

How to Use Vultr's WebApp Marketplace Application

Contents

01	Introduction	3
02	Prerequisites	3
03	Create a Standard User Account	4
04	Access the Vultr WebApp	6
05	Upload and Download Files	7
06	Install Additional Applications	11
07	Security	12
08	Conclusion	16
09	Next Steps	16

Introduction

Vultr WebApp is a virtual desktop solution that offers 3D acceleration for GPU-intensive applications such as games, graphics software, and Computer-Aided Design (CAD) apps. The WebApp interface is accessible through a web browser with all installed applications available in a single menu bar on the server. It's highly customizable, and securely allows you to transfer files between your local computer and the server.

This article explains how you can use the Vultr WebApp marketplace application to run access applications such as Blender, FreeCAD, and Gimp through a secure web interface.

Prerequisites

Before you begin.

- Deploy a [Vultr WebApp A16 Cloud GPU Instance](#) from the Vultr Marketplace.

When deploying the application, enter the target applications to pre-install on the server. For example, `blender`, `gimp`, `freecad` installs

In the **Application Startup Command** field, enter the startup command for your main application. For example `blender` launches Blender as your main application when you log in to the WebApp. Enter your desired username in the **WebApp User** field. Keep the **Bash Install Script** field empty if you have no extra non-APT applications to install on the server.

- [Set up a domain A record](#) pointing to the Vultr WebApp IP Address.

For quick access, configure a domain name to translate to your Vultr WebApp IP Address. This article uses `webapp.example.com`, replace all occurrences with your actual domain name or Server IP Address.

Create a Standard User Account

To securely manage your Vultr WebApp server, it's important to refrain from using the `root` user account. It's recommended to use a standard user account with `sudo` privileges to install any additional applications to the server, upload, and download files. Create a new user on the server as described in the steps below.

1. Using [SSH](#), access your Vultr WebApp server as root.

```
$ ssh root@SERVER-IP
```

Copy the auto-generated root user password in your Vultr WebApp server control panel to log in to the server.

2. Create a new user account. For example `example-user`.

```
# adduser example-user
```

Enter a strong password for the user, and press enter to accept all listed options.

3. Add the user to the sudoers group.

```
# adduser example-user sudo
```

The above command grants the user `sudo` privileges to perform tasks such as installation and configuration of application packages on the server.

4. Switch to the user account.

```
# su example-user
```

5. Update the server packages to verify that the user has sudo privileges.

```
$ sudo apt update
```

6. Create a new `files` directory in the `webapp` home directory to upload and download files.

```
$ sudo mkdir -p /home/webapp/files
```

By default, Vultr WebApp uses the `webapp` home directory to store files. In this article, you will upload and download files to the directory by creating a link to your standard user's home directory.

7. Link the `files` directory to your user home directory to create a shortcut for SFTP access.

```
$ sudo ln -s /home/webapp/files ~/
```

8. Make the parent directory writable for all users.

```
$ sudo chmod 777 -R /home/webapp/files
```

9. Verify that the linked `files` directory is added to your home directory.

```
$ ls ~/
```

Output:

```
files
```

Access the Vultr WebApp

1. In a web browser such as Chrome, visit your Vultr WebApp server IP Address.

```
http://SERVER-IP
```

If your domain propagates successfully, access WebApp using your domain name.

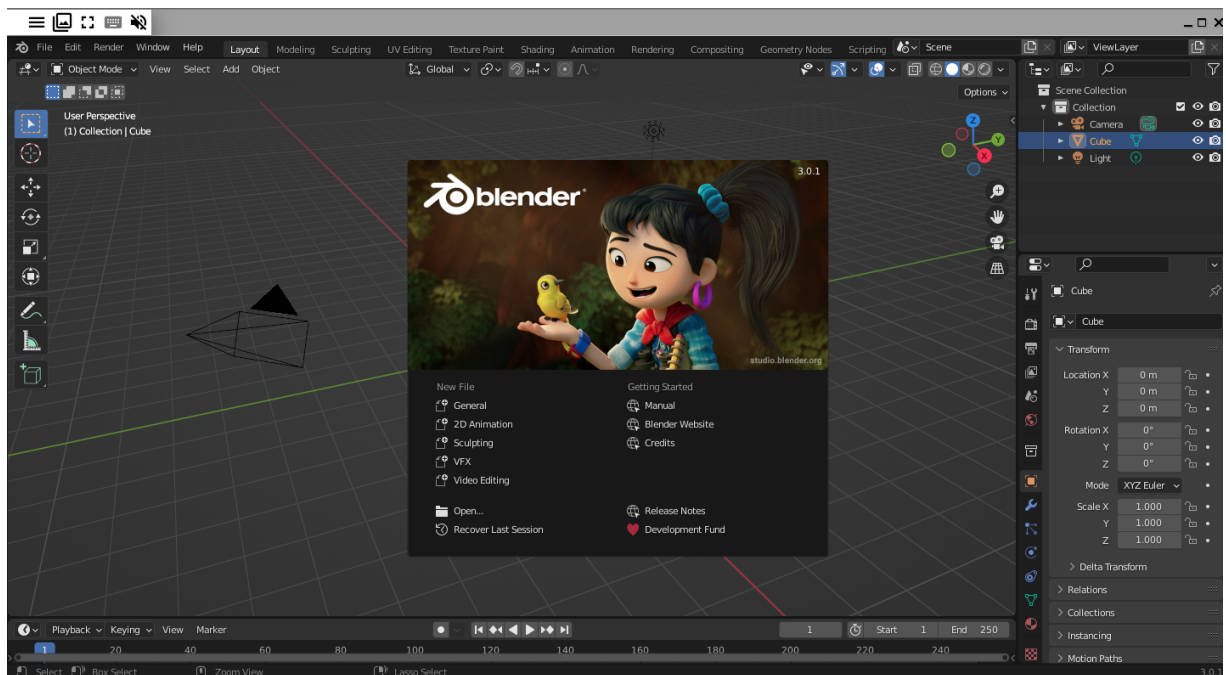
```
http://webapp.example.com
```

2. When prompted for a username and password, fill in the fields as follows:

Username: You set during deployment

Password: Auto-generated password in your Vultr WebApp control panel

3. Verify that the Blender Interface loads correctly in your browser.



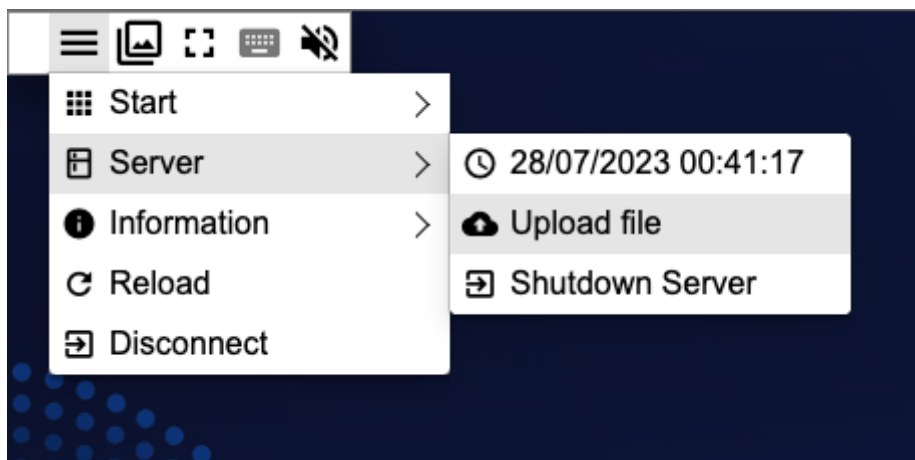
4. Start using the Blender to create 3D models, Save your work, and press the minimize button to hide it when running another app.

5. To start another application, click the floating menu bar, and hover the **Start** menu to reveal a dropdown list.
6. Click each of the list options, **Graphics**, and **Multimedia** to reveal additional applications you can run in your Vultr WebApp interface.
7. To open the **Gimp** graphics tool, navigate to `Start > Graphics`, and click **Gimp** to open the application window.
8. Start using Gimp to create your graphics workflows.
9. Save your work, and download a copy of the files to on your computer.

Upload and Download Files

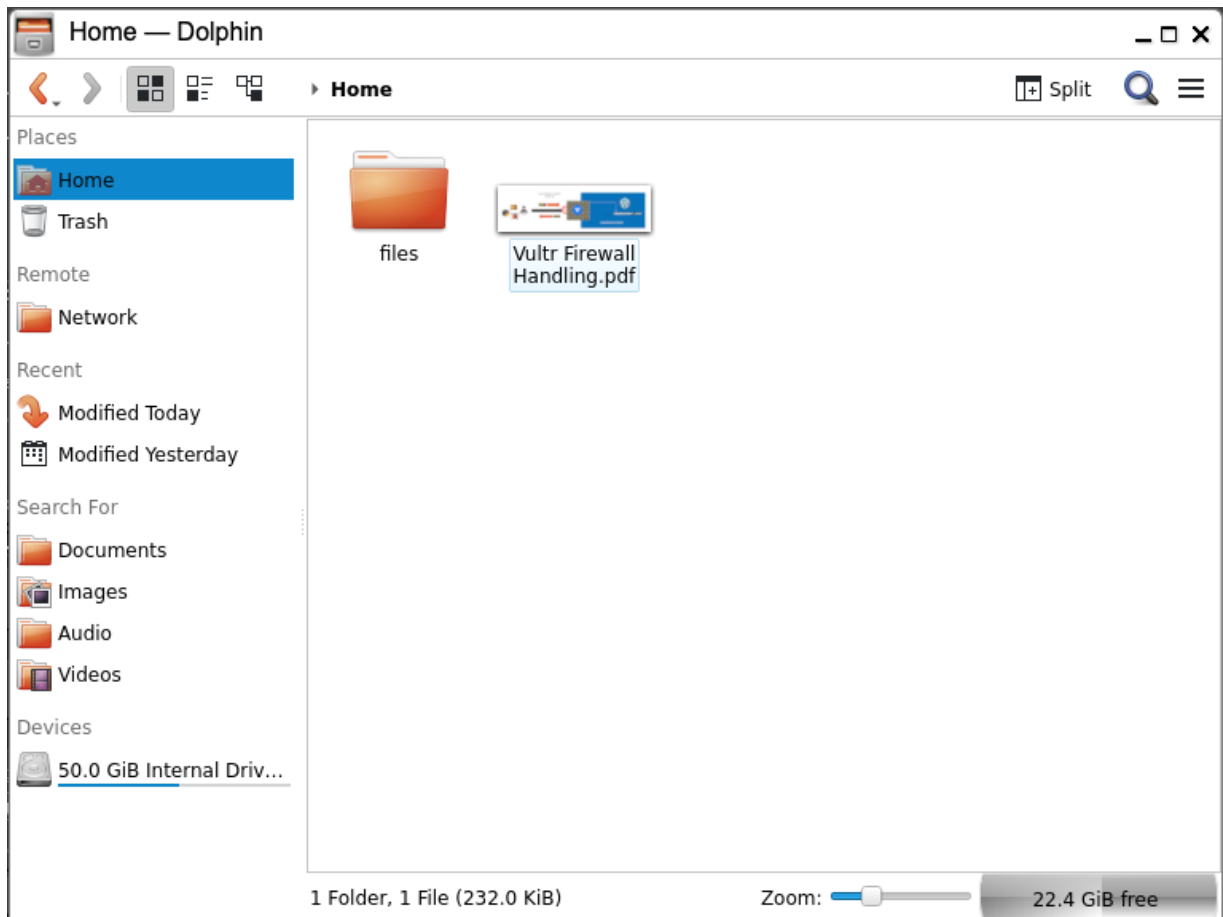
To upload files to your Vultr WebApp server, use the main web interface to upload a single file for use in your application. However, to upload a batch of files, you need to use a secure FTP or SFTP connection to the server. Through the connection, you can upload and download files on the server directly to your local computer as described in the following steps.

1. To upload a single file on the server, click the floating menu bar.
2. Navigate to **Server** to reveal a dropdown menu, and select **Upload File** from the list.



3. Browse a file from your computer, and click **Open** to upload the file to the Vultr WebApp server.

4. To view the uploaded file, click the main menu bar, navigate to **Start**, scroll to **System**, and click **Dolphin** to open the file explorer.
5. In the **Places** section, click **Home**, view, and verify that your file is available in the directory.

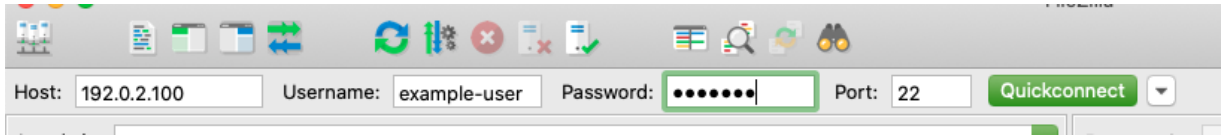


Upload Multiple Files

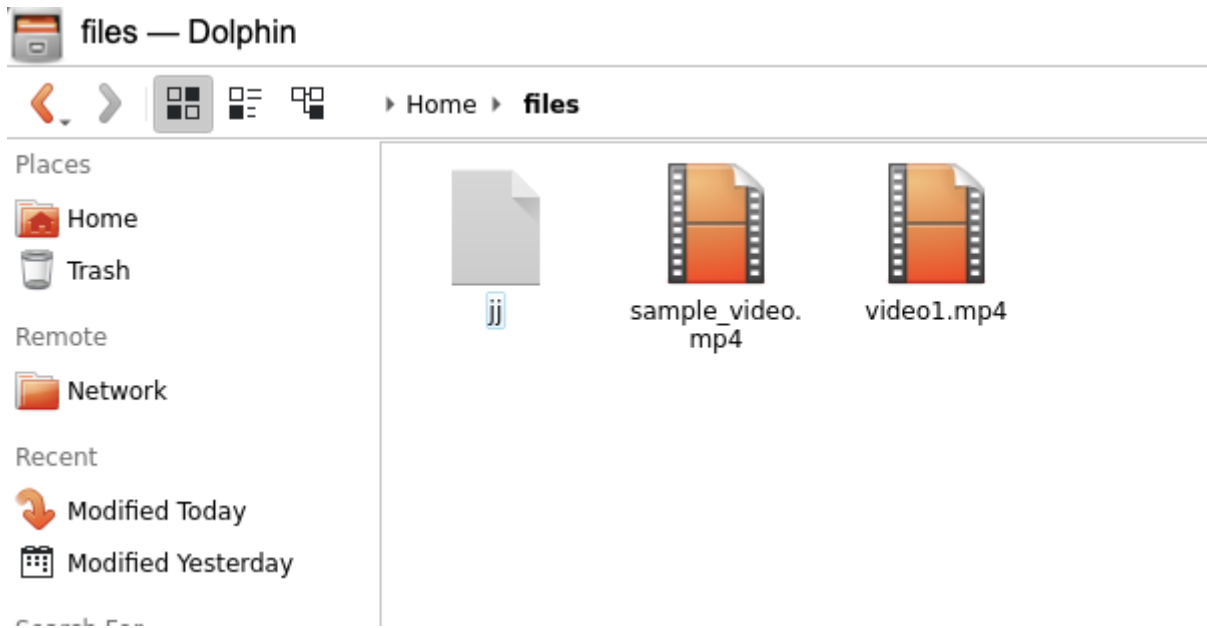
To upload multiple files on your Vultr WebApp server, you must establish a secure connection to the server using a file transfer protocol such as FTP, SFTP, or Rsync. In this section, you will use the FileZilla SFTP client to connect to the server and upload multiple files as described in the steps below.

1. Download and Install FileZilla on your computer from the official website.
2. From your applications menu, open FileZilla.
3. Within the FileZilla window, enter your Vultr WebApp IP Address in the **Host** field, or the configured domain name.

4. In the **Username:** field, enter the standard user you created earlier.
5. Enter the user password in the **Password:** field.
6. Enter `22` in the **Port:** field to instruct FileZilla to use FTP.

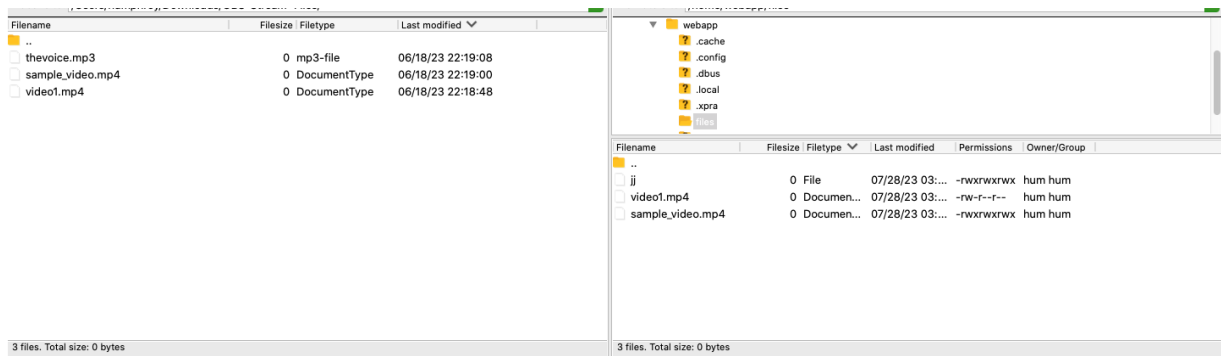


7. Click the **Quick Connect** button to establish a connection to the server.
8. In the **Remote Site** section, verify that the `files` directory is available.
9. Double-click to open the directory.
10. In the **Local Site** section, navigate to the directory where your target upload files are stored.
11. Drag and drop files from the **Local Site** section to the **Remote Site** to start uploading them to the Vultr WebApp server.
12. When successful, open Vultr WebApp in your web browser.
13. Click the floating menu bar, navigate to **System**, and open the **Dolphin** file explorer.
14. Click the **Home** directory, double-click `files`, and verify that your uploaded files are available in the directory.



Download Files

1. In your FileZilla SFTP session, navigate to the `files` directory in the **Remote Site** section.
2. Verify that your target files are available, drag and drop them to your destination directory in the **Local Site** section to save them on your computer.



3. Open a new file explorer window on your local computer.
4. Navigate to your destination directory.
5. Verify that your downloaded files from WebApp are available.

To connect, upload and download files on your Vultr WebApp server, you can use other SFTP clients such as Cyberduck, or directly [sync your local directories with the WebApp server using RSync](#) to continuously download new files.

Install Additional Applications

Vultr WebApp allows you to install multiple applications with the `,` separator during the deployment stage. To install additional applications such as `OBS` on your Vultr WebApp, make sure they are graphical applications, then use the Ubuntu APT repository to install them as below.

1. Update the server packages.

```
$ sudo apt update
```

2. Install your target application, for example, `OBS-Studio`.

```
$ sudo apt install obs-studio ffmpeg
```

The `ffmpeg` package is a necessary application for OBS Studio to correctly work on the server.

3. Install a web browser, for example, `Chromium` to browse the web using Vultr WebApp.

```
$ sudo apt install chromium-browser
```

4. Alternatively, install non-apt packages from sources such as `snap`. For example, to install Minecraft, run the following command.

```
$ sudo snap install mc-installer
```

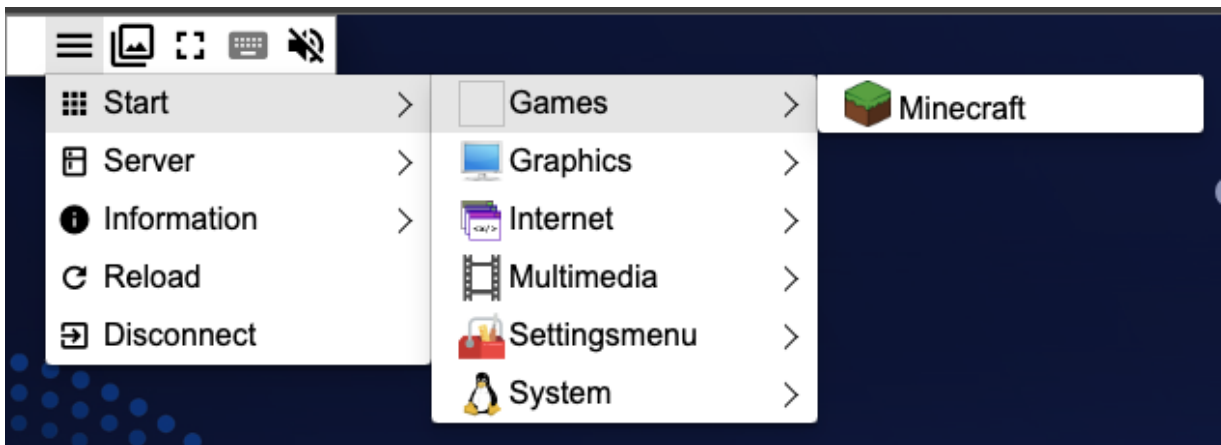
5. Install the Shotcut video editor.

```
$ sudo snap install shotcut
```

6. To verify that all additional applications are successfully added to your Vultr WebApp server. Load the WebApp interface in your browser.

```
http://webapp.example.com
```

7. Navigate to the floating menu bar, and hover over the **Start** menu.
8. Verify that new categories are added to the dropdown menu.



As displayed on the interface, you installed the **Minecraft** game which creates a new **Games** category in your WebApp menu. The **Chromium** browser also creates a new **Internet** menu option.

Security

To secure your Vultr WebApp server, verify your Firewall table rules, and redirect all HTTP requests to HTTPS to add an encryption layer to your server traffic. Additionally, you can change the Vultr WebApp user password, and add any secondary users to grant access to your server as described in this section.

1. Verify the available rules in the Uncomplicated Firewall (UFW) table.

```
$ sudo ufw status
```

Output:

```
Status: active
```

To	Action	From
--	-----	----
22/tcp	ALLOW	Anywhere
443	ALLOW	Anywhere
80	ALLOW	Anywhere
9080/tcp	ALLOW	Anywhere
22/tcp (v6)	ALLOW	Anywhere (v6)
443 (v6)	ALLOW	Anywhere (v6)
80 (v6)	ALLOW	Anywhere (v6)
9080/tcp (v6)	ALLOW	Anywhere (v6)

As displayed in the above output, the HTTP port `80`, HTTPS port `443`, and SSH port `22` are allowed through the firewall.

2. Block access to the Cockpit port `9080` if you are not using it.

```
$ sudo ufw deny 9080/tcp
```

3. Restart the firewall to load changes.

```
$ sudo ufw reload
```

Generate Let's Encrypt SSL Certificates

1. To configure Nginx to read your domain name, navigate to the host files directory.

```
$ sudo cd /nginx/sites-available
```

2. Back up the `webapp_https.conf` file to your user home directory.

```
$ sudo mv webapp_https.conf ~/
```

3. Delete the orphaned file from the `sites-enabled` directory.

```
$ sudo rm ../sites-enabled/webapp_https.conf
```

- Using a text editor such as `Nano`, edit the `webapp_http.conf` file.

```
$ sudo nano webapp_http.conf
```

- Find the `server_name _;` directive, and include your domain name as below.

```
server_name webapp.example.com;
```

Save and close the file.

- Test Nginx for configuration errors.

```
$ sudo nginx -t
```

- Restart Nginx.

```
$ sudo systemctl restart nginx
```

- Install the Certbot Let's Encrypt client.

```
$ sudo snap install --classic certbot
```

- Activate the Certbot systemwide command.

```
$ sudo ln -s /snap/bin/certbot /usr/bin/certbot
```

- Request for a new SSL certificate. Replace `webapp.example.com` with your actual domain name, and `user@example.com` with your actual email address.

```
$ sudo certbot --nginx -d webapp.example.com -m user@example.com --agree-tos --redirect
```

- Verify that the certificate auto-renews upon expiry.

```
$ sudo certbot renew --dry-run
```

12. In your web browser, visit your domain to verify that it's accessible over HTTPS.

```
https://webapp.example.com
```

Optional: Set up Vultr WebApp Users

To change your Vultr WebApp user password, or set up additional users, create a new password as described in the steps below.

1. Using the `htpasswd` utility, Change your user password in the `/etc/nginx/htpasswd/webapp` file by running the following command.

```
$ htpasswd -c /nginx/htpasswd/webapp myuser
```

Enter your new password when prompted, and replace `myuser` with your actual user.

The above command overwrites the existing user password in the `webapp` file with your new password.

2. To fully change the user password, edit the `.xprapasswd` file in the webapp home directory as below.

```
$ sudo nano /home/webapp/.xprapasswd
```

3. Set a new password in the file.

```
STRONG-PASSWORD
```

Save and close the file.

4. To create additional users to access your Vultr WebApp, append the `/etc/nginx/htpasswd/webapp` file to set up a new basic authentication user as below.

```
$ htpasswd -b /etc/nginx/htpasswd/webapp example-designer STRONG-PASSWORD
```

The above command creates the user `example-designer` with access to your Vultr WebApp interface.

Conclusion

You have used the Vultr WebApp Marketplace application to access your GPU-intensive applications, installed extra apps, and improved the server security. By using the Vultr WebApp interface, you can easily access your applications faster than VNC, or Remote Desktop connections (RDP) that require special apps to connect.

Next Steps

For more information on how to secure your Vultr WebApp server, and deploy other applications to run, visit the following resources.

- [How to Use Vultr's Broadcaster Marketplace App.](#)
- [How To Connect To An FTP Server With FileZilla.](#)
- [Best Practices for SSH on a Production Cloud Server.](#)



VULTR

