

TUTORIAL

Cloud Disk Sync (S&F) - VPS

PLAYER ONE / PLAYER ZERO



Introduction

Create a VPS and Set it Up with UBUNTU 22.04

Connect to VPS via SSH via PuTTY Software

User creation for Store & Forward (S&F)


Generating SSH keys

Uploading content to VPS with FileZilla (FTP)

S&F module (Rsync)

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Uploading content to VPS with FileZilla (FTP)
S&F module (Rsync)

Thank you for choosing our device Ecler PLAYER ONE / PLAYER ZERO!
We appreciate your trust.

This is a Tutorial developed exclusively to answer any questions you may have on this particular topic and, in this way, improve your experience with our products.

We remind you that you can also visit our website at www.ecler.com where you can access the complete user manual of the product.

If you still have any questions after reading, you can contact your supplier or distributor, or fill in the contact form on our website, at [Support / Technical requests](#).


1. INTRODUCTION


The **Store and Forward (S&F)** module **allows PLAYER devices (Player ONE and Player ZERO) to download remote audio content to local storage media (USB/uSD).**

When it is active, it checks a remote location that hosts audio content on a daily basis, compares it to the current content stored on local media (USB/uSD) and, if necessary (if differences are detected), syncs the local content to make it an exact copy of the remote content. This is a safe method of playing content on the device during working hours (during the day), storing it on local media without the risks associated with real-time streaming.

The Store and Forward (S&F) utility for remotely synchronising music content uses the Rsync (Remote Sync) tool.

 **This exemplified and orientative technical tutorial is intended for qualified IT personnel only.**

 **The third-party tools and procedures discussed in this manual are for information purposes only, and no support queries will be answered in relation to them.**

 **From now on in this tutorial, we will use the word **PLAYER** to refer both to Player ONE and to Player ZERO models.**



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S&F module (Rsync)

2. CREATE A VPS and SET IT UP WITH UBUNTU 22.04

2.1 Necessary tools

- Ubuntu 22.04
- VPS Provider



VPS is a virtual private server. It acts as an isolated server. Unlike shared hosting, it works as if it were your own private server.

2.2 Necessary steps



The steps **may differ depending on the contracted VPS provider**, but the principle is the same.

First of all, you need to **have an active account and subscription with a VPS provider**. To do this:

1. Log in to your account and look for the "VPS" section.
2. Choose server size, amount of RAM, amount of storage space and amount of CPU.


Starter	
Processor	1 vCore
Memory	2 GB
Storage	20 GB SSD SATA
Public bandwidth	100Mbps

3. Choose the operating system you want to install. In this case, we recommend Ubuntu 22.04.

Operating system selection

Distribution only

Operating system selection


Ubuntu

Version 23.04

Free



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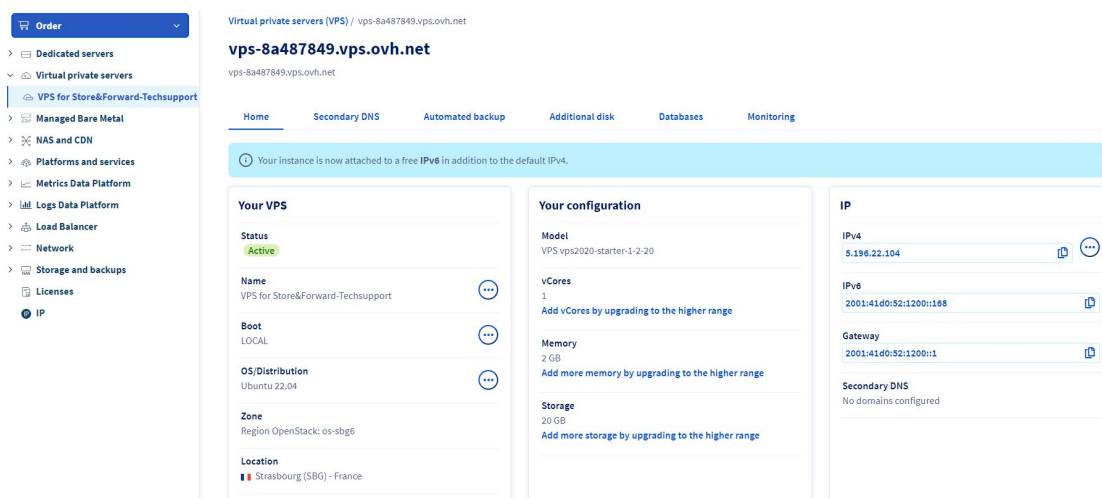
- In the time slot section, you must select the region in which you want to create your VPS.

Slot	Quantity
<input checked="" type="checkbox"/> North America, Virginia (United States), Vint Hill (US-EAST-VA)	- 1 +

- In the Renewal Frequency section, you must select the desired option.

Renewal frequency

- Verify that all information is correct and proceed to finalise the subscription.
- Once subscribed, in the VPS configuration screen, you will be able to adjust network settings, add additional storage, adjust security, etc. Configure these settings according to your preferences and needs.



The screenshot shows the OVH VPS configuration interface. On the left is a sidebar with navigation links: Order, Dedicated servers, Virtual private servers (selected), VPS for Store&Forward-Techsupport, Managed Bare Metal, NAS and CDN, Platforms and services, Metrics Data Platform, Logs Data Platform, Load Balancer, Network, Storage and backups, Licenses, and IP. The main content area is titled 'Virtual private servers (VPS) / vps-8a487849.vps.ovh.net'. It shows the VPS name 'vps-8a487849.vps.ovh.net' and a status of 'Active'. Below this are sections for 'Your VPS' (Name, Boot, OS/Distribution, Zone, Location), 'Your configuration' (Model, vCores, Memory, Storage), and 'IP' (IPv4, IPv6, Gateway, Secondary DNS). A notification at the top states: 'Your instance is now attached to a free IPv6 in addition to the default IPv4.'

- Once the VPS has been created, you will be able to access it through the provider's console by entering your Ubuntu user details.



Recommended security tips to protect your VPS.

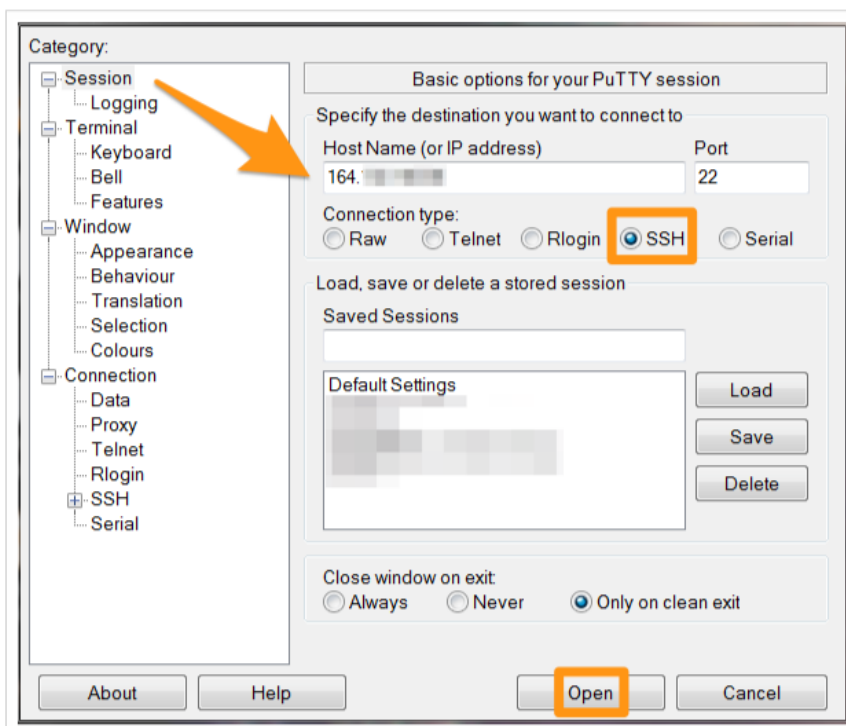
- Be sure to update and patch the server after the initial installation to keep it safe and secure.
- Consider changing the SSH listening port, which defaults to 22.
- Change the password of the root user.

3. CONNECT TO VPS VIA SSH VIA PuTTY SOFTWARE

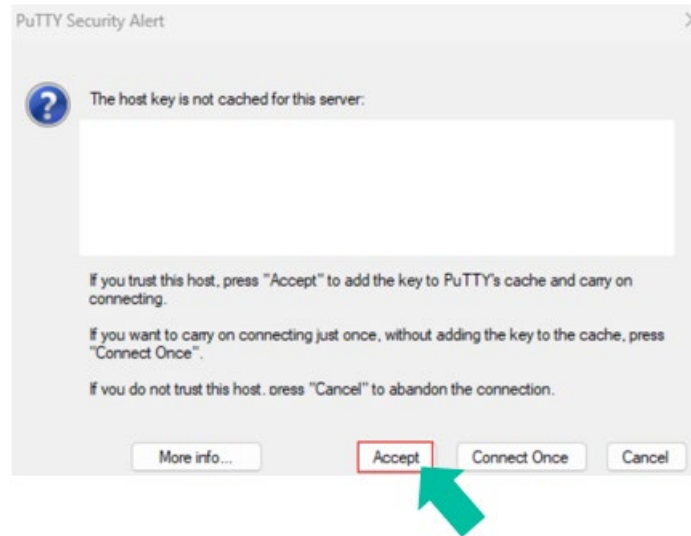
Once your VPS has been created and validated, the provider should provide you, via your email account, with all the relevant information you will require to enter in the PuTTY terminal:

- IPv4 address of the VPS.
- Name of the VPS.
- Administrator account.
- User.
- Password.

1. You can access the server through a command line terminal (on Linux or Mac) or using third party software on Windows, we recommend PuTTY, which will be used in this example.
2. Download the PuTTY software from its official website: <https://www.putty.org/>
3. Open PuTTY and in the "Host Name (or IP address)" section enter the IPv4 address of the VPS you wish to connect to.
4. In the "Port" section, enter the communication port you have established, in this case we will use the default port "22".
5. Select "SSH" as the connection type
6. Click "Open" to start the SSH session.



7. Accept the security message.



8. Enter your VPS username and password when prompted.

```
ubuntu@vps-8a487849: ~
login as: ubuntu
ubuntu@85.196.22.104's password:
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.15.0-71-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Thu May 25 11:03:51 UTC 2023

System load:  0.080078125
Usage of /:   10.8% of 19.20GB
Memory usage: 14%
Swap usage:   0%
Processes:    93
Users logged in: 0
IPv4 address for ens3: 5.196.22.104
IPv6 address for ens3: 2001:41d0:52:1200::168

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.
   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

10 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
ubuntu@vps-8a487849:~$
```

9. You are now connected to your VPS.
10. As you are now logged in with high permissions (a sudo user), you can enter commands to perform administrative tasks. We recommend that you change your password first.

```
~$ sudo passwd nombre_de_usuario
New password:
Retype new password:
passwd: password updated successfully
```

4. USER CREATION FOR STORE & FORWARD (S&F)

Now that we have our VPS up and running through the Putty terminal, let's create a new user for the specific use of S&F.

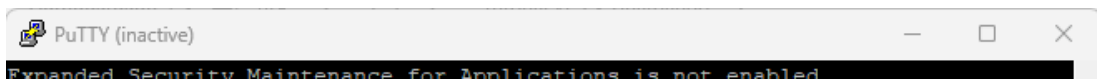
! It is important not to use the ADMIN user for the S&F implementation.

- Before creating the new user, both for new versions of Linux and Ubuntu 22.04, we must enter the following commands.

! This procedure will restart your VPS and stop the SSH connection, so you will need to reconnect via SSH.

```
sudo sh -c 'echo "HostKeyAlgorithms +ssh-rsa" >> /etc/ssh/sshd_config'
sudo sh -c 'echo "PubkeyAcceptedAlgorithms+=ssh-rsa" >> /etc/ssh/sshd_config'
sudo reboot
```

- Shut down the PuTTY terminal and reconnect.

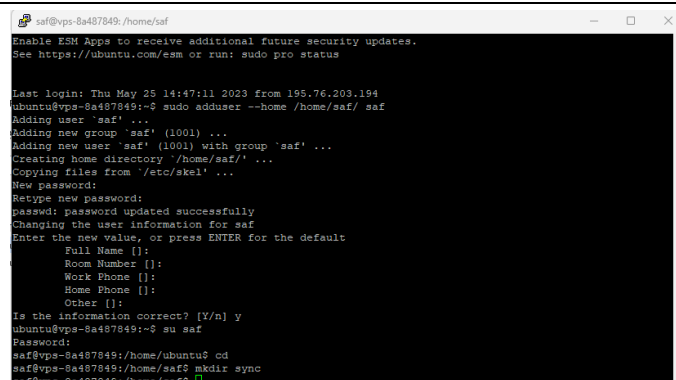


- We create the specific user for Store & Forward. In this case, our user will be called "SAF".

```
sudo adduser --home /home/saf/ saf
```

- Enter the new password for the SAF user.
- Leave the following requested data (Full name, room number...) empty and press ENTER.
- Press the "y" key to accept that the information is correct.
- Enter the following commands in the terminal to change the user to SAF.

```
su saf
cd
mkdir sync
```



5. GENERATING SSH KEYS

1. We use the command `ssh-keygen -m PEM` to generate the keys and press ENTER directly in response to each question (without typing anything).

```
saf@vps-8a487849:/home/saf$ ssh-keygen -m PEM
Generating public/private rsa key pair.
Enter file in which to save the key (/home/saf/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/saf/.ssh/id_rsa
Your public key has been saved in /home/saf/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:5bNXrgw2oPy4cR/jFOj7ttAdFCMBcwaXKfMuP4/APUc saf@vps-8a487849
The key's randomart image is:
+----[RSA 3072]-----+
|      .+o..o.o      |
|      ooo. . . o     |
|      + . . .       |
|      . + .         |
|      . E + . .     |
|      ..o.+ o = +    |
|      oo* = X o .    |
|      .oo B.B .     |
|      ++o=.o        |
+----[SHA256]-----+
```

2. Add the public keys to the authorised keys with the following command and then press ENTER:

```
cat .ssh/id_rsa.pub >> .ssh/authorized_keys
```

3. You may view the private key that you need to enter in the Store and Forward configuration page of the PLAYER:

```
cat .ssh/id_rsa
```



The private key that we must place in the S&F Module of our PLAYER is from "----BEGIN RSA..." dragging the cursor to the end, in "...PRIVATE KEY----".

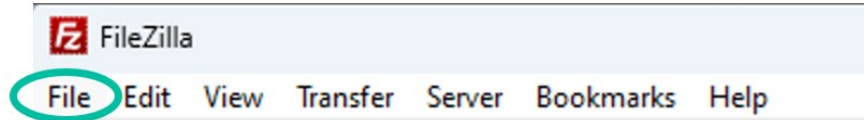
Copy from here

```
-----BEGIN RSA PRIVATE KEY-----
MIIGAwIBAAKCAVEAoemoGg/qgr6cXRXZkhmZGha7IT8X/W3K4E/q08U/s7CaLP
eFmD02EQ5in5Om6UP6GdV5066CoveEr2L4s3vWJGnhWjggatvarx1/acj0NMIB
VgEazrBh0QchVnq0KmdclP3vq2VwQ0UuE844Q841Qg74u0Q0W0r
m590c1a9Ea01V2+f43jmi2zSGA0pC20d3+5awC2d02H+CVK1Q8wahb3Q0MaR
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AQW1NfL5/v2Tchr/WH6p/4u0BQdnMBagjP/EDmxrENZwNmRtVh+aeVIX94IC
R4+waqF4y/0KdA0y3/Quim3P+EMd03S8a0RJR0Kf42uq/0yFP091b0dly
fx58rta8BazgU1ZaRqBAAACqg0ABc0RIMt+5MC0a0E0Fw34LYb30F03CDW0
17pvtuEg19:5LYV0ng3hA5qh+BBM8+0a25+Y7bFe5yXk35+0yyfo1DiAH2nU
Rac8455BzrakFWG1pVlaBKit7vImJ0F832wghfci89+QvLqkD5FYedeCE1dH
R4b3FeW6b5R8KcwaDHk14YqQv8DD0H5wdK9JwJh0e3LIXD10z3Rwz4BYhw0666
/mw9j91TENE4gH7A9cREH0hpdskwzByL4khwMFF77hNf0h0u/41kyJ0dV0ic
KX239e+e71cvt0UHeTLseprCK0Te32L0Cci1d0T8b0XNvG3j1L2k0a1P4Kw0
31jF3p09j1B99qDyJRXKa0r5J37B/yFEa0S1jdmU7Eh2YFe79e7NaTFM0g7vzr
0YbJ200g3hB3rDKIV+M9wucUwV10Y9Wp2dQ7b0S11AbCL52V1y9Ie/EKKgBwq
FQYkq2hV06LuzrEQS2G13B2D/ZBA0HBAld3YF9C12w0CL4EdAy1DSu0dW1K0GI
mN2LdLmGwFoAdWu8Em7O0oaq9bnyB0TjNWclVFXTLJAKa0hK3414897AWTE
C31j0Bm0r11jyhb1W0/0Ahnz140q0P0W0E6+eW7ah3Kq0n+1ahbV70z0au
C30G13Ac2Bv4eAvF3v0M0WDC2DgJkNoQ0a9WSe1L2HW7q9/h1Mv0DymXQzBHG
m1/yPM101Y0SHIDQ0CMk0Kp4kF4c0wQ0BwQ0G0mXCB0+k/J0hR4q1cM0c10T+
t0L3obg/UBw5yLovHneuZ2N3NaeumYJDeEnAlRxbqzrzrBVgWBNeeVtwa2Ue
1045937WVyzBc316tc5ZK5J0Ez+5Mqca1KAPuTyyNj01FU/yGIL+8ncTMK1B17
FQgr0mT17B0u3jYv+8s5whvmeqgqg8b0/+SQBwEH0g5/PALULX00c0+G
w0p313aw0m03W0P0h2a6/rz192710mE008RECC0ANNHv0C00zr3jL0S0L2M0k
mM2Y7bAr05Y1pN25YjxR1PQvFeW0PZwGv12SkfJGv71HvTgffFV7w0gB0e
Lx2G0uFpLL1dk+haBqQ051F03Dq0mzko0yB0CaNF53+aspe1VggF20uJBPqVNFPG
uE1g3100JyV11Fd0e0X0V3G19jxmhVnq0Adzuqqr++3ag7mo5P0wv+02Rk
P1a0B07P9a0PC08D0d04F0H0R0z0R0C+ym1K0C0E1a1x08F0P0h101
kyWp13Ym0H0eD00V3r0b2v0S0A0q1C0Q0Cv47XRL0P8Tq0LBNV2Vr0F0B10
ry00u11M0N0H0e1NG1XK75nkq07W0mCa0H0tK003Fw0G02U0B0LW0eS21PC51
teakUlycbk0u0+P8vEX10qz2TMK1C0Qa10/1y1L0e0KpWk/W5y07t1E0q0V4kmc
m0f0g0b0nd0CL0G0A6+D0B08F1yWz1B0a0I0U0J0h010aTAR0A0A070b+hr0u0k0
0a094E0b0et0w0+0B0A0u0L50dF0Y1B0u0C1d0l0E0+4E0L0V0P0V10g0N0E0
0C1L2L0k0/SMT0V0b0W0P1g/8Zf0R020K0M0a0b03b0L0m0310g0R10f0a0I0B018
2Wq3YI0q0t0q0U/bW0R0x0Dv0e0M05jv0P0a0b0H0UCC0+Et0Kf0B1WCf+jH0B0
5b06Z0m0p11Q0Nq0m0c1D2FBKAL10WkP0Z0hT0x0A0f04I0z1R0
-----END RSA PRIVATE KEY-----
saf@vps-8a487849:/home/saf$
```

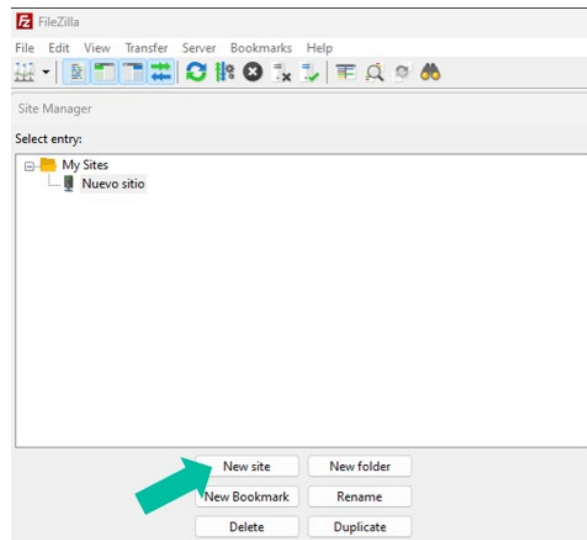
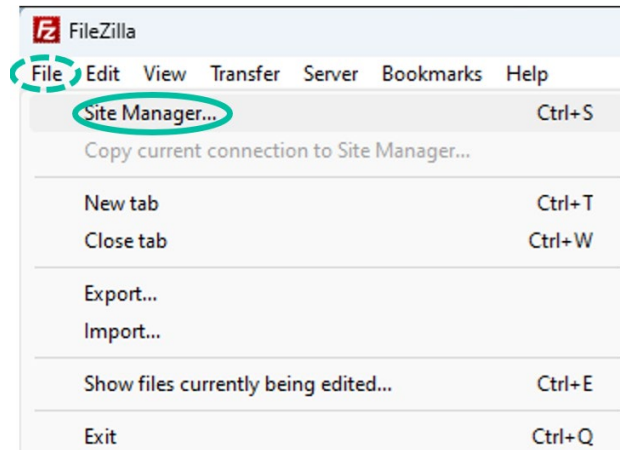
to here

6. UPLOADING CONTENT TO VPS WITH FileZilla (FTP)

1. Download and install FileZilla on your computer.
2. Open FileZilla and select "File" from the toolbar.



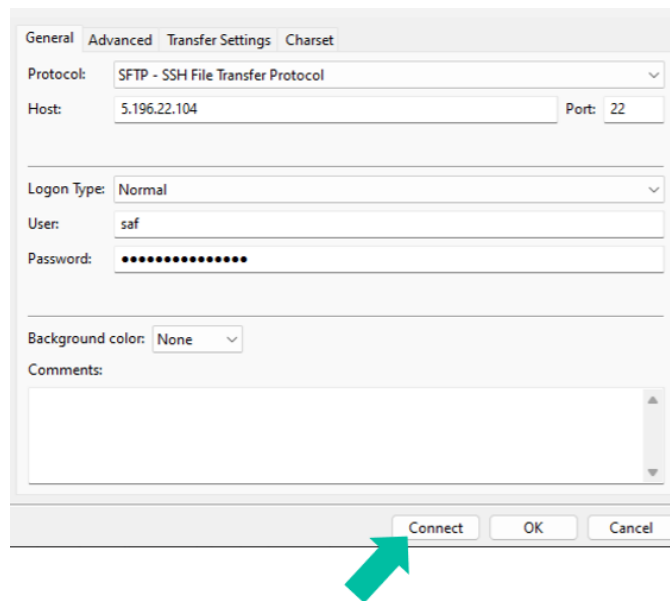
3. Click on "Site Manager" and then on "New site".



4. In the "Protocol" section, select "SFTP".
5. Enter the IP address of your VPS in the "Server" field.
6. In the "Port" field, enter "22" or whatever you have entered instead.
7. In the "Login type" field, select "Normal".
8. Enter the username and password provided by your VPS provider.



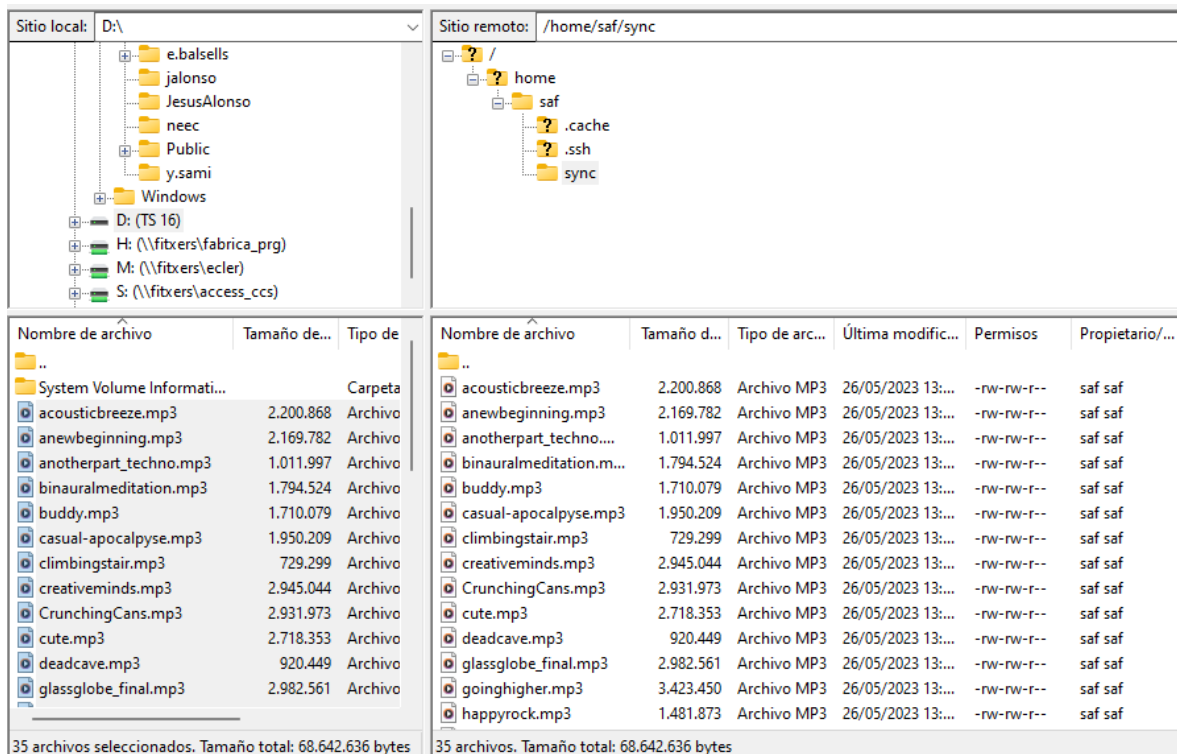
9. Click on "Connect".




10. Once connected, you will be able to see the files on your VPS in the right-hand window of FileZilla.

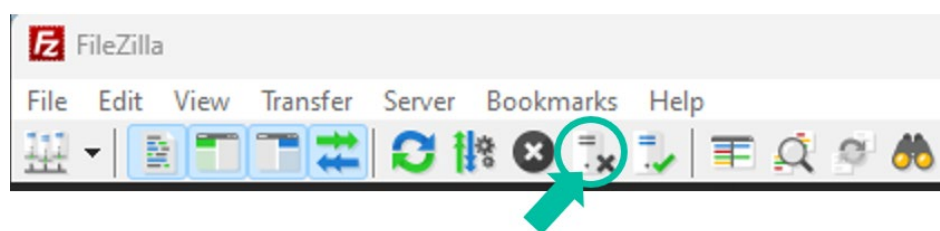
Nombre de archivo	Tamaño de...	Tipo de	Nombre de archivo	Tamaño d...	Tipo de arc...	Última modific...	Permisos	Propietario/...
..			..					
System Volume Informati...		Carpeta	.cache		Carpeta de...	26/05/2023 12:...	drwx-----	saf saf
acousticbreeze.mp3	2.200.868	Archivo	.ssh		Carpeta de...	26/05/2023 12:...	drwx-----	saf saf
anewbeginning.mp3	2.169.782	Archivo	sync		Carpeta de...	25/05/2023 17:...	drwxrwxr-x	saf saf
anotherpart_techno.mp3	1.011.997	Archivo	.bash_history	418	Archivo BA...	26/05/2023 12:...	-rw-----	saf saf
binauralmeditation.mp3	1.794.524	Archivo	.bash_logout	220	Archivo BA...	25/05/2023 17:...	-rw-r--r--	saf saf
buddy.mp3	1.710.079	Archivo	.bashrc	3.771	Archivo BA...	25/05/2023 17:...	-rw-r--r--	saf saf
casual-apocalypse.mp3	1.950.209	Archivo	.profile	807	Archivo PR...	25/05/2023 17:...	-rw-r--r--	saf saf
climbingstair.mp3	729.299	Archivo						
creativeminds.mp3	2.945.044	Archivo						
CrunchingCans.mp3	2.931.973	Archivo						
cute.mp3	2.718.353	Archivo						
deadcave.mp3	920.449	Archivo						
glassglobe_final.mp3	2.982.561	Archivo						
35 archivos y 1 directorio. Tamaño total: 68.642.636 bytes			1 directorio seleccionado.					

11. To upload files to your VPS, simply drag and drop files from your computer to the right-hand window of FileZilla to place them in the "sync" folder.



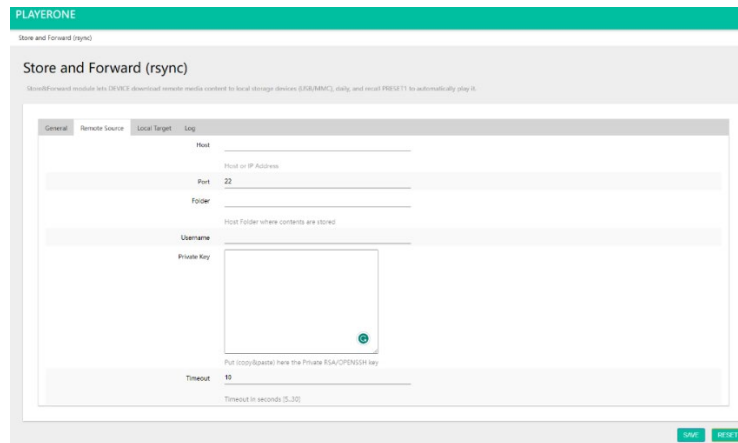
12. When you have finished uploading the files, **log out of the SFTP session** by clicking on

the  icon under the toolbar.

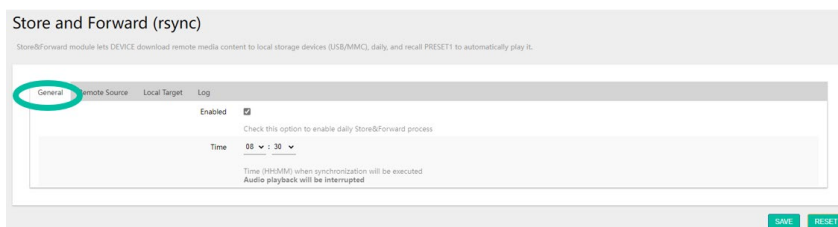


7. STORE and FORWARD MODULE (Rsync)

Now that you have all the necessary data to implement the configuration, you will implement it in the S&F module of your PLAYER.



1. “General” Section



- **Enabled:** In this section, activate the S&F Module (Rsync) by checking the box.
- **Time:** this is a **very important** point, as this is where the exact time of media synchronisation between your SSH server and the PLAYER is configured so that Rsync does the rest automatically.

Next, please press



! It is very important that both the PLAYER and the SSH server have continuous network access during media synchronisation. Otherwise, the LOG module will show a synchronisation error message.

2. "Remote Source" Section

In this section you must fill in all the data that we have previously configured and completed.


In our example:

- **Host:** 5.196.22.104
- **Port:** 22
- **Folder:** /home/saf/sync
- **Username:** saf
- **Private Key:** key we saved earlier.
- **Timeout:** 25 sec.



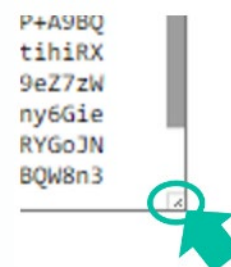
Make sure that all parameters are entered correctly.



Remember to press  when you have finished configuring each tab.



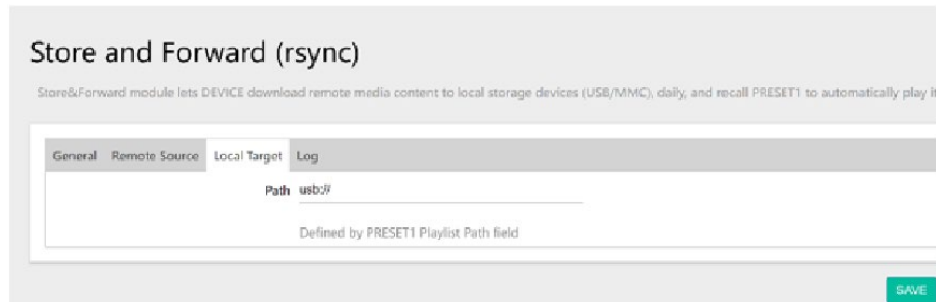
For your convenience, you can resize the "private key" text field to your liking.



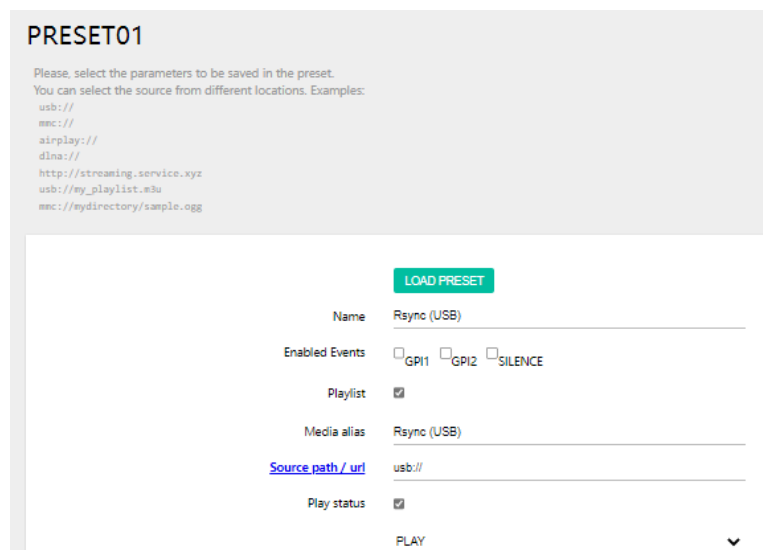
3. “Local Target” Section

In this section, **you will indicate where Rsync will synchronise the files it receives from the SSH server**, either on a USB stick or SD card inserted in the PLAYER, in FAT32 format.

- a) **Indicate the Path you wish to use**, which you will later configure in the associated PRESET1. In this example: `usb://`

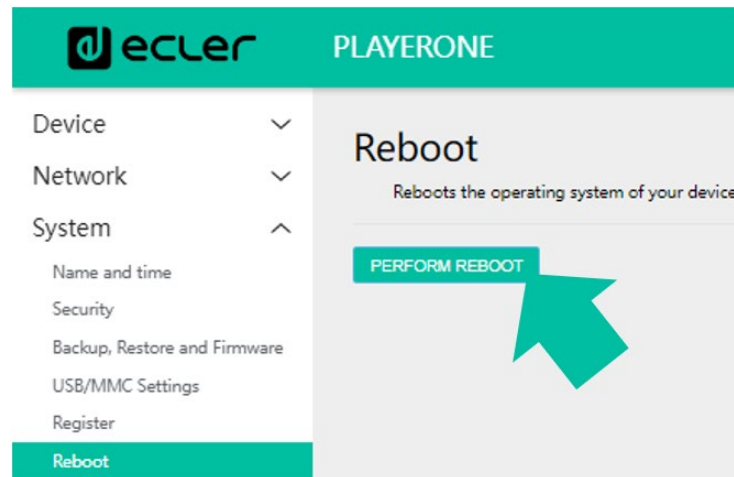


- b) **PRESET 1 of our PLAYER** is configured, so that the files from our USB or SD can be played.



- c) Press  to save the Preset.

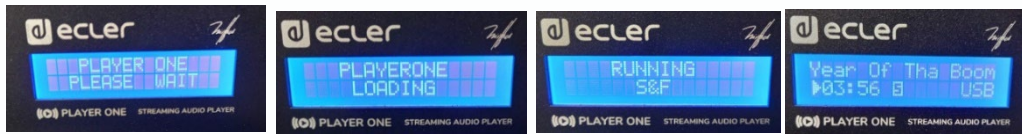
d) Restart the PLAYER.



The S&F module starts automatically and will start to dump and playback the contents to the storage previously indicated.



Example of display in Player ONE (Player ZERO does not have a display and must therefore be monitored via the Web App).



e) Lastly, check the PLAYER's LOG to make sure that everything is correct.



From FileZilla it is possible to access the server folder to modify, add or delete files. When you restart the PLAYER they will be synchronised as they are in that folder.



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UBUNTU 22.04

Connect to VPS via
SSH via PuTTY
Software

User creation for
Store & Forward
(S&F)

Generating SSH keys

Uploading content to
VPS with FileZilla (FTP)

S&F module
(Rsync)



All product characteristics are subject to variation due to production tolerances. **NEEC AUDIO BARCELONA S.L.** reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications.

For technical queries contact your supplier, distributor or complete the contact form on our website, in [Support / Technical requests](#).

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