

Get Yours Today

x

# FREE CLOUD MIGRATIONS

For a limited time, Linode is offering free cloud migrations of business workloads.

 (https://linode.com)


Guides &amp; Tutorials (https://www.linode.com/docs/)

» Game Servers (https://www.linode.com/docs/game-servers/)

» How to Setup a Terraria Linux Server

## How to Setup a Terraria Linux Server

Updated Monday, February 4, 2019 by Linode

Contributed by Tyler Langlois  (https://github.com/tylerjl)

Try this guide out by **signing up for a Linode account** (https://login.linode.com/signup?promo=DOCS20AA00X1) with a \$20 credit.



### Contribute on GitHub

Report an Issue (https://github.com/linode/docs/issues/new?)

title=How%20to%20Setup%20a%20Terraria%20Linux%20Server%20Proposed%20Changes&body=Link%3A+https%3A%2F%2Flinode.com%2Fdocs%2Fgame-servers%2Fhost-a-terraria-server-on-your-linode%2F%0A%23%23%20Issue%0A%0A%23%23%20Suggested%20Fix%0A&labels=inaccurate+guide)+View+File+(https://github.com/linode/docs/blob/master/docs/game-servers/host-a-terraria-server-on-your-linode/index.md)+Edit+File+(https://github.com/linode/docs/edit/develop/docs/game-servers/host-a-terraria-server-on-your-linode/index.md)

#### Dedicated CPU instances are available!

Linode's Dedicated CPU instances are ideal for CPU-intensive workloads like those discussed in this guide. To learn more about Dedicated CPU, read our blog post (https://blog.linode.com/2019/02/05/introducing-linode-dedicated-cpu-instances?

utm\_source=library&utm\_medium=banner&utm\_campaign=dedicated\_cpu). To upgrade an existing Linode to a Dedicated CPU instance, review the Resizing a Linode (/docs/platform/disk-images/resizing-a-linode/) guide.

## HOST A TERRARIA SERVER ON YOUR LINODE

Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement (https://www.linode.com/legal-privacy/). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out". To exercise other rights you may have related to cookies, select "More Info" or see this "Do Not Sell My Personal Information" (https://www.linode.com/legal-dpr/) link.

Accept

Opt-Out

More Info

# FREE CLOUD MIGRATIONS

For a limited time, Linode is offering free cloud migrations of business workloads. This guide outlines the steps required to run a Terraria server for yourself and others to play on. These steps are compatible with any Linux distribution that uses systemd (<https://www.freedesktop.org/wiki/Software/systemd/>). This includes recent versions of CentOS, Debian and Ubuntu, Arch Linux and Fedora.

Due to Terraria's system requirements, a Linode with at least two CPU cores and adequate RAM is required. For this reason, we recommend using our 4GB plan or higher (<https://www.linode.com/pricing>) when following this guide. If your Linode does not meet Terraria's minimum requirements, the process will crash intermittently.

## Before You Begin

1. Familiarize yourself with our Getting Started (</docs/getting-started/>) guide and complete the steps for setting your Linode's hostname and timezone.
2. This guide will use `sudo` wherever possible. Complete the sections of our Securing Your Server (</docs/security/securing-your-server/>) guide to create a standard user account, harden SSH access and remove unnecessary network services. **Do not** follow the *Configuring a Firewall* section in the Securing Your Server Guide—we will configure the firewall for a Terraria server in the next section.
3. Update your operating system's packages.

## Configure a Firewall for Terraria

Note

Terraria only uses IPv4 and does not use IPv6.

### Firewalld

Firewalld is the default iptables controller in CentOS 7+ and Fedora. See our guide on using firewalld (</docs/security/firewalls/introduction-to-firewalld-on-centos/>) for more information.

1. Enable and start firewalld:

sudo systemctl enable firewalld && sudo systemctl start firewalld

You should be using the public zone by default. Verify with:

sudo firewall-cmd --get-active-zones

2. Create a firewalld service file for Terraria:

/etc/firewalld/services/terraria.xml

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <service>
3   <short>Terraria</short>
4   <description>Open TCP port 7777 for incoming Terraria client connections.</description>
5   <port protocol="tcp" port="7777"/>
6 </service>
```

Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement (<https://www.linode.com/legal-privacy/>). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out". To exercise other rights you may have related to cookies, select "More Info" or see this "Do Not Sell My Personal Information" (<https://www.linode.com/legal-privacy/>) link.

```
sudo firewall-cmd --zone=public --permanent --add-service=terraria
sudo firewall-cmd --reload
sudo firewall-cmd --zone=public --permanent --list-services
```

Accept

Opt-Out

More Info

## UFW

UFW (Uncomplicated Firewall) (/docs/security/firewalls/configure-firewall-with-ufw/) is an iptables controller packaged with Ubuntu, but it's not installed in Debian by default.

1. If needed, install UFW:

```
sudo apt install ufw
```

2. Add SSH and a rule for Terraria. It's important you add rules before enabling UFW. If you don't, you'll terminate your SSH session and will need to access your Linode using Lish (/docs/platform/manager/using-the-linode-shell-lish/):

```
sudo ufw allow ssh
sudo ufw allow 7777/tcp
```

3. After your rules are added, enable UFW. Next, remove the Terraria rule for IPv6 since it's not needed:

```
sudo ufw enable
sudo ufw delete 4
```

Note

The second command in this step, `sudo ufw delete 4` references the fourth rule in your UFW ruleset. If you need to configure additional rules for different services, adjust this as necessary. You can see your UFW ruleset with `sudo ufw status` to make sure you're removing the correct rule.

## iptables

To manually configure iptables without using a controller, see our iptables guide (/docs/security/firewalls/control-network-traffic-with-iptables/) for a general ruleset.

1. You'll also want to add the rule below for Terraria:

```
sudo iptables -A INPUT -p tcp --dport 7777 -j ACCEPT
```

2. Verify with:

```
sudo iptables -vL
```

## Install and Configure Terraria

1. Change your working directory to `/opt` and download the Terraria tarball. You'll need to check Terraria's website ([http://terraria.gamepedia.com/Server#How\\_to\\_.28Linux.29](http://terraria.gamepedia.com/Server#How_to_.28Linux.29)) for the current release version. Right-click and copy the link to use with `curl` or `wget`. We'll use 1.3.4.4 as an example in this guide:

```
cd /opt && sudo curl -O http://terraria.org/server/terraria-server-1344.zip
```

Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement (<https://www.linode.com/legal-privacy/>). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out". To exercise other rights you may have related to cookies, select "More Info" or see this "Do Not Sell My Personal Information" (<https://www.linode.com/legal-dpr/>) link.

Note

Before you install Terraria, be sure the version you download is the same as the clients that will be connecting to it.

Accept

Opt-Out

More Info

## FREE CLOUD MIGRATIONS

For a limited time, Linode is offering free cloud migrations of business workloads.

```
sudo apt install unzip
```

### CentOS:

```
sudo yum install unzip
```

### 3. Extract the archive and set the necessary permissions:

```
sudo unzip terraria-server-1344.zip
sudo mv /opt/Dedicated\ Server/Linux /opt/terraria
sudo rm -rf Dedicated\ Server/
sudo chown -R root:root /opt/terraria
sudo chmod +x /opt/terraria/TerrariaServer.bin.x86_64
```

### 4. Running daemons under discrete users is a good practice. Create a `terraria` user from which to run the game server:

```
sudo useradd -r -m -d /srv/terraria terraria
```

### 5. Terraria has a server configuration file that you can edit with options such as automatic world creation, server passwords, difficulty, and other options (<http://terraria.gamepedia.com/Server#serverconfig>). Create a copy of the default file so you have something to revert back to if you run into problems:

```
sudo mv /opt/terraria/serverconfig.txt /opt/terraria/serverconfig.txt.bak
```

Create a new server configuration file for yourself. The options below will automatically create and serve `MyWorld` when the game server starts up. Note that you should change `MyWorld` to a world name of your choice.

#### `/opt/terraria/serverconfig.txt`

```
1 world=/srv/terraria/Worlds/MyWorld.wld
2 autocreate=1
3 worldname=MyWorld
4 worldpath=/srv/terraria/Worlds
```

## Managing the Terraria Service

### Screen

Terraria runs an interactive console as part of its server process. While useful, accessing this console can be challenging when operating game servers under service managers. The problem can be solved by running Terraria in a screen session (<https://www.gnu.org/software/screen/>) that will enable you to send arbitrary commands to the listening admin console within Screen.

Install Screen with the system's package manager:

### CentOS:

```
sudo yum install screen
```

### Debian/Ubuntu:

Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement

(<https://www.linode.com/legal-privacy/>). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out". To exercise other rights you may have related to cookies, select "More Info" or see this "Do Not Sell My Personal Information" (<https://www.linode.com/legal-dpr/>) link.

### systemd

Accept

Opt-Out

More Info

# FREE CLOUD MIGRATIONS

For a limited time, Linode is offering free cloud migrations of business workloads.

## /etc/systemd/system/terraria.service

```
1 [Unit]
2 Description=server daemon for terraria
3
4 [Service]
5 Type=forking
6 User=terraria
7 KillMode=none
8 ExecStart=/usr/bin/screen -dmS terraria /bin/bash -c "/opt/terraria/TerrariaServer.bin.x86_64 -config /opt/terraria/serverconfig.txt"
9 ExecStop=/usr/local/bin/terrariad exit
10
11 [Install]
12 WantedBy=multi-user.target
```

- **ExecStart** instructs systemd to spawn a screen session containing the 64-bit `TerrariaServer` binary, which starts the daemon. `KillMode=none` is used to ensure that systemd does not prematurely kill the server before it has had a chance to save and shut down gracefully.
- **ExecStop** calls a script to send the `exit` command to Terraria, which tell the server to ensure that the world is saved before shutting down. In the next section, we'll create a script which will send the necessary commands to the running Terraria server.

Caution

This script is intended to save your world in the event that you reboot the operating system within the Linode. It is **not** intended to save your progress if you reboot your Linode from the Linode Manager. If you must reboot your Linode, first stop the Terraria service using `sudo systemctl stop terraria`. This will save your world, and then you can reboot from the Linode Manager.

## Create a Script for Basic Terraria Administration

The Terraria administration script needs two primary functions:

- Attaching to the running screen session, which offers a helpful administration console.
- The ability to broadcast input into the screen session so the script can be run to save the world, exit the server, etc.

1. Create a `terrariad` file, enter the following script, then save and close:

## /usr/local/bin/terrariad

```
1 #!/usr/bin/env bash
2
3 send="`printf \"\${*\n}\"`"
4 attach='script /dev/null -qc "screen -r terraria"'
5 inject="screen -S terraria -X stuff $send"
6
7 if [ "$1" = "attach" ] ; then cmd="$attach" ; else cmd="$inject" ; fi
8
9 if [ "`stat -c '%u' /var/run/screen/S-terraria/" = "$UID" ]
10 then
11     $cmd
12 else
13     su - terraria -c "$cmd"
14 fi
```

2. Verify that you can execute the script:

Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement (<https://www.linode.com/legal-privacy/>). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out". To exercise other rights you may have related to cookies, select "More Info" or see this "Do Not Sell My Personal Information" (<https://www.linode.com/legal-dpr/>) link. This script permits you to both:

- Attach to the console for direct administration, and

Accept

Opt-Out

More Info

# Running Terraria

## Start and Enable the Terraria Server

Now that the game server is installed, the scripts are written, and the service is ready, the server can be started with a single command:

```
sudo systemctl start terraria
```

The first time you run the server, it will generate the world defined earlier. This will take a while, so give it time before trying to connect. To watch the world generation progress, use:

```
sudo terrariad attach
```

In addition to starting and stopping the `terraria` service, `systemd` can also use the service file created earlier to automatically start Terraria on boot.

To enable the service at startup:

```
sudo systemctl enable terraria
```

If the operating system is restarted for any reason, Terraria will launch itself on reboot.

## Server Status

To check if the server is running, use the command:

```
sudo systemctl status terraria
```

The output should be similar to:

```
• terraria.service
  Loaded: loaded (/etc/systemd/system/terraria.service; disabled)
  Active: active (running) since Tue 2017-03-07 17:37:03 UTC; 7s ago
  Process: 31143 ExecStart=/usr/bin/screen -dmS terraria /bin/bash -c /opt/terraria/TerrariaServer.bin.x86_64 -config /opt/terraria/serverconfi
  Main PID: 31144 (screen)
  CGroup: /system.slice/terraria.service
          └─31144 /usr/bin/SCREEN -dmS terraria /bin/bash -c /opt/terraria/TerrariaServer.bin.x86_64 -config /opt/terraria/serverconfig.txt
          └─31145 /opt/terraria/TerrariaServer.bin.x86_64 -config /opt/terraria/serverconfig.txt
```

## Stop the Server

If you ever need to shut down Terraria, use the following command to save the world and shut down the game server:  
Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement (https://www.linode.com/legal-privacy/). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out". To exercise other rights you may have related to cookies, select "More Info" or see this "Do Not Sell My Personal Information" (https://www.linode.com/legal-dpr/) link.

## Attach to the Console

Accept

Opt-Out

More Info

# FREE CLOUD MIGRATIONS

For a limited time, Linode is offering free cloud migrations of business workloads.

Type `help` to get a list of commands. Once you're done, use the keyboard shortcut **CTRL+A** then **D** to detach from the screen session and leave it running in the background. More keyboard shortcuts for Screen can be found in the Screen default key bindings documentation ([https://www.gnu.org/software/screen/manual/html\\_node/Default-Key-Bindings.html#Default-Key-Bindings](https://www.gnu.org/software/screen/manual/html_node/Default-Key-Bindings.html#Default-Key-Bindings)).

## More Information

You may wish to consult the following resources for additional information on this topic. While these are provided in the hope that they will be useful, please note that we cannot vouch for the accuracy or timeliness of externally hosted materials.

- Terraria Wiki ([http://terraria.gamepedia.com/Terraria\\_Wiki](http://terraria.gamepedia.com/Terraria_Wiki))
- Terraria Wiki: Server (<http://terraria.gamepedia.com/Server>)
- Terraria Wiki: Setting up a Terraria Server ([http://terraria.gamepedia.com/Guide:Setting\\_up\\_a\\_Terraria\\_server](http://terraria.gamepedia.com/Guide:Setting_up_a_Terraria_server))

## Join our Community

Find answers, ask questions, and help others. (<https://www.linode.com/community/questions/>)

### Linode Comment Policy

Comments must be respectful, constructive, and relevant to the topic of the guide. No external links or advertisements.



19 Comments

Linode

Disqus' Privacy Policy

Login

Recommend

Tweet

Share

Sort by Best

Join the discussion...

LOG IN WITH

OR SIGN UP WITH DISQUS

**Shane** • 6 days ago

When I run:  
systemctl status terraria  
I get the following error:  
Process: 27424 ExecStop=/usr/local/bin/terrariad exit (code=exited, status=1/FAILURE)

When I run:  
terrariad attach  
and try to launch the game, it says :  
Error on message Terraria.MessageBuffer

^ | v • Reply • Share ›

Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement (<https://www.linode.com/legal/privacy/>). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out" at <https://www.linode.com/legal/privacy/>. To exercise other rights you may have related to cookies, select "More" on the same page. On the Linode Community, you have a lot of other users who can answer and give advice regarding your specific use case. Please do not hesitate to log a ticket on <https://cloud.linode.com/support/> if you need further assistance.

Accept

Opt-Out

More Info

^ | v • Reply • Share ›



# FREE CLOUD MIGRATIONS


For a limited time, Linode is offering free cloud migrations of business workloads.

```
Loaded: loaded (/etc/systemd/system/terraria.service; enabled; vendor preset: enabled)
Active: failed (Result: exit-code) since Thu 2020-04-02 13:57:02 EDT; 3s ago
Process: 4231 ExecStop=/usr/local/bin/terrariad exit (code=exited, status=1/FAILURE)
Process: 4223 ExecStart=/usr/bin/screen -dmS terraria /bin/bash -c /opt/terraria/TerrariaServer.bin.x86_64 -config /opt/terraria/serverconfig.txt (code=exited, status=0/SUCCESS)
Main PID: 4224 (code=exited, status=0/SUCCESS)
```

```
Apr 02 13:57:00 someonePlexServer systemd[1]: Starting server daemon for terraria...
Apr 02 13:57:00 someonePlexServer systemd[1]: Started server daemon for terraria.
Apr 02 13:57:02 someonePlexServer terrariad[4231]: No screen session found.
Apr 02 13:57:02 someonePlexServer systemd[1]: terraria.service: Control process exited, code=exited status=1
Apr 02 13:57:02 someonePlexServer systemd[1]: terraria.service: Failed with result 'exit-code'.
```

and nothing more in journalctl. It was working fine before and I didn't touch the .service file. I got the same thing Yesterday when I tried replicating this setup for a minecraft server. I can't figure out why "No screen session found"

^ | ⌵ • Reply • Share ›




Linode Docs

Mod ➔ luxor37 • 2 months ago

You may want to post the question on : <https://www.linode.com/comm...> On the Linode community, you have access to a much larger audience who can answer and give advice regarding your specific use case. Please do not hesitate to log a ticket on <https://cloud.linode.com/su...> if you need further assistance.

^ | ⌵ • Reply • Share ›



Vadim • 2 months ago


CentOS 7, Terraria 1.3.5.3

I've tried to import my world from Windows machine to a VPS with CentOS 7 on it. I run

```
chown terraria:terraria /srv/terraria/Worlds/world.wld
chmod 777 /srv/terraria/Worlds/world.wld
```

but after I start server, my world is not on the list. I tried to generate a new world on server, but it suddenly terminates the process during world generation (size and difficulty doesn't matter). Can you help me, please

^ | ⌵ • Reply • Share ›




Linode Docs

Mod ➔ Vadim • 2 months ago

You may want to post the question on : <https://www.linode.com/comm...> On the Linode community, you have access to a much larger audience who can answer and give advice regarding your specific use case. Please do not hesitate to log a ticket on <https://cloud.linode.com/su...> if you need further assistance.

^ | ⌵ • Reply • Share ›



Ed Wilson • 7 months ago

Nice guide. Thanks! One of the better ones I've seen. Didn't realize that you could set up a game server on Linode. Btw to other readers, Linode is very legit. I've used them to host several websites. On Terraria, it's a great game. If you're new to it, remember that when you are done with the game there are a ton of mods that you can install. Calamity (<https://calamitymod.gameped...> and Thorium (<https://forums.terraria.org...> are excellent. If you get stuck with figuring out which weapon/armor/wing to get, Terraria Wiki (<https://terrariawiki.org>) is very helpful.

^ | ⌵ • Reply • Share ›




Linode Docs

Mod ➔ Ed Wilson • 7 months ago

Thanks for your suggestions!!!! I am sure that the additional information that you provided will be useful to the readers.

Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement (<https://www.linode.com/legal-privacy/>). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out". To exercise other rights you may have related to cookies, select "More Info" or see this "Do Not Sell My Personal Information" (<https://www.linode.com/legal-dpr/>) link.



rogerupack

7 months ago

I do not think type=torking is quite right here...it may work but...

^ | ⌵ • Reply • Share ›

Accept

Opt-Out

More Info



Crazy Coco • a year ago



# FREE CLOUD MIGRATIONS

For a limited time, Linode is offering free cloud migrations of business workloads.



**Crazy Coco** • a year ago  
got a problem, and since I'm very new to Linux i need help  
<https://pastebin.com/QVk5SJMY>  
^ | ▾ • Reply • Share ›



**Linode Docs** Mod ➔ Crazy Coco • a year ago  
Hi Coco -  
  
I'm sorry that you've run into this problem! A great place to ask for troubleshooting help is on the Linode Community Questions site:  
<https://www.linode.com/comm...>  
We recommend creating a new post there with your question so that other Linode users can offer their advice. I can't tell what the issue is from the status message in your output, so I would also recommend running another troubleshooting command to gather more log information:  
`journalctl -u terraria --no-pager | tail -20`  
If you run this command, make sure to include the output from it in your Linode Community post  
^ | ▾ • Reply • Share ›



**Robert** • a year ago  
What platform this dedicated server supports?  
My son plays on ps4, will this dedicated server be available to him to play on?  
^ | ▾ • Reply • Share ›



**Linode Docs** Mod ➔ Robert • a year ago  
Terraria is not a cross-platform game, so the dedicated server would only be playable on PC.  
^ | ▾ • Reply • Share ›



**i genuinely like nickelback** • 2 years ago  
Using this method, how would one import an existing world? When i put the world file in the Worlds directory and I change world in the server config it breaks the server.  
^ | ▾ • Reply • Share ›



**ced64k** ➔ i genuinely like nickelback • a year ago  
Check the permission on your existing world (.wld) file. The owner and group should be terraria and not root.  
^ | ▾ • Reply • Share ›



**i genuinely like nickelback** ➔ ced64k • a year ago  
Thanks! I figured it out the next day, forgot about this thread to be honest.  
^ | ▾ • Reply • Share ›



**Linode Docs** Mod ➔ ced64k • a year ago  
Hi ced64k -  
  
Thanks for the heads-up! We'll add updating this part of the guide to our work queue.  
^ | ▾ • Reply • Share ›



**Arbel Israeli** • 2 years ago  
Awesome! I used this tutorial twice.  
Once for a terraria server and once for a minecraft server.

Linux is such a greate system, thank you for the tutorial!  
Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement (<https://www.linode.com/legal-privacy/>). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out". To exercise other rights you may have related to cookies, select "More Info" or see this "Do Not Sell My Personal Information" (<https://www.linode.com/legal-dpr/>) link.  
☒ Subscribe ☒ Do Not Sell My Data

Accept

Opt-Out

More Info

[Get Yours Today](#)

✕

## FREE CLOUD MIGRATIONS

For a limited time, Linode is offering free cloud migrations of business workloads.

## Write For Linode





We're always expanding our docs. If you like to help people, can write, and have expertise in a Linux or cloud infrastructure topic, learn how you can contribute (<https://www.linode.com/lp/write-for-linode>) to our library.

Get started in the Linode Cloud today.

(<https://login.linode.com/signup>)



© 2020 All rights reserved.

[r.com/linode/](https://www.linode.com/))  (<https://www.instagram.com/linode/>)  (<https://www.youtube.com/linode/>)  (<https://www.linkedin.com/company/linode/>)  (<https://github.com/linode/>)

Some U.S. state privacy laws offer their residents specific consumer privacy rights, which we respect as described in our privacy statement (<https://www.linode.com/legal-privacy/>). To opt-out of our making available to third parties information relating to cookies and similar technologies for advertising purposes, select "Opt-Out". To exercise other rights you may have related to cookies, select "More Info" or see this "Do Not Sell My Personal Information" (<https://www.linode.com/legal-dpr/>) link.

[Accept](#)[Opt-Out](#)[More Info](#)