

TUTORIAL



- 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)

Cloud Disk Sync (S&F) - VPS

PLAYER ONE / PLAYER ZERO



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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

1 month
 3 month
 6 month
 1 year

- 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 console. On the left is a navigation menu with options like 'Dedicated servers', 'Virtual private servers', '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 displays the configuration for 'vps-8a487849.vps.ovh.net'. It includes a navigation bar with 'Home', 'Secondary DNS', 'Automated backup', 'Additional disk', 'Databases', and 'Monitoring'. A notification states: 'Your instance is now attached to a free IPv6 in addition to the default IPv4.' The configuration is divided into three panels: 'Your VPS' (Status: Active, Name: VPS for Store&Forward-Techsupport, Boot: LOCAL, OS/Distribution: Ubuntu 22.04, Zone: Region OpenStack: os-sbg6, Location: Strasbourg (SBG) - France), 'Your configuration' (Model: VPS vps2020-starter-1-2-20, vCores: 1, Memory: 2 GB, Storage: 20 GB), and 'IP' (IPv4: 5.196.22.104, IPv6: 2001:41d0:52:1200:168, Gateway: 2001:41d0:52:1200:1, Secondary DNS: No domains configured).

- 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.

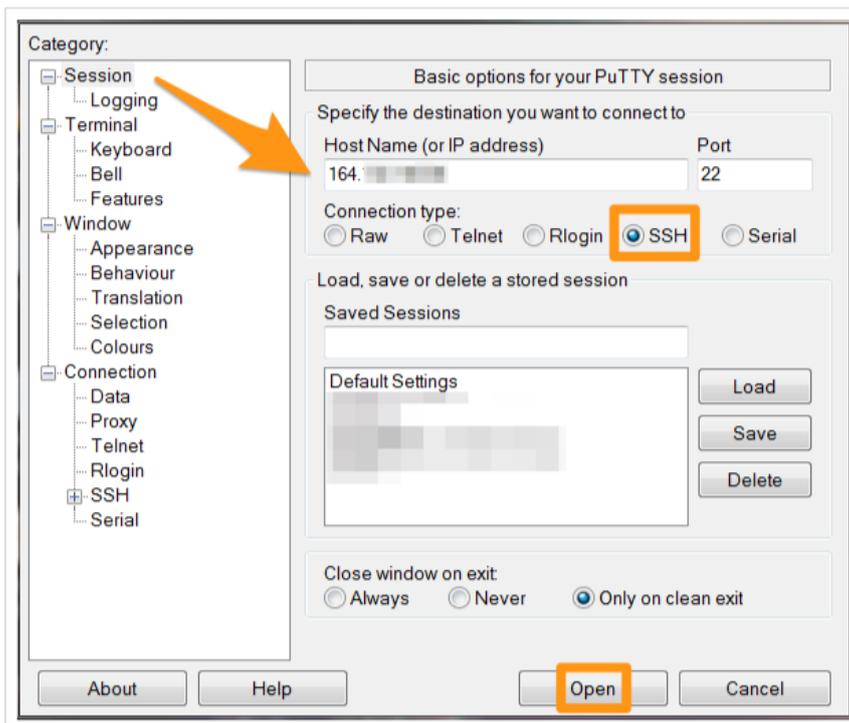
- Be sure to update and patch the server after the initial installation to keep it safe and secure.
- Consider changing the SSH listening port, which defaults to 22.
- Change the password of the root user.

3. CONNECT TO VPS VIA SSH VIA PuTTY SOFTWARE

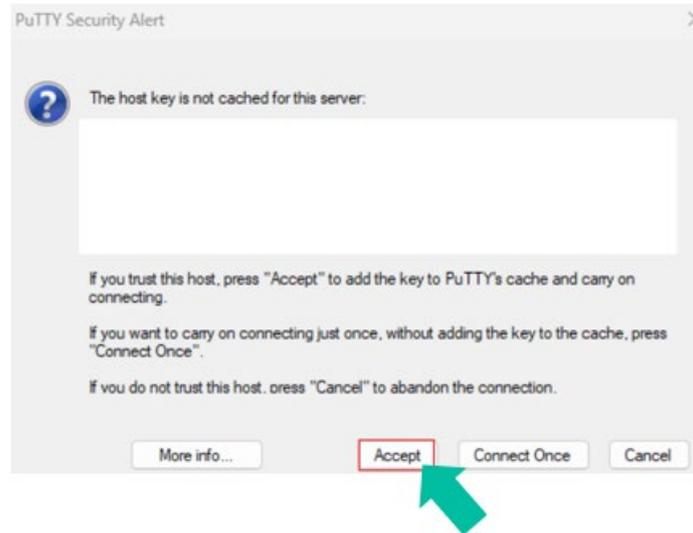
Once your VPS has been created and validated, the provider should provide you, via your email account, with all the relevant information you will require to enter in the PuTTY terminal:

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

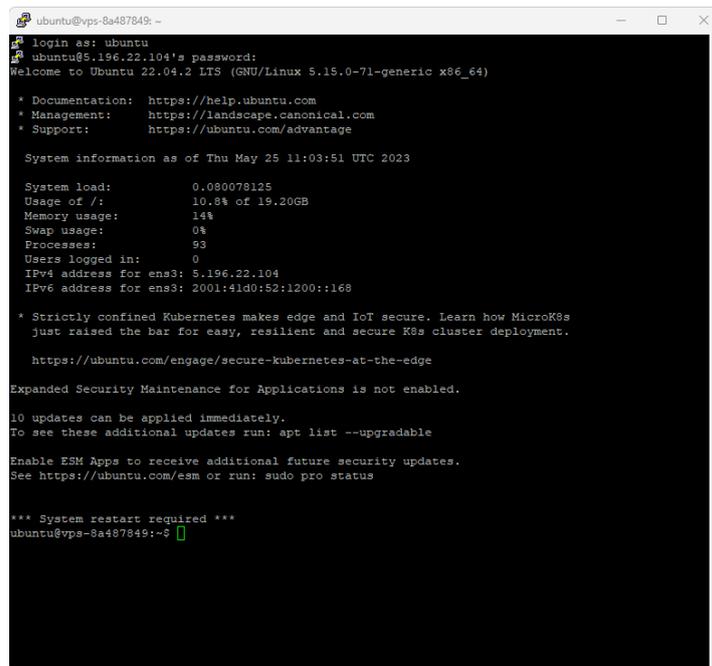
1. You can access the server through a command line terminal (on Linux or Mac) or using third party software on Windows, we recommend PuTTY, which will be used in this example.
2. Download the PuTTY software from its official website: <https://www.putty.org/>
3. Open PuTTY and in the "Host Name (or IP 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.



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
```

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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.

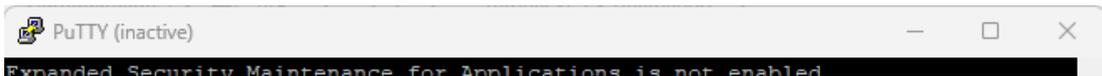
! It is important not to use the ADMIN user for the S&F implementation.

1. 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
```

2. Shut down the PuTTY terminal and reconnect.

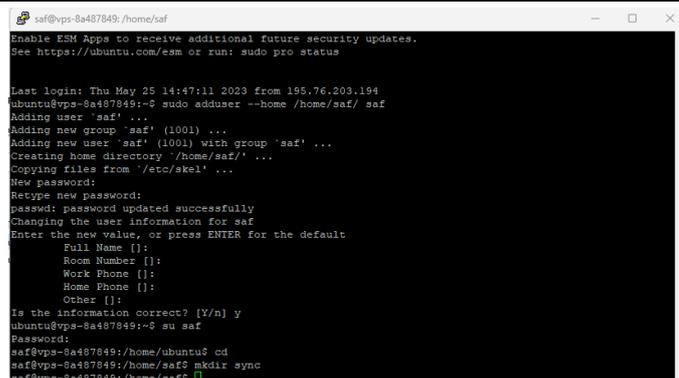


3. We create the specific user for Store & Forward. In this case, our user will be called "SAF".

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

4. Enter the new password for the SAF user.
5. Leave the following requested data (Full name, room number...) empty and press ENTER.
6. Press the "y" key to accept that the information is correct.
7. 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/fOj7ttAdFCMBCwaXKfMuP4/APUC saf@vps-8a487849
The key's randorm art 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
```

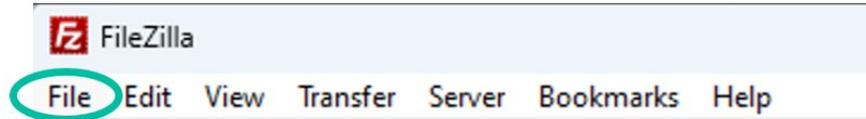
The private key that we must place in the S&F Module of our PLAYER is from "----BEGIN RSA..." dragging the cursor to the end, in "...PRIVATE KEY----".

```
Copy from here -----
-----BEGIN RSA PRIVATE KEY-----
MIIG9wIBAAKCAyAeomGg/gqgr6cXRXZkhnzNca7iTS3X/W3K4E/q08U/s7CaLP
eFmD02EQ5in5Om6oUP6cDv8066CoveErz2L4s3vwGnhWjgg4tvarxL/acj08MLB
V8gEazrBhcn00chNvqoKxmdcl1F3vqcl3v4QUnvE84sQF841Q7fu8j0909F8
ah50c11a9ERclV2+f483mi2z5Gaaqpc20dm1+gawcZdc2H+CVK1Q8wahzb3QmaR
yUmdMoFC14Re12QCko9D80902IB412f+1KvD5Vvr3QNdvpUzKJIPqBESz5Ma
p6vRSTxx5yIWcpzSOa8Np7WyzxP4L+80011bMaW/mdvKca3pHR1+TYume9c2eCLP
AQm1ZL5/v2Tchr/WN68p/4uJBQdnMBagqF/EJmXrENZvNm8RtVH+aev1K94IC
Pv4+wgF4y/0Xk0y3/Quim3P+EMdS3uacCRJ0RKE4Zou/0yZFD91B8ly
Kx5Rt88agpU7ZnRqMAAECqg8AcnRINr:580x868E5w84hM7B3cXFDCCWg
A7pvuth2q195jLYV0npJnhA5q+HB8M5+0a25+Y7bFe5vXk5+0yyf01DiAH2u
Rac8455P8yzkakFWGlpVlaBRkt7vImJ0FR32wghfcl89+QvLquKDSFYedeCE1dR
R4b3FeW6bSR8kwaDHk14YqQv8DDUHSwdk9JwJho3jLIXD10zjRwz4BYhw8066
/maN3pITENE4qH7A9CERNOhpdXwz2yL1khw8P77ENFDu5e/uyk1D0v1o
KX239e+ET7cvtU7HcT7epr6K0Te2320c1dGT0bXvNvGyJ1LzkaP1kYw9
3jF3pF09J1B99qDyJRXkA0re5JJ78/yFEa0S1jdmUYhb2YF4T9cN4TFMG7vzr
0YbJ200gjh3zDKIV+M8wuzcUwVIOY9p2dQ7baSUL1AbCL52V1y9Ie/EKKqBwq
FQvYkqVc6LnazjEQS2G13BZD/2BAoHBALhd3YF9C12w0CL4Edy1DSu8dW1KogI
mH2ZdLWqFdAbNusEm7Oo0aq9bymb0G1NWCLvPXTL7AKaJmh34L4R97AWTE
c314eR8M812jymbHlW/0eAHz140q9W8RZ64v9F7Ah3Kqcm+TahvYF0z8au
CS0G13Ac2Bv4eAVF3v0MtdC2DgJk0Q0a9WSeL1ZHWqa9/h1Mv40ymXQz8HG
al/yPM1oIVoSHIDQcMkhGp4kFk4cwQ8vQDg0mXC0U+k/78h84q1cM0cIOT+
60L3obq/URW5yVLoVhneuZ2N3NseumYjDoEnA1RkqzrzrBVgW8BNeVtXa2eUe
8D4397WVyzBc3j6tcS2KSLJzE+SMqca1KkPuZyNj01FU/yG1L+8ncTMk1B1Y
F0qr80wT17B0u3y4+885whvYm4q8q8ho/+SQM8H8G5/PALJL00cpe+G
wq3j3AwGmo3W0P8hzh6e/rz193710mEa8REc0ANHNvG0G0zrjLSD1L2eK
8M2yTbAresUy1pN25Yjxr81PqvE8wFNZwGv1Z9k7Gv7H7vTgffEV7wv8xe
Lx2GuzDpLLdk+haBqQ51Fo3DgOmzko0y8CaNf5j+spe1VggP20uJBFVNFPG
uEtg3100Vv151Fd6eax0V3619jxmhVnq6Adzuvqz++3ag7mo5P7awv+G7Kx
P1a8B07F98a8PC8E8d0L4FHE8RZgR5C+ymKIE0yE1x388F8F8B101
8yKpw13y0M8eD0o5V3r0b2vasB2AtqP1C0cQv47XRLe8B8Tq6L8Nv2VzrFR2Z7/
yy0ou51NSM7Me1N31Xk75nkqo78mCaAGhtK0o3Fuw8I2USkbLwS281PC5L
8eakULyckhUnz+P8vEX10qzZMKCL1Qa1o/1y1LJaoKypK/WSydt1E0qmV4kmc
80f0gEbndECLL60A6+D8B8P1yWz:3B8a01IU3Jhp10aTARa8HA07Bb-hrDuKa
80948E8etuvz+e8A800L+8dF3j1Bo7C1dmJjEz+44Ez1oV8Vv11+8F8N8D
1SCL1LJkDk/SMTVW0bWvPjg/8zfrK2c0KfM61ob3bhLmh315q8Fz1+Pzo1Pb18
2Wq3YZXqvqvqU/bwUR0x8Dveo0aM5jvF0p2am8WUCCUc+EtDKf8IWC+Jm85yq
8b06ZdmKp11Q0nngkn8c1D2FBKALIj0wKPDZhtYx8A404z1Rr
-----END RSA PRIVATE KEY-----
saf@vps-8a487849:/home/saf$
```

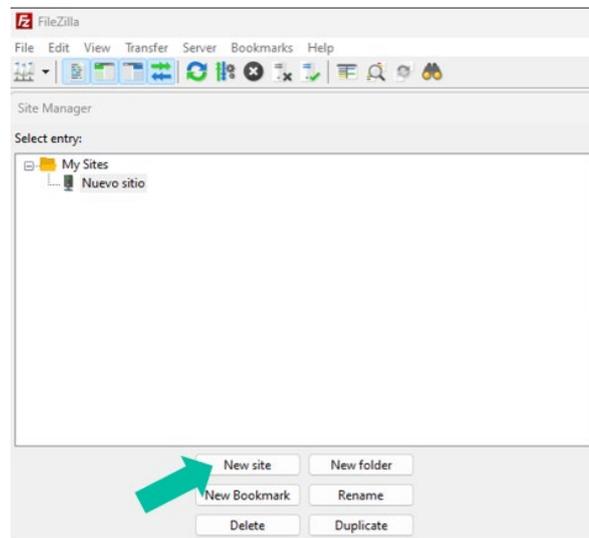
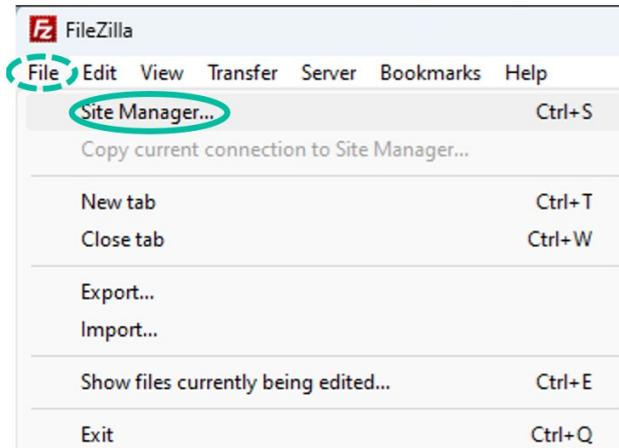
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6. UPLOADING CONTENT TO VPS WITH FileZilla (FTP)

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

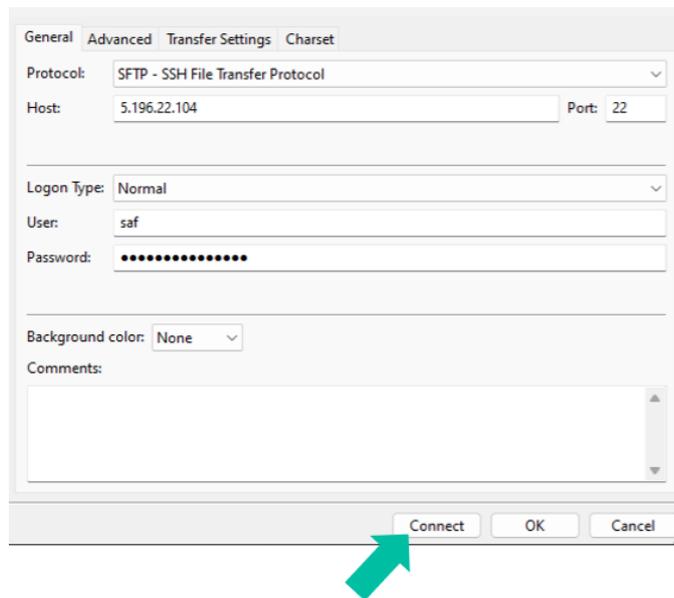


3. Click on "Site Manager" and then on "New site".

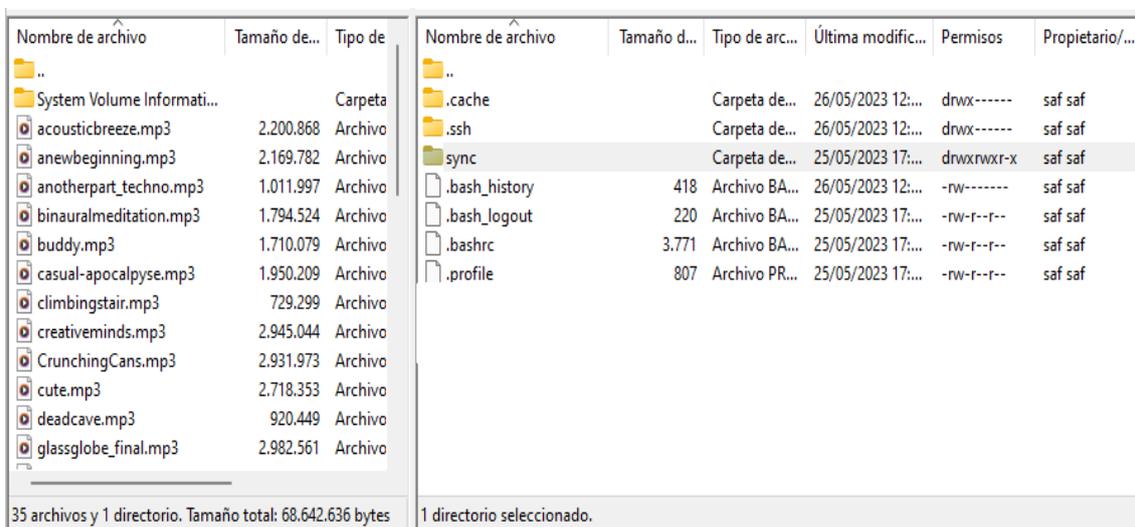


4. In the "Protocol" section, select "SFTP".
5. Enter the IP address of your VPS in the "Server" field.
6. In the "Port" field, enter "22" or whatever you have entered instead.
7. In the "Login type" field, select "Normal".
8. Enter the username and password provided by your VPS provider.

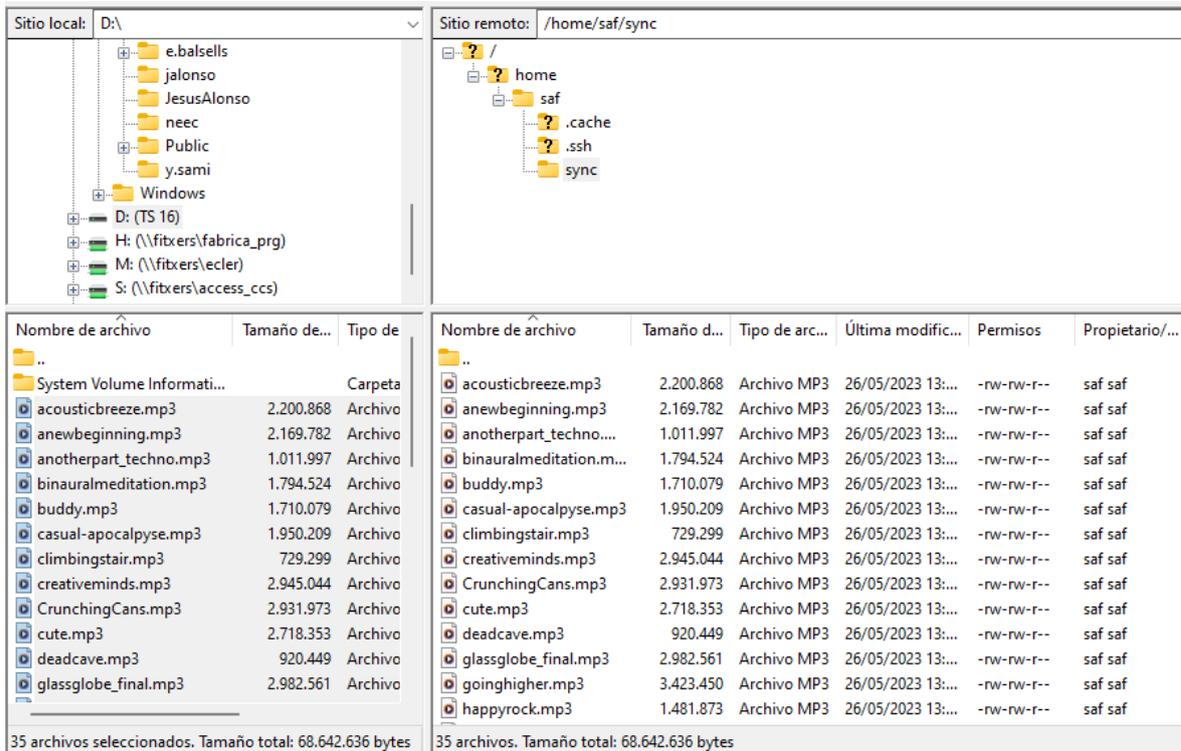
9. Click on "Connect".



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

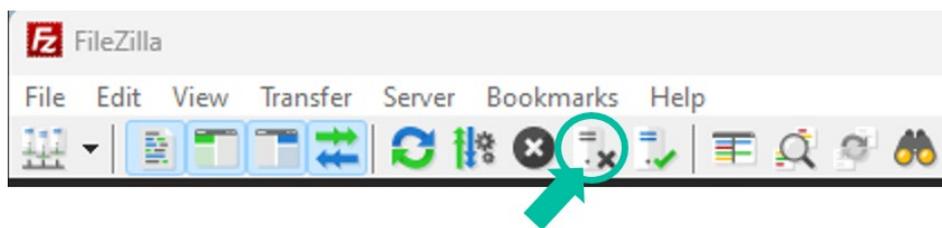


- To upload files to your VPS, simply drag and drop files from your computer to the right-hand window of FileZilla to place them in the "sync" folder.



- 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.

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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.



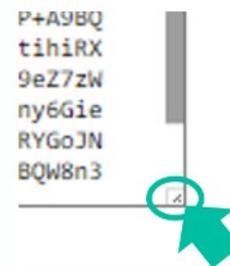
Make sure that all parameters are entered correctly.



Remember to press  when you have finished configuring each tab.



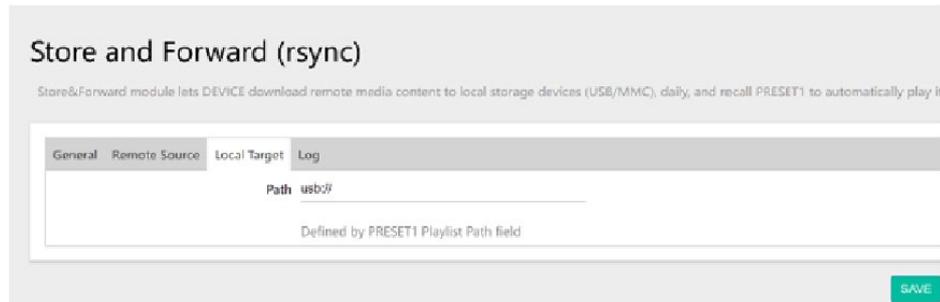
For your convenience, you can resize the "private key" text field to your liking.



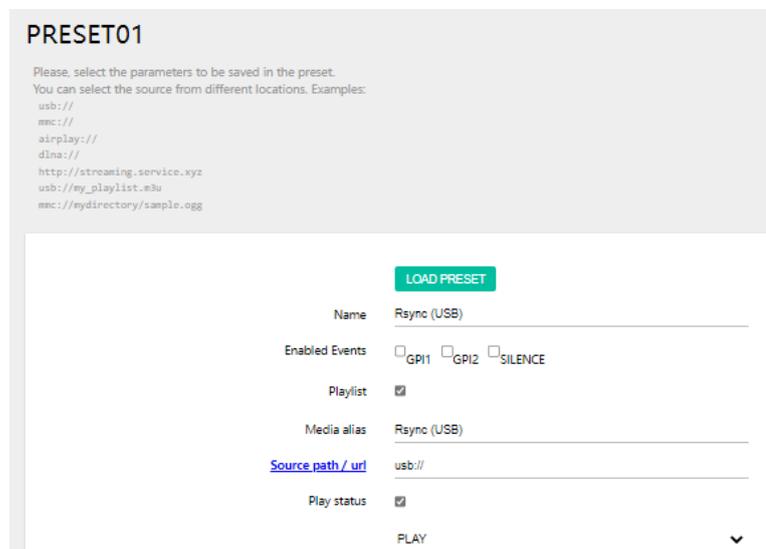
3. “Local Target” Section

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://`

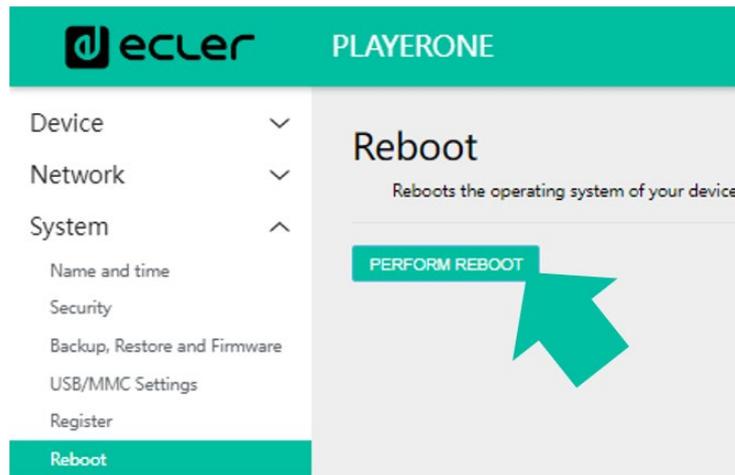


- b) **PRESET 1 of our PLAYER** is configured, so that the files from our USB or SD can be played.



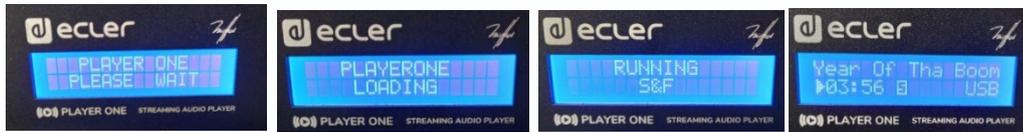
- c) Press  to save the Preset.

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.

```

General Remote Source Local Target Log
Key is a ssh-rsa key
Wrote key to '/tmp/saf-dropbear.key'
username=saf
hostname=5.196.22.104
timeout=25
port=22
source=/home/saf/sync
target=/media/usb/
ssh:
Host '5.196.22.104' key accepted unconditionally.
(ssh-rsa fingerprint sha1!! b3:16:a7:5b:df:61:89:58:f5:2e:e1:a5:7d:bc:0d:31:94:4b:86:40)

receiving incremental file list
sync/
sync/CrunchingCans.mp3
sync/Honorable-Battle.mp3
sync/Notwhatitseems.mp3
sync/TraditionalJapanese_2.mp3
sync/Worldwar3.mp3
sync/Zombie_farm.mp3

```

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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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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