TrueNAS Mini Compact ZFS Storage Server

TrueNAS Mini Compact ZFS Storage Server User Guide

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Specifications:

- Brand: TrueNAS
- Model: Mini
- Manufacturer: iXsystems, Inc.
- Year: 2024

Product Information:

The TrueNAS Mini is a compact and efficient storage solution that provides users with True Data Freedom. It comes equipped with hard drives, drive trays, ethernet cables, power cord, and keys for secure access.

Product Usage Instructions

Initial Setup:

1. Open the TrueNAS Mini box and remove all contents.
2. Identify hard drives, drive trays, ethernet cables, screws, power cord, and keys.
3. Lock drive trays if needed using a flat-head screwdriver in the center slot of the button.

Connecting Power and Network Cables:

The TrueNAS Mini should power up automatically after unboxing. Connect the power cord and ethernet cables. Optionally, connect a VGA monitor to observe the boot process.

Accessing the Web Interface:

To access the web interface, visit the provided URL or IP address in a web browser after the initial boot process is complete.

Initial Pool Configuration:

TrueNAS CORE:

1. Navigate to Storage > Pools and click ADD.
2. Select Create New Pool and provide a name for the pool.
3. Add two identical disks to the Data Vdev area.
4. Click CREATE POOL to create your pool.

TrueNAS SCALE:

1. Navigate to Storage and click Create Pool.
2. Provide a name for the pool and select the desired layout.
3. Select disks for mirroring and adjust settings accordingly.
4. Create the pool and review the configuration before finalizing.

FAQ

How can I back up my TrueNAS system?

To back up your TrueNAS system, you can utilize cloud-based backup services like iX-Storj. Refer to our TrueNAS Documentation for detailed instructions at: **TrueNAS Documentation**.

Thank you for purchasing a TrueNAS Mini and welcome to True Data Freedom! This simplified quick setup guide is recommended for users who are less technical and want to get up and running quickly.

Initial Setup

Open the TrueNAS Mini box and take everything out. You should see hard drives (if a preconfigured unit was selected), drive trays, two ethernet cables, bags of screws for the hard drive trays (if your unit has both 3.5” and 2.5” drive bays, there will be a bag for each tray size) one power cord and one set of keys for the unit.

- To install hard drives, place the drive carefully into the hard drive tray and mount the drive using four screws. There should be places for two screws on each side.

- Starting with the top drive bay, insert the hard drive until it stops. Then, gently swing the latch closed until it clicks. Repeat for all drives that need to be installed in your TrueNAS Mini.

NOTE: Drive bays can be locked to prevent tray removal. You can lock the tray with a flat-head screwdriver into the center slot of the button.

Connecting Power and Network Cables:

Your TrueNAS Mini should power up by itself after a short delay. It may take up to 10 minutes to complete the initial boot process. If desired, you may connect a VGA monitor to observe the boot process.

Accessing the Web Interface:

- An IP address is a unique address assigned to every device that is on a network. It's a series of numbers that helps information find its way to the correct destination.
- Open your web browser and go to "TrueNAS.local" or try to enter the TrueNAS Mini's IP address in the web browser's search bar.
- If an IP address is needed, connect a monitor to the TrueNAS Mini and view the console setup menu that displays at the end of the boot process.
- By default, the administrative account username is root (on TrueNAS CORE) or admin (on TrueNAS SCALE) and the password is abcd1234

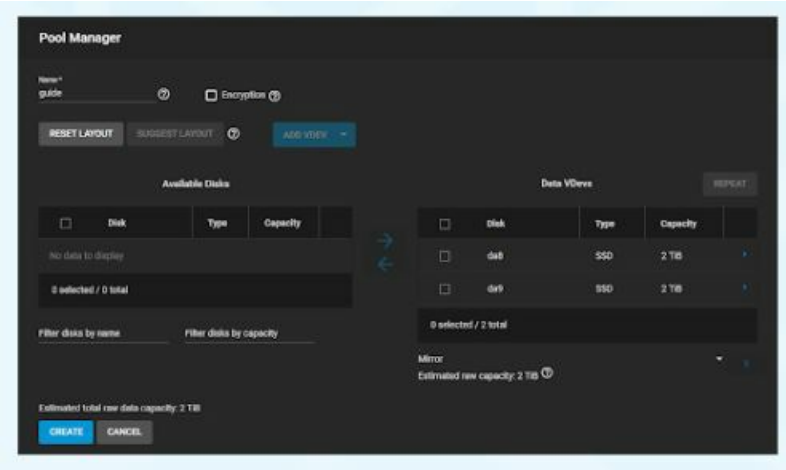
Initial Pool Configuration

- Creating a Storage Pool In the world of data storage, a storage pool is like your pantry. It's a space where you

can organize and store different types of digital data, such as photos, or videos. Each shelf and container in your pantry represents a specific storage disk or drive in the storage pool.

TrueNAS CORE

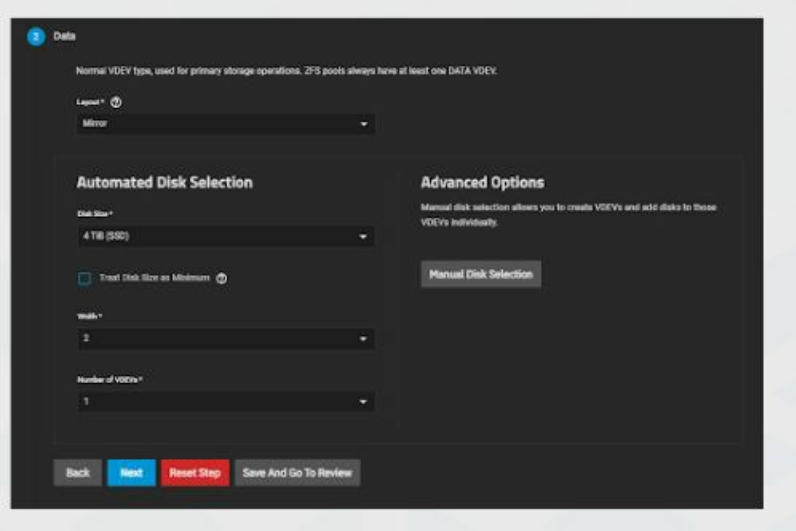
To create a new pool, navigate to Storage > Pools and click ADD. Select Create New Pool and click CREATE POOL to open the Pool Manager. Provide a name for your pool. This doesn't have to match the system name or intended shared folder name – use whatever you'd like. From here, you can either use the Automated Disk Selection or Manual Disk Selection fields to add two disks of equal size. In the Available Disks section, select two identical disks and click the arrow to move them to the Data Vdev area.



Review the estimated total data capacity and click CREATE to create your pool. Note that any existing data on your disks will be erased

TrueNAS SCALE

- To create a new pool, navigate to Storage and click Create Pool.
- Provide a name for your pool and click the Next button.
- For the Layout, select Mirror from the dropdown menu. Your disk(s) should be shown in the
- Disk Size menu. Select a Width of 2 for 2-way mirroring, and adjust the Number of VDEVs until you have allocated all available disks



- Click Save And Go To Review. From this section, you can click the Inspect VDEVs button to check that you have the expected number of disks.
- Click Create Pool when you are ready. Note that any existing data on your disks will be erased.

TrueNAS will automatically suggest a Mirror as the ideal layout for protection of your data. With this configuration, if one drive is damaged, your data will remain intact and accessible from the other drive, similar to having two SD cards to write to in a DSLR. More than one mirror can be added to the same pool. If you have four drives, you can create two mirrors of two disks each, and benefit from additional capacity and performance For additional safety, you can back up your TrueNAS system to a cloud-based backup service, such as iX-Storj. Further information on this process can be found in our TrueNAS Documentation at

- **https://www.truenas.com/docs/core/13.0/gettingstarted/databackups/**

Create a Dataset

User Accounts

It's good practice to create a dataset rather than store files in the root of your pool. This allows you to make adjustments to the datasets independently, rather than needing to take a "one size fits all" approach.

- Navigate to Storage > Pools (CORE) or Datasets (SCALE)
- (CORE) Click the vertical 3-dot menu and choose Add Dataset or (SCALE) click the Add Dataset button
- Provide a name for your first dataset. The default dataset values for compression are optimized for most use cases – TrueNAS can identify incompressible data and will not attempt to compress it further.
- Click Submit (CORE) or Save (SCALE)

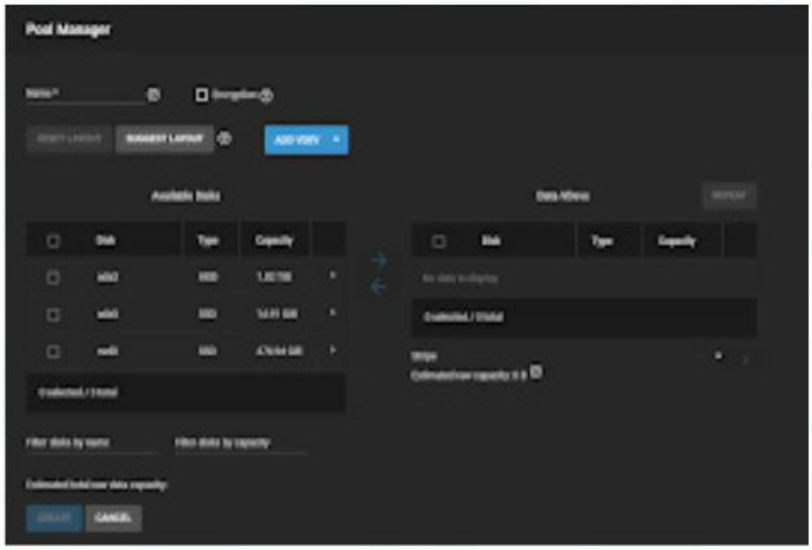
Create User Accounts:

- Navigate to Accounts > Users (CORE) or Credentials > Local Users (SCALE)
- Click ADD and create a user account for yourself and each person you intend to access the files shared on your TrueNAS Mini.
- Each user should choose a secure, memorable password that is hard to guess

Assigning Permissions:

Permissions allow certain users to access certain data. For example, giving an editor at work permission to only access photos from a recent photoshoot rather than every photo on your TrueNAS Mini.

- Go to Storage > Pools (CORE) or Datasets (SCALE) and edit your storage pool
- Under Permissions, click Edit Permissions.
- Add ACL items for users with basic read and write permissions.



Data Sharing (SMB)

SMB stands for Server Message Block, a protocol that allows computers to share files and communicate with each other on a network. SMB is a “common language” that can be spoken by Windows, MacOS, and Linux operating systems, and is recommended for ease of access among different types of computers.

Create an SMB Share:

- Visit Sharing > Windows (SMB). For this guide, we will ignore AFP as Apple devices now support SMB sharing.
- Click ADD to create a new share.
- Choose your dataset (folder) and set a clear Share Name (e.g., “Photography”).

Configure SMB Service:

If you weren’t prompted to automatically enable the SMB service after creating your share above (or you accidentally clicked away from it) don’t worry – you can enable it manually.

- Head to Services > SMB/CIFS.
- Toggle the service switch to enable SMB.

vdevs (Virtual Devices)

Understanding vdevs:

- Think of vdevs like drawers in your storage cabinet.
- Each drawer (vdev) can contain hard drives, and the more drawers, the more space

Simple vdev Recommendations:

- For basic setups, choose a Mirror vdev.
- For workloads with few users and very large files (eg: videos) consider RAIDZ2

Connecting vdevs:

- In Storage > Pools, create a new pool.
- Choose the recommended vdev and add your hard drives.

Accessing from Other Devices:

- Open your computer's file explorer and enter your TrueNAS Mini's IP address in the search bar to access shared files.
- Your TrueNAS Minis IP can be found from within the WebUI in the network interfaces section.
- You may be prompted to enter the user credentials that you configured in the TrueNAS UI for the user. Click here for instructions on mounting the share using other operating systems.

Upload and Access

Upload Your Files:

- Use your computer to copy your photography files to the SMB share you created.

Access Files from Any computer on your network:

- Open File Explorer or Finder (Apple devices) on your computer.
- Enter the hostname (truenas.local) or IP address to access your shared files.

Installing Applications (TrueNAS SCALE)

- The first time you open the Applications screen, it displays an Apps Service Not Configured status on the screen header.
- Click Settings > Choose Pool to choose the newly created apps storage pool. Use Discover Apps to open the Discover Applications screen.
- Browse the widgets or use the search field to find available applications. Click an application widget to go to the application information screen.
- Click Install to open the installation wizard for the application. After installing an application, the Installed Applications screen shows the application in the Deploying state. It changes to Running when the application is ready to use.

Backing Up TrueNAS Storage Data

You can configure TrueNAS to send, receive, or synchronize data with a cloud storage provider. The simplest way to set up a cloud sync task is using a free iX Storj account.

To create and link to an iX Storj account:

1. From the TrueNAS Dashboard, find the Backup Tasks widget and click Cloud Sync to Storj or similar provider to open the Cloudsync Task Wizard.
2. Open the Credentials dropdown and select Add New.
3. The Storj iX provider is preselected. Click Signup for account to open a browser tab then register and activate a

free iX-Storj Account.

4. After the iX-Storj account is created, log in to the Storj portal, create a new bucket, and create new S3 access credentials (click here for more information).
5. When the new S3 Credentials are created, download the Access Key and Secret Key and paste each string into the TrueNAS Access Key ID and Secret Access Key fields, respectively. Click Save.
6. In the TrueNAS Cloud sync task wizard, review the fields in the What and When section (details). Select the created Storj Bucket before attempting to choose a Folder.
7. There are several predefined Schedules to choose from, or select Custom to define your own.
8. Click Save.

Enjoy True Data Freedom

Congratulations! You've successfully set up your TrueNAS Mini. This basic guide ensures a smooth experience for photographers, allowing easy sharing and access to your valuable files. Feel free to explore advanced features as needed.

Other Resources

- TrueNAS SCALE Official Documentation: **https://www.truenas.com/docs/scale/**
- Networking Recommendations: **https://www.truenas.com/docs/solutions/optimizations/networking/**
- Security Recommendations: **https://www.truenas.com/docs/solutions/optimizations/security/**
- TrueNAS Reference Articles: **https://www.truenas.com/docs/references/**
- ZFS Primer: **https://www.truenas.com/docs/references/zfsprimer/**
- ACL Primer: **https://www.truenas.com/docs/references/aclprimer/**

Documents / Resources

	**TrueNAS Mini Compact ZFS Storage Server** [pdf] User Guide Mini Compact ZFS Storage Server, Mini, Compact ZFS Storage Server, ZFS Storage Server, Storage Server, Server

References

- **Data Backups | TrueNAS Documentation Hub**
- **References | TrueNAS Documentation Hub**
- **ACL Primer | TrueNAS Documentation Hub**
- **TrueNAS SCALE | TrueNAS Documentation Hub**
- **Security Recommendations | TrueNAS Documentation Hub**
- **User Manual**