



## Introduction

This guide indicates the steps to be taken to use RDP connection clients to connect to UDS services from macOS operating systems.

The supported RDP clients are:

- FreeRDP
- Microsoft Remote Desktop

To enable this new functionality, it will be necessary to have a stable UDS Enterprise 3.0 version and apply a patch to the UDS-Server machine (if there are several UDS servers, the patch must be applied to all of them).

It will also be necessary to install the UDS Client, which will call the RDP client chosen for the connection.

## 1. Apply patch to UDS server

The first task to be performed will be the installation of the patch that will allow you to use the RDP clients for macOS.

Download the RDP.zip file from the following repository:

[http://images.udsenderprise.com/files/UDSPatches/UDS-3.0/MacOS\\_RDP/RDP.zip](http://images.udsenderprise.com/files/UDSPatches/UDS-3.0/MacOS_RDP/RDP.zip)

Connect to the UDS server (UDS-Server). Cut and save a copy of the existing folder in case its restoration is necessary:

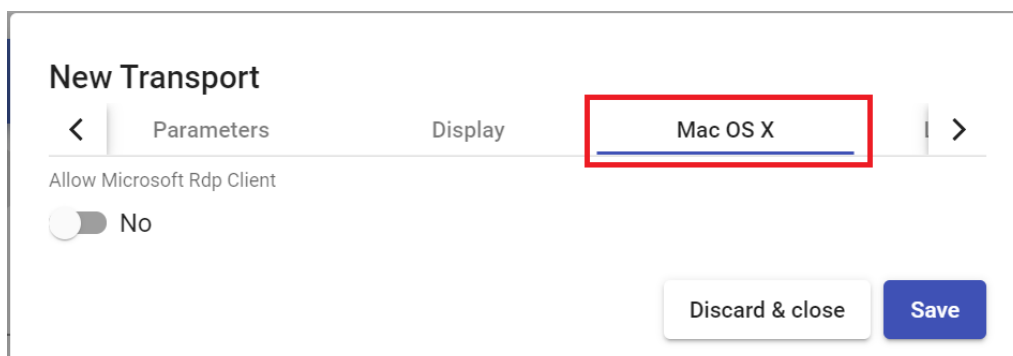
`/var/server/uds/transports/RDP`

Unzip the new RDP folder and make a complete copy in the path:

`/var/server/uds/transports/`

Replace the old RDP folder with the new one. Once the folder is copied, restart the UDS server.

After restarting, you will see that now when you edit or create an RDP transport, a new tab called "**Mac OS X**" appears:





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If you leave the option **“Allow Microsoft Rdp Client”** as it comes by default (disabled), the UDS Client installed on the macOS device will search for and use the FreeRDP client (if it is not installed, an error will appear requesting its installation).

If you enable the **“Allow Microsoft Rdp Client”** option, the UDS Client installed on the macOS device will use the **“Microsoft Remote Desktop”** client.

**NOTE: If you use the "Microsoft Remote Desktop" client, it will not be possible to redirect credentials and it will always be necessary to indicate the password to log into the service.**

## 2. Installing the UDS Client

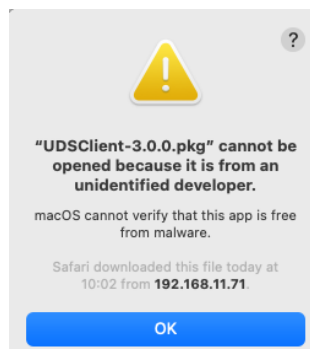
Before connecting to UDS services, it will be necessary to install the UDS Client for macOS.

Access the UDS Client downloads and select **“MacOS (pkg)”**:



Proceed to its installation:

- A notification will appear that prevents its execution:



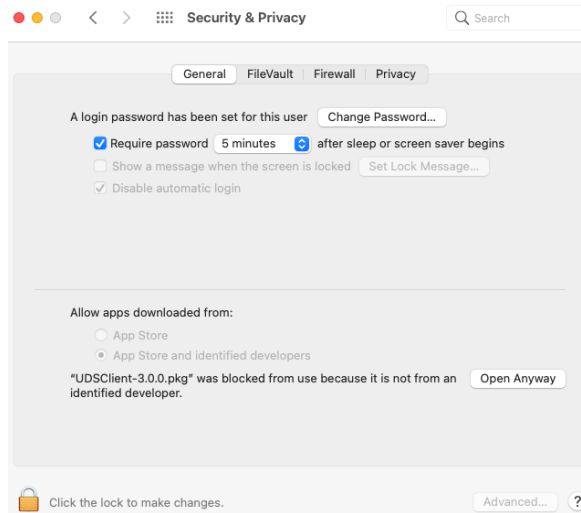


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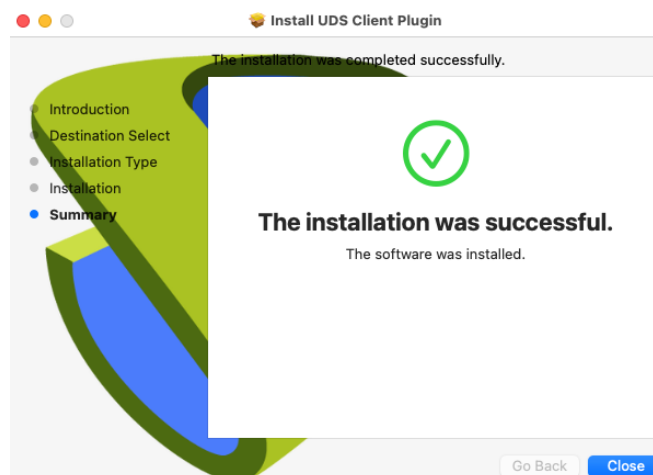
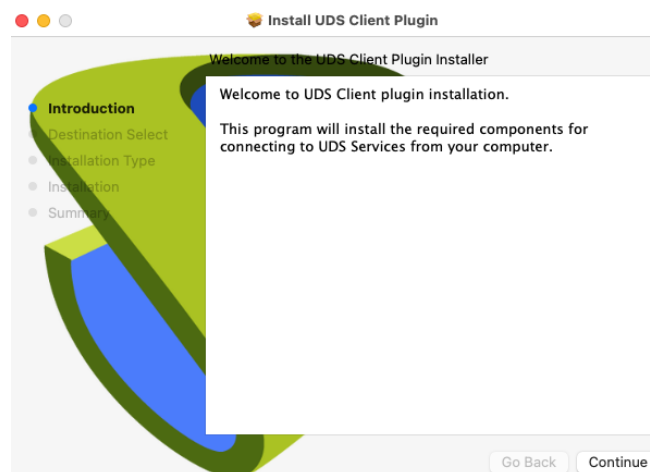
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- To solve this issue, access: **Apple menu > System Preferences, click Security & Privacy, General:**



- Click on **“Open Anyway”** to open the UDS Client.
- Proceed to the installation of the UDS Client:





### 3. Installing FreeRDP

To use the FreeRDP client to connect with UDS services, it is necessary to install it. To that end, you will have to carry out the following tasks:

- Install "brew"

Execute the following command from a terminal:

```
/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install.sh)"
```

```
[user@users-MacBook-Pro ~ % /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/in
stall/master/install.sh)"
[Password:
==> This script will install:
/usr/local/bin/brew
/usr/local/share/doc/homebrew
/usr/local/share/man/man1/brew.1
/usr/local/share/zsh/site-functions/_brew
/usr/local/etc/bash_completion.d/brew
/usr/local/Homebrew
==> The following new directories will be created:
/usr/local/bin
/usr/local/etc
/usr/local/include
/usr/local/lib
/usr/local/sbin
/usr/local/share
/usr/local/var
/usr/local/opt
/usr/local/share/zsh
/usr/local/share/zsh/site-functions
/usr/local/var/homebrew
/usr/local/var/homebrew/linked
/usr/local/Cellar
/usr/local/Caskroom
/usr/local/Homebrew
/usr/local/Frameworks
==> The Xcode Command Line Tools will be installed.

Press RETURN to continue or any other key to abort
█
```

Confirm that the installation was successful:

```
Already up-to-date.
==> Installation successful!

==> Homebrew has enabled anonymous aggregate formulae and cask analytics.
Read the analytics documentation (and how to opt-out) here:
https://docs.brew.sh/Analytics
No analytics data has been sent yet (or will be during this `install` run).

==> Homebrew is run entirely by unpaid volunteers. Please consider donating:
https://github.com/Homebrew/brew#donations

==> Next steps:
- Run `brew help` to get started
- Further documentation:
https://docs.brew.sh
user@users-MacBook-Pro ~ % █
```



- Install “xquartz”

Execute the following command from a terminal:

```
brew cask install xquartz
```

```
[user@users-MacBook-Pro ~ % brew cask install xquartz ]
Updating Homebrew...
==> Auto-updated Homebrew!
Updated 1 tap (homebrew/core).
==> Updated Formulae
Updated 1 formula.

==> Tapping homebrew/cask
Cloning into '/usr/local/Homebrew/Library/Taps/homebrew/homebrew-cask'...
remote: Enumerating objects: 572306, done.
remote: Total 572306 (delta 0), reused 0 (delta 0), pack-reused 572306
Receiving objects: 100% (572306/572306), 239.72 MiB | 12.77 MiB/s, done.
Resolving deltas: 100% (407190/407190), done.
Updating files: 100% (3821/3821), done.
Tapped 1 command and 3728 casks (3,846 files, 257.9MB).
==> Downloading https://dl.bintray.com/xquartz/downloads/XQuartz-2.7.11.dmg
==> Downloading from https://d29vzk4ow07wi7.cloudfront.net/32e50e8f1e21542b847041711039fa78d44febfe
##### 100.0%
==> Verifying SHA-256 checksum for Cask 'xquartz'.
==> Installing Cask xquartz
==> Running installer for xquartz; your password may be necessary.
==> Package installers may write to any location; options such as --appdir are ignored.
[Password: ]
installer: Package name is XQuartz 2.7.11
installer: Installing at base path /
installer: The install was successful.
🍺 xquartz was successfully installed!
user@users-MacBook-Pro ~ %
```

- Install “FreeRDP”

Execute the following command from a terminal:

```
brew install freerdp
```

```
user@users-MacBook-Pro ~ % brew install freerdp
```



Confirm that the installation was successful:

```
==> Summary
📦 /usr/local/Cellar/openssl@1.1/1.1.1h: 8,067 files, 18.5MB
==> Installing freerdp
==> Pouring freerdp-2.2.0_1.big_sur.bottle.tar.gz
📦 /usr/local/Cellar/freerdp/2.2.0_1: 245 files, 5MB
==> Caveats
==> openssl@1.1
A CA file has been bootstrapped using certificates from the system
keychain. To add additional certificates, place .pem files in
  /usr/local/etc/openssl@1.1/certs

and run
  /usr/local/opt/openssl@1.1/bin/c_rehash

openssl@1.1 is keg-only, which means it was not symlinked into /usr/local,
because macOS provides LibreSSL.

If you need to have openssl@1.1 first in your PATH run:
  echo 'export PATH="/usr/local/opt/openssl@1.1/bin:$PATH"' >> ~/.zshrc

For compilers to find openssl@1.1 you may need to set:
  export LDFLAGS="-L/usr/local/opt/openssl@1.1/lib"
  export CPPFLAGS="-I/usr/local/opt/openssl@1.1/include"

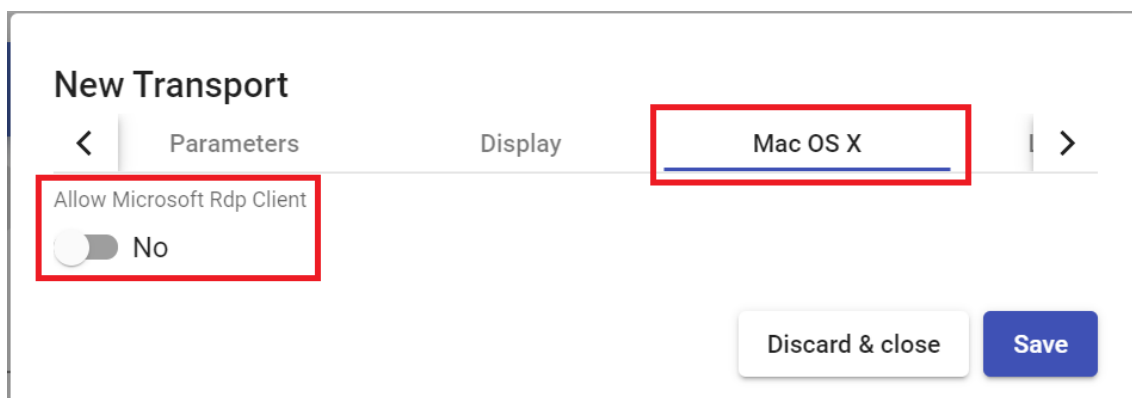
For pkg-config to find openssl@1.1 you may need to set:
  export PKG_CONFIG_PATH="/usr/local/opt/openssl@1.1/lib/pkgconfig"

user@users-MacBook-Pro ~ %
```

The last task to be performed to finish the FreeRDP installation is **restarting the computer** to apply these new settings.

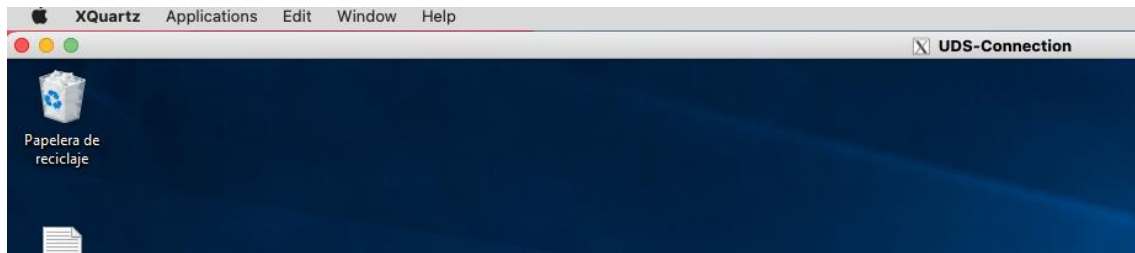
## 4. Using FreeRDP

If you already have a FreeRDP client installed on your macOS connection client computer, you will be able to access UDS services through this client. To do this, you will have to verify that the “**Allow Microsoft RDP Client**” parameter is not enabled within the “**Mac OS X**” section of the RDP transport to be used:





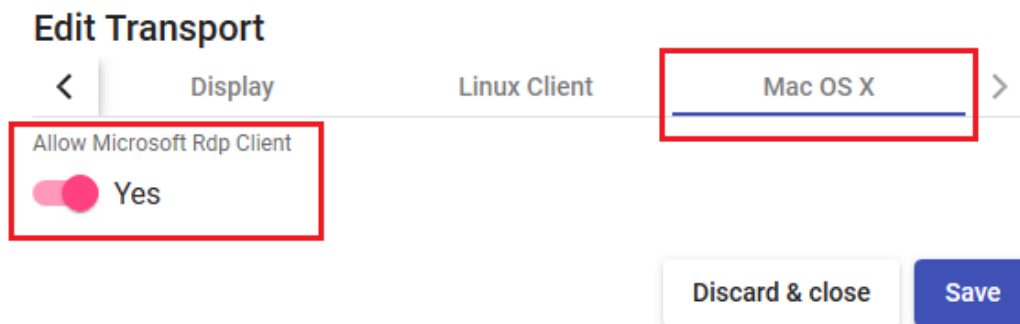
Once verified, you can make the connection with the service:



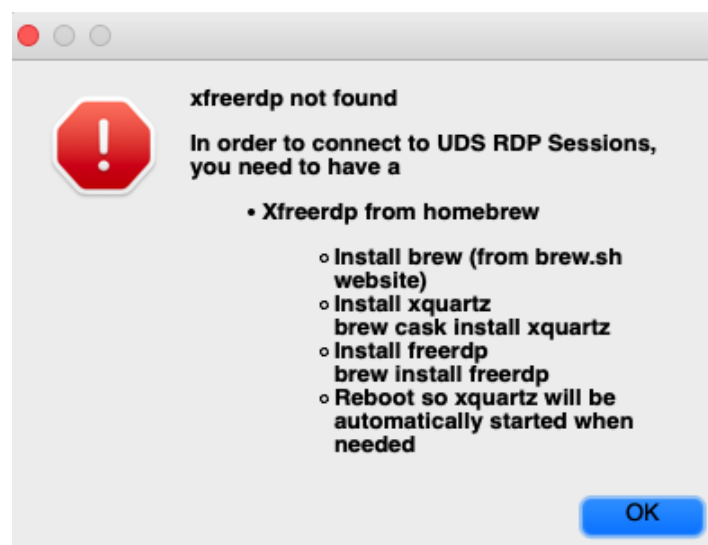
**NOTE:** With the FreeRDP client, you will be able to redirect credentials (username and password) based on the configuration applied in the “**Credentials**” tab of the transport.

## 5. Using Microsoft Remote Desktop

If you want to use the Microsoft Remote Desktop client instead of FreeRDP, you must enable the “**Allow Microsoft RDP Client**” parameter within the “**Mac OS X**” section of the RDP transport to be used:



In case this parameter is not enabled, UDS will try to use the FreeRDP client to make the connection. If it is not installed, you will get the following error:



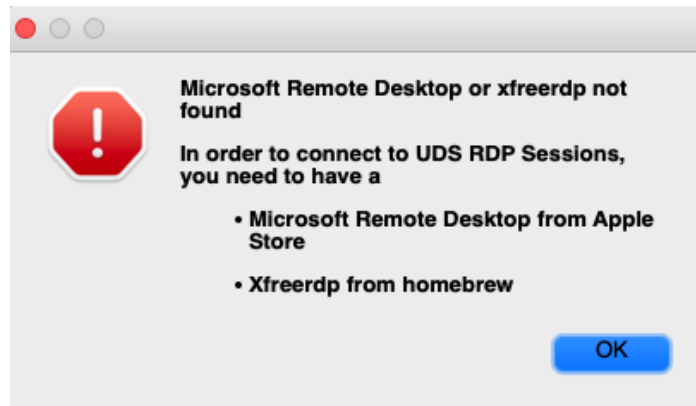


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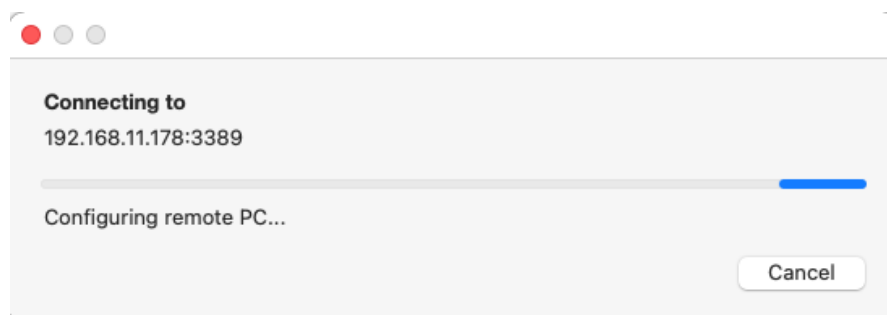
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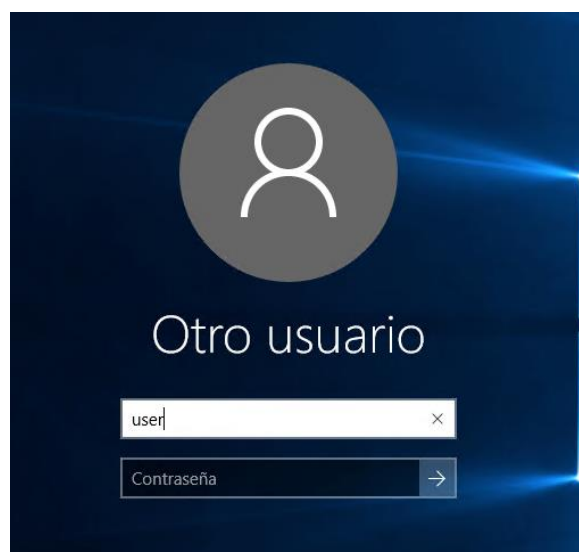
If you have the “**Allow Microsoft RDP Client**” parameter enabled but the “**Microsoft Remote Desktop**” client is not installed and you try to make the connection, you will get the following error:



If you have the “**Microsoft Remote Desktop**” client installed and the “**Allow Microsoft RDP Client**” parameter enabled, when you make the connection you will connect to the service.



The system will request the user's password (the user name will be redirected based on the configuration applied in the “**Credentials**” tab of the transport).







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## Professional services and support

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

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

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