



Windows application
virtualization with
UDS Enterprise 3.5

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| | |
|--|----|
| Introduction | 2 |
| Necessary elements | 3 |
| Application servers (physical or virtual) | 3 |
| Windows OS for vApp Servers | 3 |
| RDS Actor | 4 |
| Various..... | 4 |
| Application server configuration | 5 |
| OS Windows Server | 5 |
| RDS Actor Installation | 7 |
| Remote Desktop Service (RDS) Installation | 10 |
| Configuring RDS with UDS Enterprise..... | 15 |
| Publishing the RDS Actor to the RDS server | 17 |
| UDS Enterprise Administration | 21 |
| RDS Server and UDS Enterprise connection..... | 21 |
| Authentication method..... | 25 |
| OS Manager..... | 26 |
| Transport..... | 27 |
| Service Pool..... | 28 |
| Access to Windows applications | 30 |
| Different methods of accessing a vApp service..... | 31 |
| Direct (LAN) | 31 |
| Tunneling (LAN and WAN) | 32 |
| About Virtual Cable | 34 |



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Introduction

The UDS Enterprise VDI and vApp connection broker allows the deployment and management of remote Windows application sessions through the Microsoft Remote Desktop Services (RDS) service. These applications can be assigned to user groups.

Access to remote application sessions can be done through Windows and Linux OS with the installation of the “UDS Client” component and through any device that has a web browser with the HTML5 connection mode.

Users will run application sessions on Windows servers with the RDS role enabled and configured.

For the correct operation and integration of UDS Enterprise with RDS, it is necessary to perform a series of tasks that are detailed in this document.



Necessary elements

To configure the different elements that will make up the vApp environment with UDS Enterprise to serve Windows virtual applications, you will need:

Application servers (physical or virtual)

The Windows servers that will be in charge of providing the application sessions can be hosted on a virtualization platform or be physical servers. UDS Enterprise allows you to create groups of application servers. These groups can be made up of virtual and physical servers.

The application servers (physical or virtual) must have sufficient resources (vCPU, vRAM, and disk) to be able to run the applications.

Windows OS for vApp Servers

To deploy virtual applications it will be necessary to use the following OS:

- Windows 2012 R2
- Windows 2016
- Windows 2019

In this example, it will be use a Windows Server 2019 image:





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RDS Actor

To download the RDS Actor it is necessary to validate in the UDS Enterprise login window with a user with administrator permissions. Display the user menu and access the downloads. In this window download the Actor for Windows machines, specifically for RDS servers.

Downloads

- udsactor_3.5.0_all.deb**
UDS Actor for Debian, Ubuntu, ... Linux machines (Requires python >= 3.6)
- udsactor-3.5.0-1.noarch.rpm**
UDS Actor for Centos, Fedora, RH, Suse, ... Linux machines (Requires python >= 3.6)
- udsactor-unmanaged_3.5.0_all.deb**
UDS Actor for Debian based Linux machines. Used ONLY for static machines. (Requires python >= 3.6)
- RDSActorSetup-3.5.0.exe**
RDS UDS Actor (for remote apps on Windows Server)
- UDSActorSetup-3.5.0.exe**
UDS Actor for windows machines
- UDSActorUnmanagedSetup-3.5.0.exe**
UDS Actor for Unmanaged windows machines. Used ONLY for static machines.

Various

To carry out the following procedure, it will be necessary to have a domain user with administration permissions on the RDS server.



Application server configuration

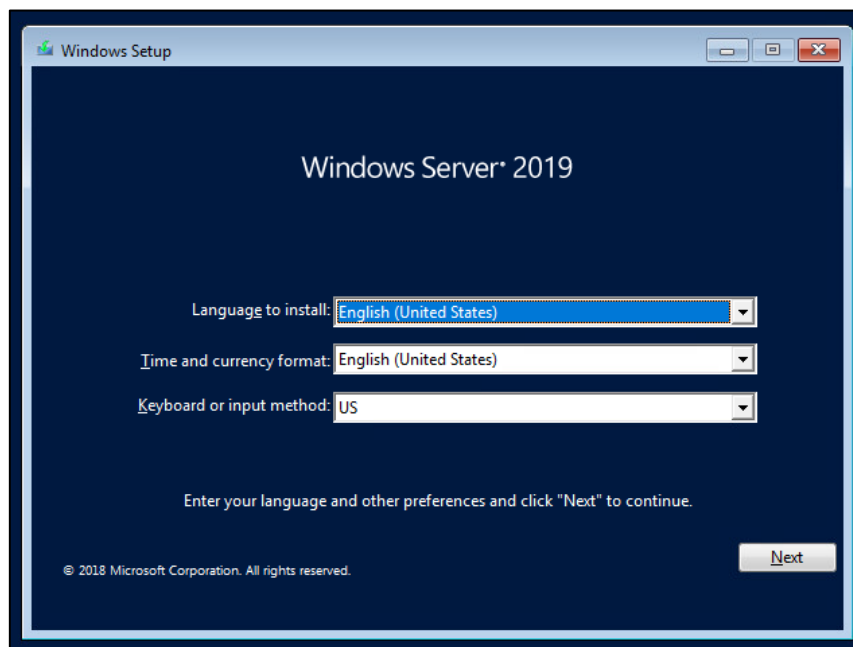
The following are all the necessary tasks to perform on the RDS application server.

OS Windows Server

Start with the machine that you will use as a server.

The installation will be carried out with the default values and indicating some resources (disk, vRAM and vCPUs) according to the requirements of the applications that you will install on the machine.

Once the Windows server image has been downloaded, proceed to install it:

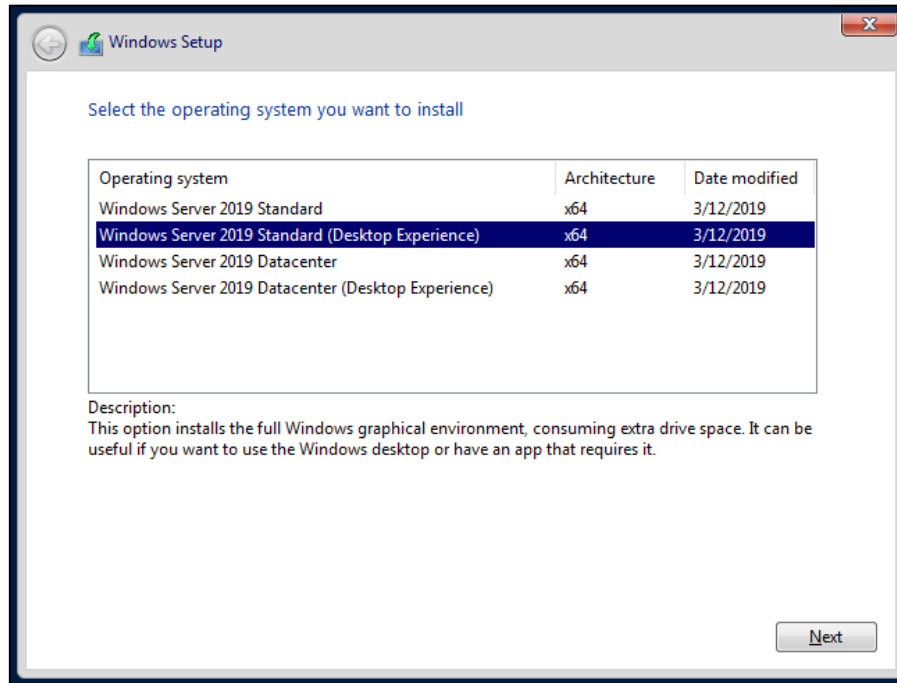




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When you get to the part of the installation wizard where it asks us to select the type of OS, choose the option “**Desktop Experience**”.



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



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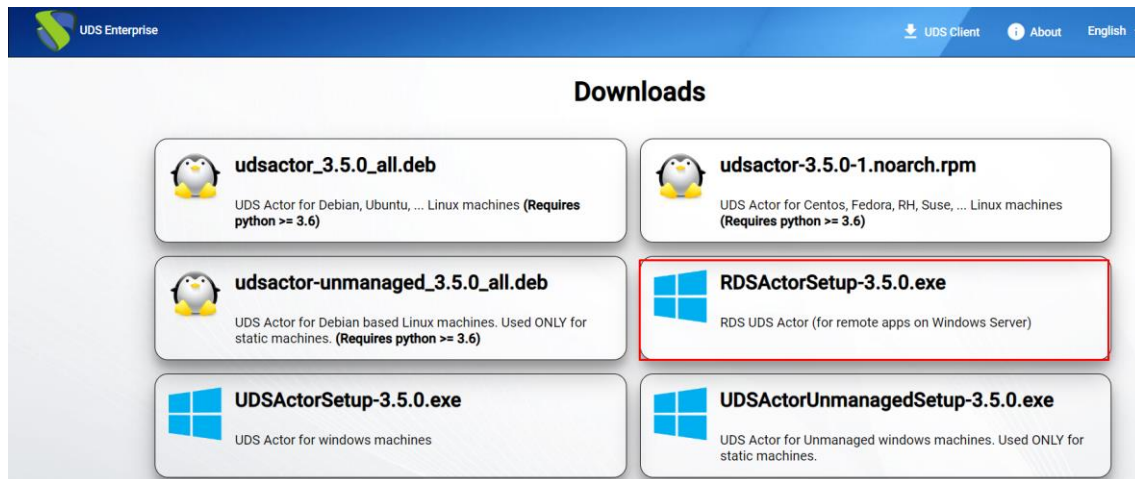
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RDS Actor Installation

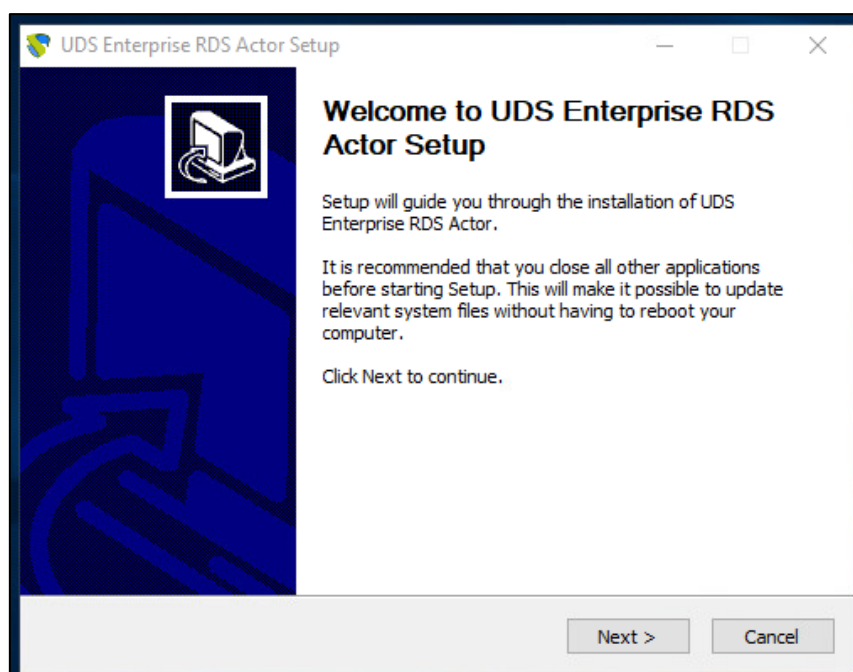
The following requirements must be met:

- Have an updated Windows Server 2012 R2, 2016, 2019 or 2022 OS. (Installed and configured in the previous section).
- Have the IP of the broker, as well as an administrator user of the same.
- The server must have a fixed IP address.
- The server has to be part of a domain.

Before proceeding to install and configure RDS, it is necessary to install the UDS Actor. From the UDS Enterprise download page select and download the actor for RDS servers (**RDS UDS Actor**).



It will be installed on the Windows server:

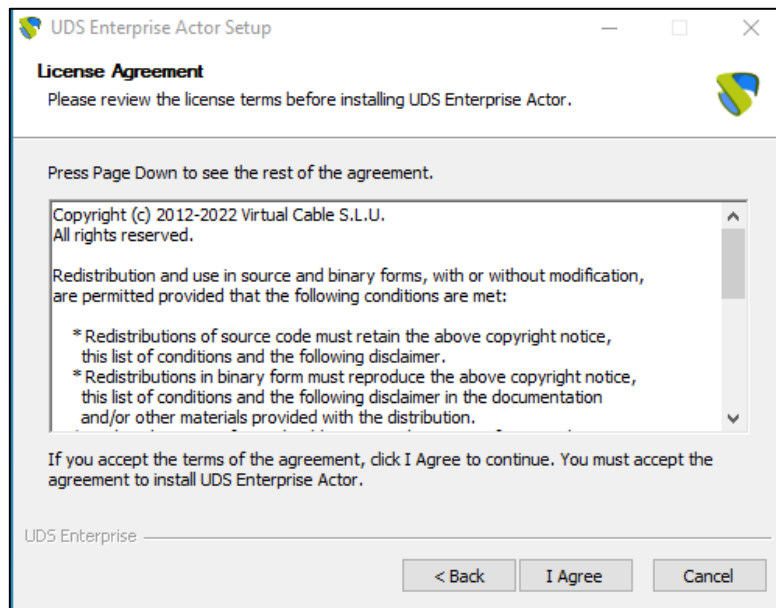




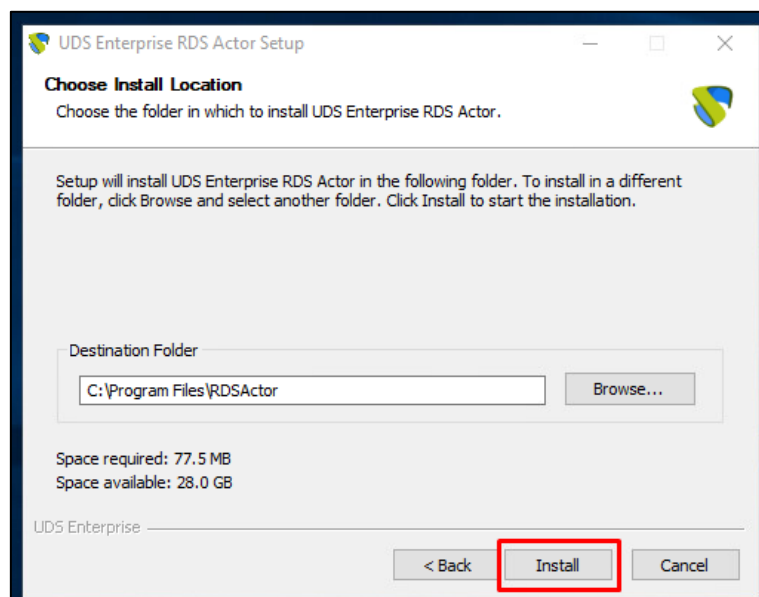
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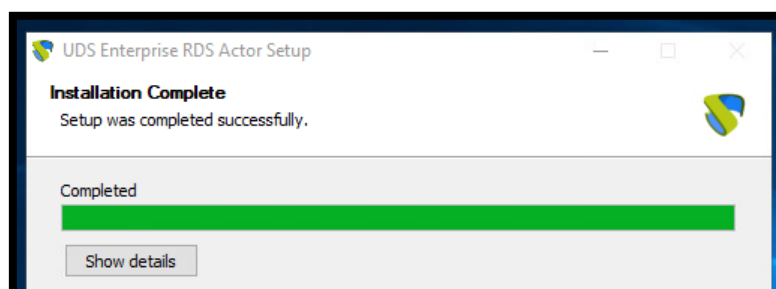
The license agreement is accepted:



Choose an install location:



Once the installation is finished, run the UDS Actor:





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The address of the UDS server, an authenticator and a user with administrator permissions that belongs to the selected authenticator are displayed.

UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 192.168.0.6

Authenticator: dbinterna

Username: udsadmin

Password:

Log Level: ERROR

Buttons: Register with UDS, Test configuration, Close

Once all the data has been indicated, click on "Register with UDS" to register the Actor with your UDS server:

UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 192.168.0.6

Authenticator: dbinterna

Username: udsadmin

Password:

Log Level: ERROR

Buttons: Register with UDS, Test configuration, Close

UDS Registration dialog: Registration with UDS completed. OK

Click on "Test configuration" to confirm that all the data is correct:

UDS Actor Configuration Tool

SSL Validation: Ignore certificate

UDS Server: 192.168.0.6

Authenticator: dbinterna

Username: udsadmin

Password:

Log Level: ERROR

Buttons: Register with UDS, Test configuration, Close

UDS Test dialog: Configuration for 192.168.0.6 seems to be correct. OK

Once the UDS Actor for Windows RDS servers is installed, proceed with the installation and configuration of Microsoft Remote Desktop Services.

NOTE: It is necessary that in the UDS environment there is at least one authenticator.



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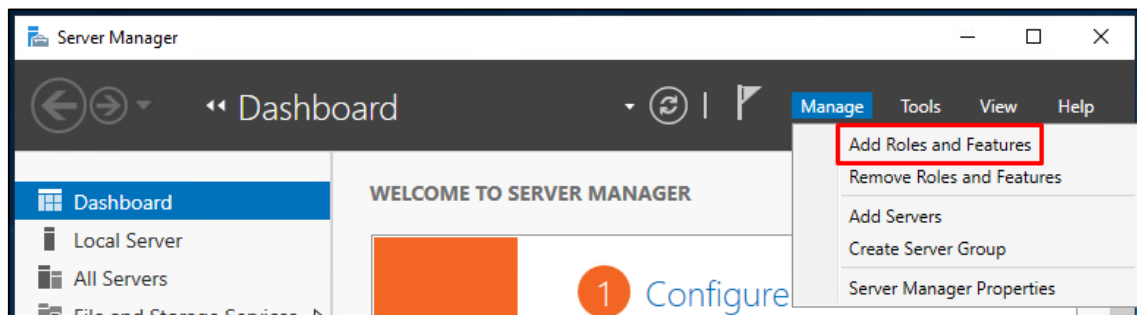
Remote Desktop Service (RDS) Installation

The following requirements must be met:

- Have an updated Windows Server 2012 R2, 2016, 2019 or 2022 OS.
- The server must have a Static IP address.
- The server has to be part of an Active Directory (AD) domain.

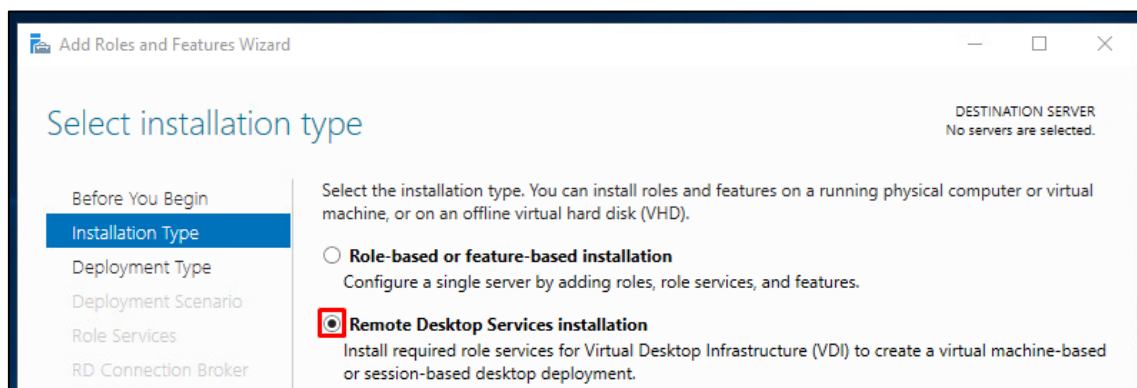
Once the requirements are met, you can move on to the installation.

The server administrator is accessed to add said service:



In the wizard follow the following steps:

Installation type.

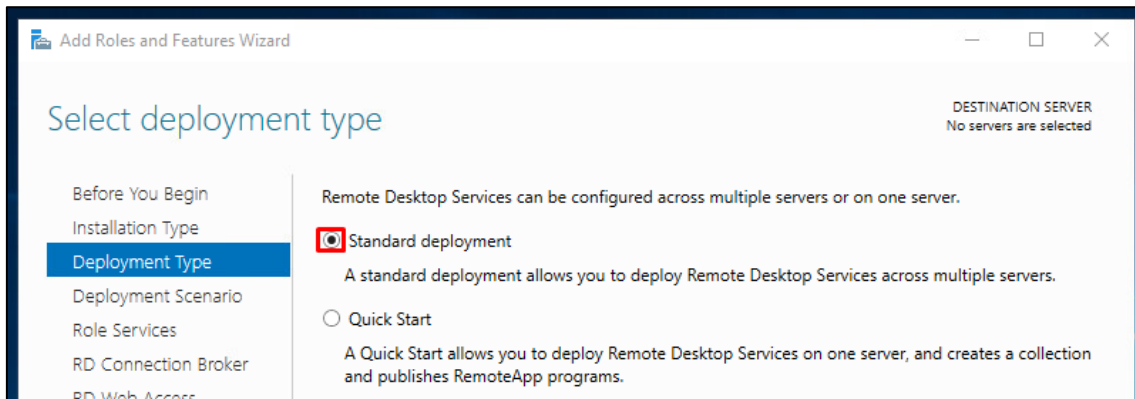




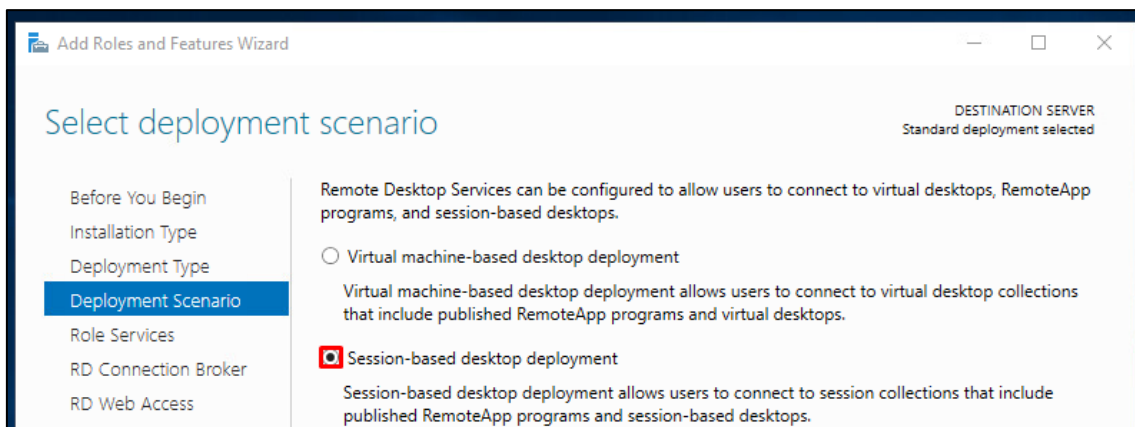
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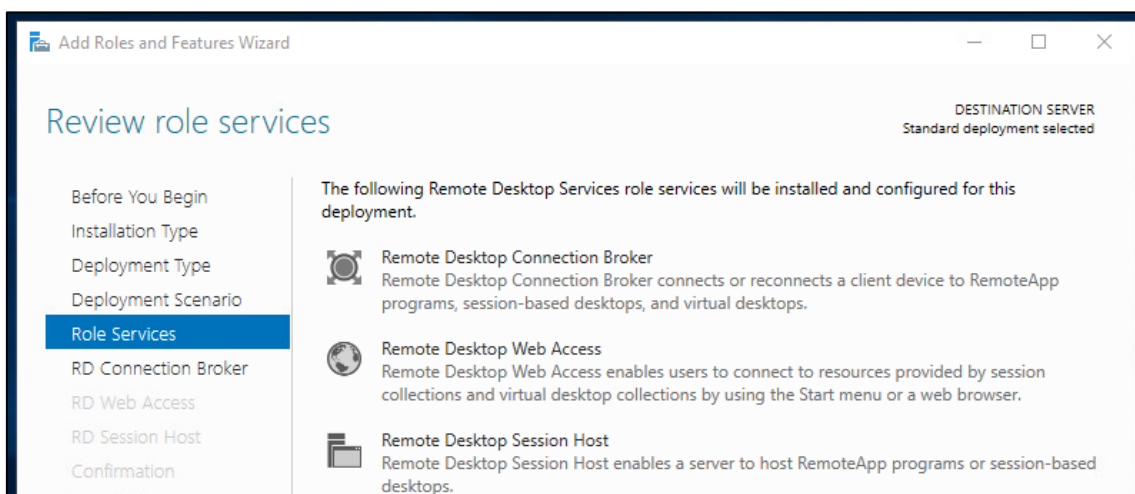
Type of deployment.



Deployment scenario:



A summary of what will be installed appears:





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The server where each element will be installed must be indicated:

Add Roles and Features Wizard

Specify RD Connection Broker server

DESTINATION SERVER
Standard deployment selected

Before You Begin
Installation Type
Deployment Type
Deployment Scenario
Role Services
RD Connection Broker
RD Web Access

Select the servers from the server pool on which to install the RD Connection Broker role service.

Server Pool

Filter:

| Name | IP Address | Operating |
|--------------------------|---------------|-----------|
| WIN-E3CBPGNF05B.vc.lo... | 192.168.15.93 | |

Selected

Computer

- VC.LOCAL (1)
- WIN-E3CBPGNF05B

Add Roles and Features Wizard

Specify RD Web Access server

DESTINATION SERVER
Standard deployment selected

Before You Begin
Installation Type
Deployment Type
Deployment Scenario
Role Services
RD Connection Broker
RD Web Access
RD Session Host
RD Web Access

Select a server from the server pool on which to install the RD Web Access role service.

☐ Install the RD Web Access role service on the RD Connection Broker server

Server Pool

Filter:

| Name | IP Address | Operating |
|--------------------------|---------------|-----------|
| WIN-E3CBPGNF05B.vc.lo... | 192.168.15.93 | |

Selected

Computer

- VC.LOCAL (1)
- WIN-E3CBPGNF05B

Add Roles and Features Wizard

Specify RD Session Host servers

DESTINATION SERVER
Standard deployment selected

Before You Begin
Installation Type
Deployment Type
Deployment Scenario
Role Services
RD Connection Broker
RD Web Access
RD Session Host

Select the servers from the server pool on which to install the RD Session Host role service. If more than one server is selected, the RD Session Host role service will be deployed on all of them.

Server Pool

Filter:

| Name | IP Address | Operating |
|--------------------------|---------------|-----------|
| WIN-E3CBPGNF05B.vc.lo... | 192.168.15.93 | |

Selected

Computer

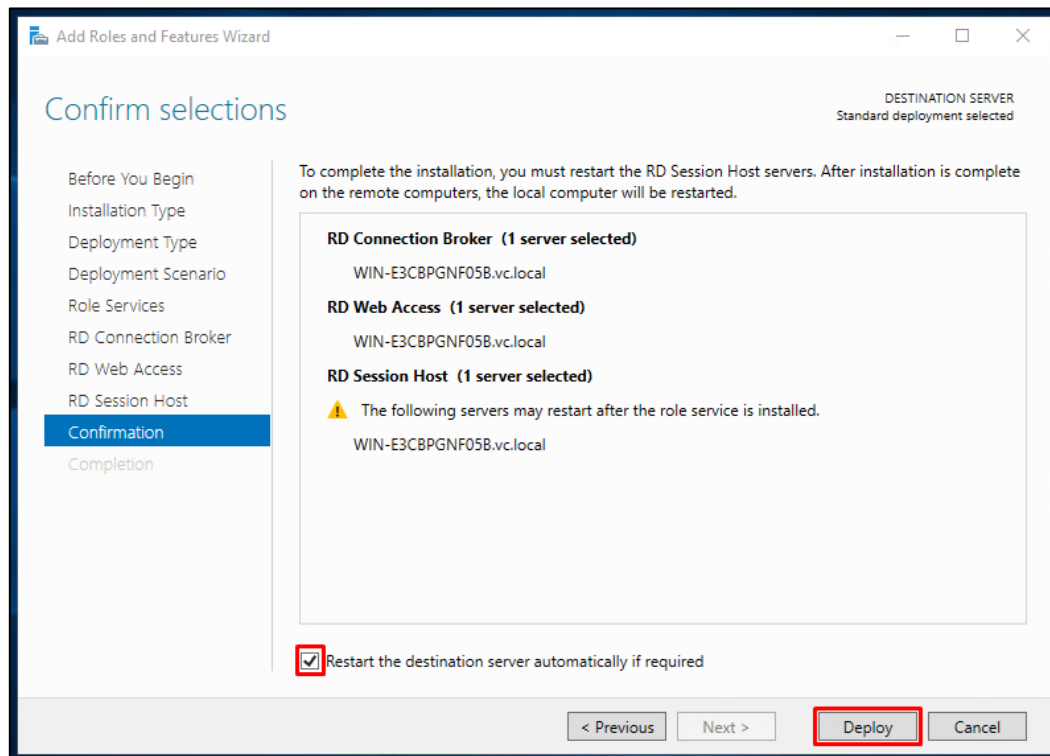
- VC.LOCAL (1)
- WIN-E3CBPGNF05B



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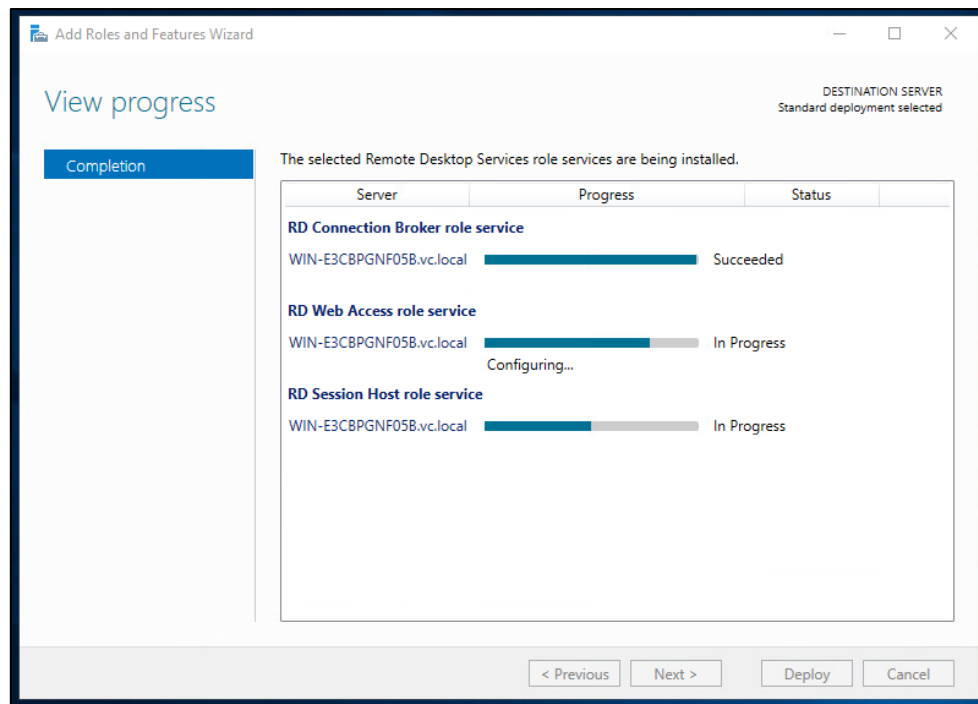
The installation is confirmed and its deployment is carried out:



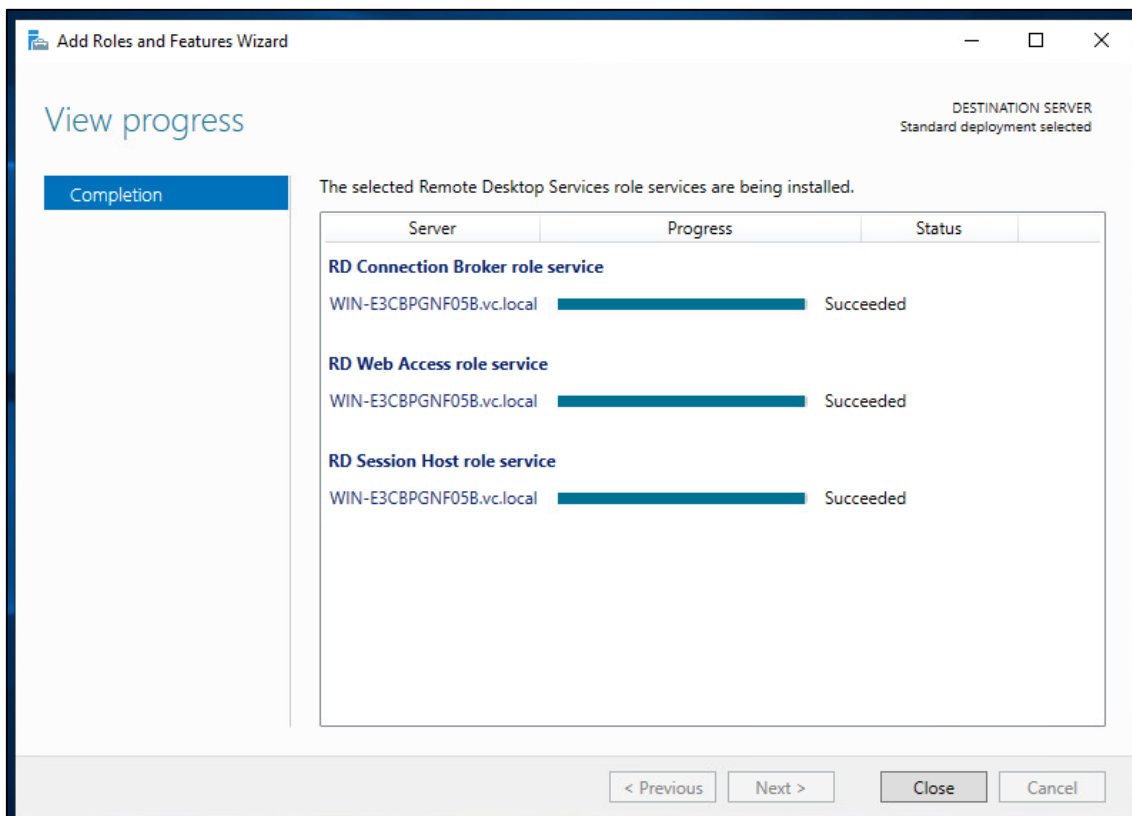


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The server will restart automatically (if you have indicated so) and the installation will finish:



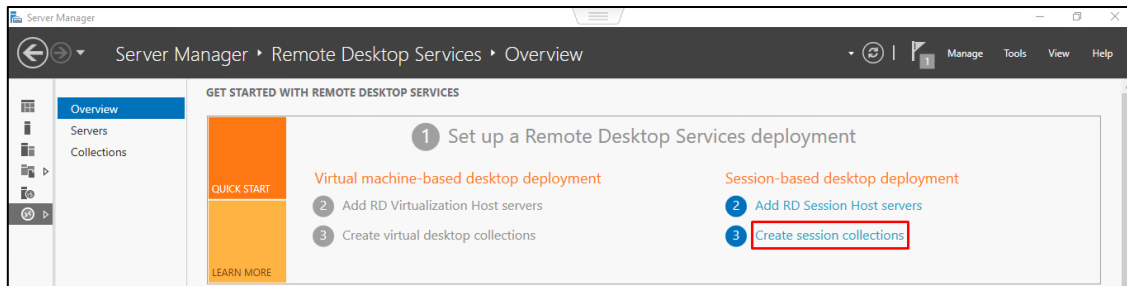


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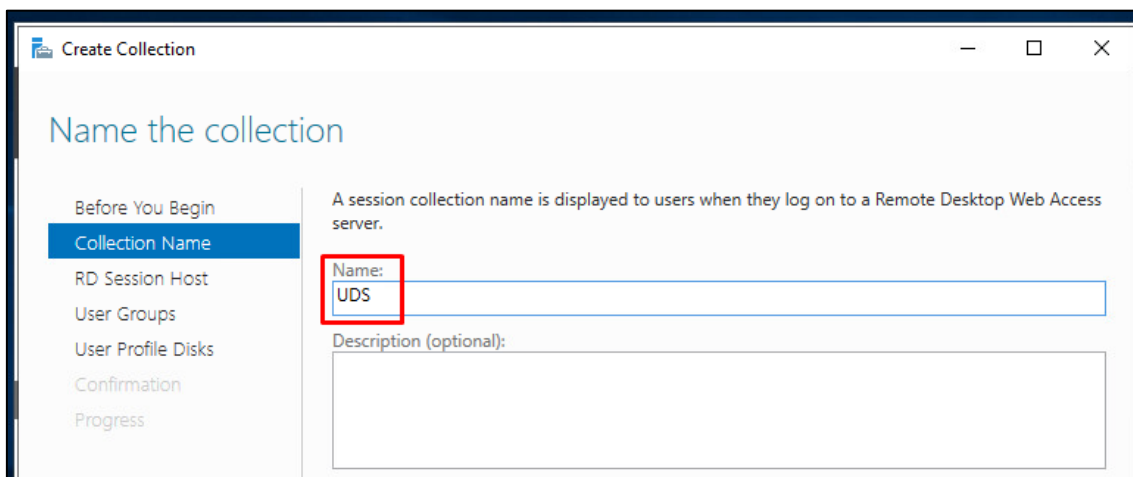
Configuring RDS with UDS Enterprise

Once the RDS role is installed and the server restarted, proceed to the creation of a new RDS collection. To do this, choose **"Create session collections"** or access the **"Collections"** section and select **"Create Session Collection"**:

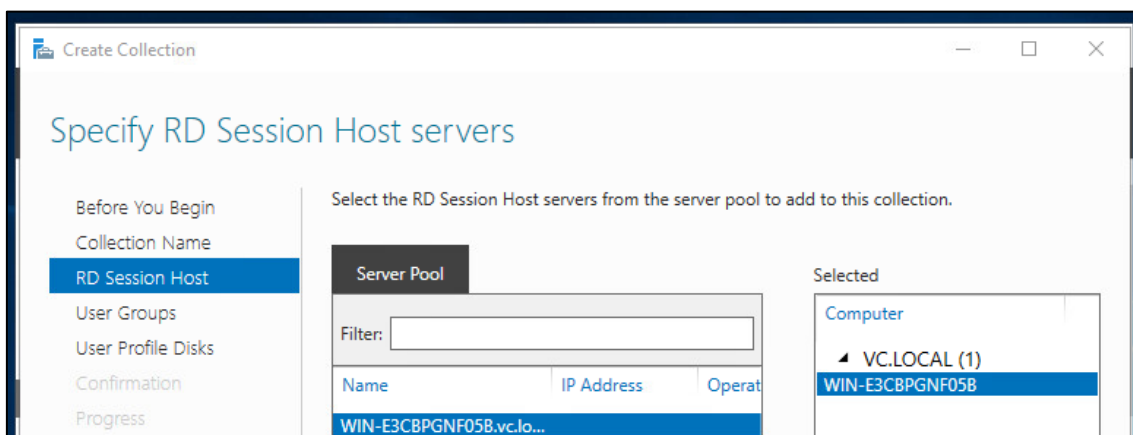


In the creation wizard the following will be indicated:

Indicate a name for the new collection.



The server **"RD Session Host Servers"** is added:





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You select which groups of users will be able to access the collection. Leave the group **"Domain Users"** as it comes by default to allow all users and perform group filtering from the UDS Enterprise administration.

The screenshot shows the 'Specify user groups' step of the 'Create Collection' wizard. On the left, a sidebar lists the steps: 'Before You Begin', 'Collection Name', 'RD Session Host', 'User Groups' (highlighted), and 'User Profile Disks'. The main area has the title 'Specify user groups' and a sub-header 'Add the user groups that should have access to connect to the collection.' Below this, there is a 'User Groups:' label and a text box containing 'VC\Domain Users'. To the right of the text box are 'Add...' and 'Remove' buttons.

It indicates where the user's profile will be stored. In case you do not enable it, a temporary profile will be created, which will be deleted when the user disconnects.

The screenshot shows the 'Specify user profile disks' step of the 'Create Collection' wizard. The sidebar on the left highlights 'User Profile Disks'. The main area has the title 'Specify user profile disks' and a sub-header 'User profile disks store user profile settings and data in a central location for the collection.' Below this, there is an unchecked checkbox labeled 'Enable user profile disks'. Underneath the checkbox is a 'Location of user profile disks:' label and an empty text box. At the bottom, there is a 'Maximum size (in GB):' label and a text box containing the number '20'.

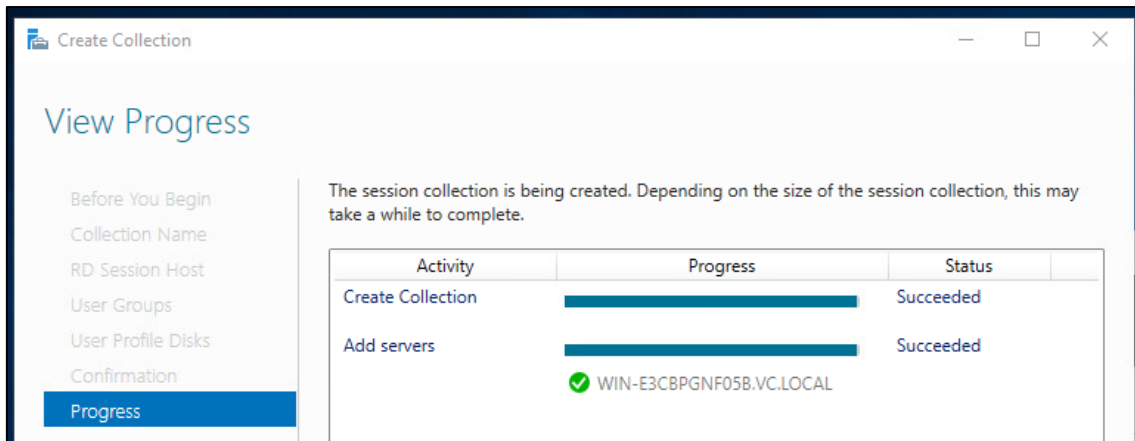
Confirm and create the collection.

The screenshot shows the 'Confirm selections' step of the 'Create Collection' wizard. The sidebar on the left highlights 'Confirmation'. The main area has the title 'Confirm selections' and a summary of the configuration. The summary includes: 'Collection Name' (UDS), 'Users and User Groups' (VC\Domain Users), 'Remote Desktop Session Host Servers' (WIN-E3CBPGNF05B,VC.LOCAL), and 'User Profile Disks' (No).



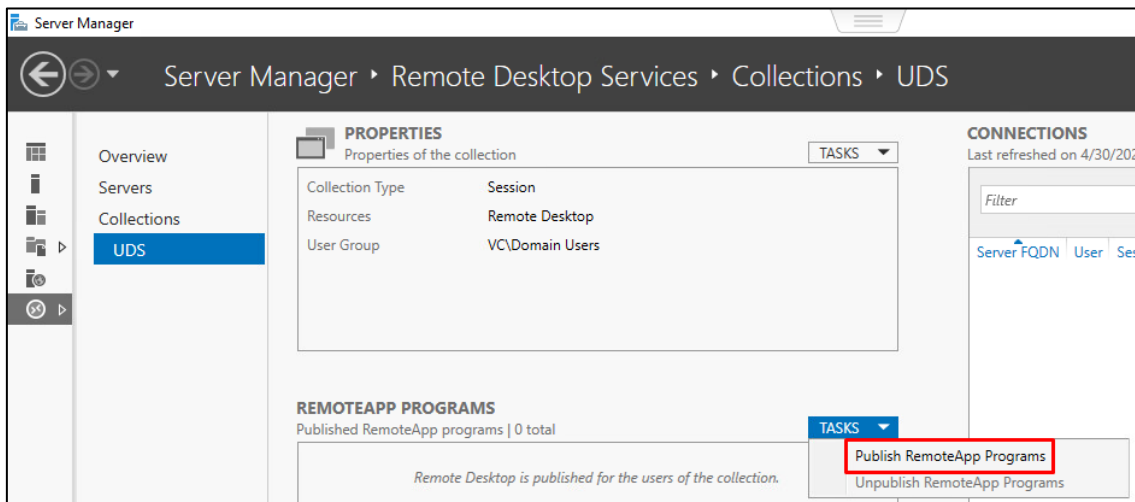
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Publishing the RDS Actor to the RDS server

Once the collection is created, select "**Publish RemoteApp Programs**".



You will have to add and select the RDS Actor in the "**RemoteApp Programs**" list. For this, the UDS Actor for RDS must be previously installed.

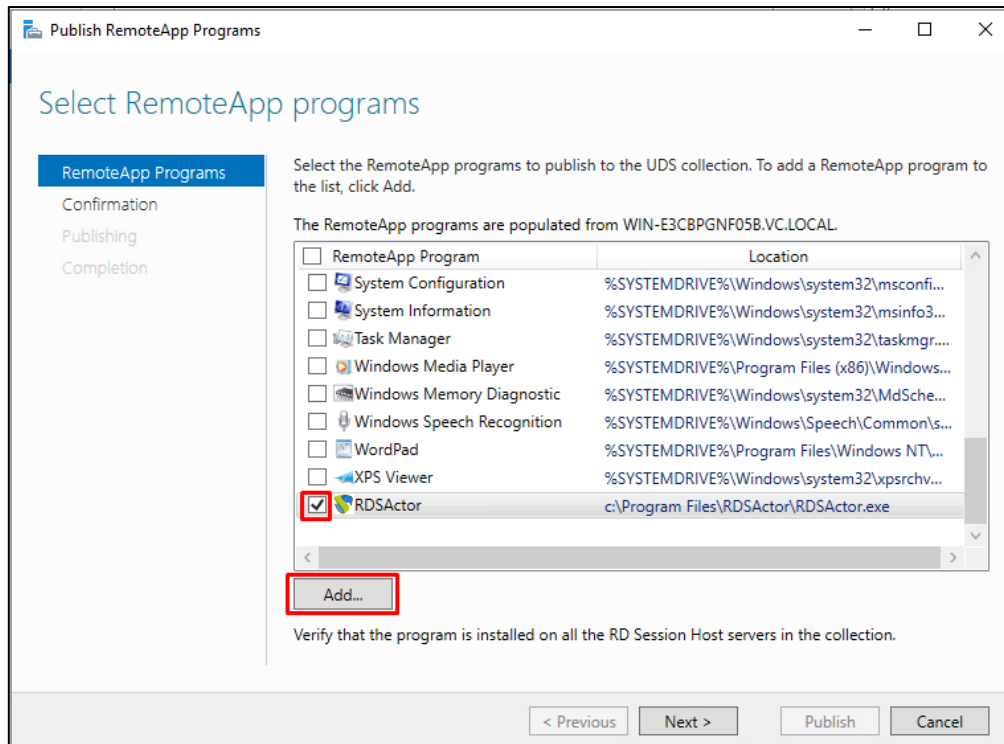
Click on "**Add**" and select the UDS Actor in the path:

C:\Program Files\RDSActor\RDSActor.exe

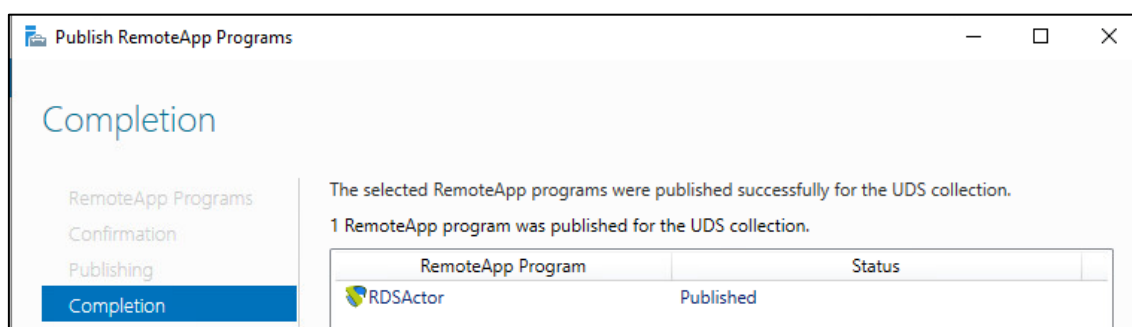
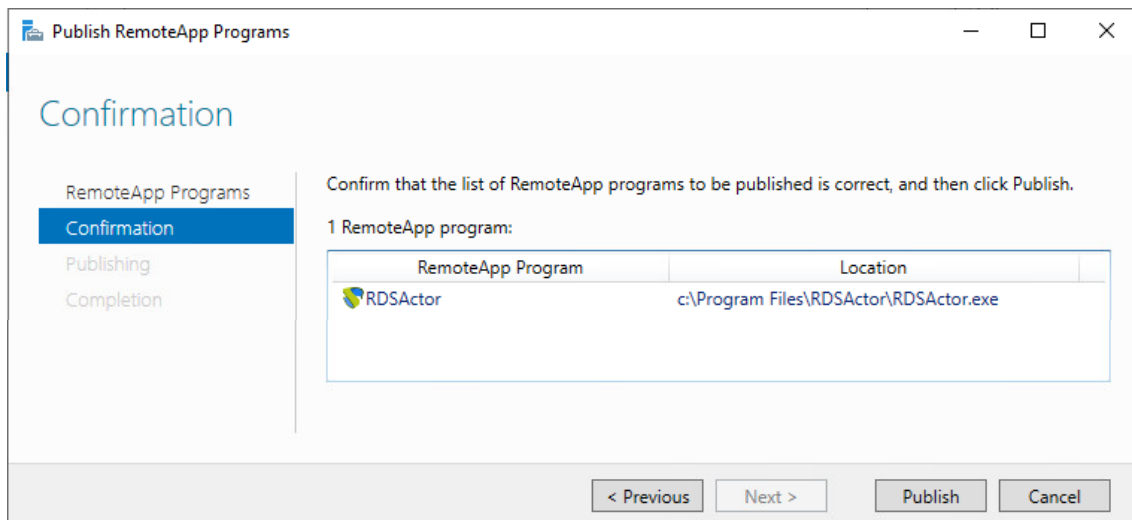


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The publication is confirmed and made:

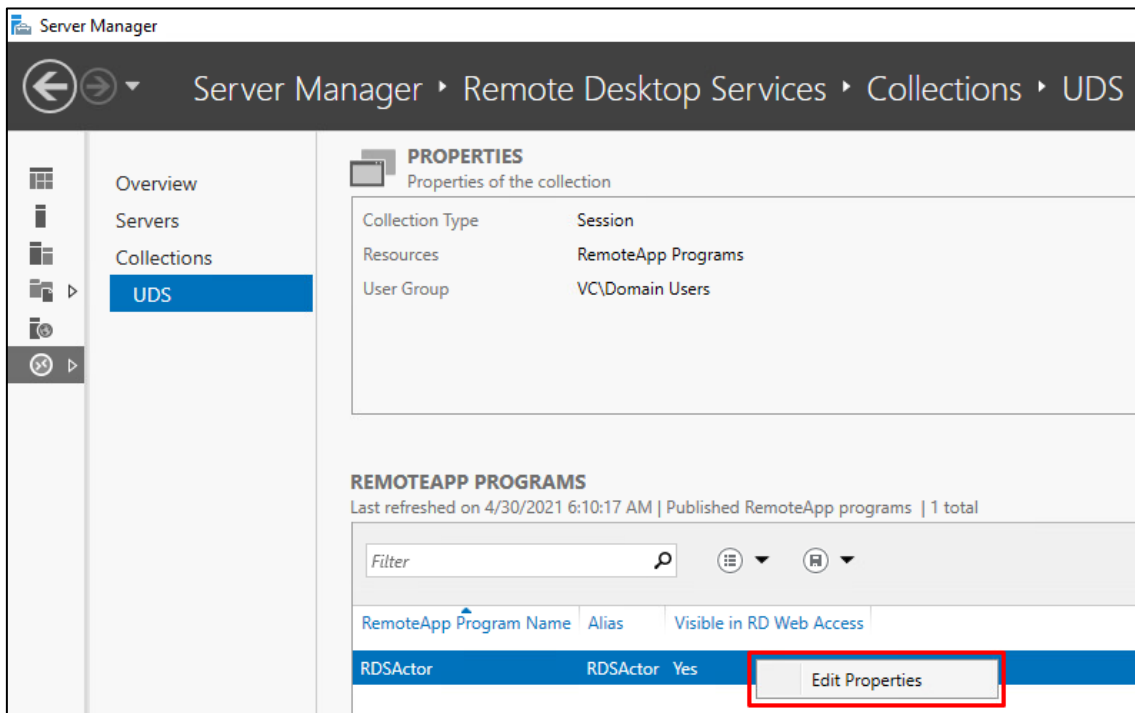




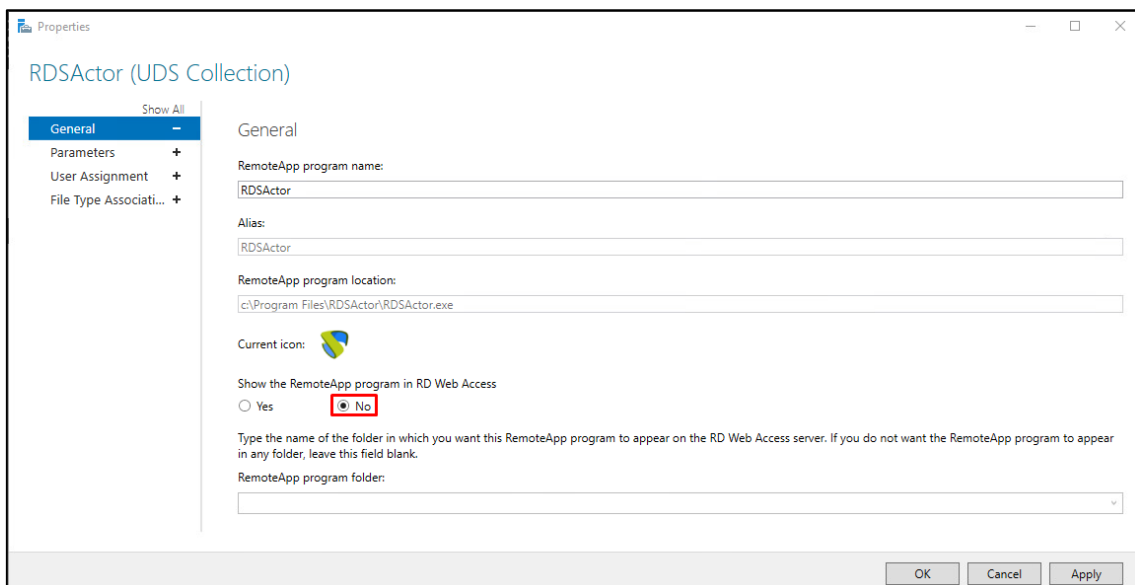
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Once created, edit its properties:



In the **"General"** section mark **"No"** in **"Show the RemoteApp program in RD Web Access"**.

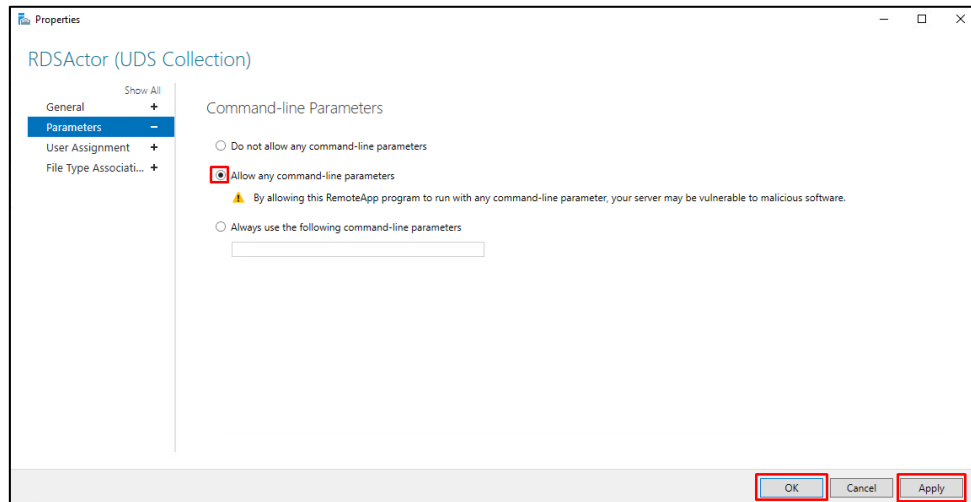




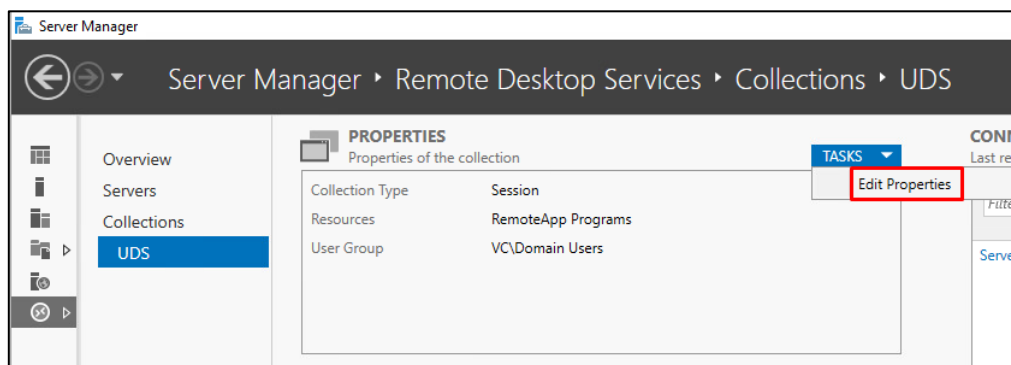
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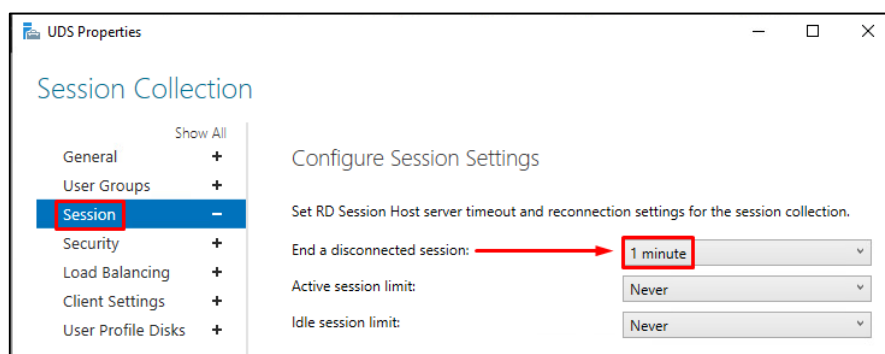
In the "**Parameters**" section select "**Allow any command-line parameters**".



Changes are applied and accepted. It is recommended to indicate a time to end the sessions of disconnected users. In this way, you will release users and their licenses when they disconnect from their virtual application. To do this, edit the properties of the collection:



In the "**Session**" section indicate a minimum time for "**End a disconnected session**":



Once all these steps have been completed, you will have a valid RDS server to connect to the UDS server and be able to publish virtual applications for UDS Enterprise users.



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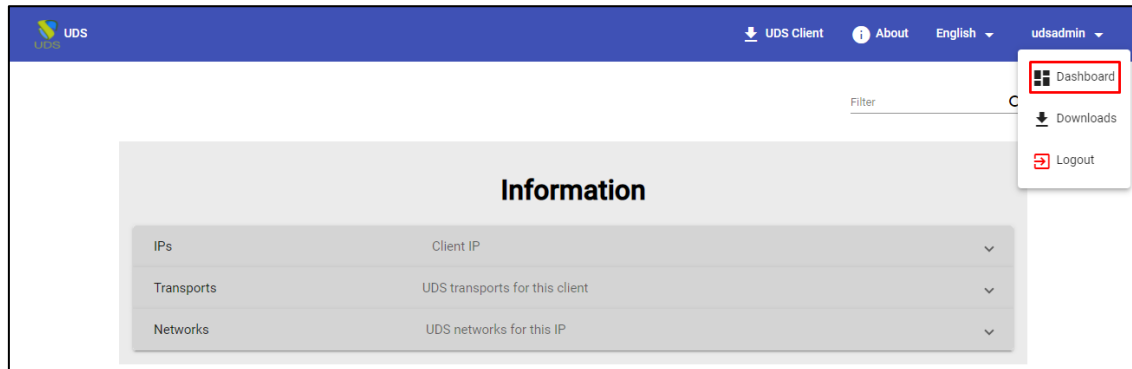
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UDS Enterprise Administration

Once completed all the previous steps, the integration with the application server will be carried out for the publication of the desired application service.

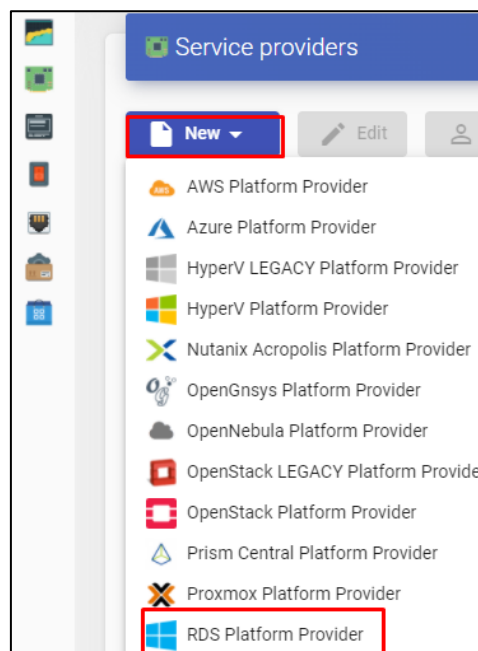
Follow the next steps:

Go to our UDS Enterprise control panel.



RDS Server and UDS Enterprise connection

Access the services tab and create a new service provider:





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A service name will be given and the IP of our RDS server.

New provider

Main User mapping AD User management

Tags

Tags for this element

Name *

RDS Windows

Comments

Comments for this element

List of servers

192.168.15.93

Server Checking

☐ No

Test Discard & close Save

NOTE: The same RDS service can have several IPs that connect different existing RDS servers, thus achieving high availability of the applications. In addition, when indicating several IPs you must mark the "Server Checking" check.

When the login in UDS Enterprise is done through a user who is not in the Active Directory (AD), you must define the following options in the "User mapping" tab:

- **"Yes"**: Indicates that specific users (indicated in the **"Users"** section) will be used to access the applications.
- **"No"**: You will use the user of the UDS Enterprise login portal to access the applications (in this case, you must be an AD user).
- **"Users"**: Only applies if **"User mapping"** is **"Yes"**. They will be mapping users belonging to an Active Directory that will be able to log in to the RDS application servers and that will be used by UDS Enterprise only to execute an application session.
- **"User's password"**: Password of all the users indicated in the previous section. All mapping users need to have the same password.

Edit provider

Main User mapping AD User management

User mapping

☒ Yes

Users

user01@vdi.local, user02@vdi.local, user03@vdi.local, user04@vdi.local, user05@vdi.local, (15 more)

User's password

.....

Test Discard & close Save



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You can also use the “**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**

NOTE: Only one of the two methods can be activated for user mapping “**User mapping**” or “**User auto creation on AD**”.

New provider

Main User mapping **AD User management**

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

test **Discard & close** **Save**

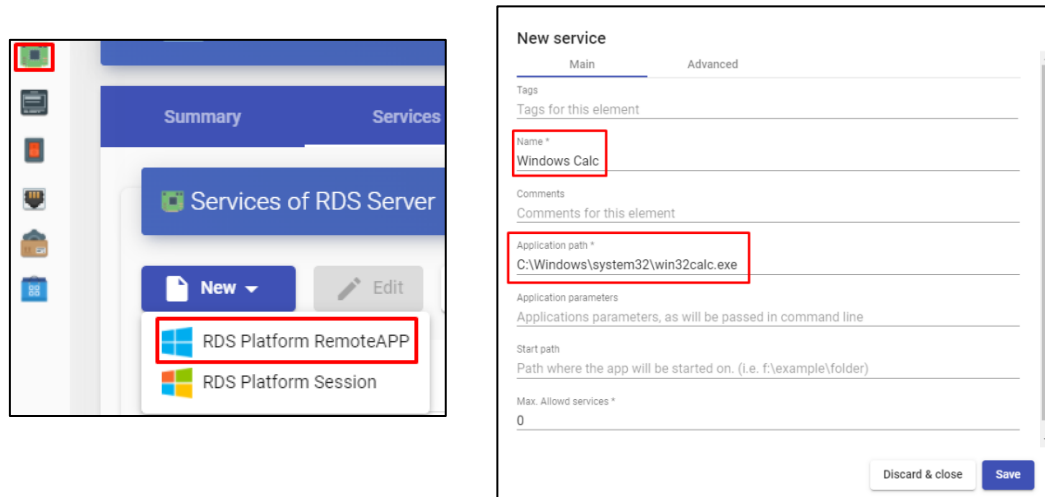


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Once you have created your service provider, within it the base application to be served will be defined. (In this example the Windows calculator has been chosen).

A name and the execution path of the application will be entered:



Additionally, other parameters can be defined if desired:

- **Application Parameters:** You can pass parameters to any application in this field to customize its execution.
- **Start Path:** Path where the application will be executed.
- **Max. Allowed services:** Maximum number of application sessions: (0 = unlimited).



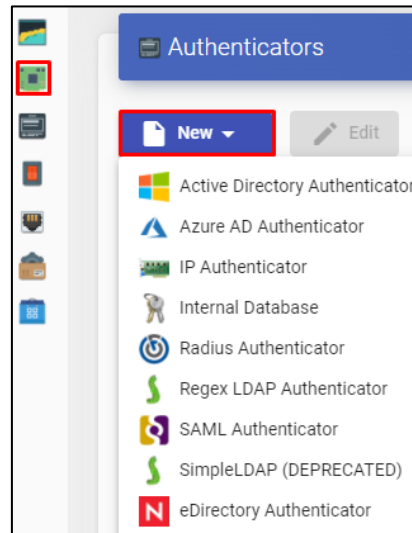
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Authentication method

The way in which users will access the UDS Enterprise environment will be created and configured.

This step will be carried out in the **"authenticators"** tab, being able to choose between the following authentication systems:



NOTE: You must take into account the way in which your users will login to UDS Enterprise, since in this case if the users who access UDS Enterprise do not do so through the AD to which the RDS server belongs, you must indicate in the service the mapping of users so that they are those with which the application is accessed.

In this example, an Active Directory-based authentication system will be used.

For more information on how to register an authentication system, you can consult the [UDS Enterprise 3.5 Installation, Administration and User Manual](#)



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OS Manager

Within the “**OS Manager**” tab, clicking on “**New**” will select “**RDS OS Manager**”.

Choose a name for the **OS Manager**:

The screenshot shows the UDS Enterprise interface. On the left, the 'OS Managers' tab is active, and the 'New' button is highlighted. A dropdown menu is open, showing various OS Manager options, with 'RDS OS Manager' selected. On the right, the 'New OS Manager' dialog box is displayed. The 'Name' field is filled with 'RDS OS Windows'. The 'Max. session time' is set to 24. The 'Save' button is highlighted.

NOTE: In an "RDS OS Manager" the minimum parameters to configure are:

- **Name:** Name of the "OS Manager".
- **Max. 26 session time:** Maximum time that the session of an application registered in UDS Enterprise will remain. Expressed in hours (0 = unlimited).



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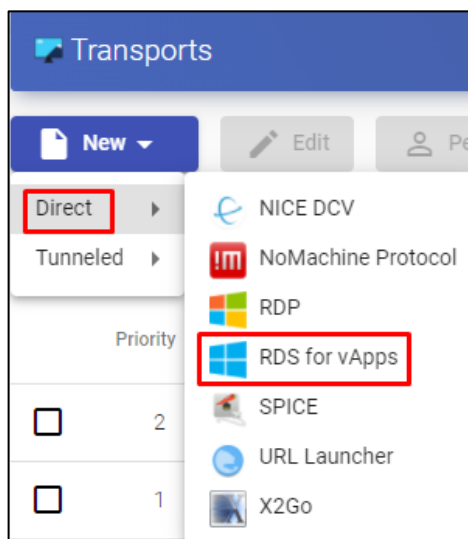
Transport

The way users will connect to your virtual application service will be created and configured.

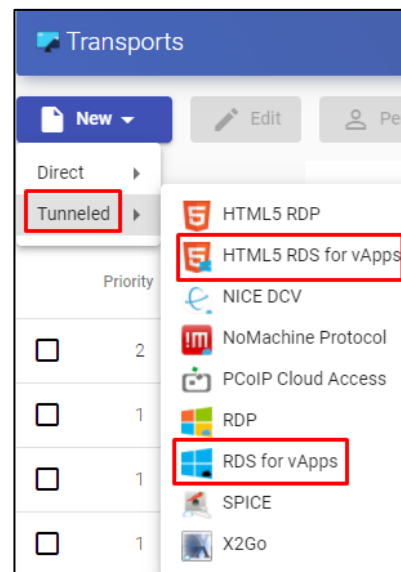
In the tab "**Connectivity > Transport**", click on "**New**".

The appropriate transport will be configured for each case:

Direct Connection (LAN)



Tunnel connection (WAN or HTML5)



The 'New Transport' window has three tabs: 'Main', 'Credentials', and 'Parameters'. The 'Main' tab is active. It contains a 'Tags' section with a text input field labeled 'Tags for this element'. Below this is a 'Name *' field with the text 'RDS Windows' entered.

In this example, it will be used the direct transport "**RDS for vAPPs**"

For more information on how to create a transport for RDS applications, you can refer to the [UDS Enterprise 3.5 Installation, Administration and User Manual](#)



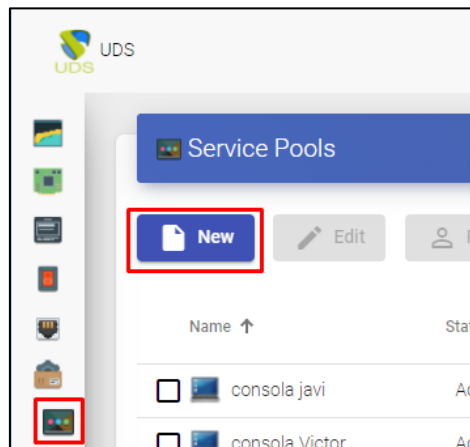
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Service Pool

Once you have completed the previous steps and you have all the necessary elements available, you can configure the Service Pool.

In the tab **"Pools> Pool of service"**, you will click on **"New"**.



A descriptive name will be entered for the application to be published, the base service and its OS Manager.

New service Pool

Main Display Advanced Availability

Tags

Tags for this element

Name *

Windows Calc

Short name

Short name for user service visualization

Comments

Comments for this element

Base service

RDS Windows\Windows Calc

OS Manager

RDS OS Windows

Publish on creation

☒ Yes

Discard & close Save

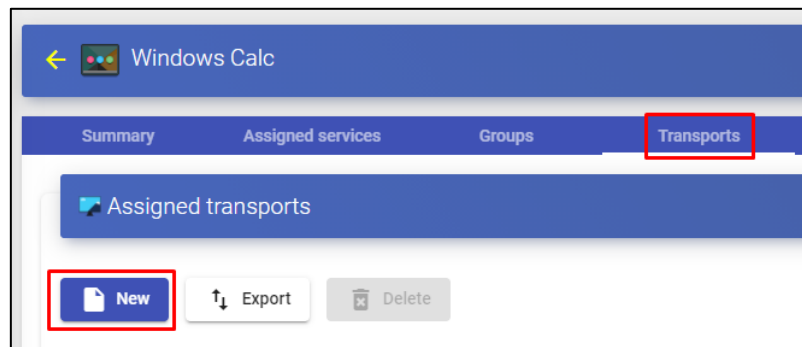
| Name ↓ | Status | User services | In Preparation | Usage | Visible | Shows transports |
|--|--------|---------------|----------------|-------|---------|------------------|
| <input checked="" type="checkbox"/> Windows Calc | Active | 0 | 0 | 0% | yes | yes |



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Once the service is created, enter it to assign the transport:

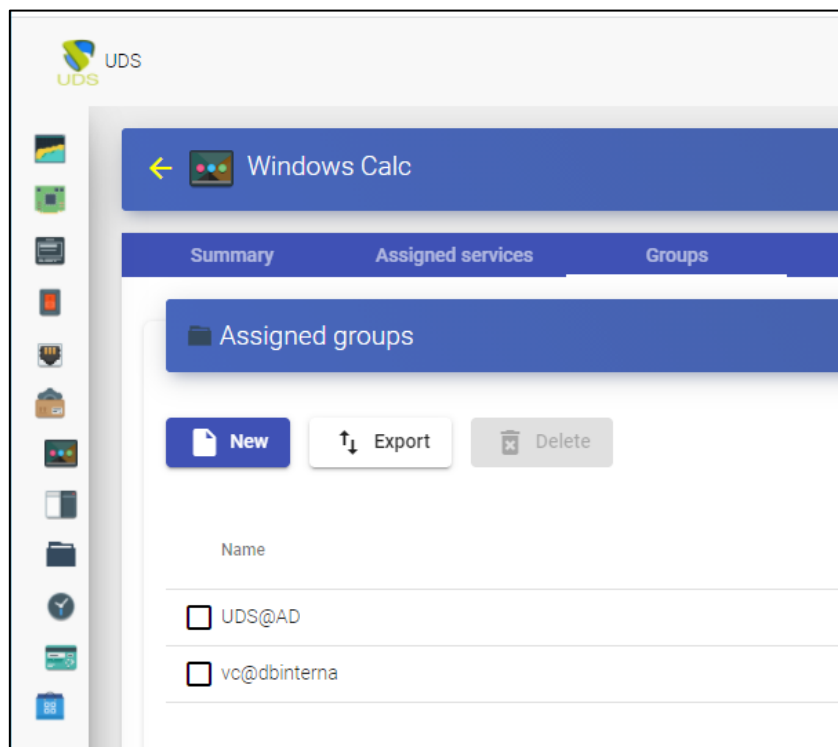


New transport for Windows Calc

Transport
RDS Windows

Cancel Ok

The user groups that you want to access this service will also be added:



For more information on how to create a service pool for RDS applications, you can consult the [UDS Enterprise 3.5 Installation, Administration and User Manual](#)

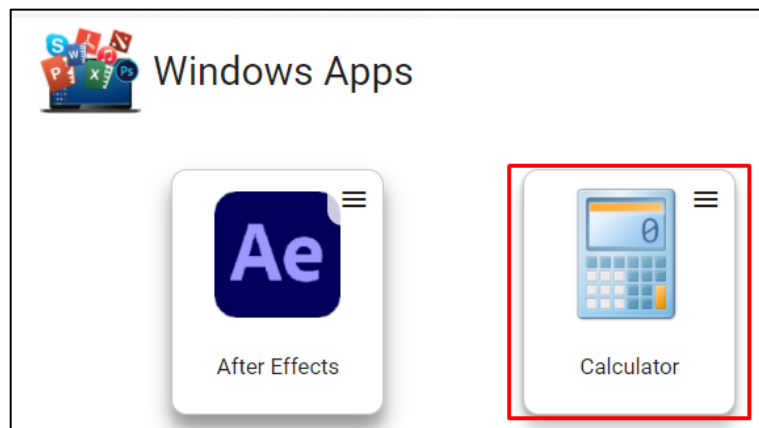


Access to Windows applications

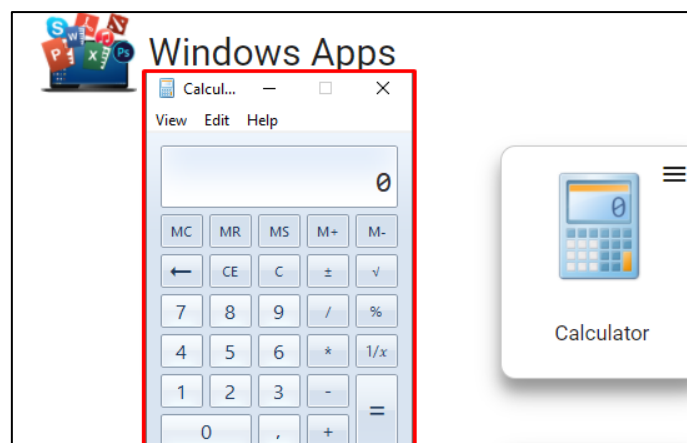
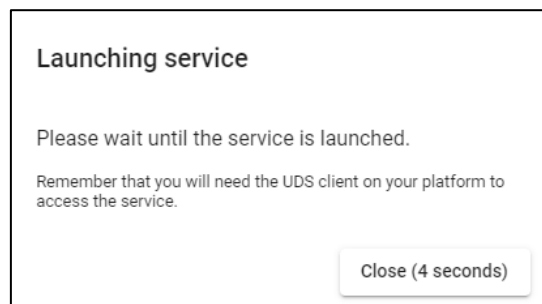
Once all the previous configuration is finished, access the service. This access can be done from Windows OS (server and desktop) and from Linux OS.

Access the UDS Enterprise login portal and validate ourselves with a previously configured user belonging to AD.

In the user services window, you will be able to see the available service:



Enter the Windows calculator service by clicking on the application. It is necessary to have previously installed the UDS Client:





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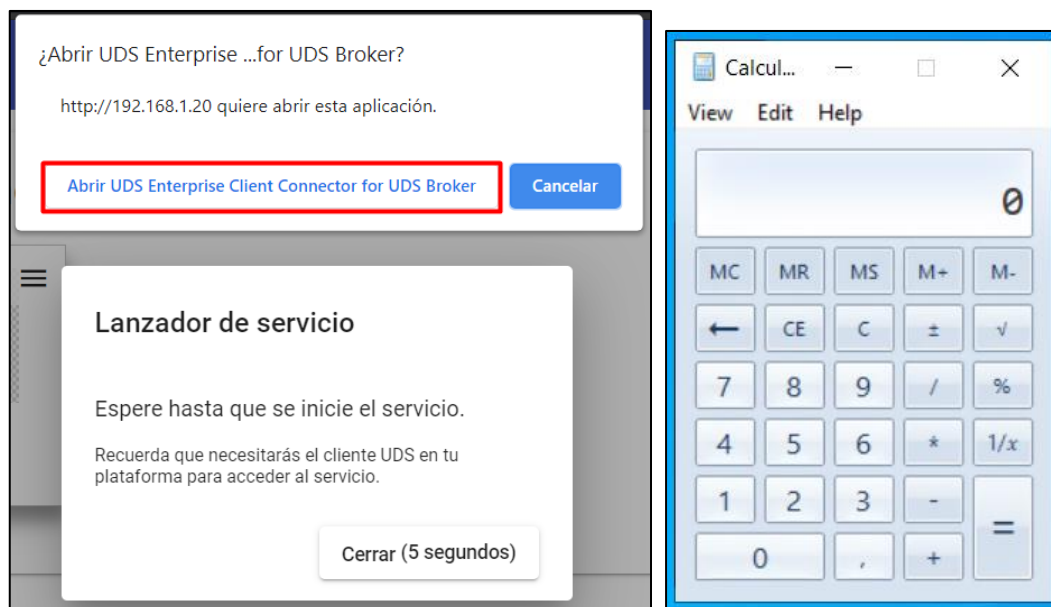
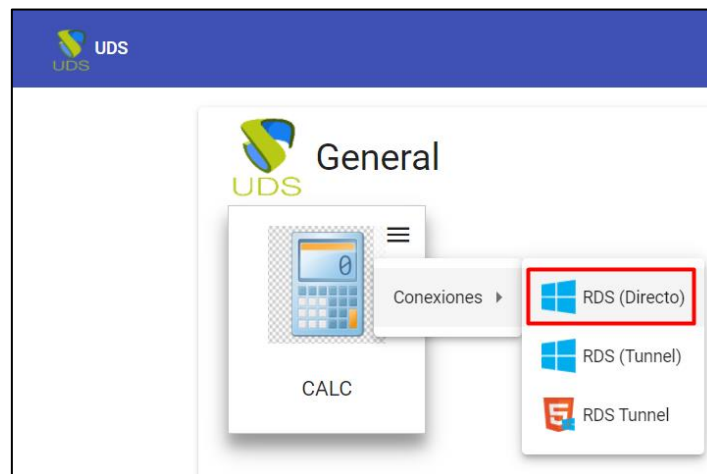
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Different methods of accessing a vApp service

One or more access modes (transports) can be assigned to the same vApp service, depending on our needs:

Direct (LAN)

- RDS



NOTE: This type of connection requires having the UDS Client previously installed on the connection client computer. It will be necessary to have, in the connection client, a Windows or Linux OS

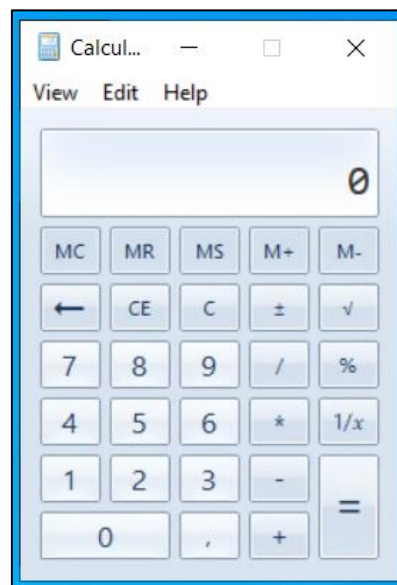
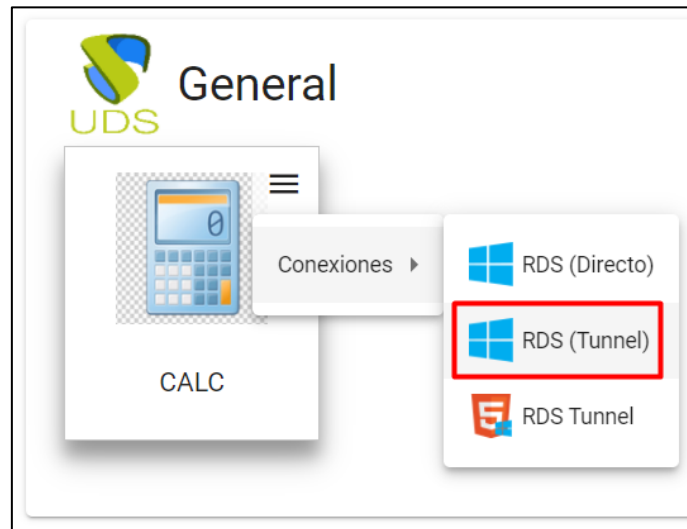


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Tunneling (LAN and WAN)

- RDS (Tunnel)



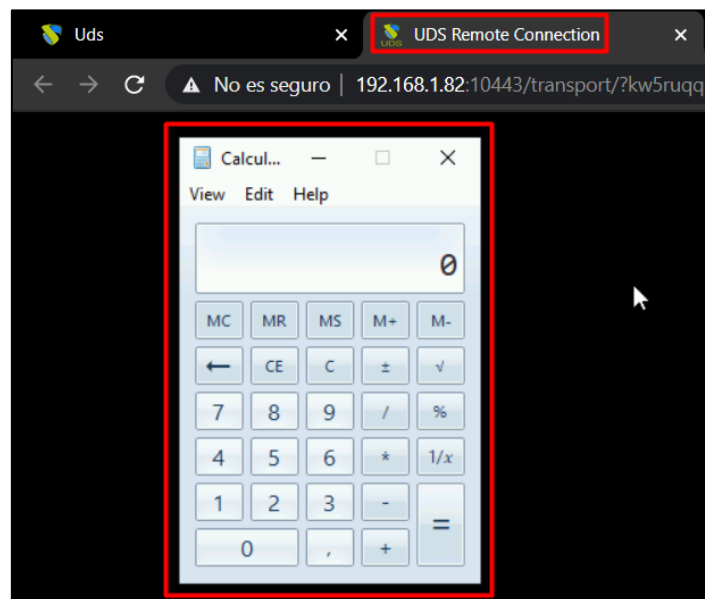
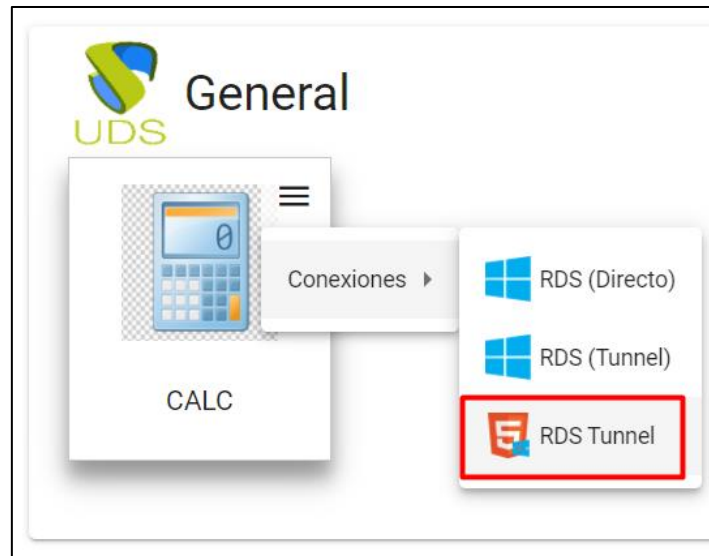
NOTE: The connection will be made in the same way as the direct one (it also requires having the UDS Client installed), but it will be made through the tunnel server, offering the possibility of connecting through the WAN. It will be necessary to have, in the connection client, a Windows or Linux OS.



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- HTML5 RDS for vApps



NOTE: The HTML5 connection type for vApps does NOT require the UDS Client. Furthermore, it can be used in both LAN and WAN connections. The accesses can be made from any OS with a current browser.



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About Virtual Cable

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

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

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