



TrueNAS Mini R 2U Enterprise Grade Storage Array User Guide

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TrueNAS Mini R 2U Enterprise Grade Storage Array



Introduction

The TrueNAS Mini R is a 2U Storage Array that has twelve (12) hot-swappable 3.5" drive bays and the option to choose between rack or desktop mounting.

Your system comes with the TrueNAS operating system preloaded.

Review the safety considerations and requirements before handling the Mini R or installing it into a rack.

Safety

Static Discharge

Static electricity can build up in your body and discharge when touching conductive materials. Electrostatic Discharge (ESD) is harmful to sensitive electronic devices and components. Keep these safety recommendations in mind before opening the system case or handling non-hot-swappable system components:

- Turn off the system and remove power cables before opening the case or touching internal components.
- Place the system on a clean, hard work surface like a wooden tabletop. Using an ESD dissipative mat can also help protect the internal components.
- Touch the metal chassis with your bare hand to dissipate static electricity in your body before touching any internal components, including components not yet installed in the system. Using an anti-static wristband and grounding cable is another option.
- Store all system components in anti-static bags.

You can find more preventative tips and details about ESD at <https://www.wikihow.com/Ground-Yourself-to-Avoid-Destroying-a-Computer-with-Electrostatic-Discharge>.

Handling the System

We recommend at least two people lift a TrueNAS system.

Never attempt to lift a TrueNAS system loaded with drives! Install the system in a rack before adding drives.

Remove drives before de-racking the system.

Hold the system from the sides or bottom whenever possible. Always be mindful of loose cabling or connectors and avoid pinching or bumping these elements whenever possible.

This document uses "left" and "right" according to your perspective when facing the front of a system or rack.

Requirements

We recommend these tools when installing a TrueNAS Mini R in a rack:

- #2 Phillips head screw driver
- Flat head screw driver
- Tape measure
- Level

Mini R Components

TrueNAS units are carefully packed and shipped with trusted carriers to arrive in perfect condition.

If there is any shipping damage or missing parts, please take photos and contact iXsystems support immediately at support@ixsystems.com, 1-855-GREP4-iX (1-855-473-7449), or 1-408-943-4100.

Please locate and record the hardware serial numbers on the back of each chassis for quick reference.

Carefully unpack the shipping boxes and locate these components:



- Mini R Storage Array
- Mini R Bezel
- Set of standard rackmount rails with hardware.
- Twelve (12) 3.5" trays with up to twelve (12) drives, depending on how many you purchased.







Accessory kit



- One (1) C13 to 5-15P power cord
- Two (2) ethernet cables
- One (1) bag of HDD screws
- Two (2) bezel keys
- Four (4) rubber feet.
- One (1) bag of rail kit screws

Front Indicators

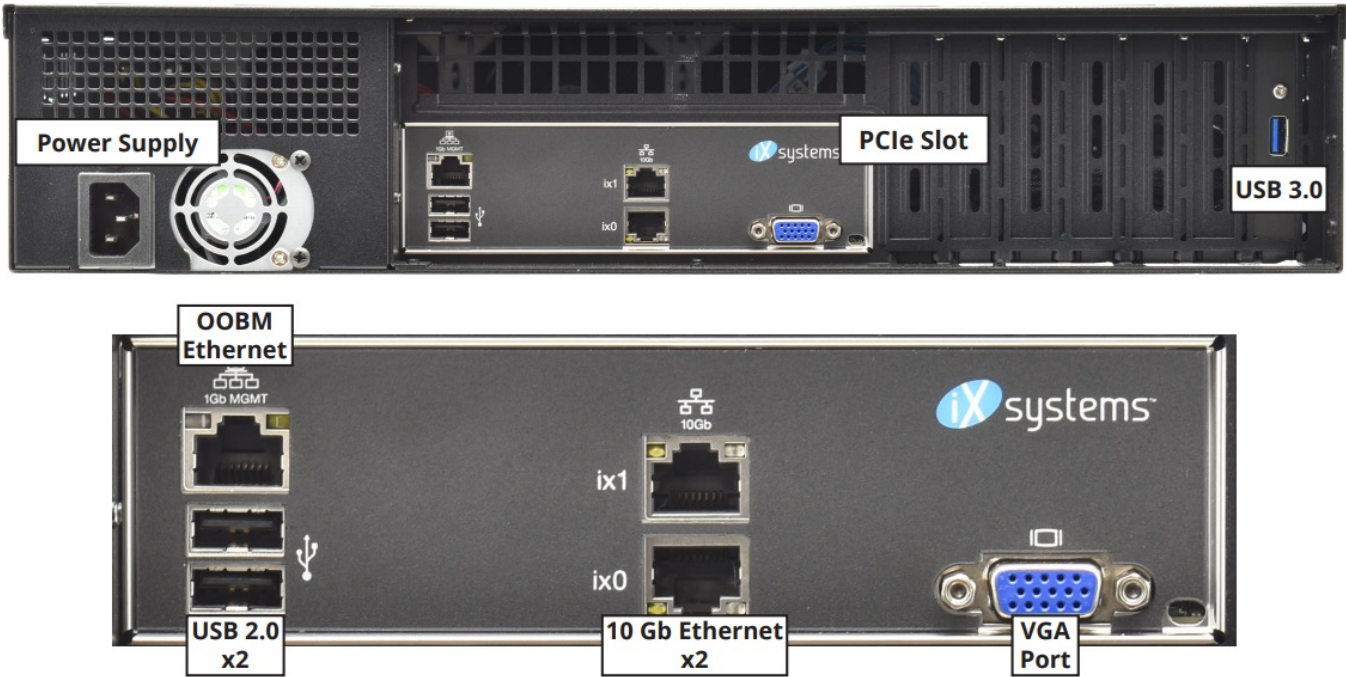
The Mini R has front panel buttons for power and system reset. It also has indicator lights for power, boot media activity, network interface activity, and system information.

Light	Color and Indication
	Green (Solid): System ready
	Green (Flashing): Boot media working
	Green (Flashing): Link active
	Green (Flashing): Link active
	N/A
	Red (Solid): Overheat Red (Flashing): Fan issue



Rear Components and Ports

The Mini R has a single power supply, one PCIe slot, and various networking and connection ports.



If you are mounting the Mini R on a desktop instead of in a rack, skip to “4 Install Rubber Feet” on page 6

Rack the Mini R

- The Mini R requires an EIA-310 compliant rack. The front and rear vertical rack posts must be 19 1⁄8” – 36 7⁄8 ” 16 apart.
- The Mini R comes with a standard rail kit and an optional extended rail kit, depending on your purchase.
- The standard rail kit supports racks 19 1⁄8” – 26.6” deep. The extended rail kit supports racks 9 1626 / ” – 36 7⁄8 ”16 deep.

Attach the Chassis Rails

- You must remove the chassis rail from the rack rail before mounting it on the system. Slide the chassis rail out until the metal catch stops it. Push the catch-release and slide the chassis rail out of the rack rail until it is free.



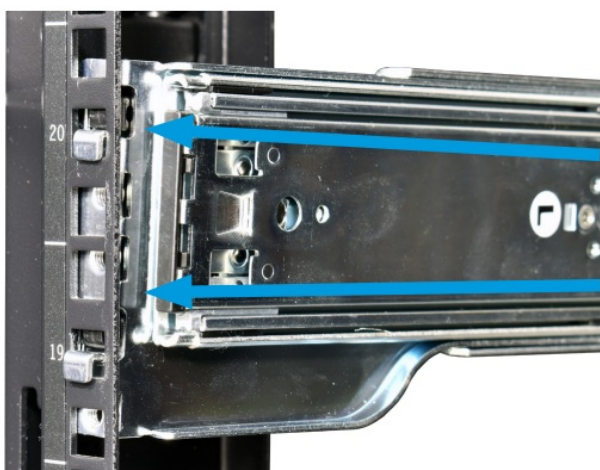
Align the chassis rail on the side of the system designated by the stickers and ensure they are right-side-up. Place the rail slots over the chassis tabs, then slide the rail toward the front of the system until it clicks into place. Secure the rail to the system using one of the low profile #6 rail screws. Repeat this process for the other rail.



Install the Rack Rails

Align a rack rail with the yellow sticker toward the front of the rack. The flat side must face outside the rack, and the empty inner rail must face inside the rack. Place the front tabs and black retaining buttons just above the center holes of each U you are mounting the rail in. Push the tabs into them until the black buttons fully depress, then slide the tabs down. Place two M5 machine screws with flush washers in the top and bottom threaded holes.

With the front of the rail installed, extend the back of the rack rail towards the equivalent attach points on the rear rack post. Make sure the rail remains level from front to back. Follow this process to install the other rack rail.



Install the Mini R in the Rack

Team-lift the system and align the chassis rails with the rack rails. Slide the ends of the chassis rails into the rack rails and push the Mini R forward until the safety catches lock. Press the catch releases down and keep sliding the system forward until it is flush with the front of the rack.

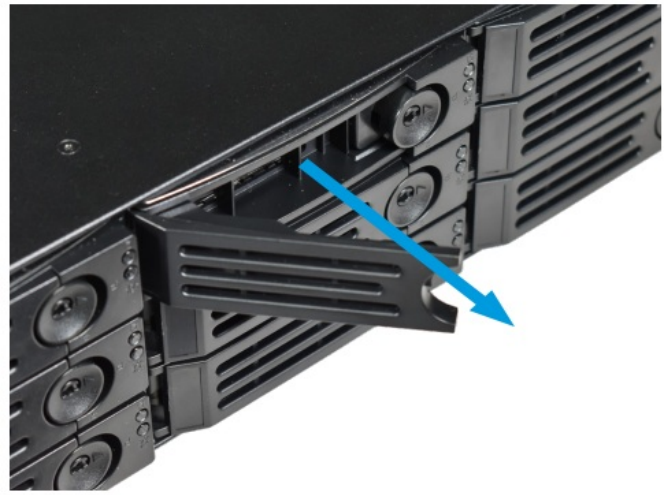


M5 Screw

Insert a long M5 screw through the holes on each ear to secure the Mini R to the rack.

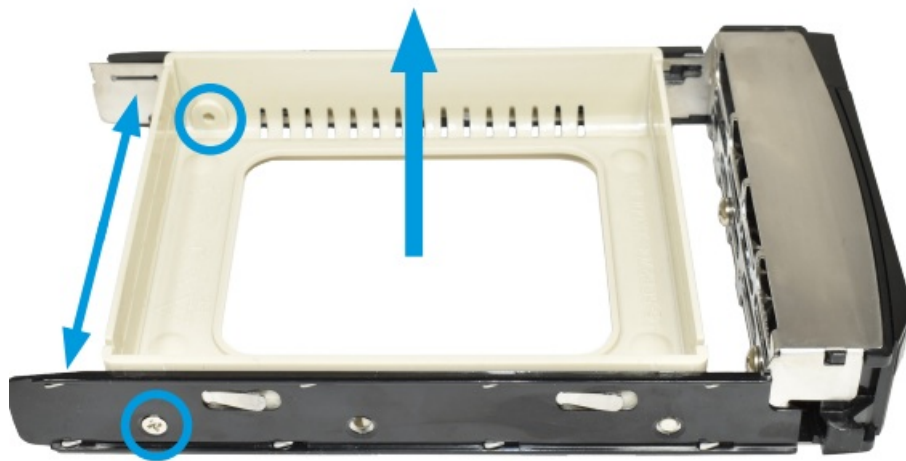
Install Rubber Feet

- The Mini R comes with 1¼" adhesive rubber feet for mounting the system on a desktop instead of in a rack.
- The diagram below shows the optimal foot placement on the bottom of the Mini R.



Removing Drive Fillers

Remove the two rear screws holding the filler. Gently spread both sides of the tray away from the filler until the pins release, then remove the filler.



Place Drives in Trays

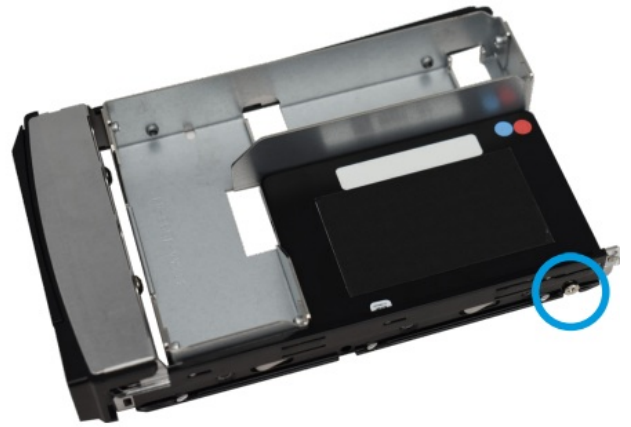
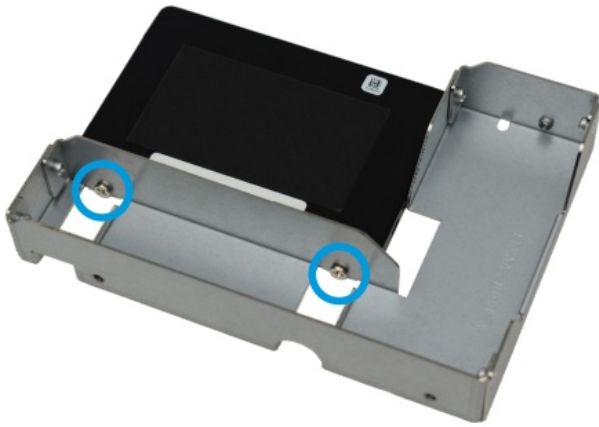
Place the hard drive in the tray and secure it with four screws.



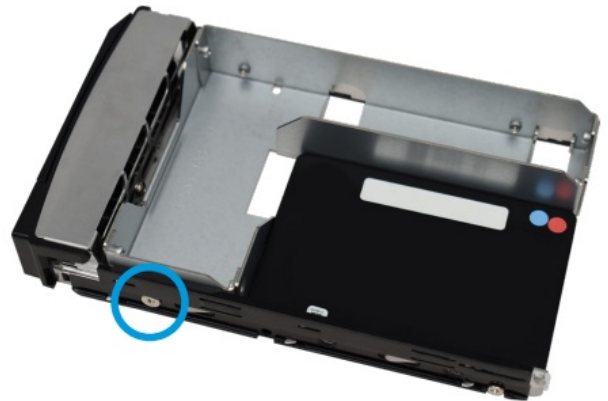
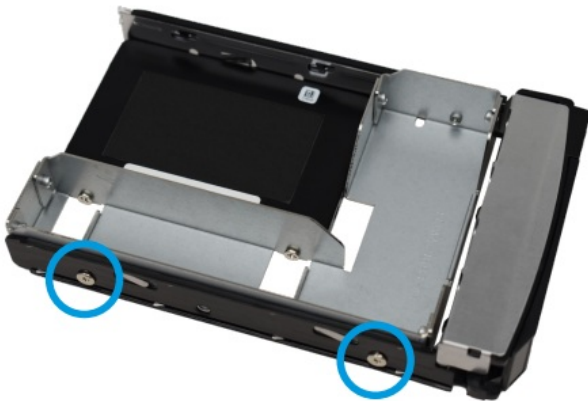
3.5" to 2.5" SSD Adapters

Users can convert Mini R 3.5" HDD trays into 2.5" SSD trays with adapters.

Attach an SSD to the adapter using two of the SSD screws that came with the adapter. Ensure the SSD connector faces outside the adapter. Place the adapter in a drive tray and use the last SSD screw to secure the SSD to the tray.



Use three HDD screws to attach the adapter and SSD to the drive tray. To install the tray into the system, follow the instructions in “5.5 Installing Drive Trays” on page 9. Ensure you attached the SSD to the adapter with the connector facing toward the system.



Installing Drive Trays

Gently insert a tray into a drive bay until it stops. Close the locking arm until it locks. Repeat for all hard drives, then load trays with fillers into the remaining empty bays.



For extra security, you can lock the drive tray into the system. The tray button is unlocked when the inner slot is horizontal and locked when the slot is vertical. To lock a tray, insert a flat-head screwdriver into the center button slot and gently turn it ninety degrees clockwise until the slot is vertical.

Attach the Bezel (Optional)

Slide the left side of the bezel into the attachment points on the left ear, then push the right side of the bezel into the right ear latch until it locks.

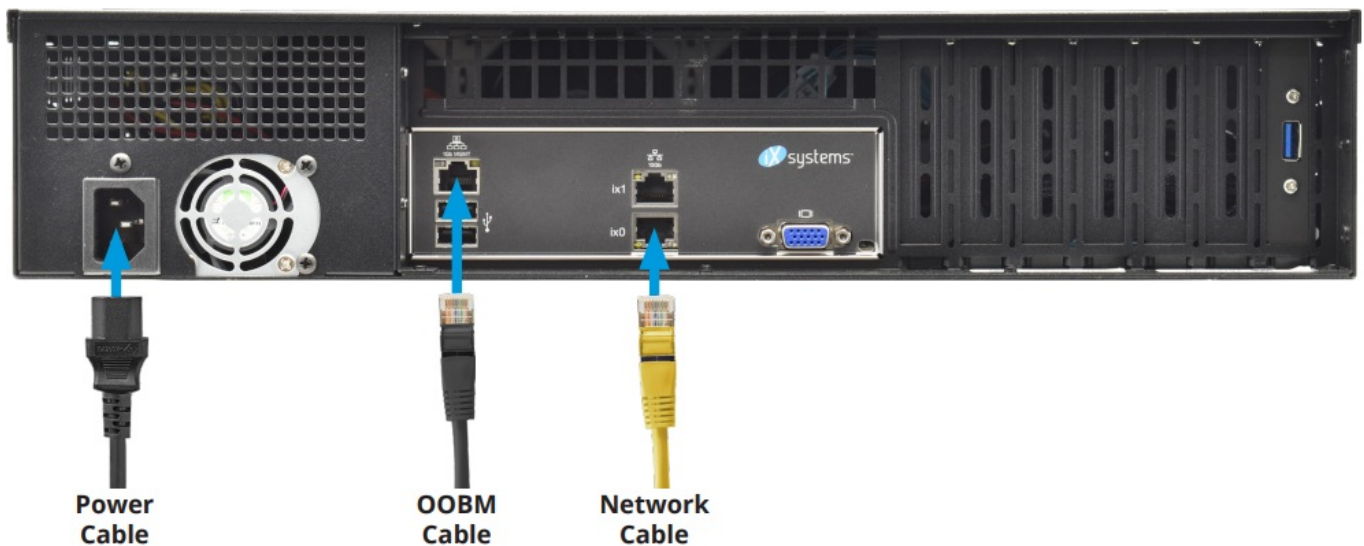


You can lock the bezel for added security. To do so, insert a key in the lock and turn it ninety degrees clockwise.



Connect Network and Power Cables

Connect network cables from the router or switch to the gigabit networking port and the OOBM ethernet port. Plug the power cable into the Mini R, then a power outlet.



Powering on the TrueNAS Mini

The Power and Reset buttons control the power state of the TrueNAS Mini. These buttons behave in the same manner as standard PC power and reset buttons. When the system is off, pressing the power button turns the system on. Pressing and holding the power button while the system is running performs a hard power off. The reset button reboots the system.

By default, the Mini powers on as soon as you plug the cable into a live power source. In the event of power loss, the Mini R also powers on as soon as power restores.

Notice: High Draw USB Devices

The current draw on the Mini power supply +5Vsb line can exceed specifications if you leave high-draw USB devices attached to the rear USB ports when the Mini R is powered off. Unplug high-draw devices (such as bus-powered USB hard drives) before powering off your Mini R.

Console Setup

You can connect a VGA monitor and USB keyboard for console access, but they are not required. If a monitor and keyboard are attached, you can see the Console Setup Menu. For more details about the Console options, see <https://www.truenas.com/docs/core/gettingstarted/consolesetupmenu/>.

If you want remote out-of-band management (OOBM) via IPMI, connect a network cable to the IPMI port. See section “2.2 Rear Components and Ports” on page 3 to find your Mini IPMI port.

Your system is equipped with the optimal BIOS and IPMI firmware out of the box.

DO NOT UPGRADE: your system’s BIOS and IPMI firmware.

We recommend that IPMI be on a separate and secure network without Internet access. Please contact support if you need to upgrade your system’s BIOS or IPMI firmware.

```
Console setup
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1) Configure Network Interfaces
2) Configure Link Aggregation
3) Configure VLAN Interface
4) Configure Default Route
5) Configure Static Routes
6) Configure DNS
7) Reset Root Password
8) Reset Configuration to Defaults
9) Shell
10) Reboot
11) Shut Down

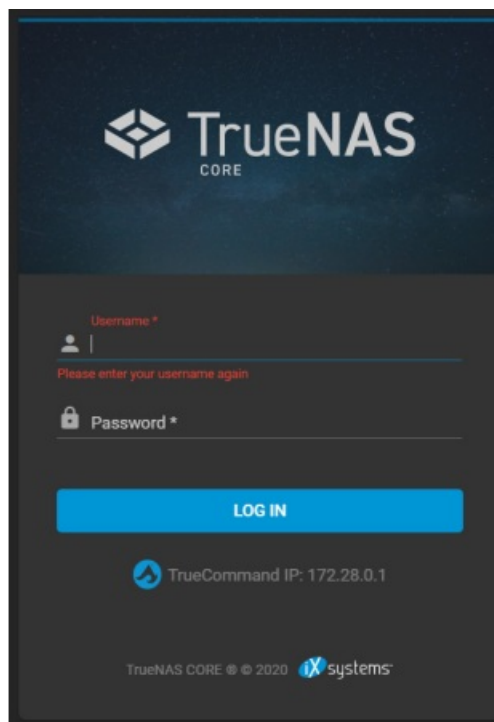
The web user interface is at:

http://10.0.0.102

Enter an option from 1-11: █
```

TrueNAS Web Interface

- TrueNAS uses the Multicast DNS service, also known as Bonjour or mDNS, to make the system accessible on most networks without additional setup.
- Open a web browser on another computer on the same network. Open the TrueNAS web interface by navigating to truenas.local (or your Mini R IP address).



The TrueNAS web interface uses default credentials for first-time logins:

Username: root

Password: abcd1234

After logging in, you can change the root account password in Accounts > Users to increase system security. When more than one TrueNAS device is connected to the network, mDNS can experience name conflicts. Give each TrueNAS device a unique hostname like truenas1.local and truenas2.local to avoid the problem. You can

change hostnames in Network > Global Configuration > Hostname in the TrueNAS web interface.

Out-of-band logins have separate credentials from the TrueNAS web interface. The credentials are randomized and attached to the back of the TrueNAS Mini R chassis. For more details, see <https://www.truenas.com/docs/sb-327>.

For more on Mini R Out-of-band Management. see:
<https://www.truenas.com/docs/hardware/mini/minieroobm/>

Change TrueNAS Versions

If you want to run a different version of TrueNAS, you can find new and legacy versions at truenas.com/download. After downloading your desired version, you must use image utility like belenaEtcher or rufus to flash the ISO file to a USB drive. Plug the flashed USB drive into a USB port on your Mini R and select it from the boot menu during system startup.

Follow the install instructions for CORE or SCALE on our Documentation Hub.

Additional Resources

The TrueNAS Documentation Hub has complete software configuration and usage instructions. Click Guide in the TrueNAS web interface or go directly to:
<https://www.truenas.com/docs/>

Additional hardware guides and articles are in the Documentation Hub's Hardware section:
<https://www.truenas.com/docs/hardware/>

The TrueNAS Community forums provide opportunities to interact with other TrueNAS users and discuss their configurations:
<https://www.truenas.com/community/>



Contacting iXsystems

For assistance, please contact iX Support:

Contact Method	Contact Options
Web	https://supportixsystems.com
Email	support@ixsystems.com
Telephone	Monday-Friday, 6:00AM to 6:00PM Pacific Standard Time: <ul style="list-style-type: none">• US-only toll-free: 1-855-473-7449 option 2• Local and international: 1-408-943-4100 option 2

Support: 855-473-7449 or 1-408-943-4100
Email: support@ixsystems.com

Documents / Resources

<div data-bbox="127 107 272 302"><div data-bbox="127 107 272 129">TrueNAS® Mini R Basic Setup Guide</div><div data-bbox="127 174 272 212"></div><div data-bbox="127 257 272 302"></div></div>	<div data-bbox="304 129 1485 241"><div data-bbox="304 129 1485 168">TrueNAS Mini R 2U Enterprise Grade Storage Array [pdf] User Guide</div><div data-bbox="304 168 1485 241">Mini R, 2U Enterprise Grade Storage Array, Mini R 2U Enterprise Grade Storage Array, Enterpr ise Grade Storage Array, Storage Array, Array</div></div>
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