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Faculty of computing

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Title:solus operating system

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Introduction to solus operating system

An standalone operating system built on the Linux platform, Solus was created especially for personal computers. Solus is a completely original Linux distribution, in contrast to many others that are based on upstream projects like Ubuntu, Debian, or Arch. This allows the developers complete control over the user experience, optimization, and design of the system.The project was attempted by Ikey Doherty in 2015 with a vision to create a clean, efficient, and user-focused desktop operating system. It originally installing under the name Evolve OS, but after facing legal issues regarding the name, it was rebranded as Solus.

Background of solus operating system

In order to address a need in the Linux ecosystem for a desktop-first distribution that does not carry the burden or advantage of being server-focused, Solus was built. At the time, the most widely used distributions were either enterprise-specific or general-purpose. By maximizing efficiency, usability, and simplicity for routine tasks like web surfing, media consumption, and productivity, Solus sought to cater only to desktop users.

Motivation of solus operating system

The goal of Solus was to provide: An intuitive and contemporary Linux desktop experience right out of the box. a style of rolling release that offers the most recent software upgrades without requiring a complete reinstallation. a separate software repository that guarantees more stringent oversight of system stability and package quality. Budgie is a distinctive and sophisticated desktop environment that was created internally and offers a sophisticated and intuitive user interface. By eliminating the complexity typically associated with Linux, Solus seeks to provide customers switching from other operating systems, such as Windows or macOS, with a "just works" experience.

Objectives of the solus operating system

The Solus Operating System was created with a focused set of objectives aimed at redefining the desktop Linux experience. Unlike general-purpose distributions, Solus is engineered with specific goals that prioritize simplicity, performance, and user-centric

design. Below are the key objectives that define the Solus OS project:

1. Deliver a Desktop-Centric Experience:Solus is purpose-built for home and office desktop users, not servers or embedded systems. The objective is to provide an operating system that is tailored for personal computing tasks such as web browsing, office work, media consumption, development, and gaming.

2. Provide an Out-of-the-Box Usable System:One of Solus's main goals is to minimize the setup process. Solus ships with:

A full-featured desktop environment (e.g., Budgie, GNOME, MATE, KDE Plasma)

Pre-installed essential software such as Firefox, LibreOffice, and media players

Built-in driver support for common hardware

This ensures that users can start using the system productively immediately after installation.

3. Maintain an Independent and Stable Core:Solus is an independent distribution, meaning it does not rely on other Linux distributions like Debian or Arch. This allows the team to:

Maintain tighter control over system design and architecture

Avoid inherited bugs or inconsistencies

Innovate without dependency constraints

4. Enable a Rolling Release Model with Stability:Solus follows a curated rolling release approach. Unlike traditional rolling releases that may prioritize the latest software at the cost of stability, Solus:Tests and validates updates thoroughly before release

Ensures system components are updated regularly without compromising reliability

Offers a consistent user experience over time

5. Support Software Development and Programming:Solus comes with powerful tools for developers, such as:

Build tools (gcc, make, etc.)

Support for multiple programming languages.A simple package management system (eopkg) This makes Solus a great platform for software development.

6. Promote Simplicity and Elegance through Budgie

:The flagship desktop environment, Budgie, is developed by the Solus team with a focus on:

Clean and modern user interface

Low resource usage

Ease of customization Budgie is designed to offer a balance of aesthetics and performance.

7. Encourage Open Source Contribution

As a fully open-source project, Solus encourages developers and users to:Contribute to code,Report bugs and request features and Take part in building a better Linux desktop experience

Hardware requirements of solus operating system

The Solus operating system is made to be incredibly compatible with contemporary hardware, lightweight, and efficient. Although it can operate on a variety of platforms, including both contemporary desktops and laptops and older computers, the following hardware requirements are advised for best results:

1. Minimum Hardware Requirements

These are the least specifications required to install and run Solus OS. Suitable for basic tasks like web browsing, office work, and light media use.

CPU: 64-bit processor (Intel or AMD)

RAM: 2 GB

Storage: 10 GB of available disk space

Display: 1024x768 screen resolution

Graphics: Intel HD Graphics or compatible GPU

Boot Mode: UEFI or legacy BIOS supported

Others: USB port or DVD drive for installation media

2. Recommended Hardware Requirements

These specifications are ideal for a smoother experience, multitasking, software development, and media consumption.

CPU: Dual-core 64-bit processor (Intel i3, AMD Ryzen 3 or better)

RAM: 4 GB or more

Storage: 20 GB or more of free space (SSD recommended for performance)

Display: 1366x768 or higher resolution

Graphics: Dedicated GPU (NVIDIA/AMD) for enhanced performance, especially for gaming or graphical tasks

Network: Wired or wireless network adapter supported out-of-the-box

3. Desktop Environment Impact

Solus offers multiple desktop environments, and hardware usage can vary slightly:

Budgie and GNOME: Require more RAM and CPU power due to animations and effects.

MATE and Plasma: Lighter options, suitable for older or low-resource hardware.

4. Virtual Environment

If installing Solus in a virtual machine (e.g., VirtualBox or VMware), it is recommended to allocate:

CPU: At least 2 virtual cores

RAM: Minimum 2 GB (4 GB recommended)

Video Memory: 128 MB (with 3D acceleration enabled)

Software requirements of solus operating system

The Solus Operating System is built with simplicity and efficiency in mind, aiming to provide a complete, ready-to-use desktop experience with a minimal initial setup. Below are the key software-related requirements and recommendations for successfully installing and running Solus OS:

1. Supported Architecture

64-bit (x86_64) only:

Solus does not support 32-bit systems. A 64-bit CPU is required to install and run Solus.

2. Installation Media Requirements

ISO Image File: The official Solus ISO image is available from the Solus website.

Bootable Media Creation Software: To create a bootable USB/DVD from the ISO image, you can use tools such as:

Rufus (Windows)

Etcher (Windows/Linux/macOS)

UNetbootin

dd command (Linux terminal)

3. Boot Mode Compatibility

UEFI and Legacy BIOS boot modes are supported.

For newer systems, UEFI is preferred for better security and compatibility

4. Package Management System

Solus uses its own package manager: eopkg

Allows installation, removal, and updating of software

Supports package searching and dependency resolution

Works with Solus's official software repository

5. Pre-installed Software

Solus provides a collection of pre-installed applications to cover common usage needs:

Web Browser: Firefox

Office Suite: LibreOffice

Media Player: GNOME MPV or Rhythmbox (depending on desktop)

Software Center: GUI for discovering and managing applications

System Tools: Terminal, Settings, Disk utility, and more

6. Optional and Development Tools

For developers and power users, additional tools and libraries can be easily installed via

the Software Center or eopkg. These include:

Compilers: GCC, Clang

Programming Languages: Python, Node.js, Java, Rust, etc.

IDEs & Editors: Visual Studio Code, GNOME Builder, Vim, Emacs

7. Internet Connectivity

An active internet connection is recommended during installation or first use to:

Update the system

Install additional drivers or packages

Access the software repositories

Issues(problem faced)during installation of solus operating system with their solution

1. Solus ISO Not Booting

Symptom: Black screen or stuck at "Booting..." message.

Cause: Incorrect ISO image, incompatible VMware settings.

Solution:Use the official Solus ISO from https://getsol.us.

Ensure the VM is set to UEFI mode (not Legacy/BIOS).

Allocate at least 2 GB RAM and enable virtualization (VT-x/AMD-V).

2. Stuck at “Loading initial ramdisk…”

Symptom: Boot process halts at this message.

Cause: Low memory or incompatible hardware configuration.

Solution:Increase VM RAM to at least 2 GB (preferably 4 GB).

Use VMware Workstation or Player version 15+.

Use a virtual SATA disk instead of SCSI if needed.

3. Mouse/Keyboard Not Working in Installer

Symptom: Can't move the mouse or type in the installer GUI.

Cause: Missing VMware tools or misconfigured input settings.

Solution:Try clicking inside the VM window to capture input.

Enable USB controller and set it to USB 2.0 or 3.0.

Install VMware Tools after installation for better input integration.

4. Disk Not Detected During Installation

Symptom: Solus installer does not detect any disk to install to.

Cause: Unsupported disk controller or unallocated disk space.

Solution:Use SATA or IDE as the virtual disk controller (not NVMe or SCSI).

Make sure the virtual disk is created and initialized.

Use GParted (pre-installed) to format disk if needed before installation.

5. Installation Fails or Freezes Midway

Symptom: Installer crashes or gets stuck during the process

Cause: Insufficient resources or corrupted ISO.

Solution:Allocate at least 2 CPUs and 20 GB disk space.

Check the ISO checksum and re-download if corrupted.

Disable unnecessary VM devices (e.g., printer, floppy).

6. No Bootable Device After Installation

Symptom: After installation, VM says "No bootable device found."

Cause: Bootloader not installed or UEFI/BIOS mismatch.

Solution:Ensure the VM uses UEFI firmware.

Reinstall Solus and confirm the bootloader option is checked.

Use VMware settings to prioritize the correct disk as boot device.

7. Slow Performance

Symptom: Lag or unresponsive system after installation.

Cause: Low system resources or lack of VM tools.

Solution:

Enable 3D acceleration and allocate more RAM/CPU.

Install VMware Tools inside Solus for better performance.

Increase video memory to at least 128 MB.

File system support in solus operating system

File systems are a fundamental componenet of any operating system,responsible for how data is stored,organized and accessed on storage device.Solus is a modern, independent Linux distribution focused on desktop usability. It supports a variety of file systems, but it's good to know which ones are officially supported and commonly used.

Solus supports the following file systems:

1. ext4 (Default and Recommended)

Default file system used during Solus installation.

Well-supported, reliable, and robust for desktop use.

Journaling file system, good performance and stability.

2. Btrfs

Supported but not used by default.

Offers advanced features like snapshots, compression, and subvolumes.

Useful for advanced users or specific use cases.

3. XFS

Supported, especially good for large files and high-performance needs.

Not used by default.

4. F2FS

Flash-Friendly File System.

Optimized for SSDs and flash storage.

May require additional configuration or manual setup.

5. vfat / exFAT / NTFS (for removable drives)

Supported via:

dosfstools for FAT32 (vfat),

exfat-utils / exfatprogs for exFAT,

ntfs-3g for NTFS (read/write support).

These are mainly used for compatibility with Windows systems and USB drives.

How to Check File System Support?

You can check which file systems are supported on your Solus system with:

cat /proc/filesystems

And to list available kernel modules:

ls /lib/modules/$(uname -r)/kernel/fs

Installation steps to install solus operating system on virtual box

1. Download Solus ISO

Visit the official website: https://getsol.us/download/

Choose your preferred edition (Budgie, GNOME, KDE Plasma, or MATE).

Download the .iso file.

2. Install Oracle VirtualBox

If not installed, download VirtualBox from: https://www.virtualbox.org/

Install it using the default options.

3. Create a New Virtual Machine

1. Open VirtualBox, click "New".

2. Name: e.g., Solus

3. Type: Linux

4. Version: Linux 2.6 / 3.x / 4.x (64-bit)

5. Click Next

4. Allocate RAM

Minimum: 2048 MB (2 GB)

Recommended: 4096 MB (4 GB) or more

5. Create Virtual Hard Disk

Choose Create a virtual hard disk now

Click Create

Disk Type: VDI (VirtualBox Disk Image)

Storage: Dynamically allocated

Size: Minimum 15 GB (Recommended: 20+ GB)

6. Mount Solus ISO

1. Select your VM, click Settings > Storage

2. Under Controller: IDE, click the empty disk icon.

3. On the right, click the disk icon next to Optical Drive > Choose a disk file

4. Select the Solus ISO you downloaded.

7. Boot and Install Solus

1. Start the VM.

2. The Solus live environment will boot.

3. Click Install OS on the desktop.

4. Follow the on-screen installation instructions:

Select language, timezone, keyboard layout.

Choose the virtual hard disk for installation.

Set your user name and password.

8. Restart After Installation

Once installed, restart the VM.

Eject the ISO from Devices > Optical Drives and uncheck the ISO file.

The VM should now boot into the installed Solus OS.

Download VirtualBox

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VirtualBox Platform Packages

VirtualBox 7.1.8 platform packages

- Windows hosts
- macOS / Intel hosts
- macOS / Apple Silicon hosts
- Linux distributions
- Solaris hosts
- Solaris 11 IPS hosts

Platform packages are released under the terms of the GPL version 3

https://download.virtualbox.org/virtualbox/7.1.8/VirtualBox-7.1.8-168469-Win.exe

VirtualBox Extension Pack

VirtualBox 7.1.8 Extension Pack

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PlayList_ When everyth | fork() System Call in OS | Turtles All the Way Down | Download | Solus | Gemini

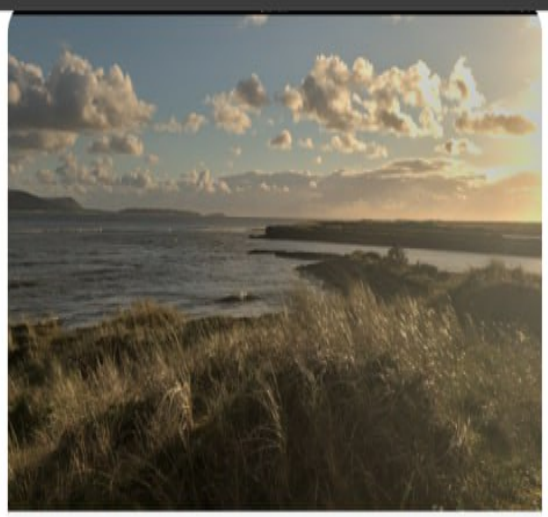
getsol.us/download/

Solus Budgie

A feature-rich, luxurious desktop using the most modern technologies.

Download

Media Size: 3.0GB
Alternative Download: Torrent
SHA256SUMS: File | Signed File | Public Key



Solus GNOME

A simple, streamlined desktop for more modern hardware.

Download

Media Size: 3.1GB
Alternative Download: Torrent
SHA256SUMS: File | Signed File | Public Key

PlayList_ When everyth | fork() System Call in OS | Turtles All the Way Down | Download | Solus | Gemini

getsol.us/download/

1% Solus-GNOME-Release-2025-01-26.iso

Download status | Speed Limiter | Options on completion

https://downloads.getsol.us/isos/2025-01-26/Solus-GNOME-Release-2025-01-26.iso

Status	Receiving data...
File size	3.118 GB
Downloaded	47.283 MB (1.48 %)
Transfer rate	7.342 MB/sec
Time left	10 min 18 sec
Resume capability	Yes

Show details >> Pause Cancel

Solus E NOME

A feature-rich, lu ined desktop for using the most modern technologies. more modern hardware.

Download

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Alternative Download: Torrent
SHA256SUMS: File | Signed File | Public Key

Download

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virtualbox.org/wiki/Downloads

VirtualBox

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VirtualBox Platform Packages

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- Windows hosts
- macOS / Intel hosts
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VirtualBox Extension Pack

VirtualBox 7.1.8 Extension Pack

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File Checksums

User Guide

Oracle VirtualBox Manager

File Machine Help

Tools

New Add Settings Discard Start

solaris_11
Powered Off

Solaris-11.4
Powered Off

ubuntu 25.04.1 lts
Powered Off

ubnutu 24.04.1 lts
Powered Off

solus
Powered Off

General

Name: solus
Operating System: Oracle Solaris 11 (64-bit)

System

Base Memory: 4096 MB
Processors: 2
Boot Order: Floppy, Optical, Hard Disk
Acceleration: Nested Paging

Preview

solus

Display

Video Memory: 16 MB
Graphics Controller: VMSVGA
Remote Desktop Server: Disabled
Recording: Disabled

Storage

Controller: SATA
SATA Port 0: solus.vdi (Normal, 32.00 GB)

Audio

Host Driver: Default
Controller: ICH AC97

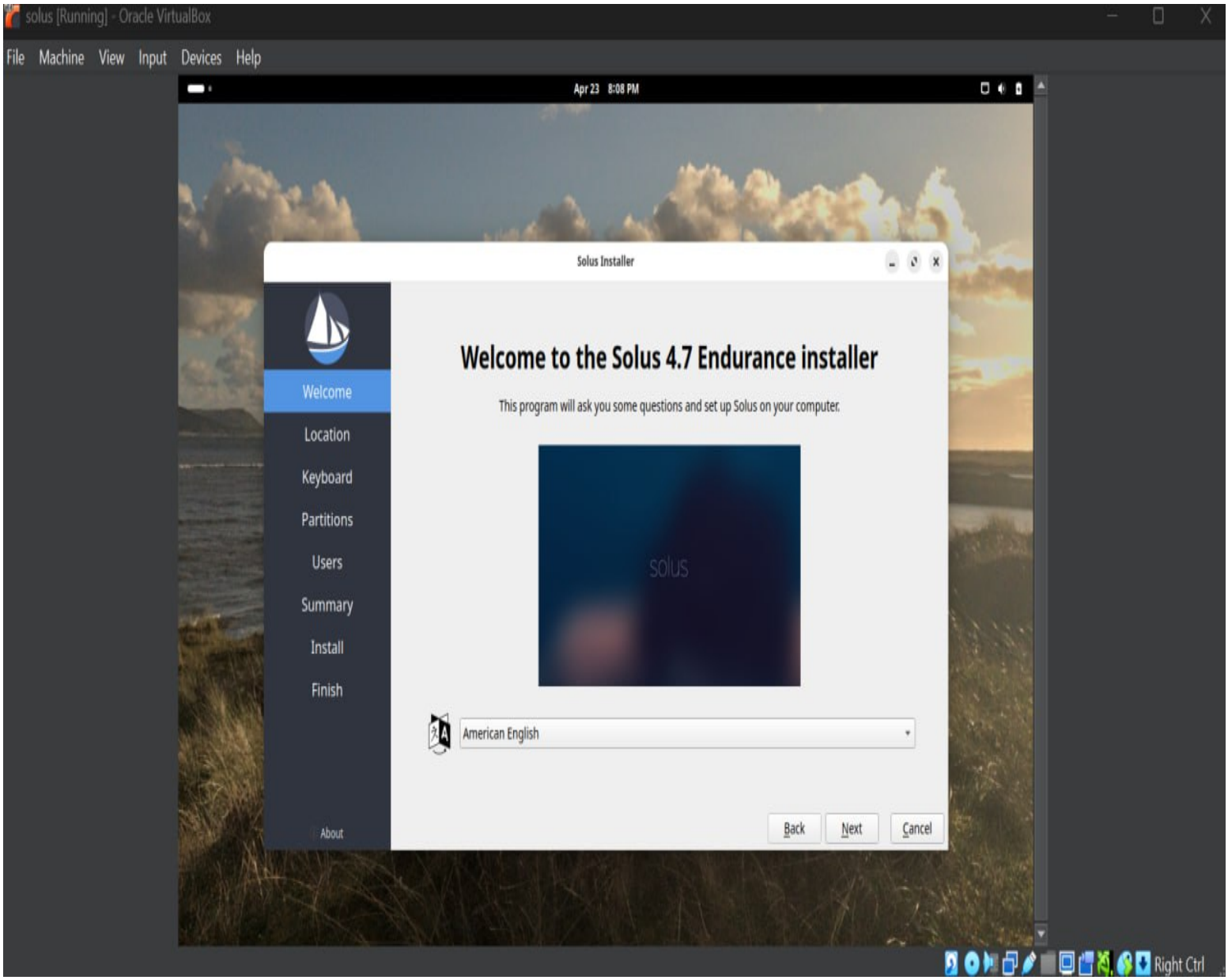
Network

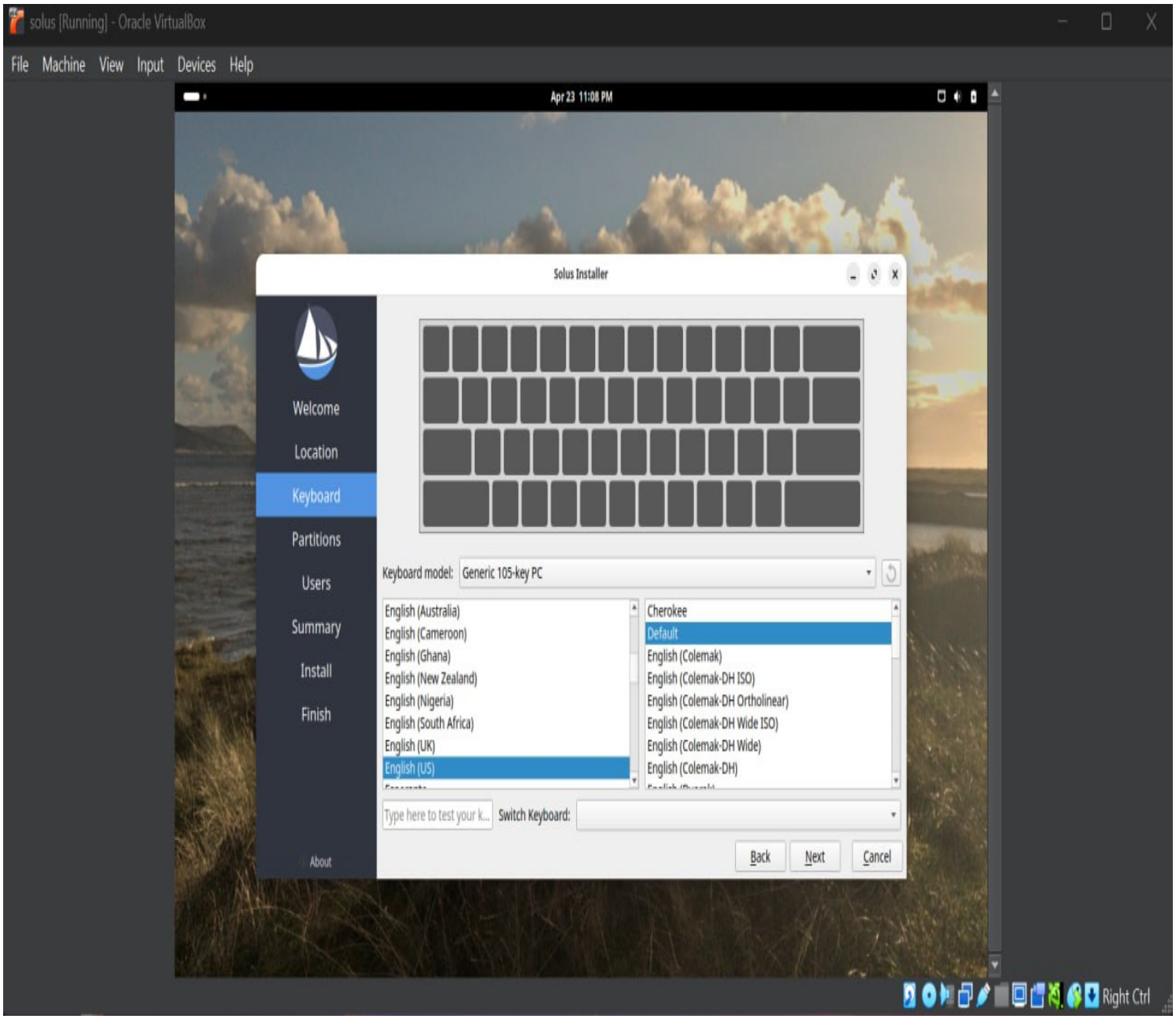
Adapter 1: Intel PRO/1000 MT Desktop (NAT)

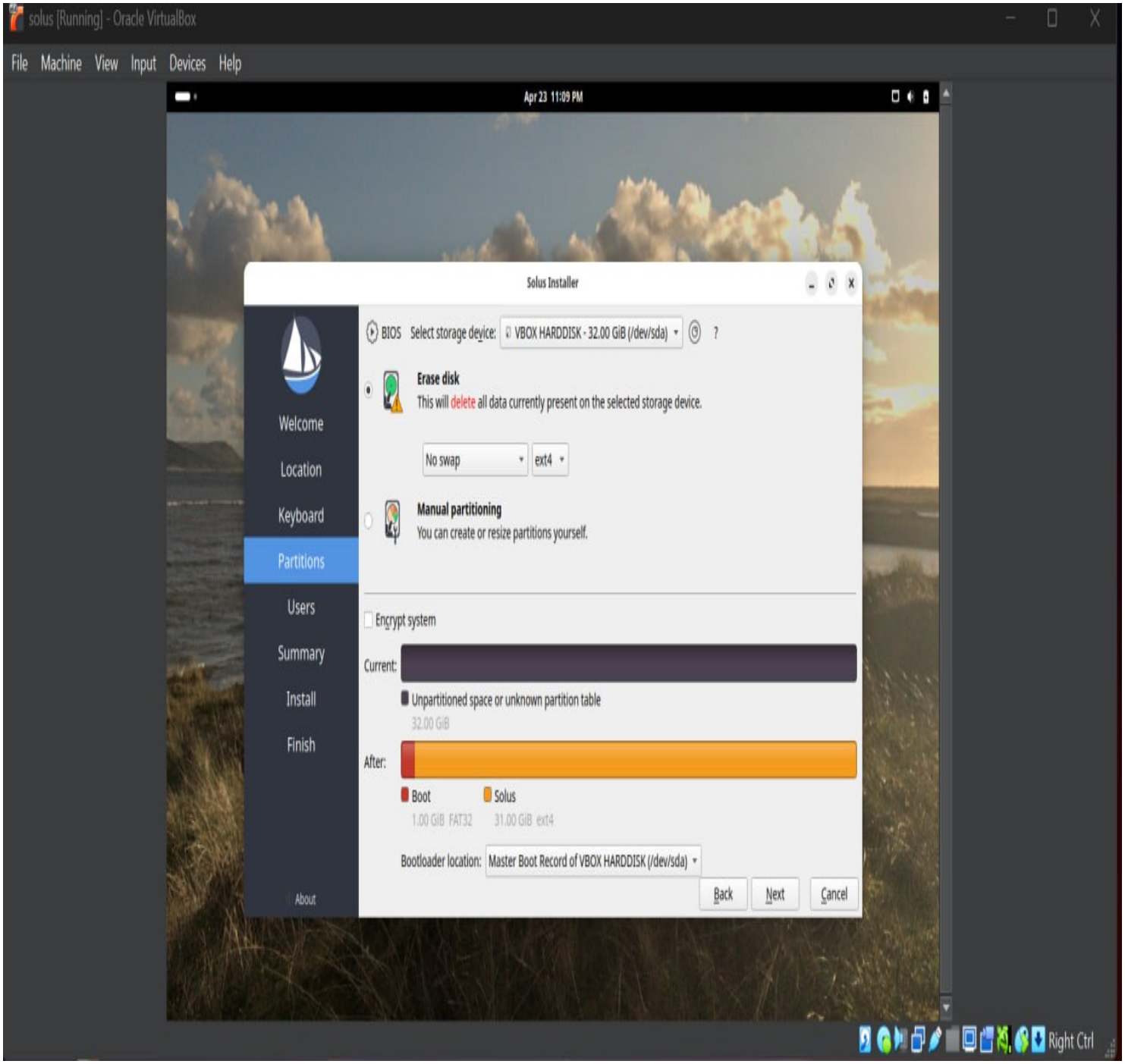
USB

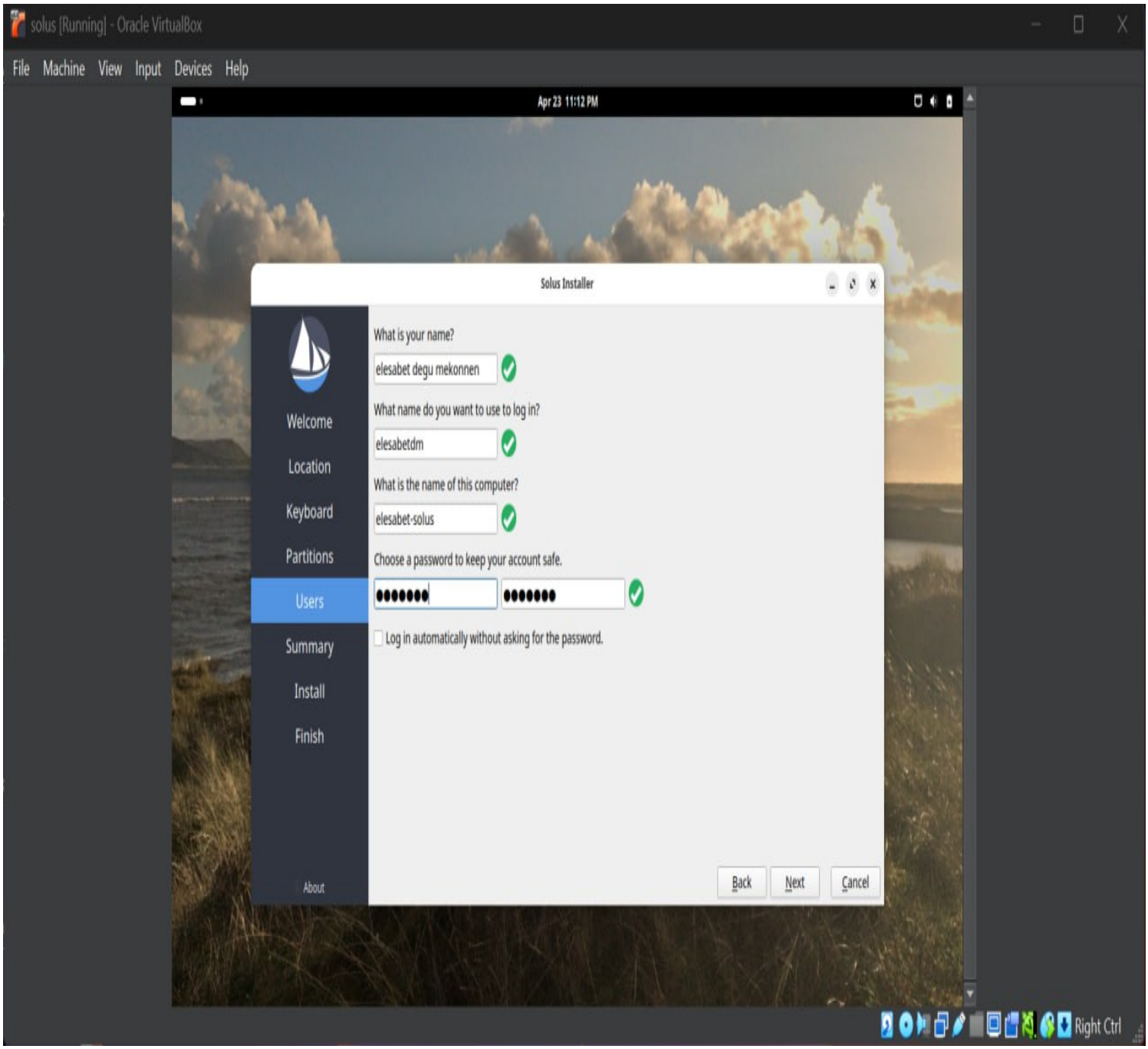
USB Controller: OHCI, EHCI
Device Filters: 0 (0 active)

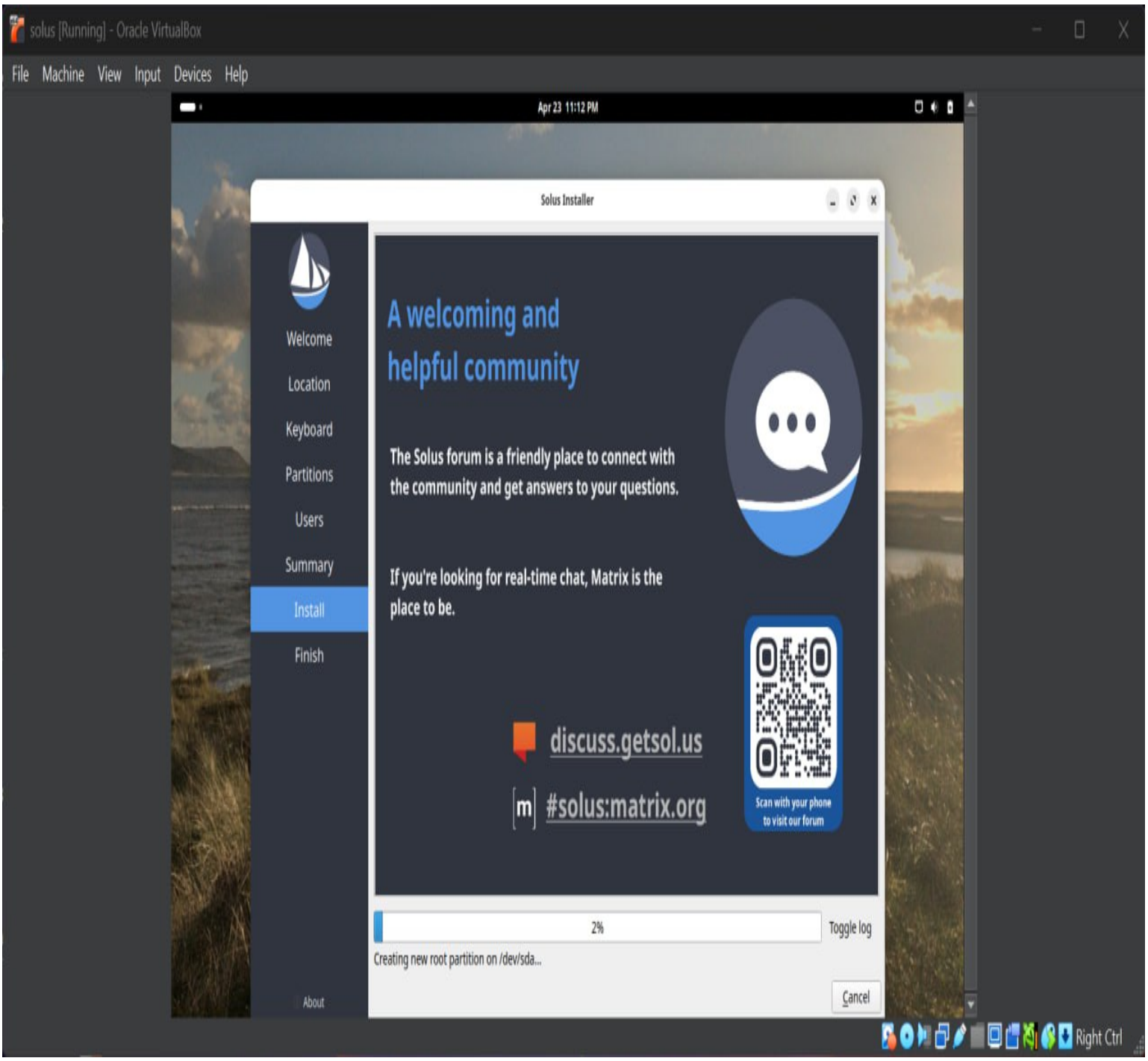
Shared folders


solus [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Apr 23 8:08 PM
Solus Installer
Welcome
Location
Keyboard
Partitions
Users
Summary
Install
Finish
About
Welcome to the Solus 4.7 Endurance installer
This program will ask you some questions and set up Solus on your computer.
solus
American English
Back
Next
Cancel
Right Ctrl


solus [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Apr 23 11:08 PM
Solus Installer
Welcome
Location
Keyboard
Partitions
Users
Summary
Install
Finish
About
Keyboard model: Generic 105-key PC
English (Australia)
English (Cameroon)
English (Ghana)
English (New Zealand)
English (Nigeria)
English (South Africa)
English (UK)
English (US)
Cherokee
Default
English (Colemak)
English (Colemak-DH ISO)
English (Colemak-DH Ortholinear)
English (Colemak-DH Wide ISO)
English (Colemak-DH Wide)
English (Colemak-DH)
Type here to test your k...
Switch Keyboard:
Back
Next
Cancel
Right Ctrl


solus [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Apr 23 11:09 PM
Solus Installer
Welcome
Location
Keyboard
Partitions
Users
Summary
Install
Finish
About
BIOS Select storage device: VBOX HARDDISK - 32.00 GiB (/dev/sda)
Erase disk
This will delete all data currently present on the selected storage device.
No swap
ext4
Manual partitioning
You can create or resize partitions yourself.
Encrypt system
Current:
Unpartitioned space or unknown partition table
32.00 GiB
After:
Boot
1.00 GiB FAT32
Solus
31.00 GiB ext4
Bootloader location: Master Boot Record of VBOX HARDDISK (/dev/sda)
Back
Next
Cancel
Right Ctrl


solus [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Apr 23 11:12 PM
Solus Installer
Welcome
Location
Keyboard
Partitions
Users
Summary
Install
Finish
About
What is your name?
elesabet degu mekonnen
What name do you want to use to log in?
elesabetdm
What is the name of this computer?
elesabet-solus
Choose a password to keep your account safe.
Log in automatically without asking for the password.
Back
Next
Cancel
Right Ctrl


solus [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Apr 23 11:12 PM
Solus Installer
Welcome
Location
Keyboard
Partitions
Users
Summary
Install
Finish
About
A welcoming and helpful community
The Solus forum is a friendly place to connect with the community and get answers to your questions.
If you're looking for real-time chat, Matrix is the place to be.
discuss.getsol.us
#solus:matrix.org
Scan with your phone to visit our forum
2%
Toggle log
Creating new root partition on /dev/sda...
Cancel
Right Ctrl

solus [Running] - Oracle VirtualBox

File Machine View Input Devices Help

Apr 23 11:12 PM

Solus Installer

Welcome
Location
Keyboard
Partitions
Users
Summary
Install
Finish
About

This is an overview of what will happen once you start the install procedure.

Location

Set timezone to Africa/Addis Ababa.
The system language will be set to American English (United States).
The numbers and dates locale will be set to American English (United States).

Keyboard

Keyboard model has been set to Generic 105-key PC.
Keyboard layout has been set to English (US)/Default.

Partitions

Erase disk **/dev/sda** (VBOX HARDDISK) and install Solus 4.7

Current:

Unpartitioned space or unknown partition table
32.00 GiB

After:

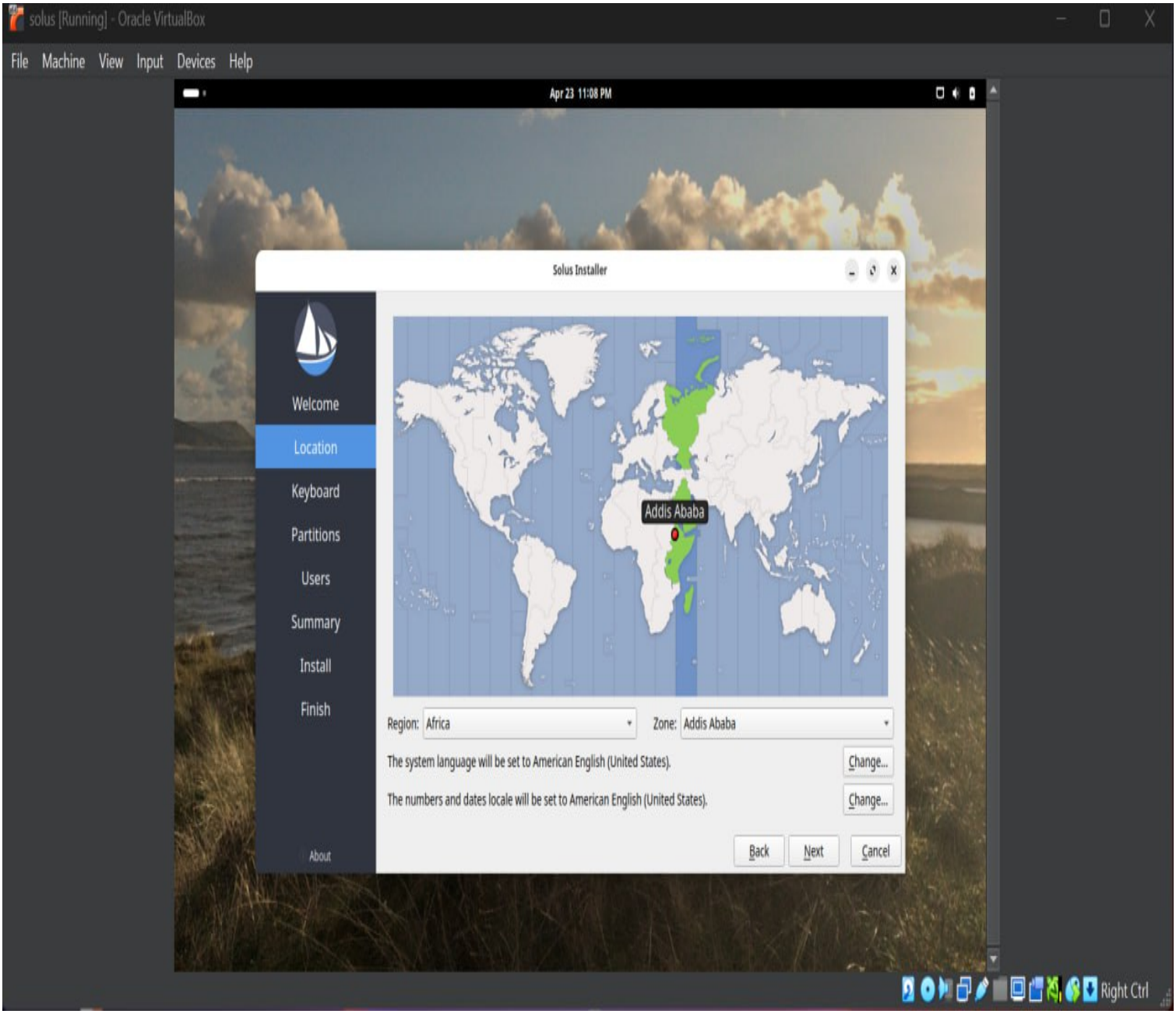
Boot
1.00 GiB FAT32

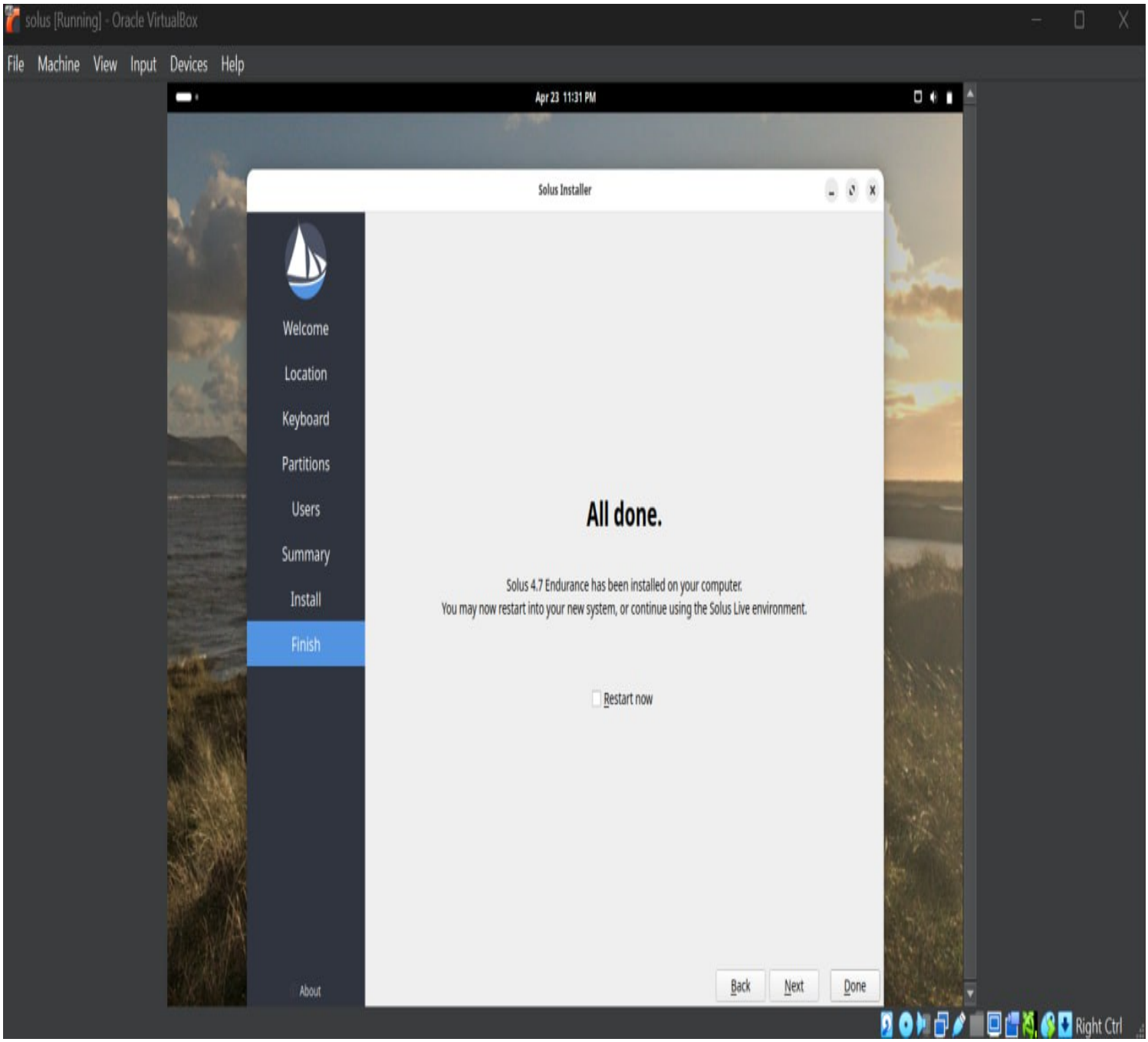
Solus
31.00 GiB ext4

Creating new **GPT** partition table on **/dev/sda** (VBOX HARDDISK)...
Create new **1024MiB** partition on **/dev/sda** (VBOX HARDDISK) with entries *boot*
Set flags on 1024MiB **fat32** partition to **boot**
Create new **31740MiB** partition on **/dev/sda** (VBOX HARDDISK) with entries *root*
Set flags on 31740MiB **ext4** partition to **boot**
Set up **new** fat32 partition with mount point **/boot**
Install Solus on **new** ext4 system partition
Install boot loader on **/dev/sda**...

Back Install Cancel

Right Ctrl


solus [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Apr 23 11:08 PM
Solus Installer
Welcome
Location
Keyboard
Partitions
Users
Summary
Install
Finish
About
Addis Ababa
Region: Africa
Zone: Addis Ababa
The system language will be set to American English (United States).
Change...
The numbers and dates locale will be set to American English (United States).
Change...
Back
Next
Cancel
Right Ctrl

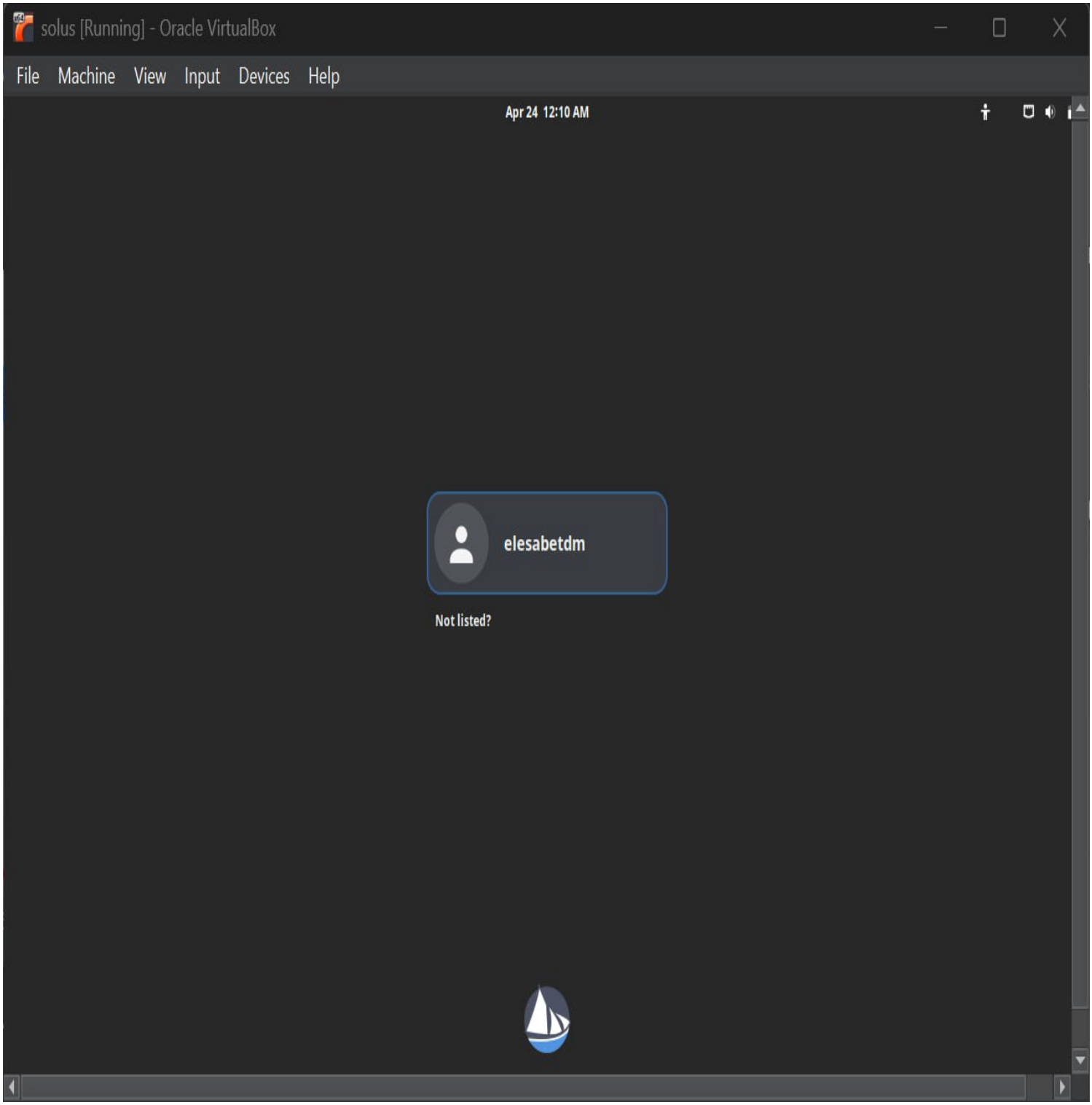

solus [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Apr 23 11:31 PM
Solus Installer
Welcome
Location
Keyboard
Partitions
Users
Summary
Install
Finish
About
All done.
Solus 4.7 Endurance has been installed on your computer.
You may now restart into your new system, or continue using the Solus Live environment.
Restart now
Back
Next
Done
Right Ctrl

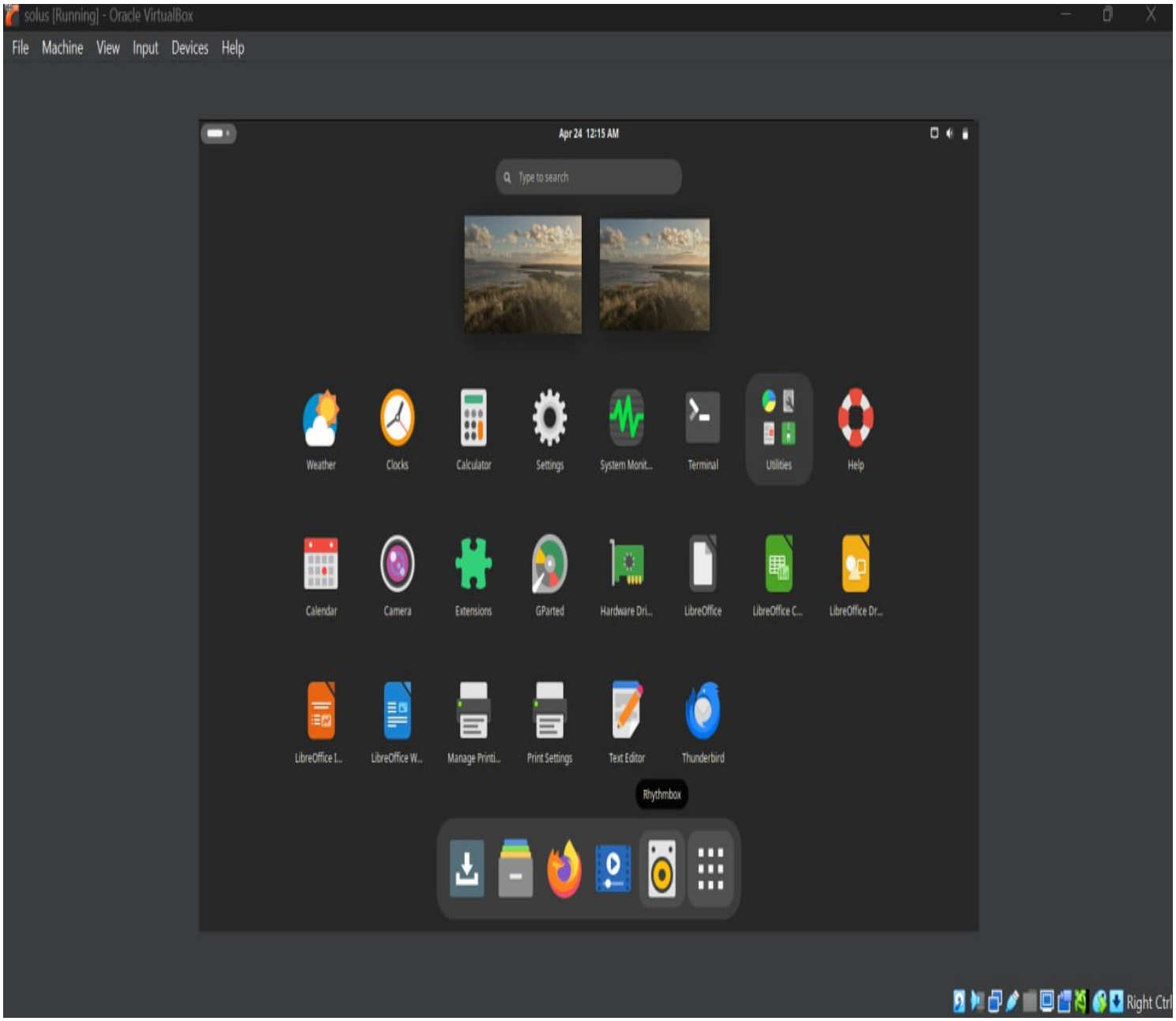
solus [Running] - Oracle VirtualBox

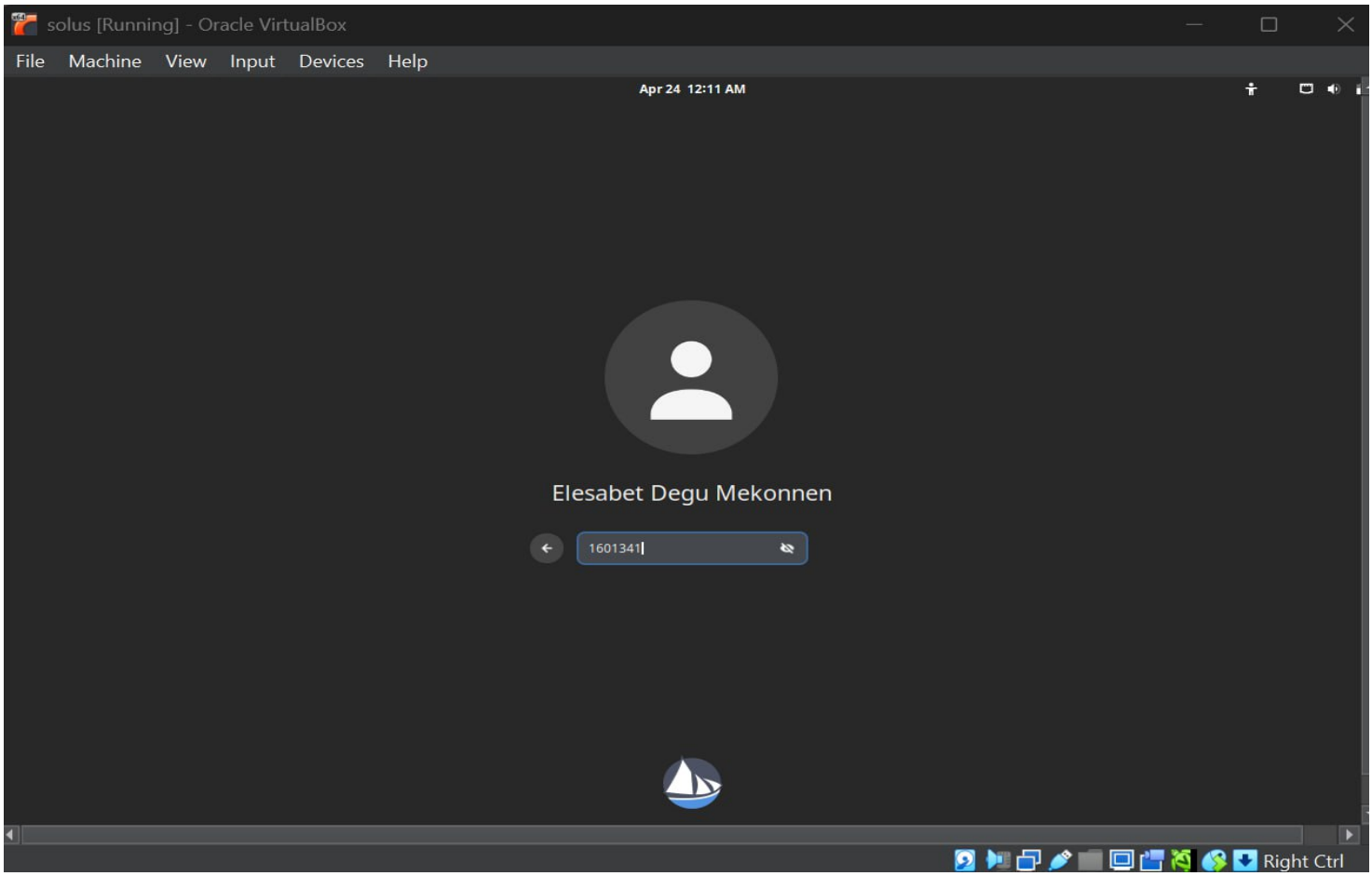
File Machine View Input Devices Help

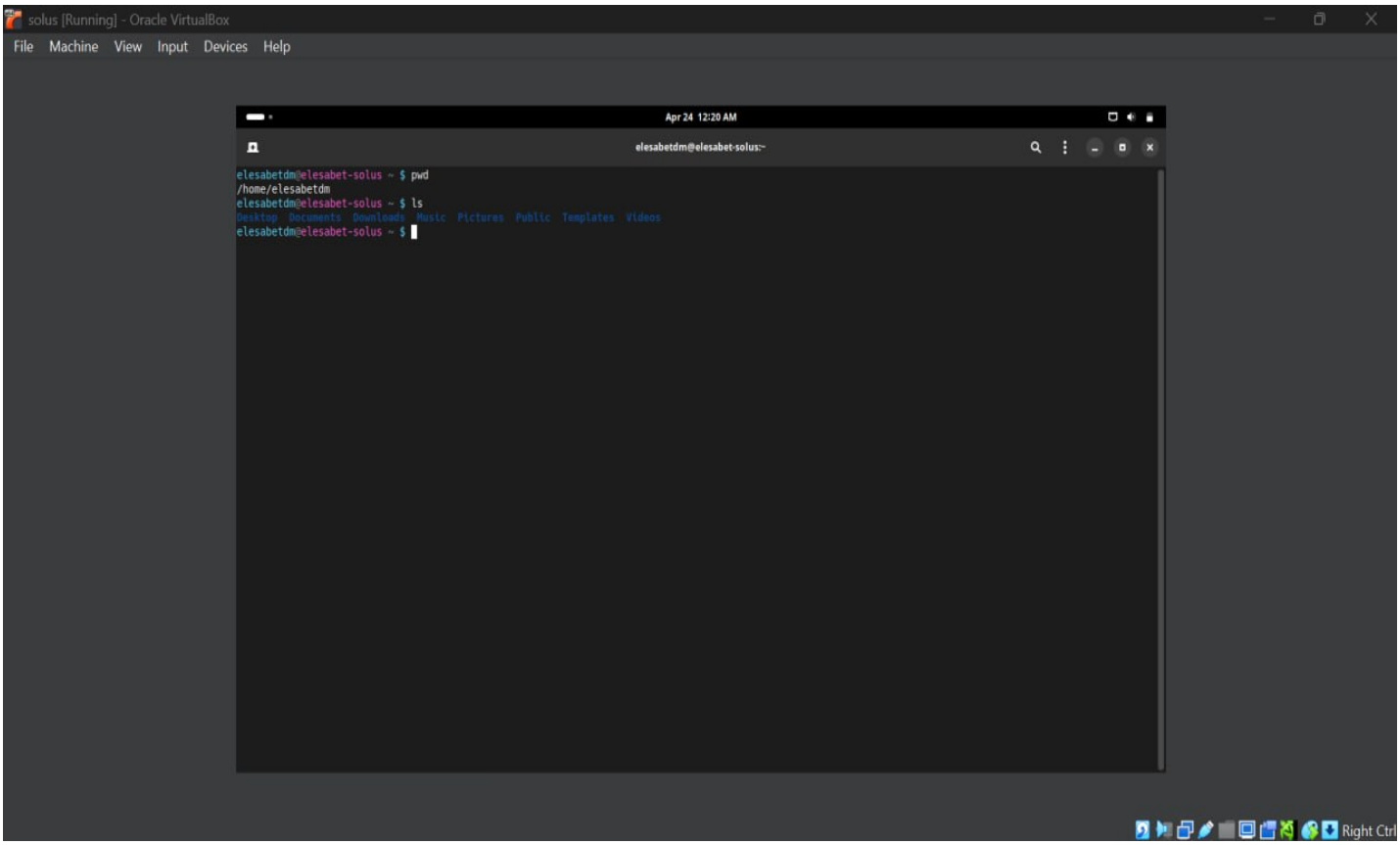
```
 Booting `Solus 4.7 Endurance (6.12.9-312.current)'

Loading Solus 4.7 Endurance 6.12.9 ...
Loading initial ramdisk
```

Right Ctrl


solus [Running] - Oracle VirtualBox
File
Machine
View
Input
Devices
Help
Apr 24 12:10 AM
elesabetdm
Not listed?


solus [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Apr 24 12:15 AM
Type to search
Weather
Clocks
Calculator
Settings
System Monit...
Terminal
Utilities
Help
Calendar
Camera
Extensions
GParted
Hardware Dri...
LibreOffice
LibreOffice C...
LibreOffice Dr...
LibreOffice I...
LibreOffice W...
Manage Printi...
Print Settings
Text Editor
Thunderbird
Rhythmbox
Right Ctrl


solus [Running] - Oracle VirtualBox
File
Machine
View
Input
Devices
Help
Apr 24 12:11 AM
Elesabet Degu Mekonnen
1601341
Right Ctrl


solus [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Apr 24 12:20 AM
elesabetdm@elesabet-solus:~
elesabetdm@elesabet-solus ~ $ pwd
/home/elesabetdm
elesabetdm@elesabet-solus ~ $ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
elesabetdm@elesabet-solus ~ $
Right Ctrl

solus [Running] - Oracle VirtualBox

File Machine View Input Devices Help

Apr 24 1:41 AM

elesabetdm@elesabet-solus:~/Desktop

```
  GNU nano 8.3                    cc.c                    Modified
#include<sys/syscall.h>

#include<errno.h>

#define MY_SYSCALL_NUMBER 548

int main(int argc, char*argv[])
{
int argument =123;
long result =syscall(MY_SYSCALL_NUMBER, argument);

if (result == -1)
{
perror("syscall");
return 1;
}

printf("System call returned:%ld\n"\, result);
return 0;
}

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^/ Go To Line
```

Right Ctrl

solus [Running] - Oracle VirtualBox

File Machine View Input Devices Help

Apr 24 12:44 AM

elesabetdm@elesabet-solus:~/Desktop/cpp

```
elesabetdm@elesabet-solus ~ $ pwd
/home/elesabetdm
elesabetdm@elesabet-solus ~ $ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
elesabetdm@elesabet-solus ~ $ cd Desktop
elesabetdm@elesabet-solus ~/Desktop $ mkdir cpp
elesabetdm@elesabet-solus ~/Desktop $ cd cpp
elesabetdm@elesabet-solus ~/Desktop/cpp $ nano cpp.cpp
elesabetdm@elesabet-solus ~/Desktop/cpp $ nano cpp.cpp
elesabetdm@elesabet-solus ~/Desktop/cpp $ gcc cppp.c
bash: gcc: command not found
elesabetdm@elesabet-solus ~/Desktop/cpp $
```

Right Ctrl

solus [Running] - Oracle VirtualBox

File Machine View Input Devices Help

Apr 24 12:52 AM

elesabetdm@elesabet-solus:~

```
elesabetdm@elesabet-solus ~/Desktop $ mkdir cpp
elesabetdm@elesabet-solus ~/Desktop $ cd cpp
elesabetdm@elesabet-solus ~/Desktop/cpp $ nano cpp.cpp
elesabetdm@elesabet-solus ~/Desktop/cpp $ nano cpp.cpp
elesabetdm@elesabet-solus ~/Desktop/cpp $ gcc cppp.c
bash: gcc: command not found
elesabetdm@elesabet-solus ~/Desktop/cpp $ cd ..
elesabetdm@elesabet-solus ~/Desktop $ cd ..
elesabetdm@elesabet-solus ~ $ sudo eopkg it -c system.devel

We trust you have received the usual lecture from the local System
Administrator. It usually boils down to these three things:

    #1) Respect the privacy of others.
    #2) Think before you type.
    #3) With great power comes great responsibility.

For security reasons, the password you type will not be visible.

[sudo] password for elesabetdm:
1Sorry, try again.
[sudo] password for elesabetdm:
Sorry, try again.
[sudo] password for elesabetdm:
Updates available, checking reverse dependencies of runtime dependencies for safety.
The following package(s) are already installed and are not going to be installed again:
nano  nano-syntax-highlighting
Safety switch forces the upgrade of following packages:
bash    bash-completion  btrfs-progs-libbtrfs  coreutils  curl     dbus      e2fsprogs   expat    glib2           glibc
hwdata  inetutils        isl                   less       libcbor  libfido2  libgcc      libgomp  libicu          libns
mpfr    nghttp2          nghttp3               openssl    sqlite3  systemd   util-linux  which    wireless-regdb  xz
Following packages will be installed:
aom                  appstream            asciify                  at-spi2                  autoconf
baobab               bash                 bash-completion          bash-completion-devel    bcachefs-tools
binutils             binutils-libs        bison                    blake3                   bluez
btrfs-progs-libbtrfs celluloid            cmake                    coreutils                cups-browsed
dbus                 dbus-devel           dbus-launch              diffstat                 diffutils
e2fsprogs            evince               evolution-data-server    exfatprogs               expat
fakeroot             ffmpeg               file-devel               file-roller              firefox
flex                 flex-devel           fluidsynth               fontconfig               freerdp
fuse-common          g++                  gcc                      gcr-4                    gdm
gexiv2               gfortran             giflib                   gjs                      glib2
glibc                glibc-devel          glibmm                   glibmm-2.68              glslang
```

Right Ctrl

Advantages of solus operating system

Solus stands out among Linux distributions for its focus on desktop computing and ease of use. Below are some of the key advantages that make Solus an attractive choice for both new and experienced Linux users:

1. Independent and Curated Rolling Release:Solus is an independent distribution, not based on Debian, Ubuntu, Arch, or any other.

It follows a curated rolling release model, which means users receive regular software

updates and improvements without needing to reinstall the OS.

This ensures long-term stability while still keeping software up to date.

2. User-Centric Design:Solus is built specifically for desktop users, not servers or enterprise.

It focuses on providing a clean, modern, and intuitive interface with minimal setup needed.

Ideal for home use, developers, and casual users alike.

3. Budgie Desktop Environment:Solus is the original home of the Budgie desktop, a modern, elegant, and performance-friendly environment.

Budgie combines the simplicity of traditional desktops with the aesthetics and fluidity of modern UIs.Other desktop environments like GNOME, MATE, and Plasma are also available.

4. Out-of-the-Box Functionality:Solus comes with essential applications pre-installed, such as:

Firefox (web browsing)

LibreOffice (productivity)

Multimedia apps (music and video playback)

Most hardware (Wi-Fi, Bluetooth, graphics cards) works without needing manual driver installation.

5. Lightweight and Efficient:Solus is optimized for performance and can run well on low to mid-range hardware.

System resource usage is minimal compared to other full-featured desktop OSes.

6. Secure and Private:Linux-based systems like Solus are inherently more secure due to permission-based architecture and open-source transparency.

Solus does not collect telemetry or user data by default, ensuring user privacy.

7. Strong Developer Support:Solus provides excellent tools for software development, including build-essential packages, IDEs, compilers, and language support.

The eopkg package manager is easy to use and provides access to a curated repository

of tested software.

8. Active Community and Documentation:The Solus community is active and helpful, with forums, a Reddit community, and social channels.

Well-maintained documentation and beginner-friendly guides are available on the official site.

Disadvantage of solus operating system

Solus offers many benefits, it also has a few limitations that users should be aware of. These disadvantages stem primarily from its independent development and smaller user base compared to mainstream Linux distributions.

1. Limited Software Repository:Solus maintains a curated and smaller repository of applications compared to larger distributions like Ubuntu or Arch.

Some niche or less popular software may not be available directly through the Software Center or eopkg.Users may need to compile software from source or rely on third-party solutions like Flatpak.

2. No Official 32-bit Support:Solus only supports 64-bit systems, which excludes older computers that rely on 32-bit architecture.

Legacy software requiring 32-bit compatibility (like some older games or applications) may not run easily.

3. Not UNIX Certified:Solus is a Unix-like OS but is not POSIX-compliant or UNIX certified, which may affect compatibility with some enterprise or legacy Unix tools.

4. Smaller Community and Ecosystem:Solus has a smaller user and developer base compared to popular distributions like Ubuntu, Fedora, or Debian.

This may lead to slower issue resolution, fewer tutorials, and limited third-party support.

5. Compatibility Issues in Some Use Cases:Due to its independent base, some third-party applications (especially proprietary software) might lack first-class support.

Enterprise-grade tools or server software may not be compatible or officially supported.

6. Slower Package Updates for Some Apps:While Solus is a rolling release, it’s a curated one, so package updates can sometimes lag behind those in bleeding-edge distros like Arch or Fedora Rawhide.Users wanting the absolute latest versions of software might

find this limiting.

7. Limited Customization in Software Manager:The Software Center in Solus is beginner -friendly but lacks advanced features for power users (e.g., advanced search filters, third -party repo management).

8. Learning Curve for Non-Ubuntu Users:Since Solus is not based on Ubuntu or Debian, users familiar with apt or dpkg need to learn eopkg, Solus's own package manager.This can be a slight adjustment for newcomers or users switching from other Linux environments.

Conclusion about solus operating system

Solus is a unique, independently developed Linux distribution that focuses on delivering a streamlined, user-friendly desktop experience. With its curated rolling release model, it balances access to the latest software with system stability. Its flagship Budgie desktop environment is clean, modern, and well-integrated, making it ideal for users seeking an out-of-the-box experience. Solus is particularly suited for developers and desktop users who want performance, simplicity, and a cohesive software ecosystem. However, since it's a smaller project, it may lack the extensive community support and software availability found in more mainstream distributions.

Future outlook and recommendation for solus operating system

The future of Solus depends largely on its community involvement and development momentum. While Solus has shown promise with its unique approach and polished desktop environments, especially Budgie, it faces challenges in keeping up with larger distributions due to a smaller development team and limited resources. Stability and innovation can be affected if community engagement doesn't grow.

Recommendations::

1. For Users: Solus is a solid choice for desktop users who value a clean, performance-focused environment. It's especially good for developers and Linux enthusiasts seeking a lightweight yet modern system. However, users who rely on broader hardware or software support might prefer more established distributions like Fedora or Ubuntu.

2. For Developers: Continued contributions and community support are vital. Interested developers can help strengthen Solus by contributing code, documentation, or support to ensure long-term sustainability.

3. For the Project: Expanding community outreach, improving documentation, and

ensuring consistent updates will be key to its continued relevance in the Linux ecosystem.

In summary, Solus has strong potential, but its long-term success will hinge on community growth, consistent development, and strategic direction.

Virtualization in solus operating system

What is Virtualization in Solus OS?

The ability to operate virtual machines (VMs) with programs like QEMU, KVM, or VirtualBox is referred to as virtualization in Solus OS. With the use of these technologies, Solus can serve as a host for several operating systems running concurrently, each on separate "virtual" hardware.

Why Virtualization in Solus OS?

1. Testing & Development: Run different OSes or environments without dual booting.

2. Isolation: Keep apps or experiments in a contained VM.

3. Server/Container Hosting: Solus can host VMs or even containers (via tools like Docker or Podman).

4. Cross-platform Compatibility: Run Windows/macOS/Linux in a VM if needed.

How Virtualization Works in Solus OS

1. Kernel Support:

Solus includes KVM (Kernel-based Virtual Machine) modules if your CPU supports VT-x/AMD-V.

Modules: kvm, kvm_intel, or kvm_amd.

2. Software Stack:

QEMU + KVM: Main virtualization backend.

Virt-Manager: GUI tool to manage VMs.

Libvirt: Optional, provides APIs for VM management.

VirtualBox: Also available, useful for GUI-driven virtualization.

3. How to Use (Example with QEMU/KVM):

Install tools:sudo eopkg it qemu virt-manager

Enable virtualization in BIOS.

Add user to libvirt/kvm group:

sudo usermod -aG kvm,libvirt $USER

Reboot and run virt-manager to create and manage VMs.

References

Official Resources

1. Solus Project Website

https://getsol.us/

Official homepage for downloads, desktop environment options (Budgie, GNOME, Plasma, MATE), and distro overview

2. Solus Help Center / Documentation

https://help.getsol.us/

Official documentation including installation guides, software management, and troubleshooting

3. Solus Dev Blog (The Roundup)

https://getsol.us/blog/

4.YouTube videos related to installation of solus operating system.