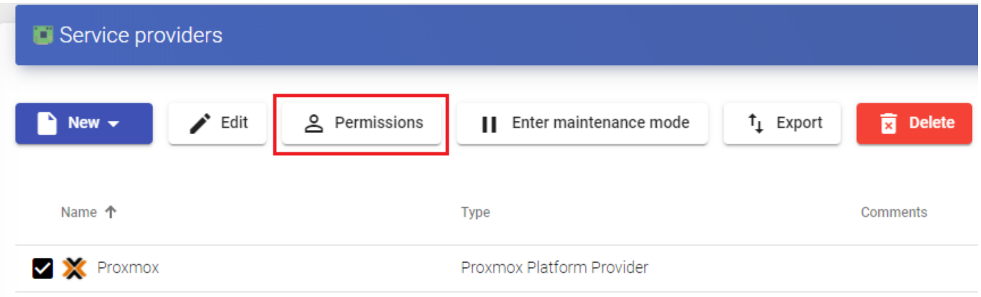
State: Enabled

Role: Staff member

Password:

Groups: admins

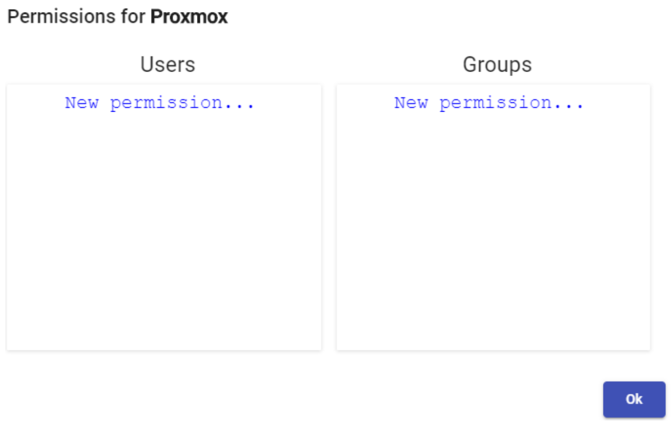
To enable permissions in the different elements of the administration, select the element and click on "**Permissions**". For example, in a "**Service Provider**".



Service providers

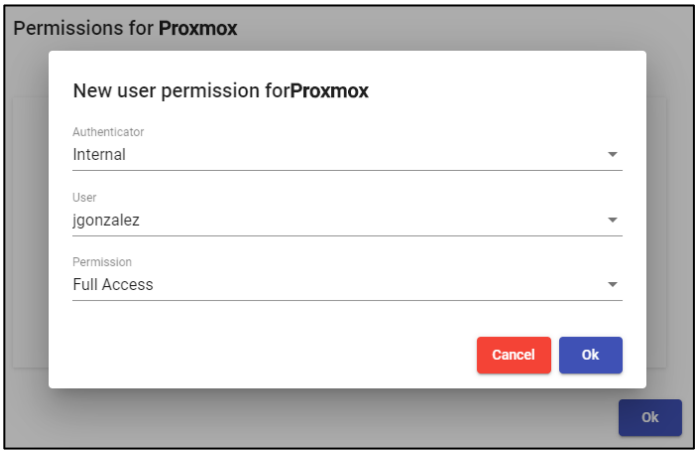
Name	Type	Comments
☑ Proxmox	Proxmox Platform Provider	

In the permissions window, click on "**New permission**…" for groups and users and select the authenticator and group/user to which the permission will be applied.



Permissions for **Proxmox**

You will have to specify if this user or group will have reading access to the element ("**Read Only**") or full control ("**Full Access**").



Permissions for **Proxmox**

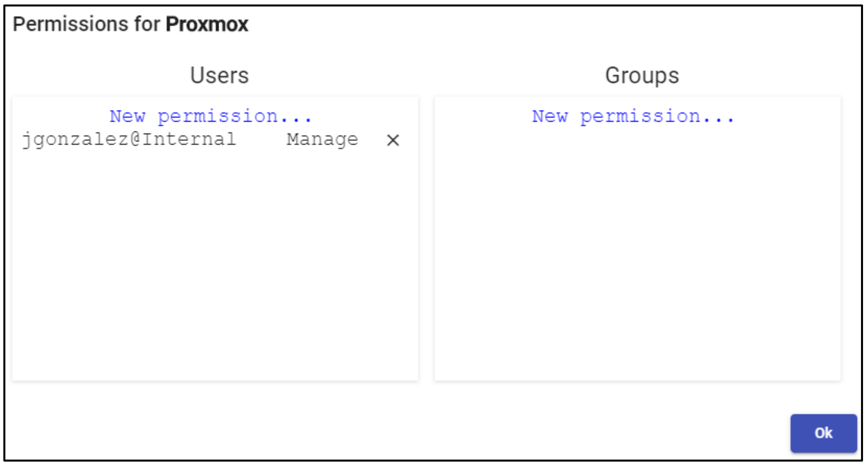
New user permission for**Proxmox**

Authenticator
Internal

User
jgonzalez

Permission
Full Access

Once applied, users who have the "**Staff member**" option enabled will be able to access this element of the administration with the permissions that have been assigned



Permissions for **Proxmox**

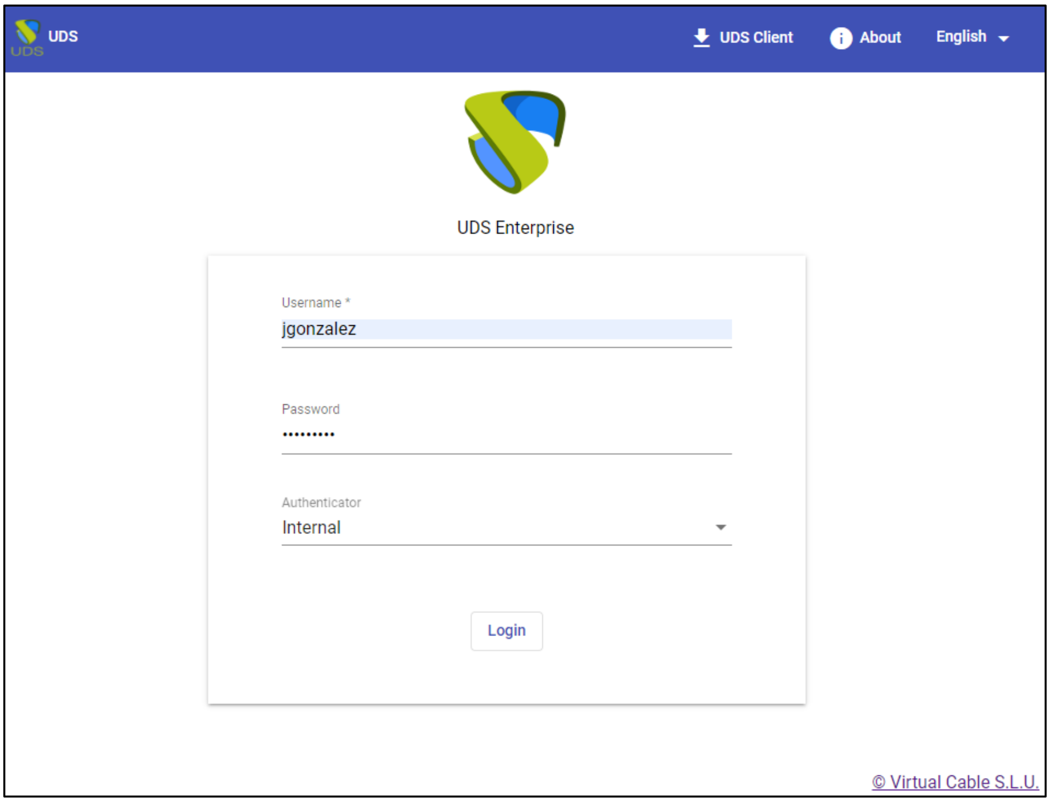
```
jgonzalez@Internal     Manage   ×
```

To remove the permissions to a group or user, click on the "*X*".

Permissions of type "***Full Access***" ("***Manage***") may only be applied to elements that have a second leve ("***Services***", "***Calendars***", "***Service Pools***", etc…).

5 ACCESING VIRTUAL DESKTOPS WITH UDS ENTERPRISE

Once you have available one or more “**Service Pools**” with published services on valid status, you can make a connection to a virtual desktop. You will access via a web browser the address or name of the UDS Server. Enter a valid user name and password and select the authenticator in the case of having more than one available.



Username *
jgonzalez

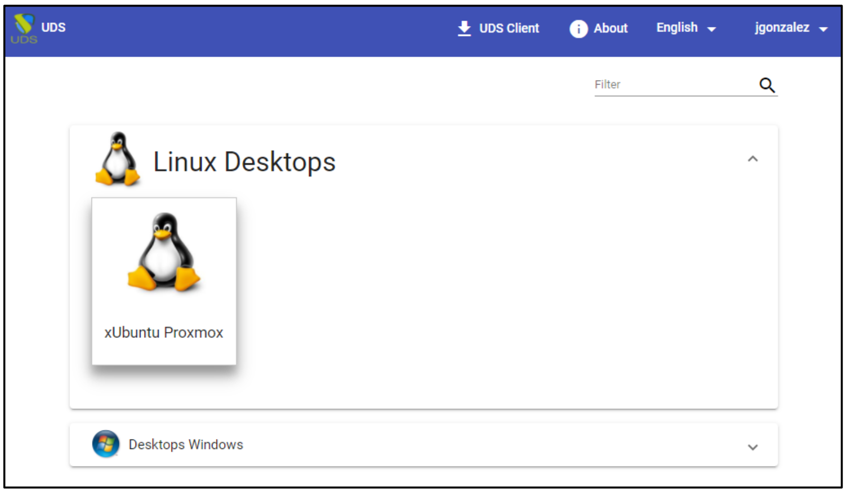
Password
•••••••••

Authenticator
Internal

In the available services screen, you will see the services to which the user with whom you have logged into the UDS system has access. Click on the one you want to start the connection with.

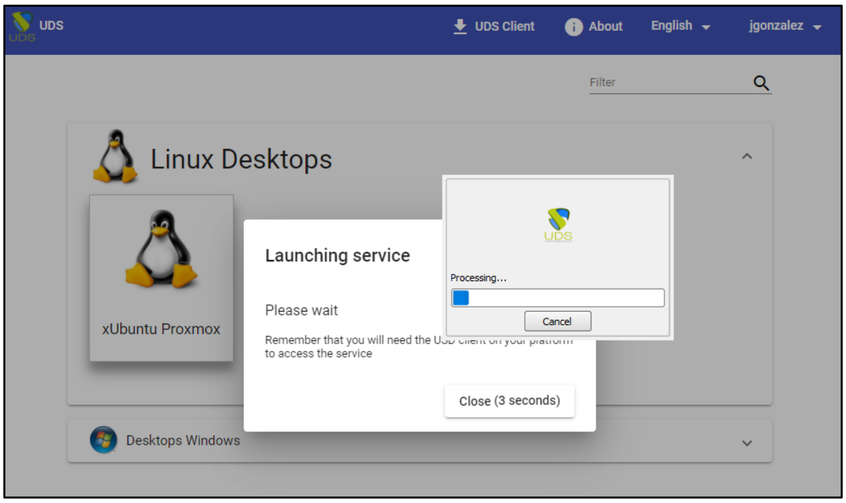
By default, if you click on the service image directly, you will make the connection with the "**Transport**" that has the lowest priority. If you have configured several ones, a drop-down menu will appear where you can select the "**Transport**" with which you will connect to the virtual desktop.

If necessary, or in case of having several types of services (applications, Linux desktops or Windows desktops), you can group the services to facilitate access to users:



To start the connection with the virtual machine, it is necessary to have the “UDS Client” installed on the connection client machine. It is necessary to start the connection with all transports except HTML5

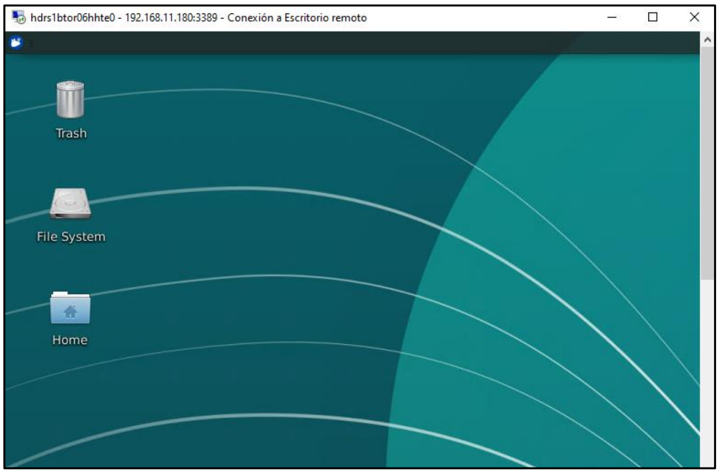
To connect to the virtual desktop or application, it is necessary to have the clients of each protocol installed (RDP, NX, RGS, SPICE, etc…).



Launching service

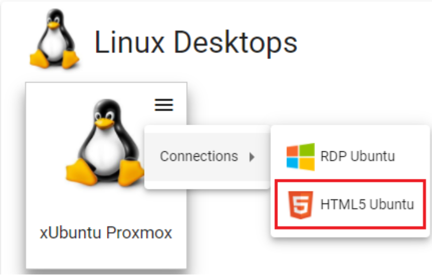
Please wait

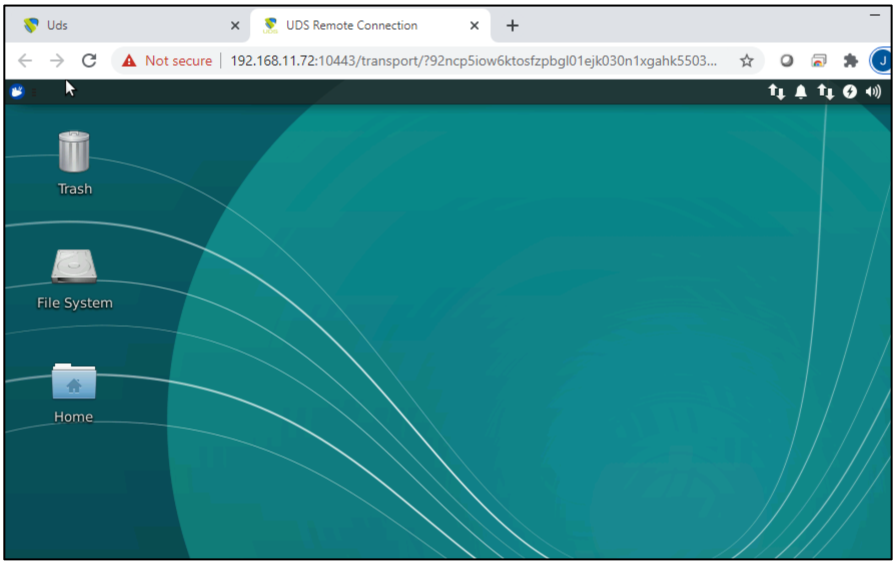
Remember that you will need the UDS client on your platform to access the service



hdrs1btor06hhte0 - 192.168.11.180:3389 - Conexión a Escritorio remoto

HTML5 connection example:





Not secure | 192.168.11.72:10443/transport/?92ncp5iow6ktosfzpbgl01ejk030n1xgahk5503...

6 Tools

UDS Enterprise provides a series of tools that give the system greater flexibility, providing customization, usage reports, advanced parameters, etc...

6.1 Gallery

UDS has a repository of images that can be associated with a "Service Pool" or "Pool Group" to facilitate the identification of the virtual desktop. Accepted formats are PNG, JPEG and GIF. If the image size is larger than 128x128, it will be resized.

To access the UDS image gallery, access the "**Tools**" section and select "**Gallery**":

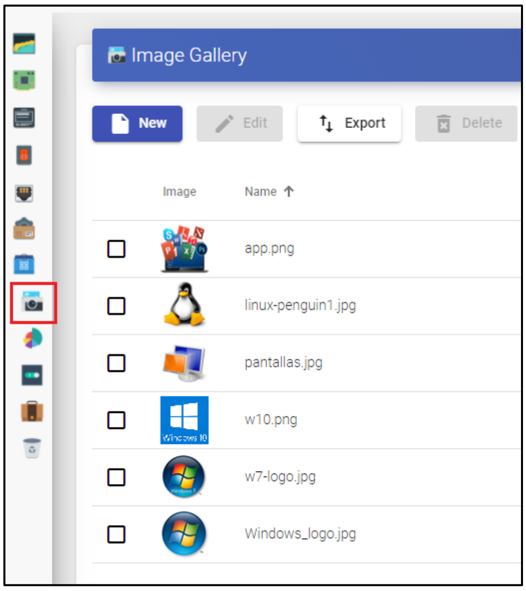


	Image	Name ↑
□		app.png
□		linux-penguin1.jpg
□		pantallas.jpg
□		w10.png
□		w7-logo.jpg
□		Windows_logo.jpg

Select "**New**" to add a new image to the repository. It will be necessary to indicate a name and, using the "**Select image**" button, you will look for the image you want to upload.

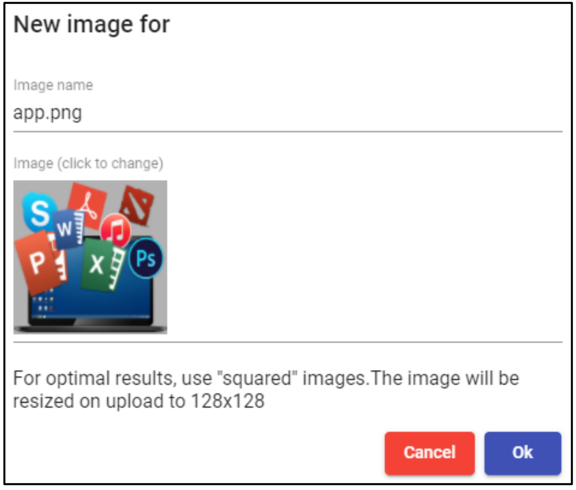

New image for

Image name: app.png

Image (click to change)

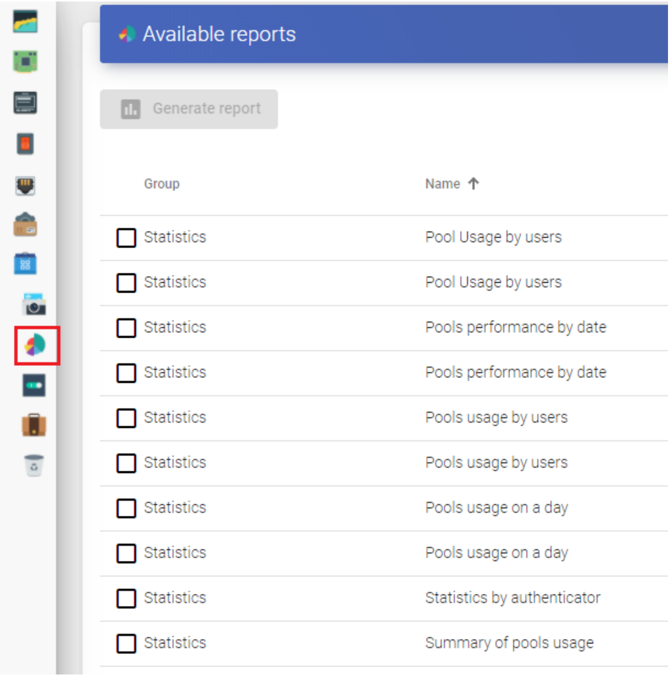
For optimal results, use "squared" images.The image will be resized on upload to 128x128

Once the image is stored, it will be available for assignment to a "**Service Pool**" or "**Pool Group**"

6.2 Reports

UDS allows the automatic generation of reports on different elements of the platform

To access the reports, enter the “Tools” section and select “**Reports**”:

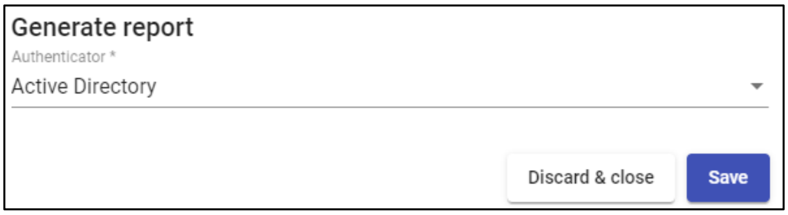


Available reports

	Group	Name ↑
□	Statistics	Pool Usage by users
□	Statistics	Pool Usage by users
□	Statistics	Pools performance by date
□	Statistics	Pools performance by date
□	Statistics	Pools usage by users
□	Statistics	Pools usage by users
□	Statistics	Pools usage on a day
□	Statistics	Pools usage on a day
□	Statistics	Statistics by authenticator
□	Statistics	Summary of pools usage

It is possible to generate different reports in UDS. Notable among them are:

- **Users list:** Generates a report with all the users that belong to an authenticator. Select the authenticator and click on “**Save**”.



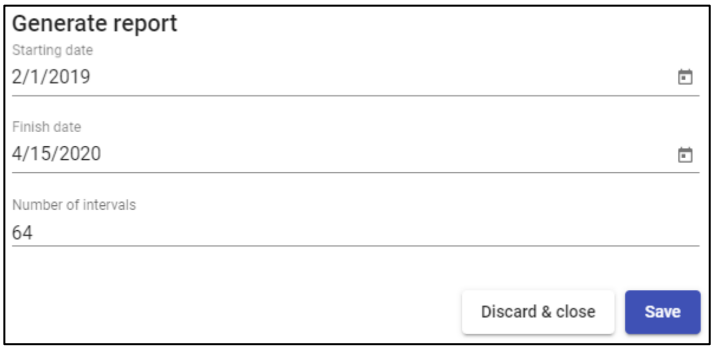
Generate report

Authenticator *

Active Directory

Once generated, you will have a list of all the users belonging to that authenticator:

- **Users access report by date:** Generates a report with all user accesses to the system in a specific date range. You can indicate a range of dates and number of intervals:



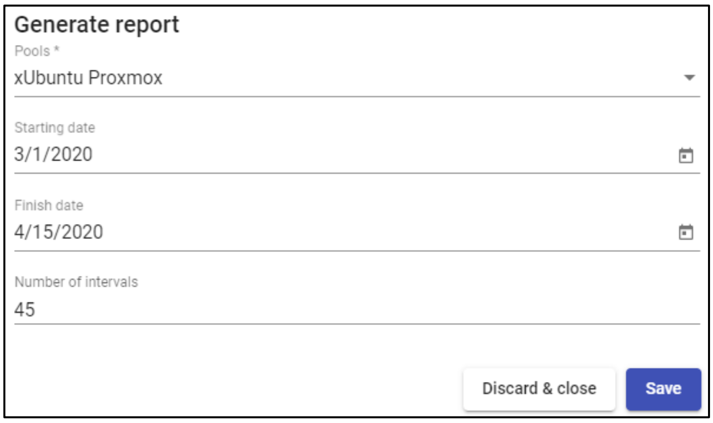
Generate report

Starting date
2/1/2019

Finish date
4/15/2020

Number of intervals
64

- **Pools performance by date:** Generates a report on the use of a services pool in a specific date range. You can indicate the pool on which you want to generate the report, date range and number of intervals



Generate report

Pools *
xUbuntu Proxmox

Starting date
3/1/2020

Finish date
4/15/2020

Number of intervals
45

6.3 Configuration

UDS Enterprise provides a series of parameters that will define the operation of the system. These parameters will be responsible for defining aspects such as security, operating mode, connectivity, etc... both of the UDS system itself and of its communication with the virtual platforms registered in UDS.

In this manual, only some of the system variables are shown, which are considered the most useful for the management of virtual desktops.

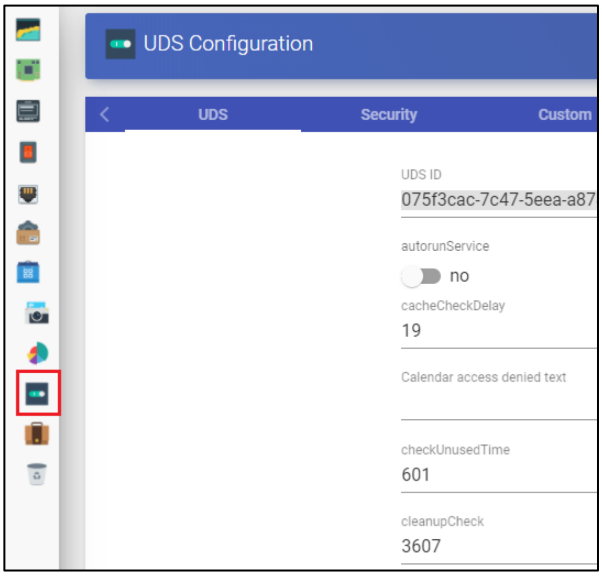
In the rest of the variables, it is recommended not to modify the default values, since some of them indicate to the system how it should work (number of simultaneous tasks, task execution time, scheduled checks, etc ...) and an incorrect modification of a parameter may cause the system to stop completely or not work properly.

NOTE:

Once the values of any of the UDS advanced configuration variables have been modified, it will be necessary to restart the UDS Server to apply the changes

If you want to modify any value that is not documented in this section, it is recommended to contact the UDS Enterprise support team to verify said change and confirm that it does not negatively affect the operation of the UDS system

To access the parameters of the advanced configuration of UDS, access the "**Tools**" section and select "**Configuration**":



UDS ID
075f3cac-7c47-5eea-a87

autorunService
no

cacheCheckDelay
19

Calendar access denied text

checkUnusedTime
601

cleanupCheck
3607

6.3.1 UDS

UDS ID: Identification of the UDS Enterprise installation

AutorunService = Performs direct access to the user's service if the user only has a single service assigned.

By activating this parameter, users who are assigned a single service will make a direct connection to it, hiding the service selection screen and using the "**Transport**" configured first.

Default: no.

DisallowGlobalLogin = If enabled, does not display the global list of authenticators.

If enabled, users will be validated on the authenticator "by default" or with higher priority. To validate with other authenticators and allow user access to the system, it will be necessary to use the "label" in the access URL (defined in the authenticator).

Default: no.

KeepInfoTime = Defines the time that the completed events of a "Service Pool" remain visible. Expressed in seconds

Default: 14401 seconds (4 hours)

RedirectToHttps = Automatically redirects access to UDS Enterprise from http to https.

Default: no

SessionExpireTime = Indicates the maximum time that a user session will be open after having made a new publication. After that time, the system will close the user session and proceed to remove the service. If the service has an OS Manager with "**Keep service assigned even on new publication** "as the persistence policy on the virtual desktop, this won't apply.

Default: 24 hours.

StatsDuration = Time that the system will store the statistics.

Default: 365 days.

6.3.2 Security

Parameters related to the security of the UDS system are described:

AllowRootWebAccess = Allows the superuser to login (user created in the UDS-Server configuration wizard) in the UDS login portal.

Modifying this variable will not affect the access of the root user through the Linux OS console

Default: yes.

Behind a proxy = Indicates to the system that the UDS servers are "**behind**" a proxy (For example, a UDS environment in high availability with a load balancer type HA Proxy).

Default: no.

Block ip on login failure: Enables that in addition to blocking a user who has failed several times in the login portal, the IP address of his connection client is also blocked.

Default: no.

LoginBlockTime: Time that a user will be blocked (in seconds) after entering his password incorrectly the times indicated in the variable "**maxLoginTries**".

Default: 300 seconds (5 minutes).

Master Key: Security code for the UDS Actor (only applies to versions prior to UDS 3.0)

MaxLoginTries: Number of attempts a user will have to enter his password before the system locks it.

RootPass = Password of the superuser created in the UDS-Server configuration wizard.

SuperUser = Name of the superuser created in the UDS-Server configuration wizard.

Session timeout for Admin = Time in seconds until an administration that does not perform any action is logged out.

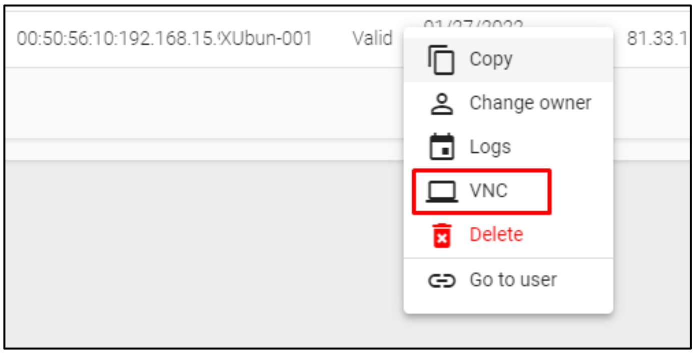
Session timeout for User = Time in seconds until a user who performs no action is logged out.

Trusted Hosts = Hosts that UDS considers safe. These hosts can make "**sensitive**" requests to UDS, such as tunnels.

It allows completes subnets, range of ips and specific public ips
By default: "*" (all allowed), admits address range values.

6.3.3 Admin

Enable VNC for user services = If enabled, a new option will appear in the assigned services of a “**Service Pool**” to allow connection via VNC.



00:50:56:10:192.168.15.!XUbun-001 Valid 01/27/2022 81.33.1

Clicking on "**VNC**" will generate a file with all the information to connect to the service through a VNC client (the client must be previously installed and there must also be direct network connectivity with the service)

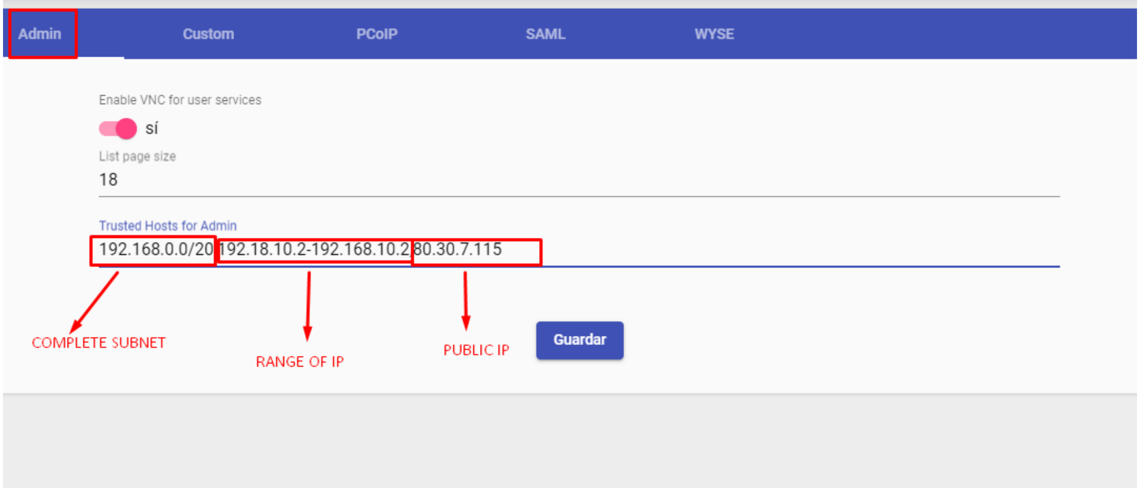
Default: no

List page size = Number of items to display. Applies to all sections of the administration.

Default: 10

Trusted Hosts for Admin: Filter from which IP addresses it is possible to manage UDS (includes from web access to administration with the API) separated by comas.

It allows completes subnets, range of ips and specific public ips.



Enable VNC for user services
sí

List page size
18

Trusted Hosts for Admin
192.168.0.0/20,192.18.10.2-192.168.10.2,80.30.7.115

6.3.4 Custom

Parameters related to the graphical customization of UDS (login and user services portal) are described:

CSS = Supports code to modify UDS default style pages

Logo name = Text that is displayed next to the upper left image of the user menu bar.

Min. Services to show filter = Minimum number of services that must exist in a user's services window (user mode) for the filter option to be displayedr.

Show Filter on Top = Allows you to modify the location of the service search bar on the user services page (user mode).

Site copyright info = Text that will appear in the lower right part of the login and user services page.

Site copyright link = Web address in the text of the section "***Site copyright info***".

Site information = HTML code for partial customization of UDS login page.

The code entered will appear below the user login box in the UDS login portal

Site name = Texto que aparecerá en la parte superior del cuadro de login de los usuarios en el portal de login de UDS.

6.3.5 PCoIP

Parameters related to the Teradici PCoIP "**Transport**" are described:

DownloadUrl = PCoIP client software download address.

6.3.6 SAML

Parameters related to the operation of the SAML authenticator are described:

Global logout on exit = Indicates the "**logout**" mode.
If enabled, when UDS is logged out, SAML is also performed.

Default: no.

IDP Metadata Cache = Time the IDP's cached metadata is kept.

Default: 86400 seconds (24 hours).

Organization Display Name = Organization name displayed.

Organization Name = Name of the organization.

Organization URL = Web address of the organization.

6.3.7 WYSE

Parameters related to connecting with Wyse clients are described:

Autoconnect = Allows auto-connection of the device.

Default: no.

Colors = Defines the quality of the colors offered during the connection.

Default: High.

DefaultUser = Default user redirected to device.

Default: UDS.

Language = Device language.

Default: us.

Privilege = Privilege level of a user.

Default: NONE.

For more details on these parameters see the official Wyse documentation or also this reference guide

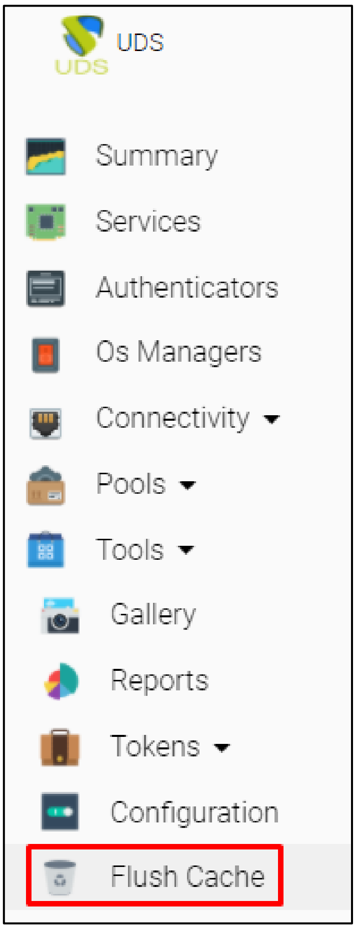
6.3.8 ENTERPRISE

Parameters related to the UDS Enterprise subscription are described (only visible in environments migrated from previous versions):

Serial Number = Subscription activation code.

6.4 Flush Cache

To empty the cache of the UDS system, access the “**Tools**” section and select “**Flush cache**”:



The most common reasons for clearing the system cache are:

- **Blocking user:** When a user enters his password incorrectly the times indicated in the variable “**maxloginTries**” (security section in the UDS configuration), the system blocks said user. To unblock him immediately, it will be necessary to empty the system cache.

- **Inventory update:** It is possible that when a "**Service**" is edited, some elements such as datastores, networks, base machines, etc... recently added, are not available (since these have been cached to avoid unnecessary requests). To view them, you will have to empty the system cache. In this way, the broker will make the request to the hypervisor again and the data will be updated.

7 ABOUT VIRTUAL CABLE

Virtual Cable is a company specialized in the **digital transformation of the workplace**. The company develops, supports and markets UDS Enterprise. Its team of experts has designed **VDI** solutions 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 in virtualization technologies. Everyday **millions of Windows and Linux virtual desktops are deployed with UDS Enterprise around the world**.

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