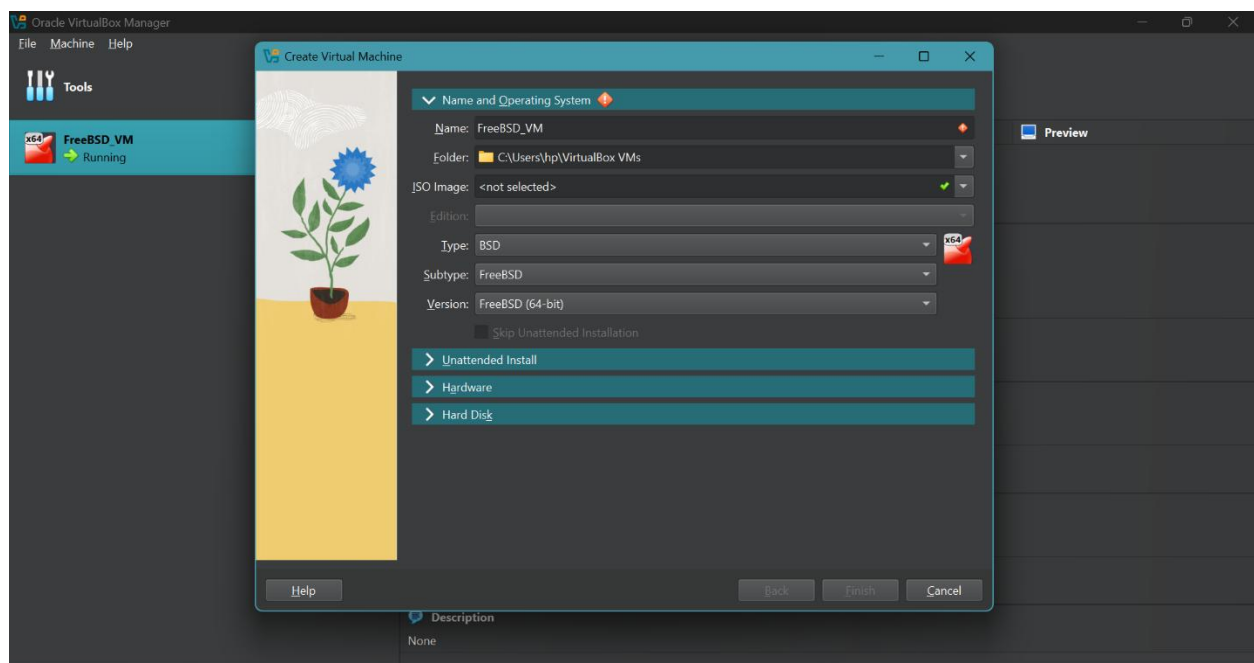


Installation Steps

This section walks you through the complete process of downloading, setting up, and installing FreeBSD on a virtual machine using VirtualBox. The steps below assume you already have VirtualBox installed and a FreeBSD ISO downloaded (usually the FreeBSD-XX.X-RELEASE-amd64-disc1.iso).

Step 1: Launch VirtualBox and Create a New Virtual Machine

1. Open **VirtualBox**.
2. Click on **"New"**.
3. Enter the following:
 - **Name:** FreeBSD_VM
 - **Type:** BSD
 - **Version:** FreeBSD (64-bit)

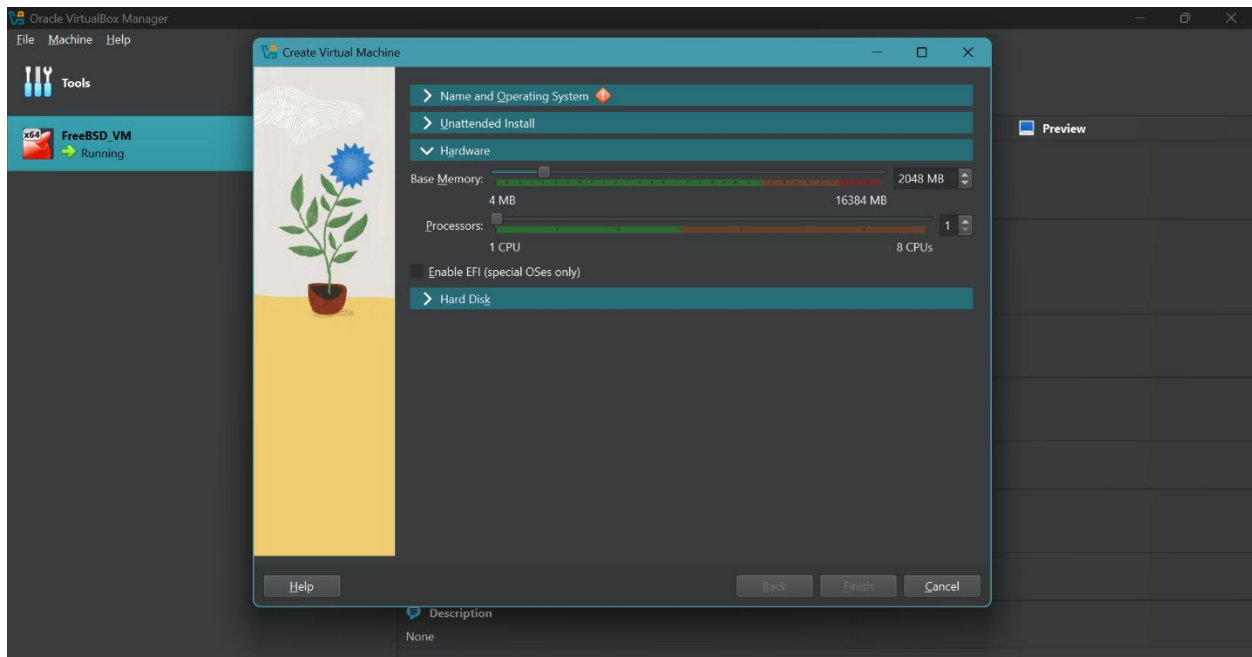


Eg. VirtualBox New VM creation window

4. Click **Next**.

Step 2: Allocate Memory (RAM)

1. Assign at least **1024 MB (1 GB)** of memory (recommended: 2048 MB).
2. Click **Next**.



Eg. Memory size selection

Step 3: Create a Virtual Hard Disk

1. Select "**Create a virtual hard disk now**".
2. Click **Create**.

3. Choose:

- **VDI (VirtualBox Disk Image)** > Next
- **Dynamically allocated** > Next
- Size: **20 GB** or more

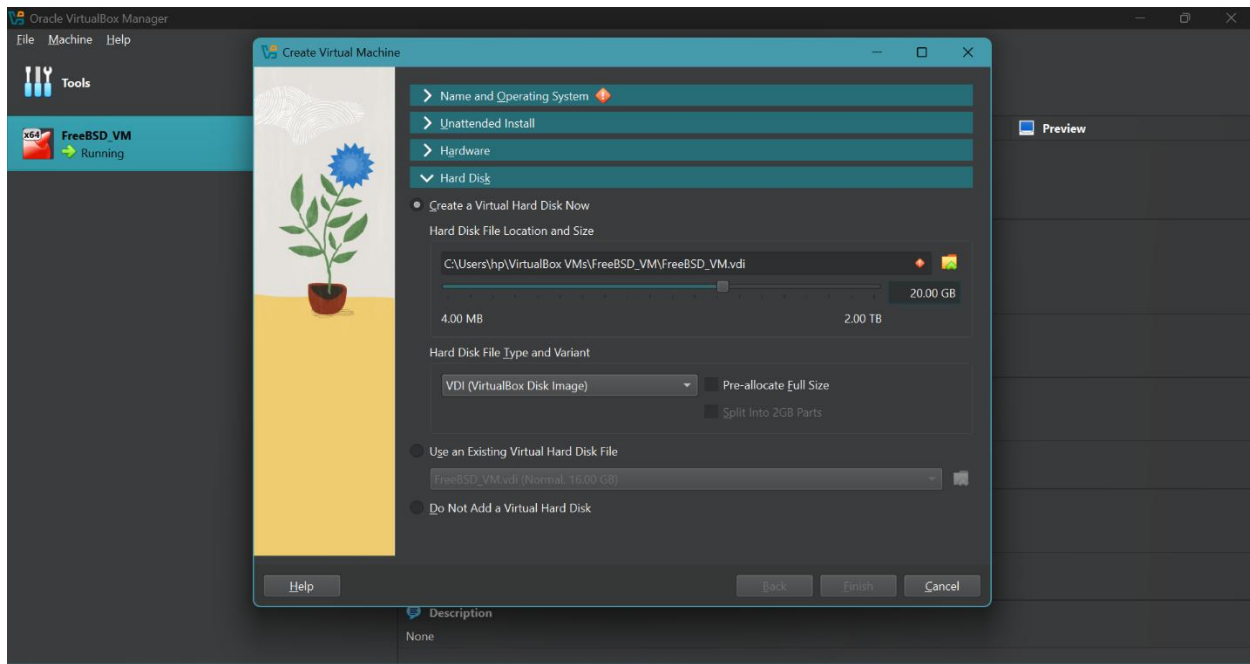


Fig. Virtual disk settings

Step 4: Mount the FreeBSD ISO

1. Select your new VM and click **Settings**.
2. Go to **Storage > Controller: IDE**.
3. Click the empty disk icon, then click the disk on the right and choose "**Choose a disk file...**".
4. Select the downloaded FreeBSD ISO file.
5. Click **OK**.

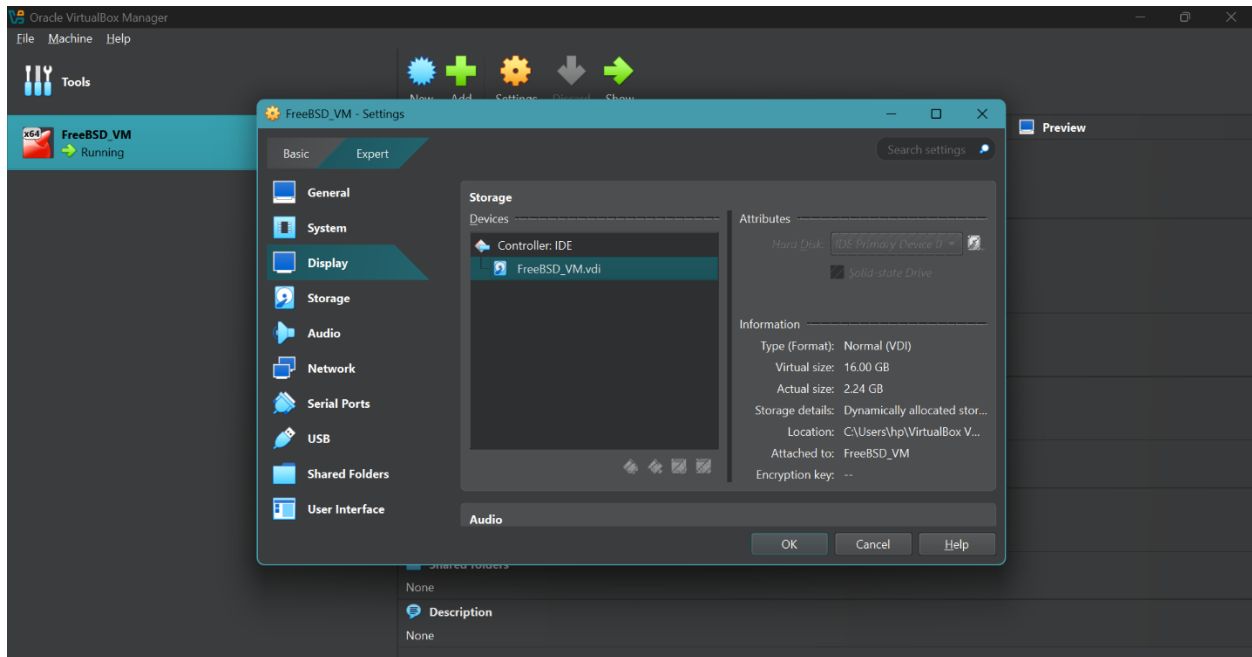


Fig. Mount ISO in Storage settings

Step 5: Start the Virtual Machine

1. Click **Start**.
2. The VM will boot into the FreeBSD installer.

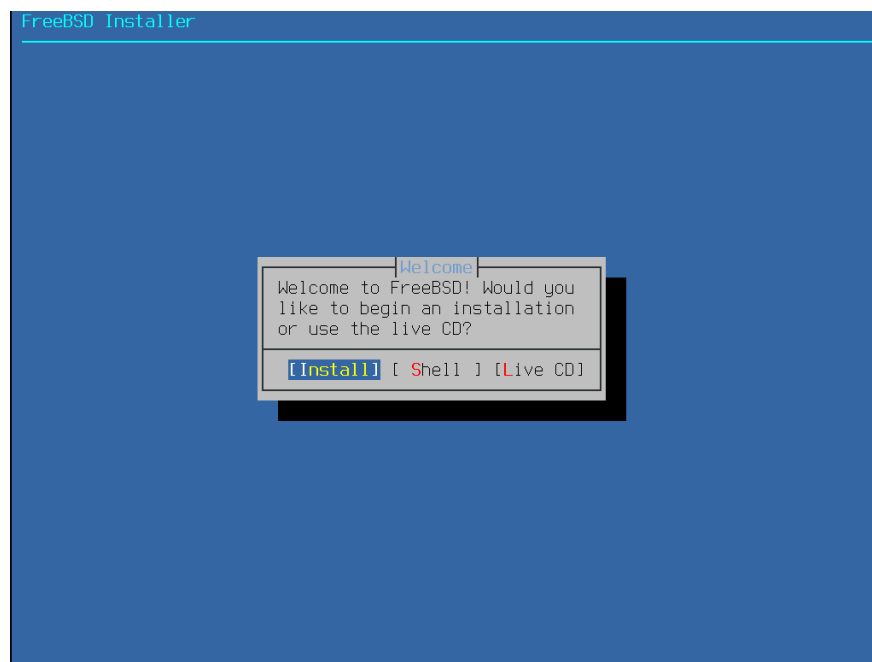


Fig. Boot screen showing FreeBSD installer

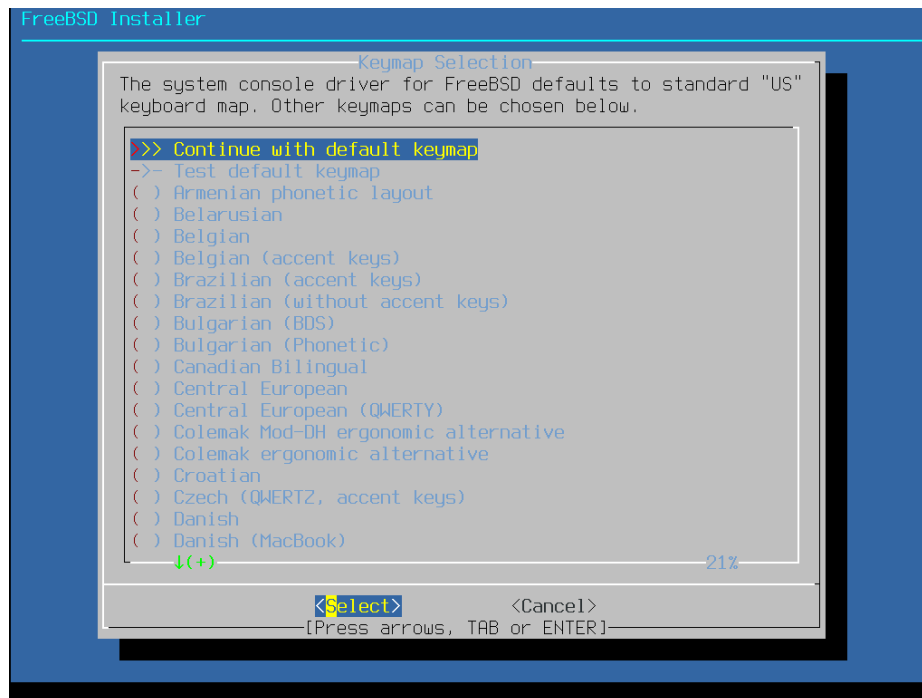
Step 6: FreeBSD Installation Process

6.1 Select Install

- Choose **Install** from the FreeBSD boot menu using the keyboard.

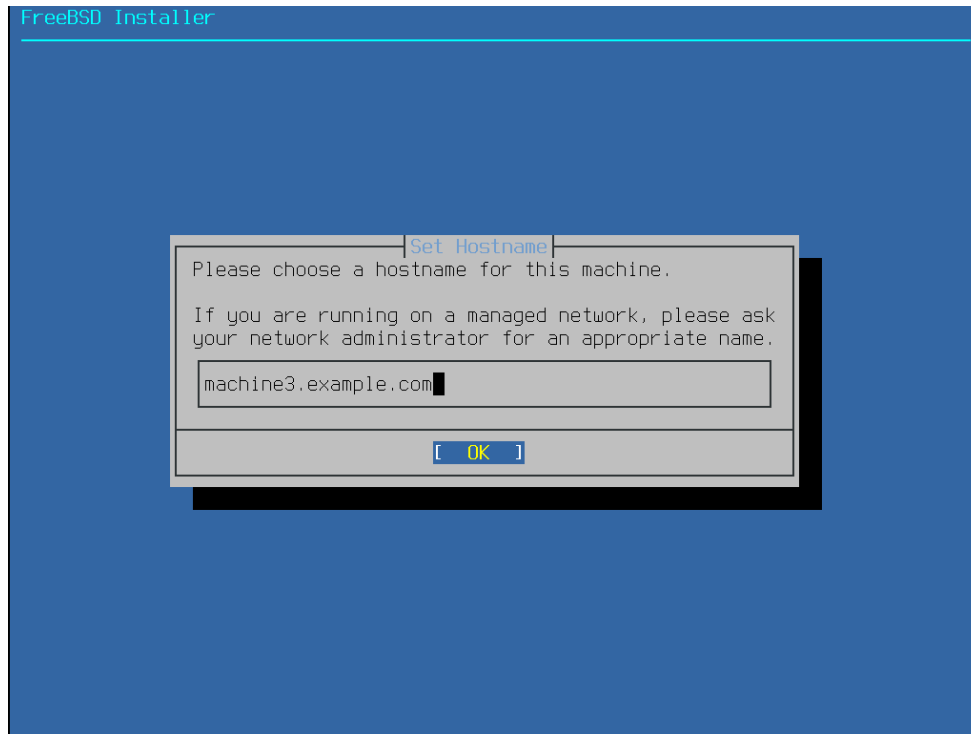
6.2 Select Keymap

- Select the default keymap (usually Continue with default keymap).

**Fig. Keymap selection screen**

6.3 Set Hostname

- Enter a hostname (e.g., freebsd-vm).



Fg. Hostname input

6.4 Choose Components

- Leave default selections (base-dbg, kernel-dbg, lib32, ports) unless specific components are required.
- Press **Enter** to continue.

Step 7: Partition the Disk

- Select **Auto (UFS)** for guided disk partitioning.
- Confirm with **Entire Disk** → Proceed with default settings.
- Select **Yes** when prompted to commit changes.

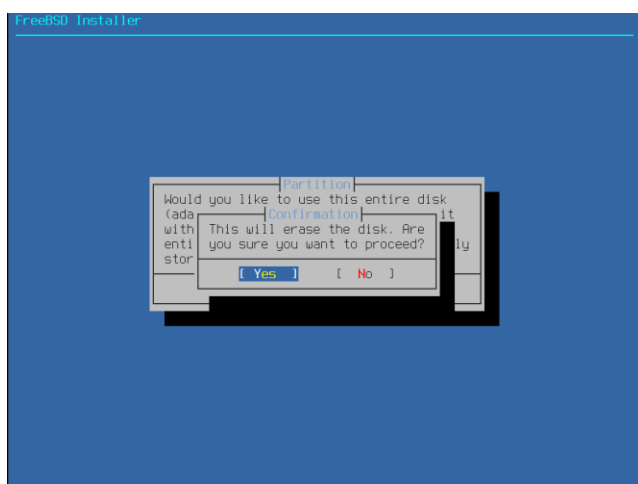
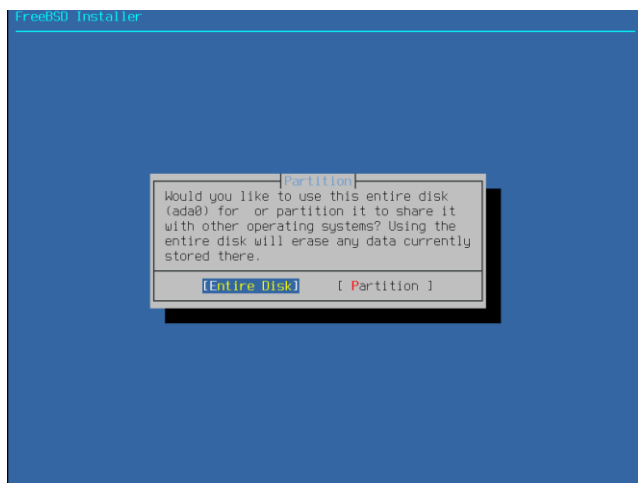
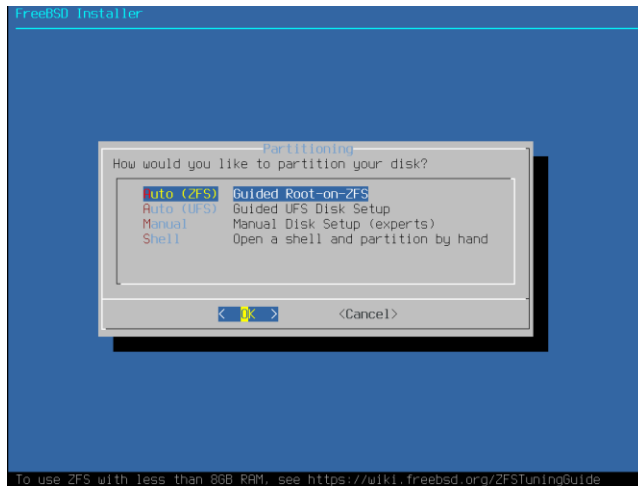


Fig. Partitioning options

Step 8: Set the Root Password

- Enter a secure password for the root account.
- Re-enter to confirm.

```
FreeBSD Installer
=====

Please select a password for the system management account (root):
Typed characters will not be visible.
Changing local password for root
New Password:
Retype New Password:
```

Fg. Root password setup

Step 9: Network Configuration

- Select your network adapter (usually em0 or vtnet0) → Choose **IPv4 DHCP**.
- Optionally configure IPv6 or skip.
- Set DNS (defaults are usually sufficient).

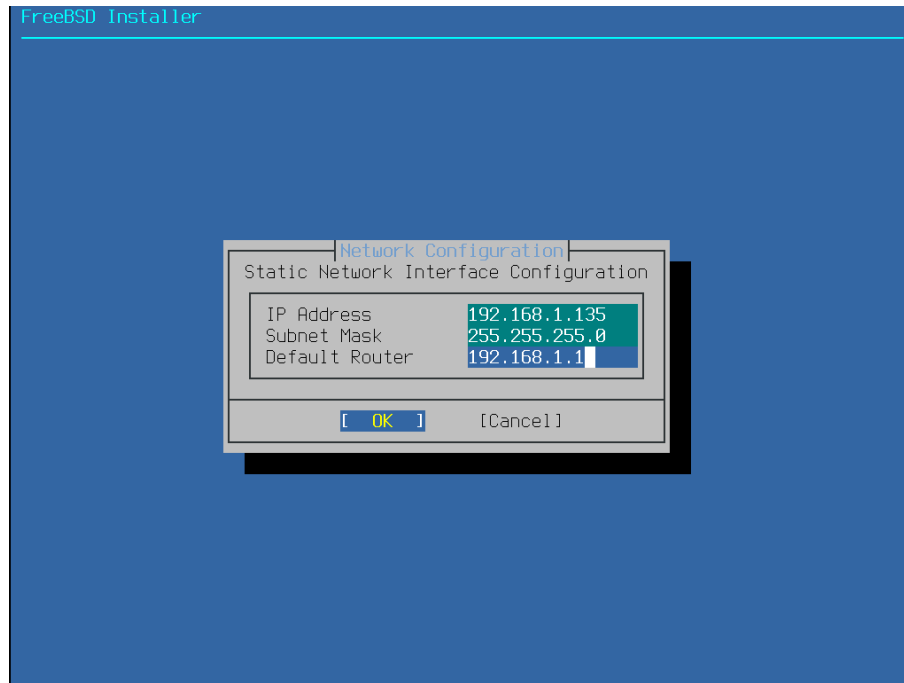


Fig. Network interface selection

Step 10: Time Zone and System Configuration

- Choose your region and local time zone.
- Enable desired services (e.g., sshd, ntpd).
- Optional: Enable hardening options like disabling root over SSH.

Step 11: Create a User Account

- Select **Yes** to add a new user.
- Enter your **full name** as the username (e.g., johnsmith).
- Fill out the remaining prompts:
 - Full name: Rahel Temesgen
 - Username: Rahel-Temesgen
 - Member of groups: wheel
 - Login shell: /bin/tcsh or /bin/sh
 - Password: Set and confirm

- Everything else: Accept defaults or customize if needed

```

Home directory permissions (Leave empty for default):
Enable ZFS encryption? (yes/no) [no]:
Use password-based authentication? [yes]:
Use an empty password? (yes/no) [no]:
Use a random password? (yes/no) [no]:
Enter password:
Enter password again:
Lock out the account after creation? [no]:
Username      : Rahel-Temesgen
Password      : *****
Full Name     : Rahel Temesgen Tigabu
Uid           : 1003
ZFS dataset   : zroot/home/Rahel-Temesgen
Class        :
Groups        : Rahel-Temesgen wheel
Home          : /home/Rahel-Temesgen
Home Mode     :
Shell         : /bin/sh
Locked        : no
OK? (yes/no) [yes]:
adduser: INFO: Successfully created ZFS dataset (zroot/home/Rahel-Temesgen).
adduser: INFO: Successfully added (Rahel-Temesgen) to the user database.
Add another user? (yes/no) [no]:
Goodbye!
root@FreeBSD_VM:~ # gg

```

Eg. User creation fields

Step 12: Final Steps and Reboot

- After installation completes, choose **Exit** → **Reboot**.
- Eject the ISO before reboot (go to VirtualBox → Devices → Optical Drives → Remove Disk from Virtual Drive).

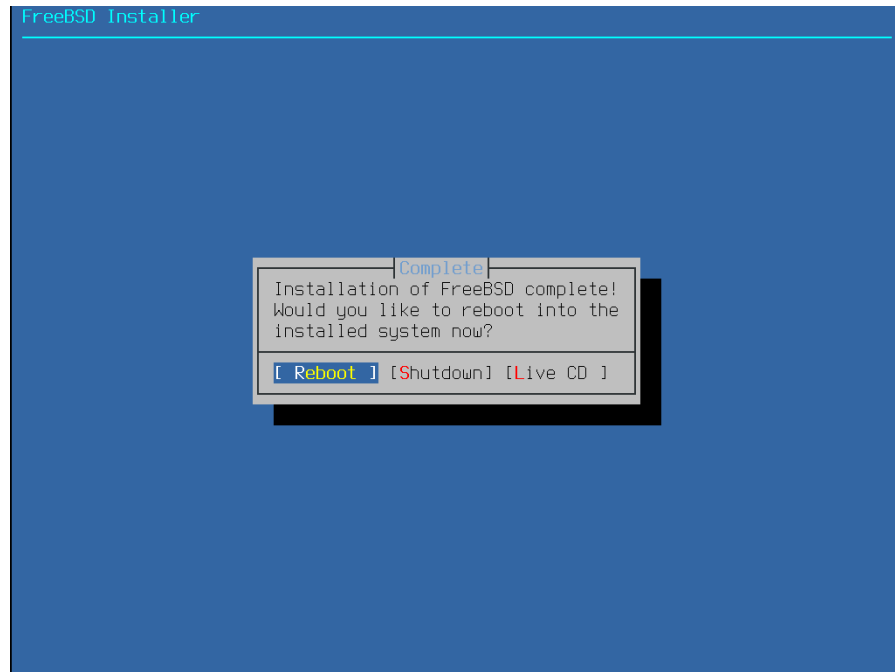


Fig. Installation complete screen

Step 13: Login and Verify

- After rebooting, login with your new user account.
- Try basic commands like:

uname -a

freebsd-version