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# Artist Guide to Using The RNDR Network



RNDR Support  
Updated 20 days ago

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## Artist Guide for Using RNDR

[Note: Please see the [RNDR User Manual](#) for general information about the network]

### 1. Preparing a Scene

#### Checking Octane Version

Currently the RNDR Client is **OctaneRender 2020.1.4** and should be backwards compatible with supported Stable versions of OctaneRender 2020. New features in RC or XB versions of OctaneRender will not be supported until they are available in a stable release. To ensure compatibility, please check your scene in OctaneRender Standalone 2020.1.4 prior to job creation.

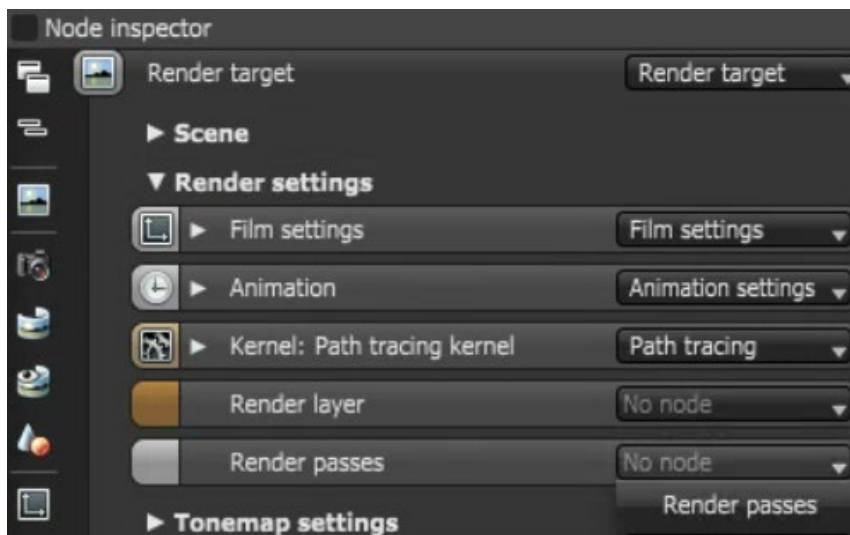
RNDR updates regularly to support the latest Stable Edition of OctaneRender, so please regularly check the version of the RNDR client. Again, experimental Builds (XB's) and Release Candidates (RC's) are not fully supported on RNDR, so scenes using new XB or RC features may not render properly. You can view the latest version of OctaneRender here: <https://help.otoy.com/hc/en-us/articles/214154363-Get-the-Latest-Edition-of-Octane>

## Using ORBX

To use RNDR, a scene needs to be exported as an ORBX file using [OctaneRender](#) Standalone or any of the supported [OctaneRender Plugin Integrations](#). Checking a scene and optimizing a scene first in Octane Standalone prior to uploading to RNDR is recommended to avoid re-renders or unnecessary costs. Please consult [OctaneRender Documentation](#) for complete instructions about how to use OctaneRender as well as information about packaging ORBX Scenes.

For scenes created using an Octane plugin, it is especially recommended to first check importing the ORBX scene file in *OctaneRender Standalone* prior to uploading it to RNDR. Importing an ORBX scene in OctaneRender Standalone allows you to confirm that there are no missing elements, and that a scene is configured correctly prior to spending RNDR tokens on a render job. If you have issues with exporting ORBX files contact [support@rendertoken.com](mailto:support@rendertoken.com).

- To check how an exported scene looks in Octane Standalone, simply to open file, choose **Render Target** and lock the perspective. This prevents you from accidentally moving the camera. All of this takes couple of minutes (sometimes more if scene is very complex and loading time is longer).
- Please note: Octane **Render Passes** need to be selected as well - this is important to check for plugin integrations like Cinema4D.



For more information please refer to [OctaneRender documentation](#) and articles;

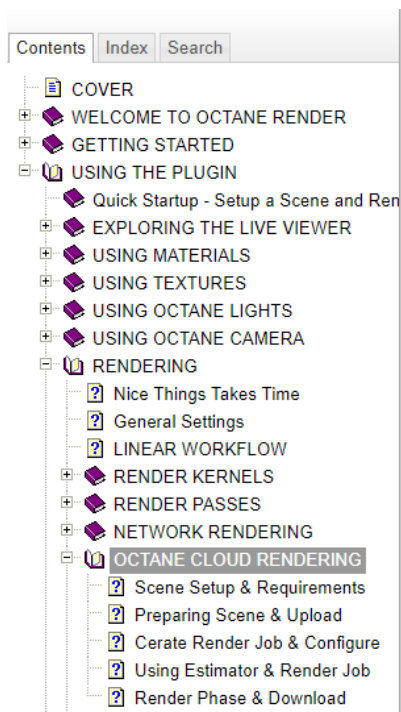
- **Working with Files and Geometry in OctaneRender Standalone**
- **ORBX Exporting and Importing in OctaneRender for Unity**
- **OctaneRender for Maya: Export to ORBX**
- **Getting Started with OctaneRender Cloud**

## Working with Particles, Attributes and Dynamics:

In programs like Cinema4D and Houdini - when users often work with plugins for particle effects - some additional baking may be needed to use RNDR. This tutorial created by artist [Andrey Lebrov](#), walks you through the process of working with particles and attributes in Cinema4D for use on the RNDR network.

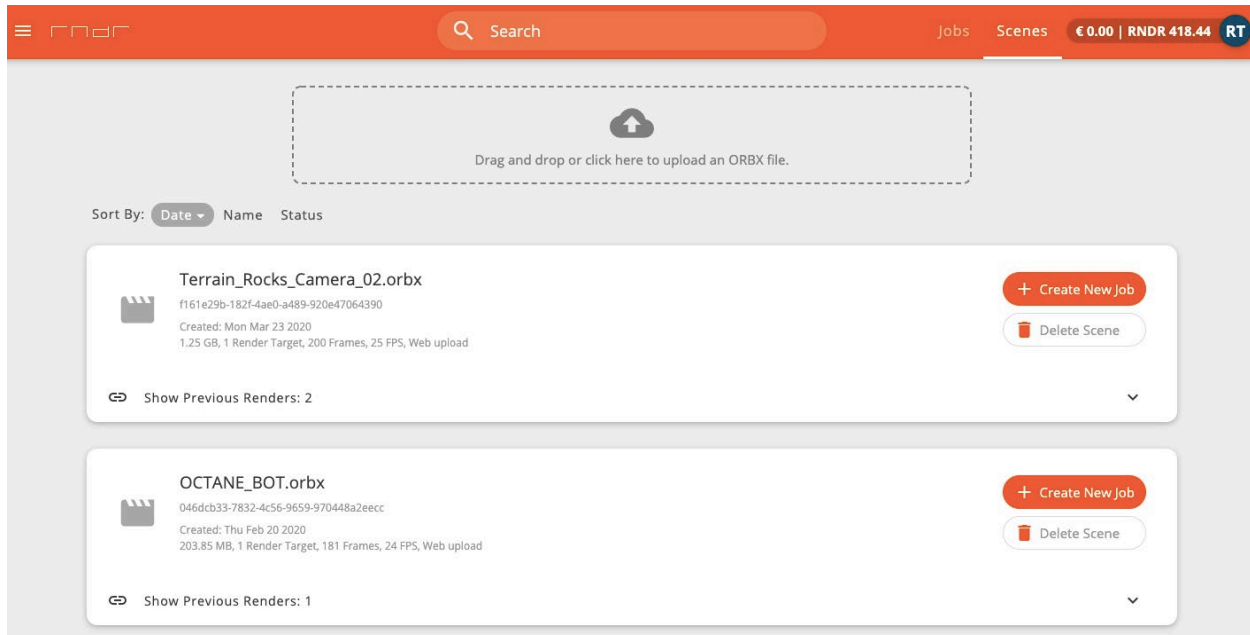
For more information about exporting ORBX Scenes from Cinema4D, please see this guide below:

You can also find documentation for exporting ORBX Scenes from Cinema4D in the '**Octane Cloud Rendering**' section of the [OctaneRender for Cinema4D](#) manual [Copyright Ahmet Oktar].



## 2. Upload ORBX Scene for Rendering

Using Octane Standalone or any of the OctaneRender supported plugins, export your scene as an ORBX file. Then navigate to the Scenes page by clicking on the Scenes tab in the top right. Click on the cloud icon and select an OctaneRender Package File (files with .orbx extensions).



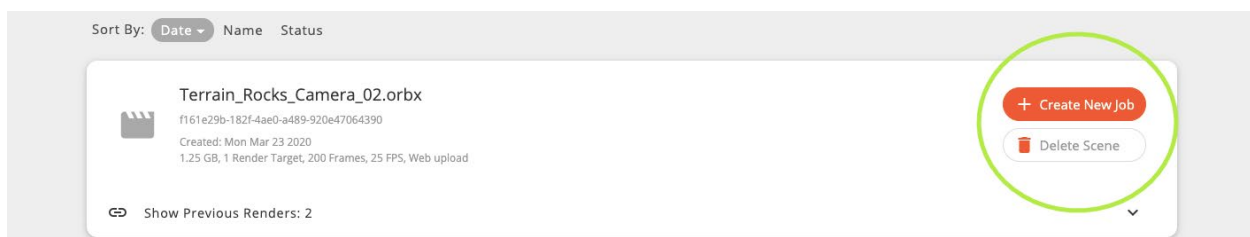
**Security Note:** When you are uploading Scenes to RNDR, each file is encrypted during the uploading process and cannot be retrieved once on RNDR. As a result, RNDR does not fully function as cloud storage and we encourage storing a backup of your work internally.

### Uploading a Scene from an Octane DCC Integration

This process varies for some OctaneRender plugins that are more deeply integrated into the Host 3D Content Creation tool. For example, with Cinema4D, please consult the 'Octane Cloud Rendering' section of the [OctaneRender for Cinema4D manual](#).

## 3. Create a Job Parameters for Rendering

Once you have uploaded your Scene, you will find it on the Scenes page. There you can create Jobs, delete Scenes, or sort Scenes by either date, name, or status.



When you have a scene to render, you can create a Job. To begin this process click the '**Create a Job**' button your scene. You will be redirected to the '**Create a Job**' page, where will have several options.

### 1. Configure Render Job

Default values are set based on scene settings.

**OCTANE BOT.orbx**  
87bd8b78-356f-459c-93e7-06635bdc3e40  
Created: Tue Apr 28 2020  
203.85 MB, 1 Render Target, 181 Frames, 24 FPS, Web upload

Render Target  
Render target (2) ▼

Number of samples ⓘ  
350

Resolution ⓘ

☐ HD - (1920 x 1080)

1024

x

512

☐ PAL - (720 x 576)

☐ UHD 4K - (3840 x 2160)

☒ Custom

Frame Range (0-180 Available) ⚠

☒ All Frames

0-180

☐ First 10 Frames

☐ Every 2nd ▼ Frame

☐ Custom

### 2. Add Output(s)

Outputs must be unique. Adding a Deep Image output will prevent other formats from being selected.

**PNG 8-Bit Depth** X

Bit Depth  
☒ 8  
☐ 16

Settings  
☐ Add Metadata

Configure Output File Names

Ex. OCTANE\_BOT\_beauty\_001.png

Select values below to configure the naming convention of job output files. Selection order will be preserved, and each option will be separated by an underscore. The example above will update as your selection changes and can be used for reference.

1. Scene Name

REMOVE

2. Render Pass Name

REMOVE

3. Frame Number

REMOVE

+ ADD ANOTHER NAMING ELEMENT

## Main parameters

- **# of Samples:** Just like in OctaneRender, this sets the maximum number of samples per pixel before the rendering process stops. The higher the number of samples per pixel, the cleaner the render. It is important to test your preferred sample settings prior to cloud rendering in order to find the optimal amount of samples a render requires to achieve desired results. If you set your sample settings too low you may have an unusable noisy render, and conversely,

if your sample settings are too high, you may be incurring cloud rendering costs with diminishing returns.

- **Resolution:** This must be between 1 and up to 65000 for both width and height.
- **Select Frames:** Range of frames you want to render (can be single frame, a range, or mix of ranges)
- **Output:** You have several options for the Format and the Output Naming Format. To change the format, simply click on the format you want. To change the Output Naming Format just enter one or more of the Output Naming Options in the field on the left.

**Output Format Recommendation for RNDR:** Very large file sizes can reduce speeds and increase costs. This is especially true when working with high resolutions, high numbers of render passes, high bit-rate output formats or multiple outputs. To increase processing speed, reduce download times, and even increase responsiveness in composition tools, RNDR recommends to work with the lossy compressed file format **EXR DWAA** or **DWAB** when using the network.

- The standard was contributed by DreamWorks Animation. The reduction in size is up to 10x and the file size of a 32-Bit EXR image is roughly the same as a 8-Bit PNG which results in much better dynamic range for the end result. Tools like Adobe After Effects are also reported to be more responsive in recent versions when working with compressed files.
- DWA in OpenEXR is actually two compression options, DWAA and DWAB. They use the same algorithm, but DWAA compresses pixels in blocks of 32 scanlines, while DWAB does 256 scanlines. Bundling more lines together lets DWAB compress more efficiently and increases performance when the entire image is read at once, as most programs do. Meanwhile, DWAA's smaller bundles make it more efficient for reading just a few scanlines at a time, as Nuke usually does." source: <https://fnordware.blogspot.com/2014/08/dwa-compression-in-openexr-22.html>
- For more information on EXR Data Compression types please read [this article](#)
- The following video is an excellent tutorial about EXR outputs and workflows by OctaneRender artist Raphael Rau (Silverwing VFX).

## 4. Select RNDR Tier

Select the tier you would like your work to be processed at. For RNDR Token users, please select **only from Tier 2 or Tier 3**. **Tier 2** provides queue priority rendering across decentralized nodes, while **Tier 3** provides the most economic rendering solution. You can learn more about RNDR Multi-Tier pricing [here](#).

### 3. Network Settings

Speed may vary based on network supply & demand.

#### Select Tier <sup>?</sup>

Tier selection affects render assignment, speed, price, and MPA compliance. Prices range from 100 to 800 OBh per RNDR Credit. When you select a tier, more detailed information will be shown below.

Price: 100 OBh per RNDR Credit

MPA Status: N/A

Power: 

Availability: 

- ☒ Release Test
- ☐ Tier 1: Trusted Partners
- ☐ Tier 2: Priority
- ☐ Tier 3: Economy

#### Select Payment Type <sup>?</sup>

Jobs can be paid using either RNDR Tokens or RNDR Credits. For more information, please visit our [FAQ section](#). Rendering power does not differ based on selected payment method.

- ☒ RNDR Credits
- ☐ RNDR Tokens

#### Select Frame Approval Method <sup>?</sup>

Manual approval allows artists to review each frame and request a re-render if the frame does not look correct. If pre-approved, a new job will need to be created to re-render any incorrect frames. Outputs for manually approved jobs cannot be downloaded until the entire job is completed and approved.

- ☒ Manually Review Frames
- ☐ Pre-Approve Frames

## 5. Estimate Job Costs Prior to Rendering

### 4. Generate an Estimate An estimate must be generated prior to job creation.

Estimates are not binding. Price will be determined based on actual render time.

#### OctaneBench Score <sup>?</sup>

Ex. 200

Don't know your score? [Look it up here](#).

#### Time Per Frame <sup>?</sup>

Ex. 5.5

minutes

#### Estimated Cost: 0.00 RNDR Tokens

Costs are estimated using your computer's performance as provided by you or otherwise estimated using OctaneBench (i.e., OB Score and the average time required to render a frame) and the number of frames in your job's configuration. [Learn More](#)

Artists are able to generate a cost estimate for a render by providing their local hardware's OctaneBench (OB) score and the time it takes to render one frame before sending the render job out to the network. This is to avoid final job cost exceeding the amount of tokens that were temporarily held for rendering. If the amount of work exceeds the amount of tokens in your account, a render will be paused and you will be prompted to add more tokens into your account.

To generate a RNDR estimate, download the latest version of OctaneBench: <http://octanebench.com> and run the application to get your system's OctaneBench score. Then render a single frame or range of frames from your scene, to see how long a frame takes to render. It is recommended to render the most complex frames from a scene in order to generate an upper bound of rendering times.

***It is important to note*** that estimates are just an approximation, as there are often significant frame to frame disparities in rendering work that cannot be projected prior to completing rendering work. Working off an upper bound, limits the potential that your rendering costs will exceed the amount of tokens you have in your account.

Please consult the [Genesis Mainnet FAQ](#) and [Release Blog Post](#) for more information about **Approving** and **Downloading** frames.

## 6. Adding Tokens to Your Account

If you have insufficient funds to process a job, you will have to add tokens to your account in order to submit the job. Additionally, if you run out of RNDR in your account while your job is in progress, your job will be paused until you add more tokens to your account.

### Deposit more Funds?

ADD RNDR CREDITSADD RNDR TOKENS

The price of one RNDR Credit is equivalent to € 1 EURO, and each credit has the equivalent rendering power of 4 RNDR Tokens. If you already have RNDR Tokens in a Metamask wallet, select "Add RNDR Tokens" above to make a deposit.

Your account currently has **0 RNDR Credits** available for rendering. To start rendering, please select one of the services below to purchase more Credits for your account. Once deposited, credits cannot be withdrawn and can only be used for rendering.

☒ PayPal☐ Stripe

How many Credits would you like to purchase? €1

CONTINUE TO CHECKOUTClose



## Deposit more Funds?

ADD RNDR CREDITSADD RNDR TOKENS

The price of one RNDR Credit is equivalent to € 1 EURO, and each credit has the equivalent rendering power of 4 RNDR Tokens. If you already have RNDR Tokens in a Metamask wallet, select "Add RNDR Tokens" above to make a deposit.

Your account currently has **418.44 RNDR Tokens** available for rendering. Once deposited, RNDR cannot be withdrawn and can only be used for rendering. To learn more about RNDR and how it can be used, please visit [this page](#).

Metamask Address:  
Metamask Balance: 250 RNDR

How much RNDR would you like to deposit?

DEPOSIT RNDRClose

You can add RNDR tokens to your account using Metamask - please see a guide for this [here](#).

**IMPORTANT:** If you are using RNDR Tokens, please use the new RNDR contract address: **0x6de037ef9ad2725eb40118bb1702ebb27e4aeb24**

You can read information about migrating tokens to the new address [here](#), the RNDR interface will also prompt you to migrate if you have not done so already.

## 7. Review and Approve Frames

Artists are able to review frames as they are rendered with a full watermarked preview. This allows an artist to ensure their renders are properly executed. Additionally, artists have the ability to watch an animated preview, and can control how long each frame is displayed once a job is completed.



## OCTANE\_BOT

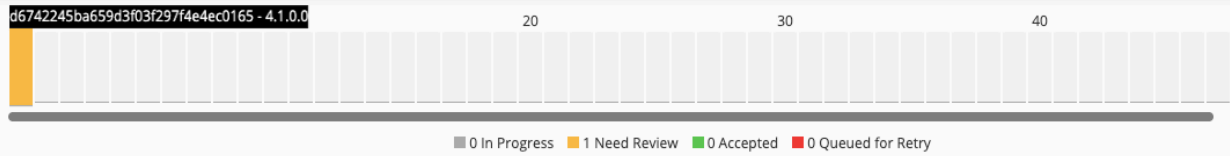
f8a1a1c2-6529-445e-b82f-b4ee3b480454

Created: Tue Apr 28 2020

In Progress

RNDR Tokens Used: 0.01

Show Frame Progress (1%)



REVIEW ALL FRAMES



Frame ID: 3 Status: Accepted

ACCEPT FRAME

RE-RENDER FRAME

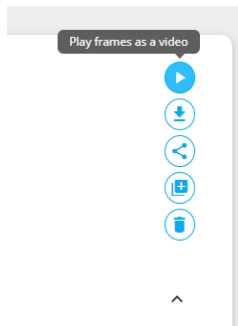
REVIEW ALL FRAMES

[Double Click for Full Frame Preview with watermark]

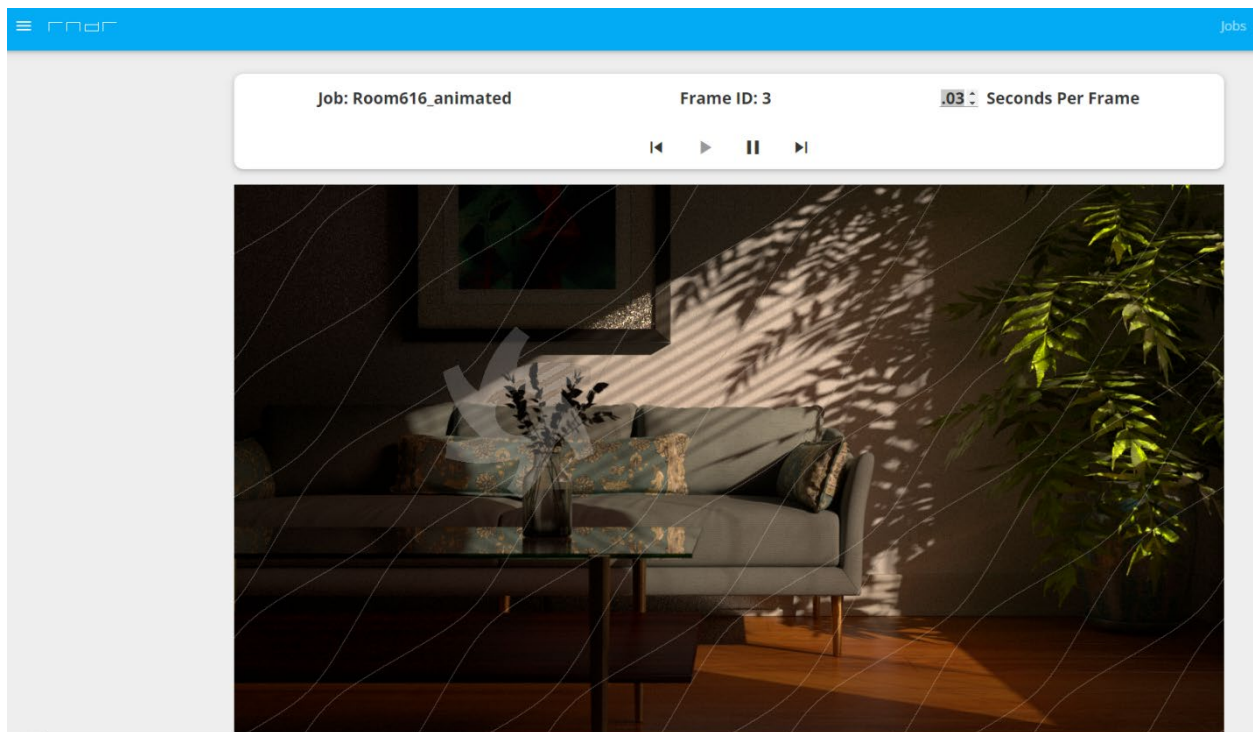
Frame: 3 | Resolution: 1280 x 720 | Samples: 1000

This is a preview, not the final output. Final outputs will be higher quality and have no watermarks.

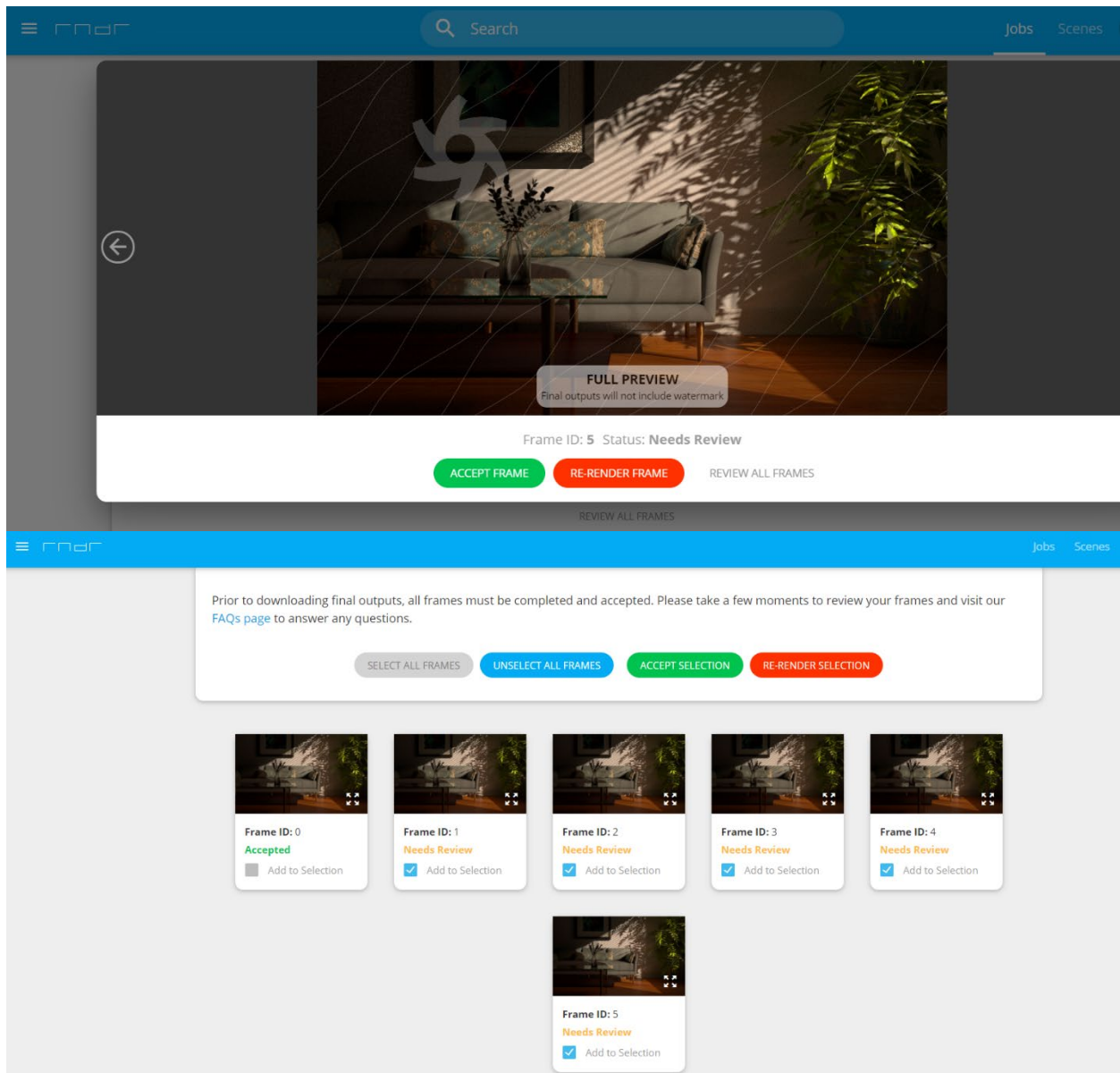




You can also view a rendered outputs as an animated sequence by selecting to play frames as video icon, where you can control how fast the animation runs in the **"Seconds Per Frame"** field (see below).



As Frames are rendered and after a job has been completed you can individually approve or reject each frame. You can also approve frames in batch sequences. For example, at frame 1000, you can approve all previous frames from 0-1000 in one click. Once a frame is approved, the tokens will be debited and used to pay for the approved frames. Once you have successfully paid for a frame, you can download the frames in your Artist Portal.



You can approve frames individually frame-by-frame or select all frames, or a larger sequence of frames by "selecting all" (see graphic). This can happen during or after the job is complete.

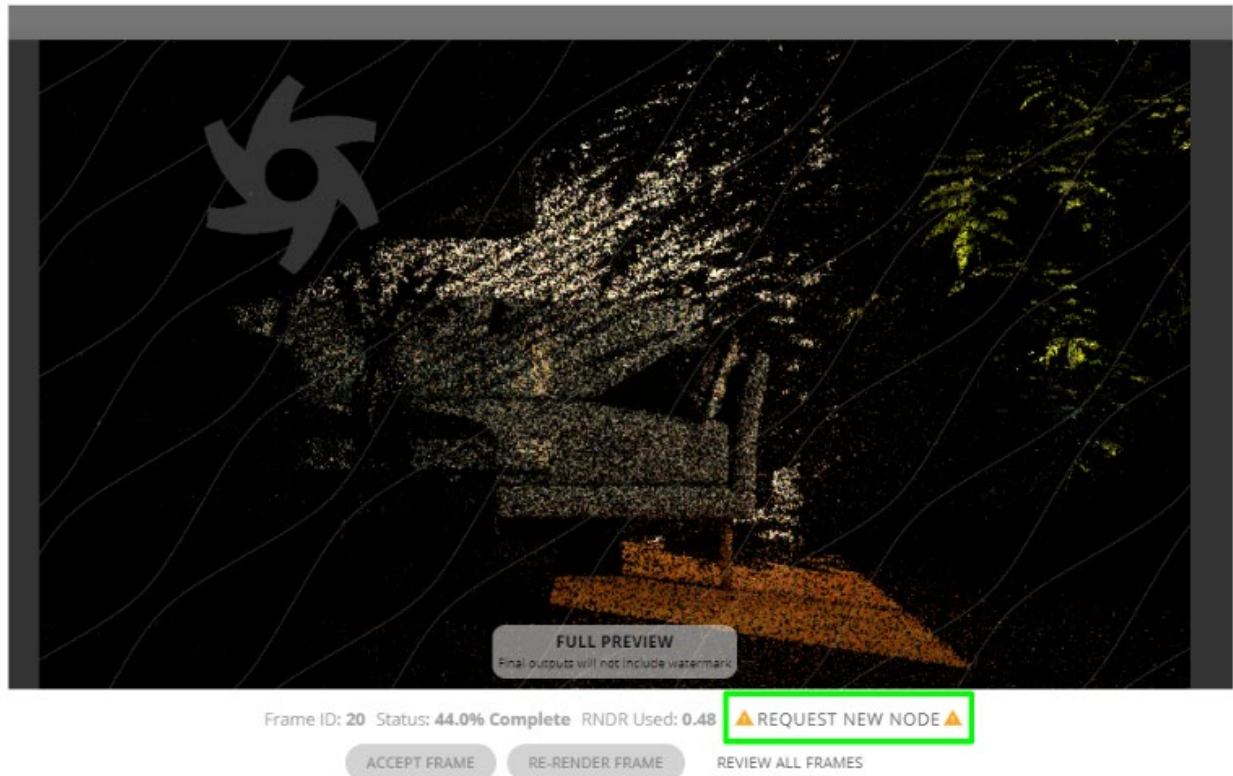
***Please note that if no approval or rejection of frames or frame sequences is given within 72 hours of Job completion, all frames will be automatically approved.***

In some cases, you will need to add RNDR Tokens or currency in order to download the approved frames. See [Here](#) for more information on adding Tokens or currency to your account.

## 8. Requesting a New Node



Occasionally a frame may take a long time to finish because the node has difficulty processing the frame. After a period of time the frame will be sent to a new node to be completed. However, if you want to expedite this process so that your job can complete, you can **Request a New Node** by selecting the highlighted area below in the preview window. Doing this will send the frame to a new node. Please note that if the frame is currently in progress, you will have to pay for this frame to be sent to a new node. It is recommended to use only sparingly - for example if your job is 97-99% complete and you are on deadline, with some frames taking time to finish. For frames that are stuck and not in progress, 'Requesting a New Node' does not cause you to incur additional costs. For all other instances, please email [support@rendertoken.com](mailto:support@rendertoken.com) for help.



## **Frame Rejection**

Select the Individual Frame or Sequence of Frames and click Reject. Once a Frame is Rejected, it will automatically be sent to another node on the network to be re-rendered. You ***will not*** be charged additional RNDR for this work. However, you will also not be allowed to modify the frame or sequence in any way. Jobs should only be rejected if there was an error processing the frame like black frames, partially rendered frames, or broken frames.

After three failed re-renders, a job will be terminated and a support ticket will be automatically created. A support team member will review the failure and follow up. For support inquiries please contact [support@rendertoken.com](mailto:support@rendertoken.com)

### **Cancellation vs Frame Rejection**

If, for example, you want to modify the Sample rate or change elements in a scene like the camera, lighting, color etc., please cancel the Job, make the changes and Submit a new Job to be processed. This means it is very important to check a Job prior to rendering.

All correctly processed rendering work will be paid for as the network needs to compensate miners for their work in order to be sustainable. See Job Cancellation FAQ's in the [General FAQ](#) for more details on cancelling scenes you no longer want rendered.

### **Frames Automatically Approved After 72 Hours**

If no Approval or Rejection of frames is given within 72 Hours after Job completion, all frames will automatically be approved. RNDR is a two-sided network of Miners and Artists, and Miners who have hard infrastructure costs need to receive Tokens in a timely manner so that they are able to maintain operations. For this reason, release of tokens needs to be expedient. With rapid confirmation, Miners are able to more easily use the network, building critical GPU supply that is intended to lower costs and increase availability for Artists.

### **Adding Tokens or Currency to Download Frames**

It is not possible to estimate Job costs with 100% accuracy prior to actually doing the rendering work. Often times there is significant variance in the rendering work required between frames as things like the camera positioning, lighting, and a host of other factors change from one frame to another. For this reason, the Tokens in the locking smart contract are only a base estimation, and the actual rendering work will occasionally exceed the initial estimation.

When a job exceeds Tokens in the locking smart contract, it will automatically be paused, and a notification will pop up asking you to add Tokens or currency to your account. However, all the frames that are currently in progress will be rendered. Once approved, completed frames can be downloaded. In order to continue a job, you will need to add Tokens or currency to your account and resume the render.

### **Job Cancellation**

Jobs can be cancelled at any point. However, in progress frames will be completed and miners will be compensated for this rendering work, with RNDR released from an Artist's wallet for the completed frames. These frames will then be available for download.

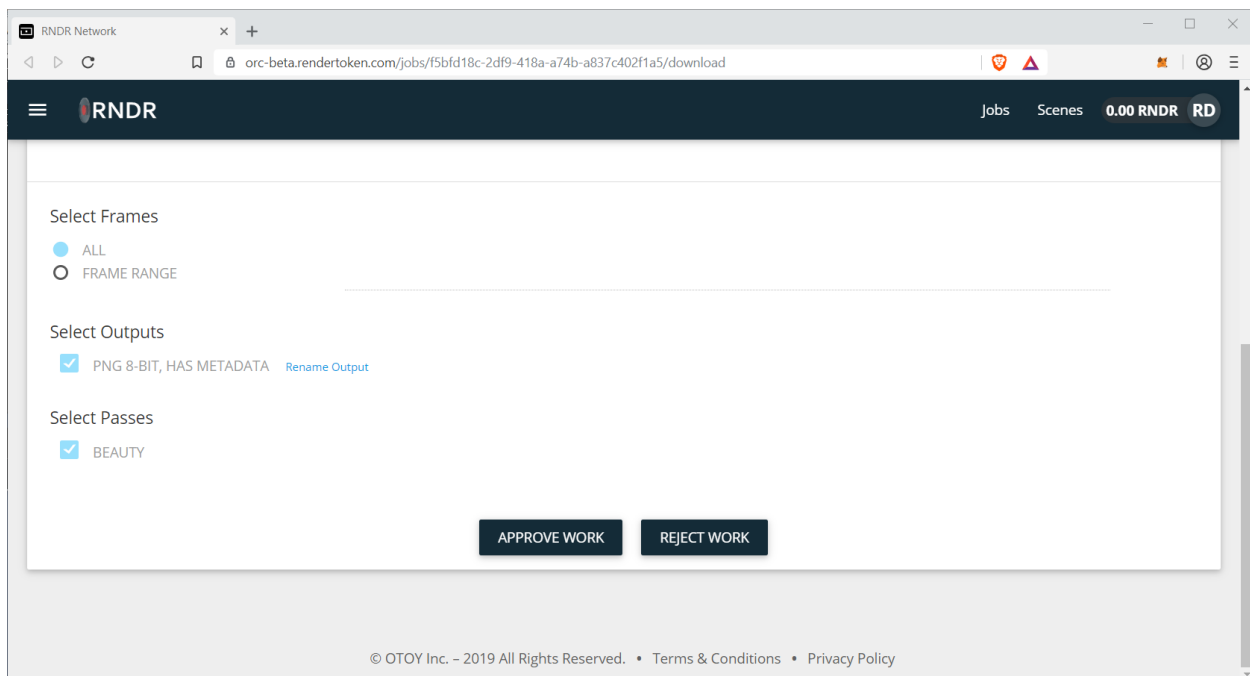
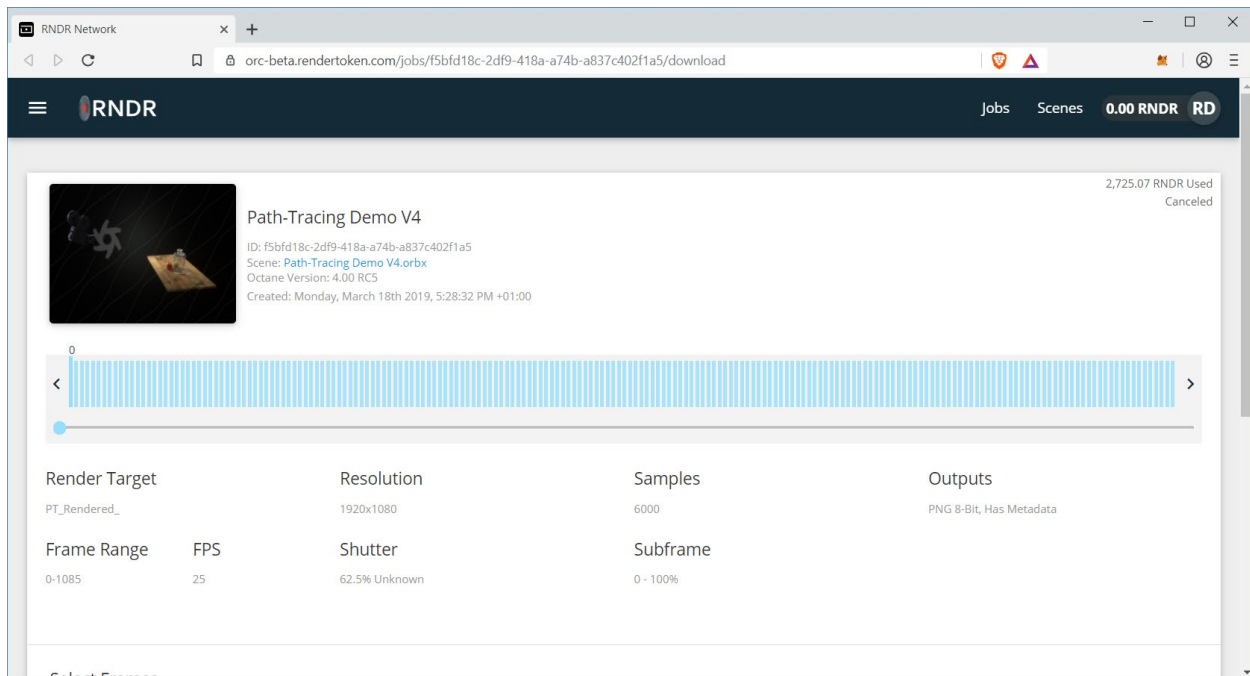
## 9. Downloading and Sharing Completed Frames

Sharing and downloading animated Jobs can be done after a job is paid and downloaded through the side toolbar. The functions include: playing outputs as an animation, downloading outputs, sharing outputs, duplicating the job for new renders.



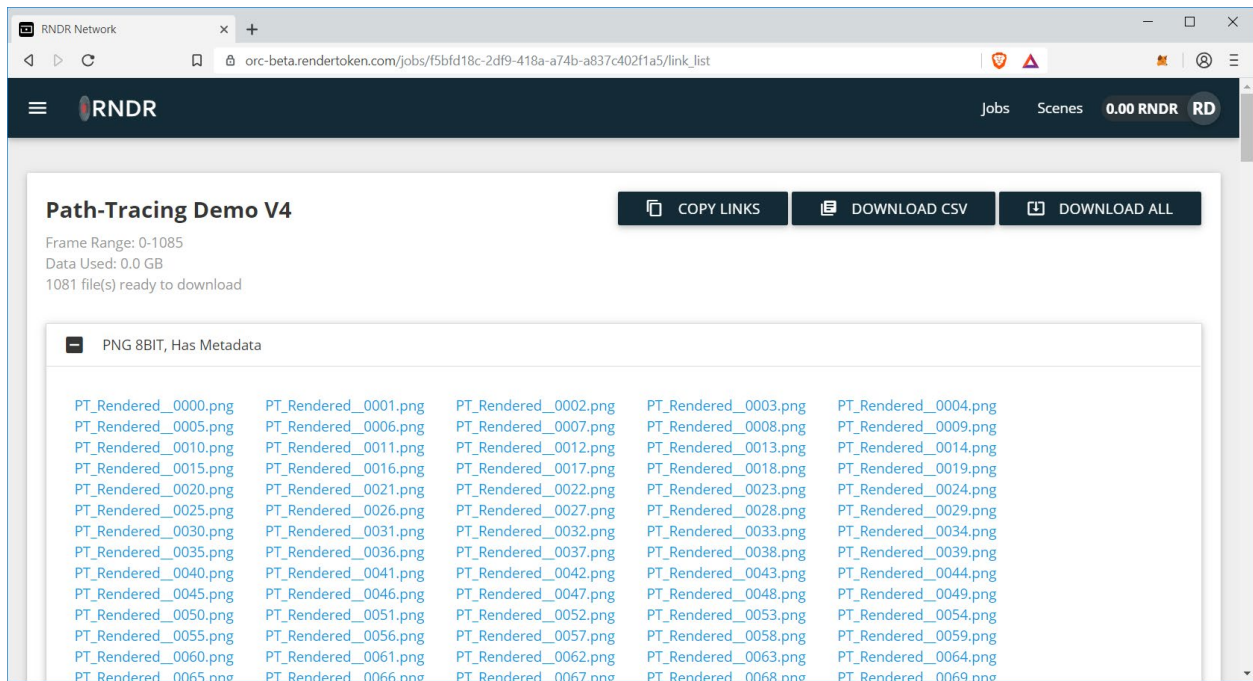
Downloading and Sharing a Job operate similarly. When either function is selected, it will redirect you to another page where you will be able to select the range of frames and output format(s) that you want to download/share.

Once you have done that, click on the button below and you will be redirected to a page where you need to approve any pending work first. If approved, the release of Tokens from the locking smart contract to the nodes is triggered and you are granted access to download the final, watermark free images.



In the case of sharing your Job you will be redirected to this same page but will also have a link that you can give out at the top of the page.





If approved, the release of tokens from the locking smart contract to the nodes is triggered and you can download the final, watermark free images. If declined, you cannot download unwatermarked full resolution outputs.

**Please Note:** RNDR should not be used for long term storage. Rendered outputs will be deleted a week after a job has been confirmed, and the ORBX scene will be deleted 10-days after a job has been completed. As a result, it is important to save copies of files you would like to keep locally.

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