

Installation Guide

This guide provides detailed instructions for installing and setting up the GeckoTerminal Data Collector.

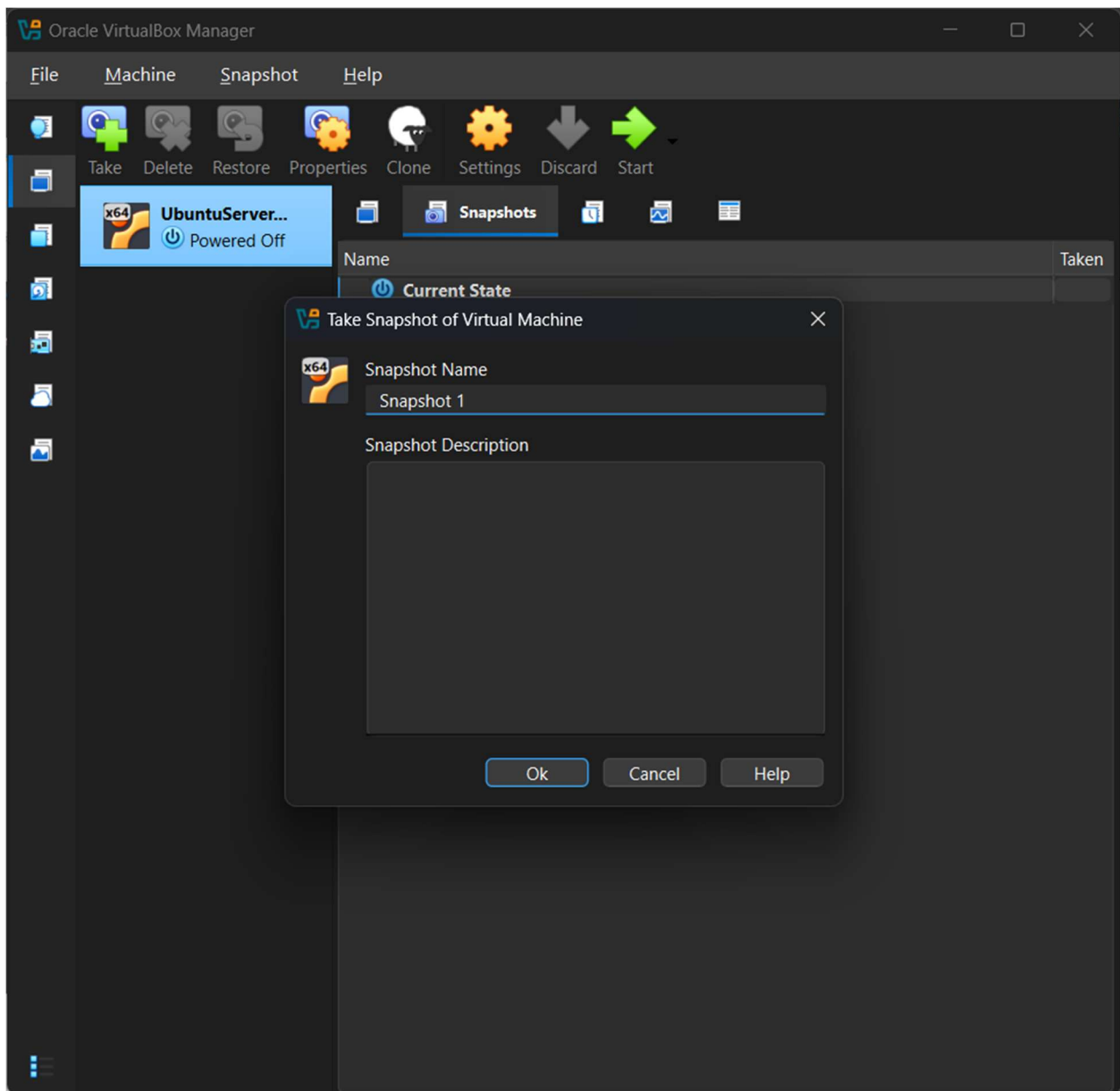
```
UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox
gecko_collector=# cls
SELECT * FROM collection_metadata ORDER BY last_run DESC;
ERROR: syntax error at or near "cls"
LINE 1: cls
      ^

gecko_collector=# ;
gecko_collector=# SELECT * FROM collection_metadata ORDER BY last_run DESC;
 id | collector_type | last_run | last_success | run_co
unt | error_count | last_error | metadata_json | created_at | updated_at
-----+-----+-----+-----+-----+-----
  2 | new_pools_solana | 2025-10-15 19:05:37.034573+00 | 2025-10-15 19:05:37.034573+00 |
38 | 0 | | {} | 2025-10-15 12:55:38.669+00 | 2025-10-15 19:05:38
.194508+00
  1 | top_pools_solana | 2025-10-15 19:05:37.022061+00 | 2025-10-15 19:05:37.022061+00 |
76 | 0 | | {} | 2025-10-15 12:50:39.709445+00 | 2025-10-15 19:05:38
.750816+00
  3 | trade_collector | 2025-10-15 18:45:37.331916+00 | 2025-10-15 18:45:37.331916+00 |
12 | 0 | | {} | 2025-10-15 13:15:38.335375+00 | 2025-10-15 18:45:39
.206307+00
  6 | ohlcv_collector | 2025-10-15 18:45:37.314712+00 | 2025-10-15 18:45:37.314712+00 |
  6 | 0 | | {} | 2025-10-15 13:45:52.903395+00 | 2025-10-15 18:45:54
.960488+00
  7 | watchlist_collector | 2025-10-15 18:45:37.279894+00 | 2025-10-15 18:45:37.279894+00 |
  6 | 0 | | {} | 2025-10-15 13:45:53.07983+00 | 2025-10-15 18:45:55
.187625+00
  4 | watchlist_monitor | 2025-10-15 18:45:37.264008+00 | 2025-10-15 18:45:37.264008+00 |
  6 | 0 | | {} | 2025-10-15 13:45:37.3084+00 | 2025-10-15 18:45:37
.36844+00
  5 | dex_monitoring_solana | 2025-10-15 18:45:37.232625+00 | 2025-10-15 18:45:37.232625+00 |
  6 | 0 | | {} | 2025-10-15 13:45:38.419392+00 | 2025-10-15 18:45:39
.197509+00
(7 rows)

(END)
```

UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox					
type	name	signal_score	momentum_indicator	activity_score	volatility_score
pool	Rizzoween / SOL	5.2300	0.2510	21.8000	0.7530
pool	Rizzoween / SOL	18.1507	0.0000	20.6000	0.0000
pool	ZBT--PRE / SOL	58.3126	13.8830	19.8286	41.6490
pool	Shiba Inu / SOL	4.2104	0.0000	20.6000	0.0000
pool	GT / SOL	9.4176	4.4110	16.9333	13.2330
pool	Mookie / SOL	2.7030	1.8000	1.2000	5.4000
pool	Rizzoween / SOL	78.5988	197.7730	75.2481	100.0000
pool	Freedom / SOL	17.9601	6.4630	32.8174	19.3890
pool	gay / SOL	36.9502	-19.2750	24.6667	57.8250
pool	*♦♦♦ / SOL	40.2953	37.7920	22.4000	100.0000
pool	Proton / SOL	46.8113	12.9760	61.5180	38.9280
pool	Xiaomi / SOL	95.0212	910.9570	83.7570	100.0000
pool	ecxdece / SOL	4.2110	0.0000	20.6000	0.0000
pool	I Am Rich / SOL	4.6142	-1.6070	10.5333	4.8210
pool	NALA / SOL	9.7702	-2.5040	30.1684	7.5120
pool	NBI / SOL	7.7000	4.4740	8.4667	13.4220
pool	Bye-Nance / SOL	9.9557	-6.3030	7.0571	18.9090
pool	NIM / SOL	39.0278	39.8480	15.6667	100.0000
pool	CDI / USD1	3.8064	-2.6750	1.2000	8.0250
pool	Proton / SOL	2.2339	-0.3370	8.4667	1.0110
pool	Byenance / SOL	53.0750	168.2360	27.6788	100.0000
pool	token2049 / SOL	39.8271	70.5320	22.4000	100.0000
pool	♦♦♦♦ / SOL	2.9334	0.5960	8.4667	1.7880
pool	Wait / SOL	31.3186	16.7420	3.6000	50.2260
pool	croco / SOL	17.8487	6.7380	30.0000	20.2140
pool	Proton / SOL	8.7075	-3.1490	23.0000	9.4470
pool	CZ ♦♦♦ / SOL	70.2849	96191.3680	72.4506	100.0000
pool	♦♦♦ / SOL	32.9356	7.3350	75.2593	22.0050
pool	\$JY / SOL	4.2110	0.0000	20.6000	0.0000
pool	Blacks / SOL	83.8586	36.2540	100.0000	100.0000
pool	ELF V1 / SOL	15.1528	5.0460	21.6000	15.1380
pool	♦♦♦ / SOL	4.1648	0.0000	20.6000	0.0000
pool	ELF V1 / SOL	30.6461	12.8400	12.0545	38.5200
pool	Gold / SOL	1.6676	-0.0200	7.0000	0.0600

To Learn More, Provide your Email Address for a guide on OHLCV Data Collection 😊



Purpose of snapshot – python installation can be difficult.

```
sudo apt update
```

```
sudo apt install postgresql postgresql-contrib
```

```
do-release-upgrade
```

- Upgrade glibc: y
- Obsolete major version 14 → ok
- Remove obsolete packages → y
- To finish the upgrade, a restart is required: y

1). Set up Postgres before proceeding with installation.

2). Make sure to use Conda Init / Python Environments are difficult.

Root User / Configured During Setup of VM (This is the Superuser for Database)

User: vboxuser

Pass: pass1234

Create Admin User for Setup Purposes / Production Usage

this is a test case on an internal VM

sudo -i -u postgres

psql

```
CREATE USER data_superuser WITH LOGIN SUPERUSER PASSWORD 'password1234';
```

```
CREATE USER data_user WITH ENCRYPTED PASSWORD 'pass1234'; # to theoretically allow  
for remote access, such as usage within Excel or SQLWorkbench.
```

```
CREATE DATABASE gecko_terminal_collector WITH ENCODING 'UTF8'  
LC_COLLATE='en_US.UTF-8' LC_CTYPE='en_US.UTF-8' TEMPLATE=template0 OWNER  
data_superuser;
```

```
GRANT ALL PRIVILEGES ON DATABASE gecko_terminal_collector TO data_superuser;
```

```
GRANT ALL PRIVILEGES ON DATABASE gecko_terminal_collector TO data_user;
```

Restart

```
sudo shutdown -r now
```

```
sudo systemctl start postgresql.service
```

```
python -m gecko_terminal_collector.cli db-setup
```

```
python -m gecko_terminal_collector.cli validate
```

```
cd geckoterminal_collector
```

```
conda activate gecko_env_3_11
```

UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

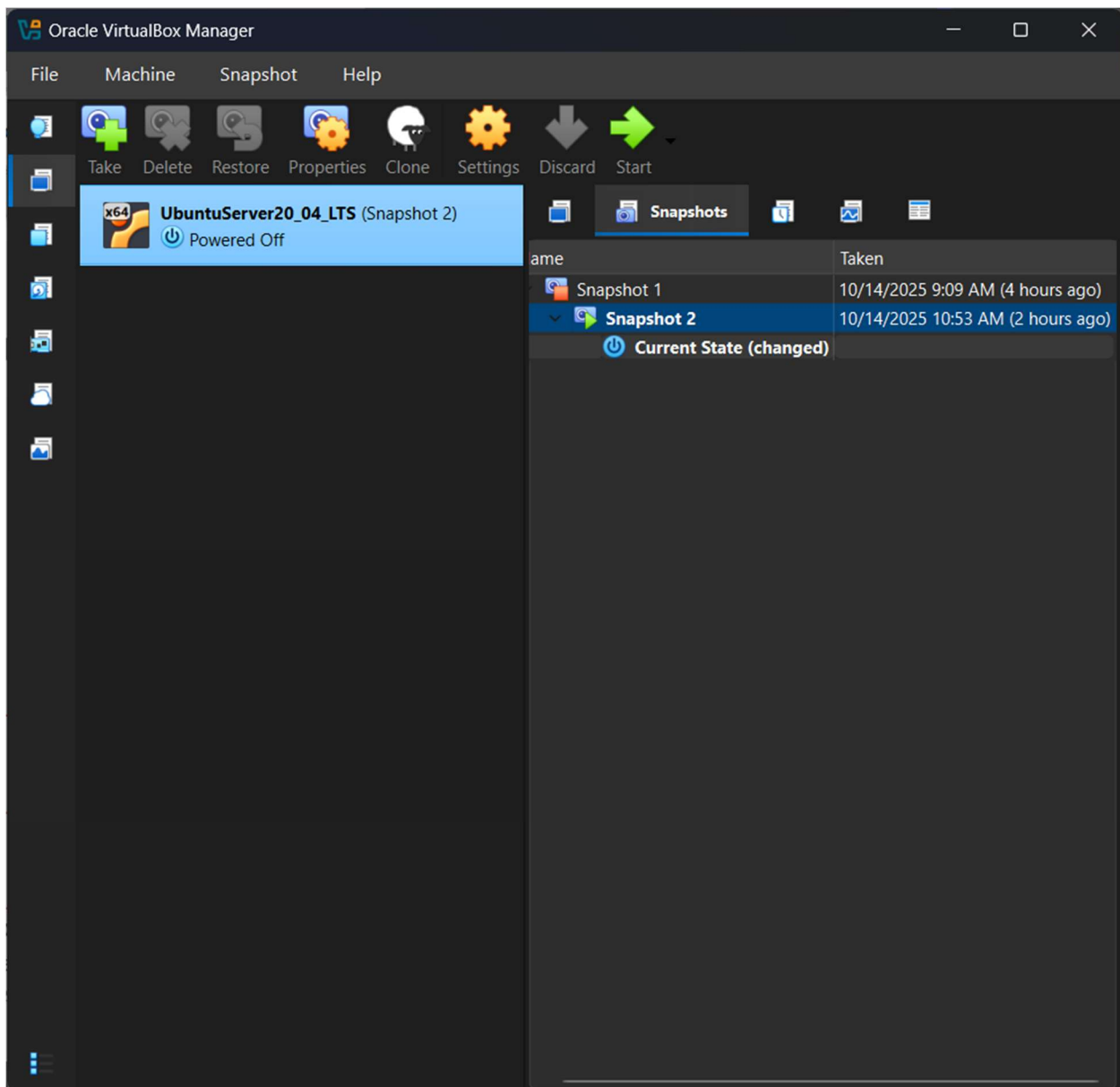
Learn more about enabling ESM Apps service at <https://ubuntu.com/esm>

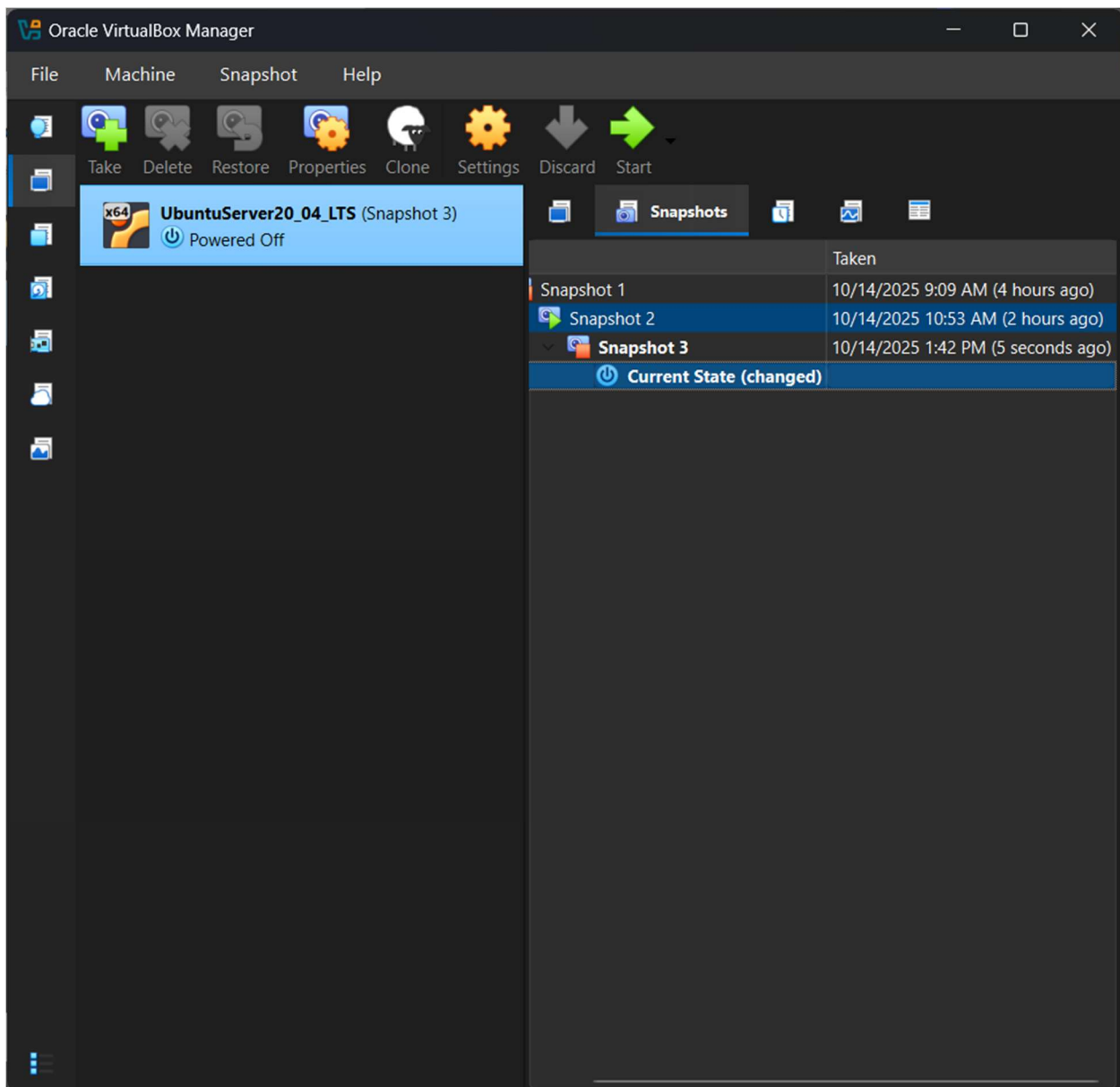
New release '24.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue Oct 14 18:30:34 UTC 2025 on tty1
(base) vboxuser@geckoterminalenv:~\$ sudo systemctl start postgresql.service
[sudo] password for vboxuser:
(base) vboxuser@geckoterminalenv:~\$ sudo -i -u postgres
postgres@geckoterminalenv:~\$ createuser --interactive
Enter name of role to add: gecko_collector
Shall the new role be a superuser? (y/n) y
postgres@geckoterminalenv:~\$ psql
psql (14.19 (Ubuntu 14.19-0ubuntu0.22.04.1))
Type "help" for help.

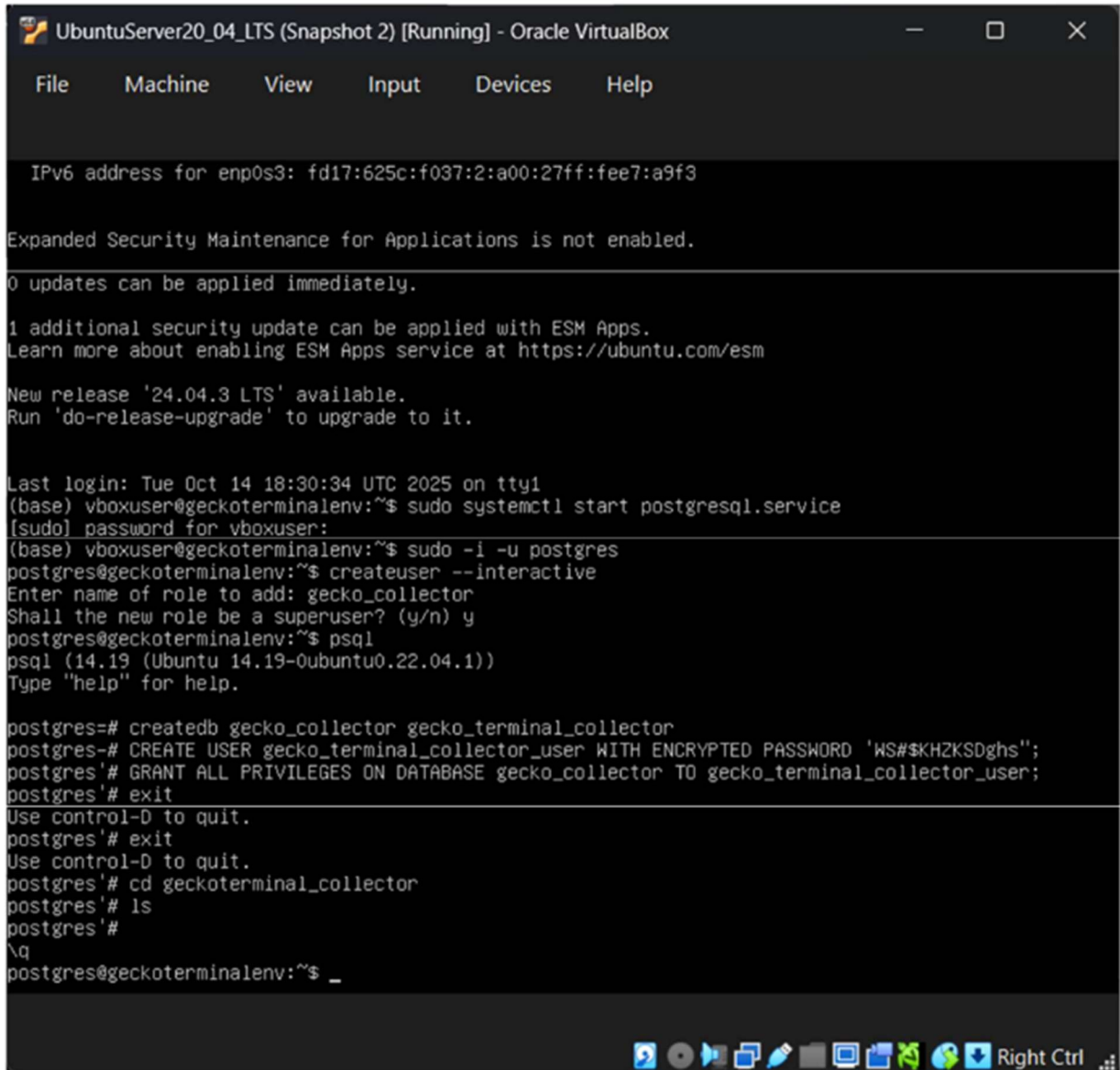
postgres=# createdb gecko_collector gecko_terminal_collector
postgres=# CREATE USER gecko_terminal_collector_user WITH ENCRYPTED PASSWORD 'WS\$KHZKSDghs';
postgres=# GRANT ALL PRIVILEGES ON DATABASE gecko_collector TO gecko_terminal_collector_user;
postgres=# exit
Use control-D to quit.
postgres=# exit
Use control-D to quit.
postgres=# cd geckoterminal_collector
postgres=# ls
postgres=#
\q
postgres@geckoterminalenv:~\$ cd geckoterminal_collector
-bash: cd: geckoterminal_collector: No such file or directory
postgres@geckoterminalenv:~\$ ls
14
postgres@geckoterminalenv:~\$ exit
logout
(base) vboxuser@geckoterminalenv:~\$ cd geckoterminal_collector
(base) vboxuser@geckoterminalenv:~/geckoterminal_collector\$ conda activate gecko_env_3_11
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector\$

Right Ctrl





Configure Database Stuff



```
IPv6 address for enp0s3: fd17:625c:f037:2:a00:27ff:fee7:a9f3

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

1 additional security update can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

New release '24.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue Oct 14 18:30:34 UTC 2025 on tty1
(base) vboxuser@geckoterminalenv:~$ sudo systemctl start postgresql.service
[sudo] password for vboxuser:
(base) vboxuser@geckoterminalenv:~$ sudo -i -u postgres
postgres@geckoterminalenv:~$ createuser --interactive
Enter name of role to add: gecko_collector
Shall the new role be a superuser? (y/n) y
postgres@geckoterminalenv:~$ psql
psql (14.19 (Ubuntu 14.19-0ubuntu0.22.04.1))
Type "help" for help.

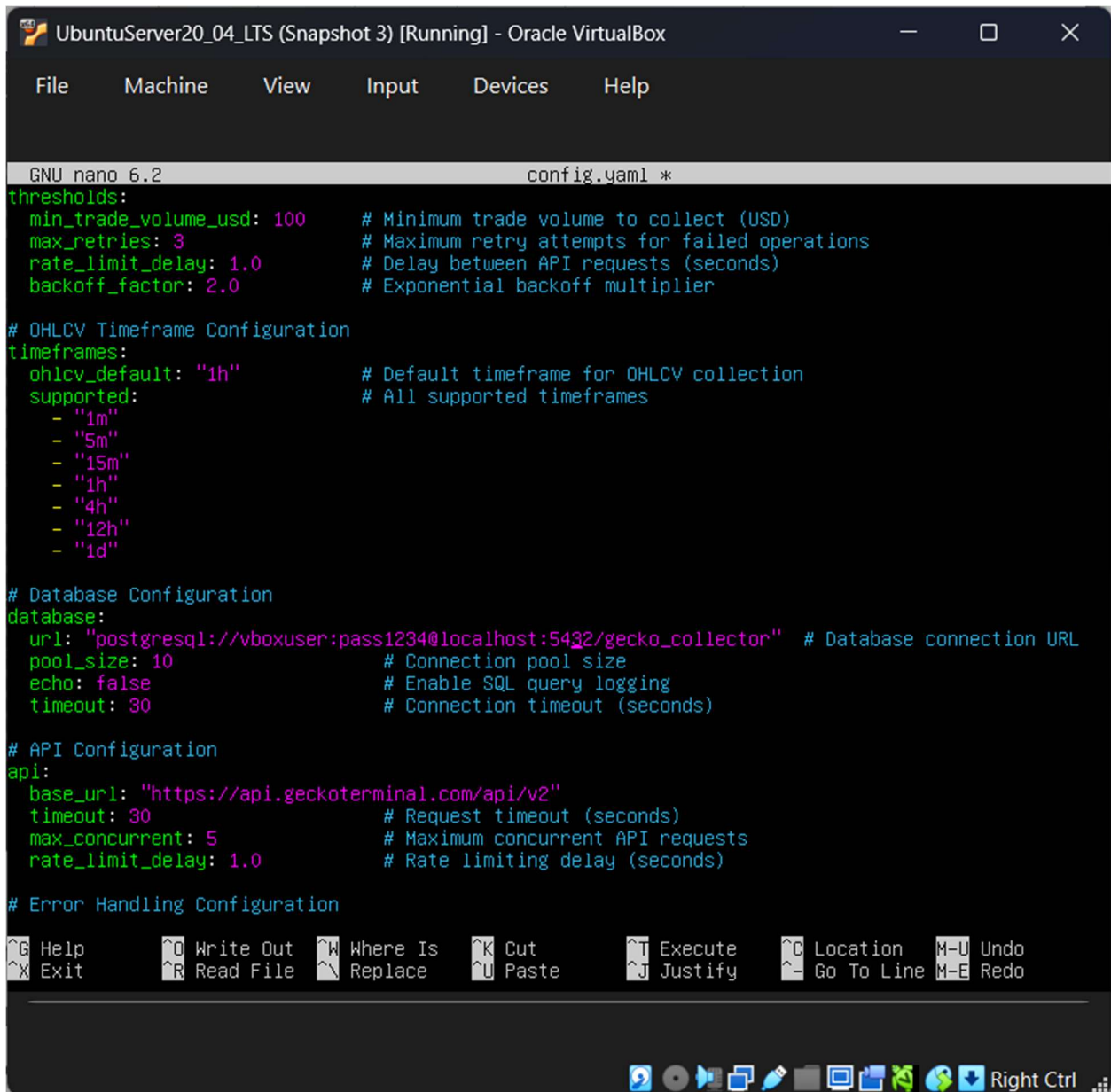
postgres=# createdb gecko_collector gecko_terminal_collector
postgres=# CREATE USER gecko_terminal_collector_user WITH ENCRYPTED PASSWORD 'WS#$KHZKSDghs";
postgres=# GRANT ALL PRIVILEGES ON DATABASE gecko_collector TO gecko_terminal_collector_user;
postgres=# exit
Use control-D to quit.
postgres=# exit
Use control-D to quit.
postgres=# cd geckoterminal_collector
postgres=# ls
postgres=#
\q
postgres@geckoterminalenv:~$ _
```

In this example, we are using two users:

superuser: gecko_collector

user: gecko_terminal_collector_user

during setup, use **gecko_collector** user



The screenshot shows a terminal window titled "UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox". The terminal is running GNU nano 6.2 and editing a file named "config.yaml". The configuration file contains several sections: "thresholds" with values for min_trade_volume_usd, max_retries, rate_limit_delay, and backoff_factor; "# OHLCV Timeframe Configuration" with a list of supported timeframes; "# Database Configuration" with database connection details; "# API Configuration" with API endpoint and rate limiting settings; and "# Error Handling Configuration". The terminal also shows a menu bar with various shortcuts like ^G Help, ^O Write Out, ^W Where Is, ^K Cut, ^T Execute, ^C Location, M-U Undo, ^X Exit, ^R Read File, ^N Replace, ^U Paste, ^J Justify, ^_ Go To Line, M-E Redo, and a status bar at the bottom with icons and "Right Ctrl".

```
GNU nano 6.2 config.yaml *
thresholds:
  min_trade_volume_usd: 100      # Minimum trade volume to collect (USD)
  max_retries: 3                 # Maximum retry attempts for failed operations
  rate_limit_delay: 1.0          # Delay between API requests (seconds)
  backoff_factor: 2.0            # Exponential backoff multiplier

# OHLCV Timeframe Configuration
timeframes:
  ohlcv_default: "1h"            # Default timeframe for OHLCV collection
  supported:                      # All supported timeframes
    - "1m"
    - "5m"
    - "15m"
    - "1h"
    - "4h"
    - "12h"
    - "1d"

# Database Configuration
database:
  url: "postgresql://vboxuser:pass1234@localhost:5432/gecko_collector" # Database connection URL
  pool_size: 10                  # Connection pool size
  echo: false                     # Enable SQL query logging
  timeout: 30                     # Connection timeout (seconds)

# API Configuration
api:
  base_url: "https://api.geckoterminal.com/api/v2"
  timeout: 30                     # Request timeout (seconds)
  max_concurrent: 5               # Maximum concurrent API requests
  rate_limit_delay: 1.0           # Rate limiting delay (seconds)

# Error Handling Configuration

^G Help      ^O Write Out  ^W Where Is  ^K Cut        ^T Execute   ^C Location  M-U Undo
^X Exit      ^R Read File  ^N Replace   ^U Paste       ^J Justify   ^_ Go To Line M-E Redo

Right Ctrl
```

User: gecko_terminal_collector

Pass:

```
UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

supported:                                # All supported timeframes
- "1m"
- "5m"
- "15m"
- "1h"
- "4h"
- "12h"
- "1d"

# Database Configuration
database:
url: "postgresql://data_user:pass1234@localhost:5432/gecko_collector" # Database connection URL
pool_size: 10 # Connection pool size
echo: false # Enable SQL query logging
timeout: 30 # Connection timeout (seconds)

# API Configuration
api:
base_url: "https://api.geckoterminal.com/api/v2"
timeout: 30 # Request timeout (seconds)
max_concurrent: 5 # Maximum concurrent API requests
rate_limit_delay: 1.0 # Rate limiting delay (seconds)

(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_collector.cli db-setup
Setting up database schema...
INFO: Database connection initialized
INFO: Creating database tables
INFO: Database tables created successfully
INFO: Using PostgreSQL database - no additional optimizations needed
INFO: SQLAlchemy database manager initialized
INFO: Synchronous database engine disposed
INFO: SQLAlchemy database manager closed
♦ Database setup completed successfully
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ _
```


New Virtual Machine



Set up unattended guest OS installation

Enter the information that will be required when the OS is installed.

User Name and Password

User Namevboxuser

Password

Confirm Password

OS Installation Options

Product Key#####-#####-#####-#####-#####

Host NameUbuntuServer

Domain Namemyguest.virtualbox.org

☒ Install in Background

☒ Install Guest Additions

Guest Additions ISO Image:

C:\Program Files\Oracle\VirtualBox\VBBoxGuestAdditions.iso

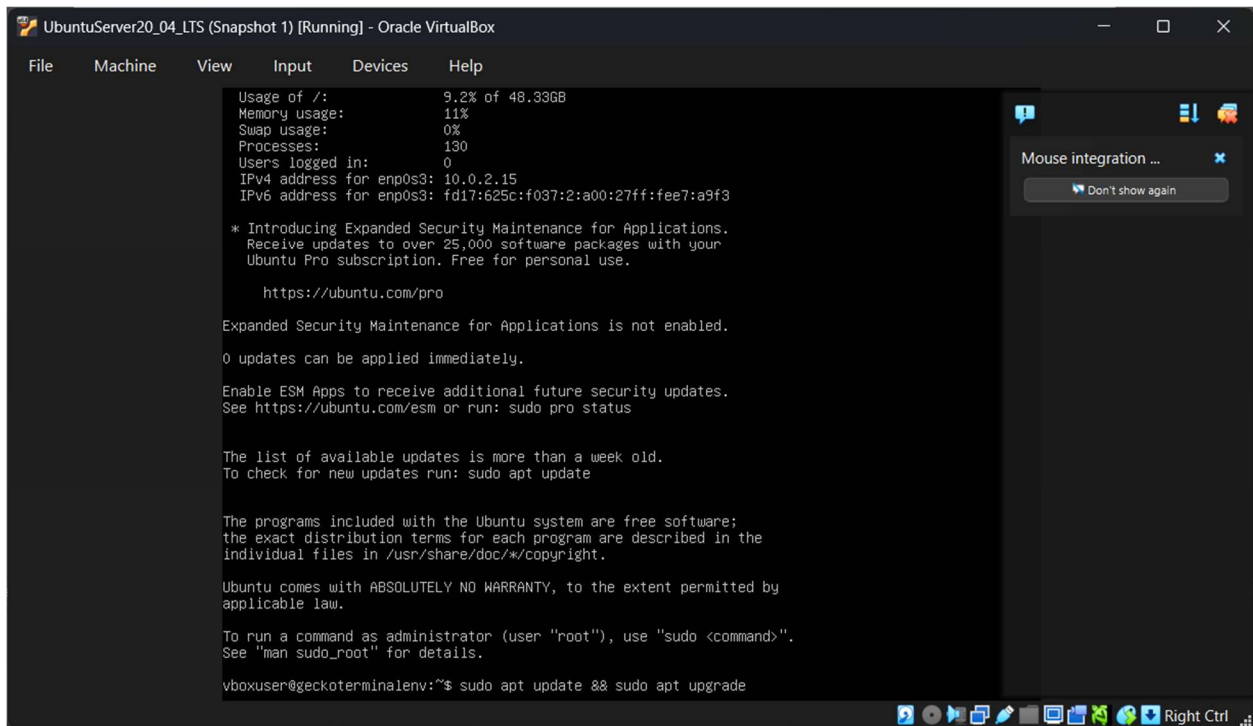
Help

BackNextCancel

Step 1: Prepare Linux Environment

Build Requirements

`sudo apt update && sudo apt upgrade`



The screenshot shows a terminal window titled "UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox". The terminal output displays system statistics, network information, and update status. A "Mouse integration ..." notification is visible on the right side of the terminal window.

```
Usage of /:          9.2% of 48.33GB
Memory usage:       11%
Swap usage:         0%
Processes:          130
Users logged in:    0
IPv4 address for enp0s3: 10.0.2.15
IPv6 address for enp0s3: fd17:625c:f037:2:a00:27ff:fee7:a9f3

* Introducing Expanded Security Maintenance for Applications.
  Receive updates to over 25,000 software packages with your
  Ubuntu Pro subscription. Free for personal use.

  https://ubuntu.com/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

vboxuser@geckoterminalenv:~$ sudo apt update && sudo apt upgrade
```

```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

Hit:4 http://us.archive.ubuntu.com/ubuntu focal-security InRelease
Fetched 128 kB in 1s (141 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
61 packages can be upgraded. Run 'apt list --upgradable' to see them.
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following security updates require Ubuntu Pro with 'esm-infra' enabled:
cloud-init linux-headers-generic openssl libblockdev-swap2 libssh-4
libpython3.8-minimal git-man libsystemd0 gcc-10-base linux-image-generic
libsqlite3-0 python3-urllib3 sudo libpython3.8 python3.8 open-vm-tools git
libblockdev-crypto2 udev libblockdev-loop2 libblockdev-fs2 libblockdev-part2
python3-requests libudev1 libsoup2.4-1 systemd-timesyncd udisks2
python3.8-minimal systemd-sysv libblockdev2 libpam-systemd systemd
libblockdev-utils2 libnss-systemd libblockdev-part-err2 libgcc-s1 libxml2
libpython3.8-stdlib libgnutls30 libudisks2-0 libssl1.1 libstdc++6
linux-generic libssl1.1
Learn more about Ubuntu Pro at https://ubuntu.com/pro
The following NEW packages will be installed:
python3-packaging python3-pyparsing ubuntu-pro-client ubuntu-pro-client-110n
The following packages will be upgraded:
apt apt-utils base-files bolt cloud-init cryptsetup cryptsetup-bin cryptsetup-initramfs
cryptsetup-run distro-info distro-info-data e2fsprogs fwupd initramfs-tools initramfs-tools-bin
initramfs-tools-core iptables iputils-ping iputils-tracepath kpartx landscape-common
libapt-pkg6.0 libcom-err2 libcryptsetup12 libext2fs2 libfwupd2 libfwupdplugin5 libgpgme11
libip4tc2 libip6tc2 libnss-systemd libpam-systemd libpcap0.8 libss2 libsystemd0 libudev1
libunwind8 libxtables12 logsave ltrace mtd-news-config multipath-tools open-iscsi pollinate
python3-debian python3-distro-info python3-software-properties python3-update-manager snapd
software-properties-common sosreport systemd systemd-sysv systemd-timesyncd tcpdump
ubuntu-advantage-tools udev ufw update-manager-core update-notifier-common xfsprogs
61 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
Need to get 43.1 MB of archives.
After this operation, 6,544 kB of additional disk space will be used.
Do you want to continue? [Y/n]
```

`curl https://sh.rustup.rs -sSf | sh`

```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

/home/vboxuser/.rustup

This can be modified with the RUSTUP_HOME environment variable.

The Cargo home directory is located at:

/home/vboxuser/.cargo

This can be modified with the CARGO_HOME environment variable.

The cargo, rustc, rustup and other commands will be added to
Cargo's bin directory, located at:

/home/vboxuser/.cargo/bin

This path will then be added to your PATH environment variable by
modifying the profile files located at:

/home/vboxuser/.profile
/home/vboxuser/.bashrc

You can uninstall at any time with rustup self uninstall and
these changes will be reverted.

Current installation options:

default host triple: x86_64-unknown-linux-gnu
default toolchain: stable (default)
profile: default
modify PATH variable: yes

1) Proceed with standard installation (default - just press enter)
2) Customize installation
3) Cancel installation
>
```

UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
/home/vboxuser/.rustup

This can be modified with the RUSTUP_HOME environment variable.

The Cargo home directory is located at:

/home/vboxuser/.cargo

This can be modified with the CARGO_HOME environment variable.

The cargo, rustc, rustup and other commands will be added to
Cargo's bin directory, located at:

/home/vboxuser/.cargo/bin

This path will then be added to your PATH environment variable by
modifying the profile files located at:

/home/vboxuser/.profile
/home/vboxuser/.bashrc

You can uninstall at any time with rustup self uninstall and
these changes will be reverted.

Current installation options:

    default host triple: x86_64-unknown-linux-gnu
    default toolchain: stable (default)
    profile: default
    modify PATH variable: yes

1) Proceed with standard installation (default - just press enter)
2) Customize installation
3) Cancel installation
>1_
```

Mouse integration ...
Don't show again

Right Ctrl

UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
4.3 MiB / 4.3 MiB (100 %) 1.9 MiB/s in 1s
info: downloading component 'rust-docs'
20.5 MiB / 20.5 MiB (100 %) 4.5 MiB/s in 4s
info: downloading component 'rust-std'
27.8 MiB / 27.8 MiB (100 %) 4.7 MiB/s in 5s
info: downloading component 'rustc'
78.7 MiB / 78.7 MiB (100 %) 8.3 MiB/s in 11s
info: downloading component 'rustfmt'
2.2 MiB / 2.2 MiB (100 %) 1.7 MiB/s in 1s
info: installing component 'cargo'
info: installing component 'clippy'
info: installing component 'rust-docs'
20.5 MiB / 20.5 MiB (100 %) 3.4 MiB/s in 4s
info: installing component 'rust-std'
27.8 MiB / 27.8 MiB (100 %) 18.3 MiB/s in 1s
info: installing component 'rustc'
78.7 MiB / 78.7 MiB (100 %) 19.6 MiB/s in 4s
info: installing component 'rustfmt'
info: default toolchain set to 'stable-x86_64-unknown-linux-gnu'

stable-x86_64-unknown-linux-gnu installed - rustc 1.90.0 (1159e78c4 2025-09-14)

Rust is installed now. Great!

To get started you may need to restart your current shell.
This would reload your PATH environment variable to include
Cargo's bin directory ($HOME/.cargo/bin).

To configure your current shell, you need to source
the corresponding env file under $HOME/.cargo.

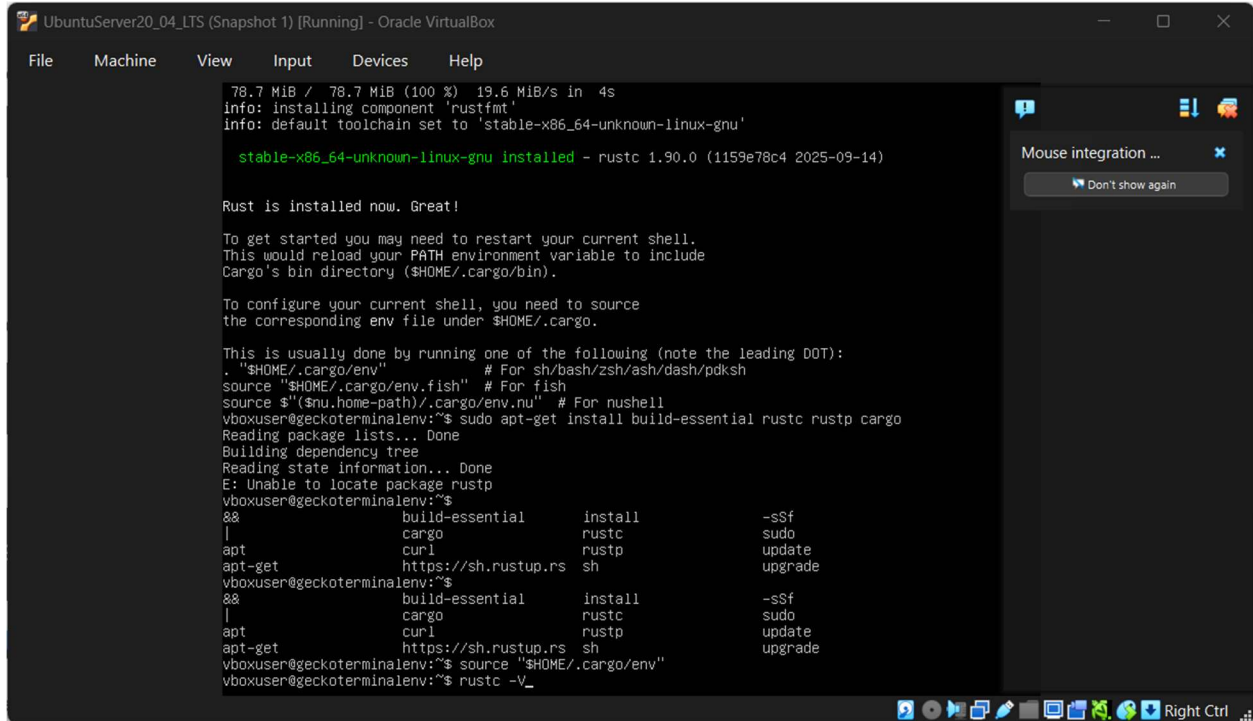
This is usually done by running one of the following (note the leading DOT):
. "$HOME/.cargo/env" # For sh/bash/zsh/ash/dash/pdksh
source "$HOME/.cargo/env.fish" # For fish
source "$($nu.home-path)/.cargo/env.nu" # For nushell
vboxuser@geckoterminalenv:~$
```

Mouse integration ...
Don't show again

Right Ctrl

source "\$HOME/.cargo/env"

rustc -V



```
78.7 MiB / 78.7 MiB (100 %) 19.6 MiB/s in 4s
info: installing component 'rustfmt'
info: default toolchain set to 'stable-x86_64-unknown-linux-gnu'

stable-x86_64-unknown-linux-gnu installed - rustc 1.90.0 (1159e78c4 2025-09-14)

Rust is installed now. Great!

To get started you may need to restart your current shell.
This would reload your PATH environment variable to include
Cargo's bin directory ($HOME/.cargo/bin).

To configure your current shell, you need to source
the corresponding env file under $HOME/.cargo.

This is usually done by running one of the following (note the leading DOT):
. "$HOME/.cargo/env" # For sh/bash/zsh/ash/dash/pdksh
source "$HOME/.cargo/env.fish" # For fish
source "${nu.home-path}/.cargo/env.nu" # For nushell
vboxuser@geckoterminalenv:~$ sudo apt-get install build-essential rustc rustp cargo
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package rustp
vboxuser@geckoterminalenv:~$
  &&          build-essential      install          -s$
  |           cargo                rustc            sudo
apt           curl                 rustp            update
apt-get      https://sh.rustup.rs      sh              upgrade
vboxuser@geckoterminalenv:~$
  &&          build-essential      install          -s$
  |           cargo                rustc            sudo
apt           curl                 rustp            update
apt-get      https://sh.rustup.rs      sh              upgrade
vboxuser@geckoterminalenv:~$ source "$HOME/.cargo/env"
vboxuser@geckoterminalenv:~$ rustc -V_
```

```
info: default toolchain set to 'stable-x86_64-unknown-linux-gnu'

stable-x86_64-unknown-linux-gnu installed - rustc 1.90.0 (1159e78c4 2025-09-14)

Rust is installed now. Great!

To get started you may need to restart your current shell.
This would reload your PATH environment variable to include
Cargo's bin directory ($HOME/.cargo/bin).

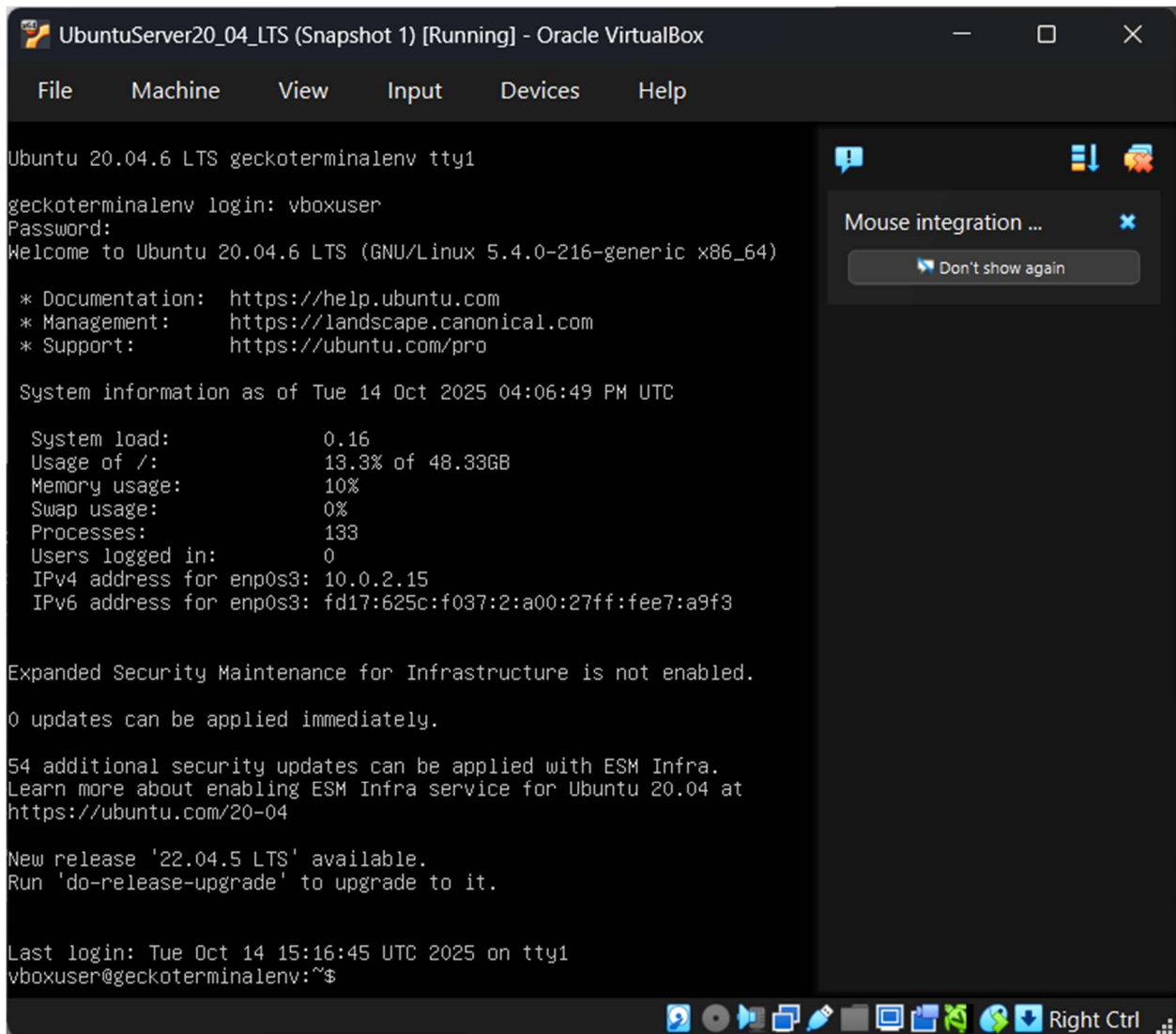
To configure your current shell, you need to source
the corresponding env file under $HOME/.cargo.

This is usually done by running one of the following (note the leading DOT):
. "$HOME/.cargo/env" # For sh/bash/zsh/ash/dash/pdksh
source "$HOME/.cargo/env.fish" # For fish
source "$($nu.home-path)/.cargo/env.nu" # For nushell
vboxuser@geckoterminalenv:~$ sudo apt-get install build-essential rustc rustp cargo
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package rustp
vboxuser@geckoterminalenv:~$
  &&          build-essential      install      -sSf
  |           cargo                rustc        sudo
  apt         curl                 rustp       update
  apt-get     https://sh.rustup.rs sh             upgrade
vboxuser@geckoterminalenv:~$
  &&          build-essential      install      -sSf
  |           cargo                rustc        sudo
  apt         curl                 rustp       update
  apt-get     https://sh.rustup.rs sh             upgrade
vboxuser@geckoterminalenv:~$ source "$HOME/.cargo/env"
vboxuser@geckoterminalenv:~$ rustc -V
rustc 1.90.0 (1159e78c4 2025-09-14)
vboxuser@geckoterminalenv:~$
```

sudo apt update

```
This is usually done by running one of the following (note the leading DOT):
. "$HOME/.cargo/env" # For sh/bash/zsh/ash/dash/pdksh
source "$HOME/.cargo/env.fish" # For fish
source "$($nu.home-path)/.cargo/env.nu" # For nushell
vboxuser@geckoterminalenv:~$ sudo apt-get install build-essential rustc rustp cargo
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package rustp
vboxuser@geckoterminalenv:~$
  &&          build-essential      install      -sSf
  |           cargo                rustc        sudo
  apt         curl                 rustp       update
  apt-get     https://sh.rustup.rs sh             upgrade
vboxuser@geckoterminalenv:~$
  &&          build-essential      install      -sSf
  |           cargo                rustc        sudo
  apt         curl                 rustp       update
  apt-get     https://sh.rustup.rs sh             upgrade
vboxuser@geckoterminalenv:~$ source "$HOME/.cargo/env"
vboxuser@geckoterminalenv:~$ rustc -V
rustc 1.90.0 (1159e78c4 2025-09-14)
vboxuser@geckoterminalenv:~$ sudo apt-get install build-essential rustc rustp cargo
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package rustp
vboxuser@geckoterminalenv:~$ sudo apt update
Hit:1 http://us.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://us.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 http://us.archive.ubuntu.com/ubuntu focal-security InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
vboxuser@geckoterminalenv:~$
```

```
sudo shutdown -r now
```



UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
Ubuntu 20.04.6 LTS geckoterminalenv tty1
geckoterminalenv login: vboxuser
Password:
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.4.0-216-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Tue 14 Oct 2025 04:06:49 PM UTC

System load:          0.16
Usage of /:            13.3% of 48.33GB
Memory usage:         10%
Swap usage:           0%
Processes:            133
Users logged in:      0
IPv4 address for enp0s3: 10.0.2.15
IPv6 address for enp0s3: fd17:625c:f037:2:a00:27ff:fee7:a9f3

Expanded Security Maintenance for Infrastructure is not enabled.
0 updates can be applied immediately.

54 additional security updates can be applied with ESM Infra.
Learn more about enabling ESM Infra service for Ubuntu 20.04 at
https://ubuntu.com/20-04

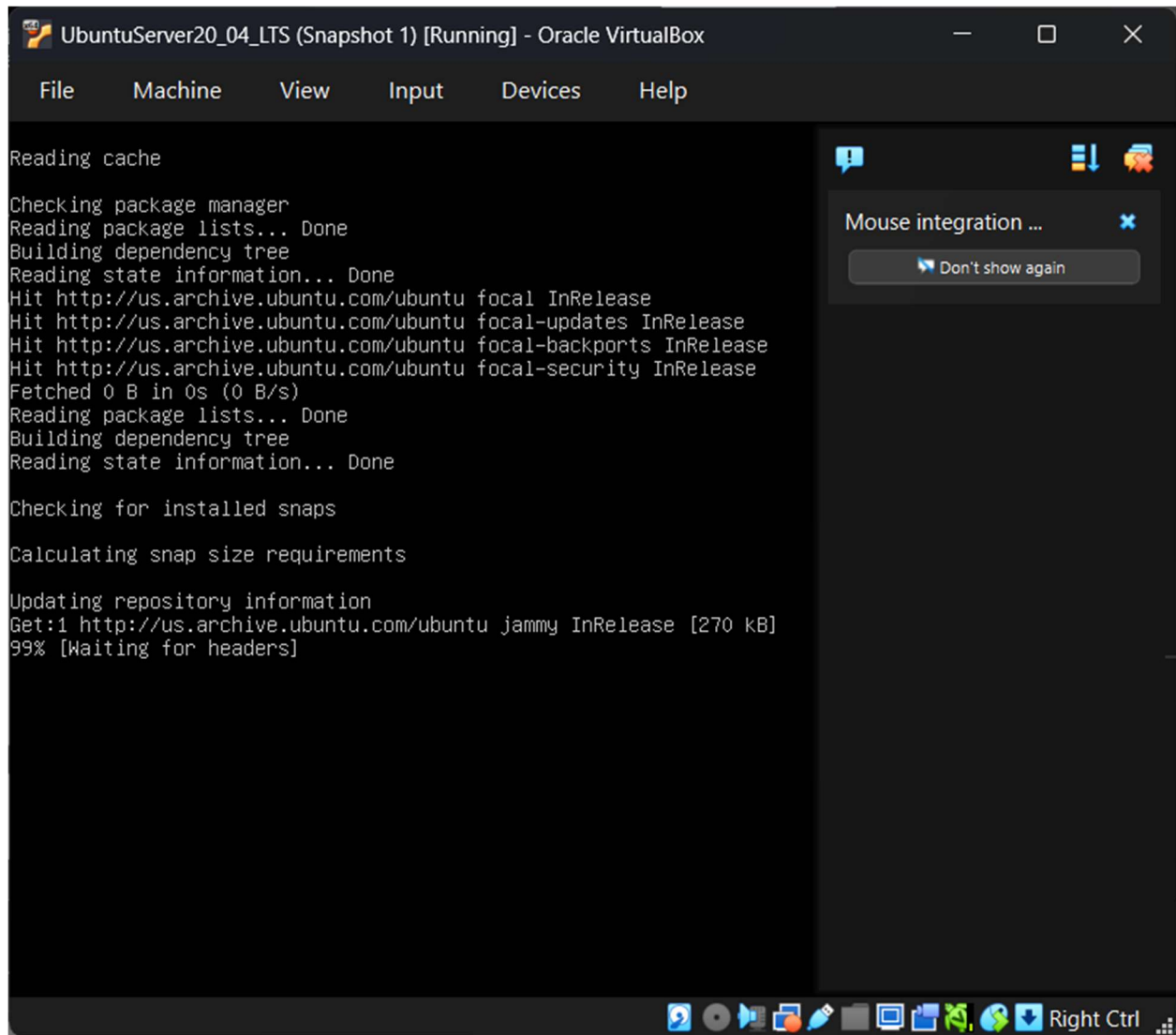
New release '22.04.5 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue Oct 14 15:16:45 UTC 2025 on tty1
vboxuser@geckoterminalenv:~$
```

Mouse integration ...
Don't show again

Right Ctrl

do-release-upgrade



The screenshot shows a terminal window titled "UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox". The terminal output shows the process of upgrading from Ubuntu 20.04 LTS to 22.04 LTS (Jammy). The process includes reading the cache, checking the package manager, reading package lists, building a dependency tree, and reading state information. It then checks for installed snaps and calculates snap size requirements. Finally, it updates repository information and fetches the new release information from the archive. A "Mouse integration ..." notification is visible on the right side of the terminal window.

```
Reading cache
Checking package manager
Reading package lists... Done
Building dependency tree
Reading state information... Done
Hit http://us.archive.ubuntu.com/ubuntu focal InRelease
Hit http://us.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit http://us.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit http://us.archive.ubuntu.com/ubuntu focal-security InRelease
Fetched 0 B in 0s (0 B/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done

Checking for installed snaps

Calculating snap size requirements

Updating repository information
Get:1 http://us.archive.ubuntu.com/ubuntu jammy InRelease [270 kB]
99% [Waiting for headers]
```


UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
Get:39 http://us.archive.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.9 kB]
Get:40 http://us.archive.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [4,513 B]
Get:41 http://us.archive.ubuntu.com/ubuntu jammy-security/restricted amd64 Translation-en [838 kB]
Get:42 http://us.archive.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [13.9 kB]
Get:43 http://us.archive.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [4,513 B]
Get:44 http://us.archive.ubuntu.com/ubuntu jammy-security/universe amd64 Translation-en [838 kB]
Get:45 http://us.archive.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [13.9 kB]
Get:46 http://us.archive.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [4,513 B]
Get:47 http://us.archive.ubuntu.com/ubuntu jammy-security/multiverse amd64 Translation-en [11.9 kB]
Get:48 http://us.archive.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [520 B]
Fetched 43.7 MB in 6s (7,092 kB/s)

Checking package manager
Reading package lists... Done
Building dependency tree
Reading state information... Done

Calculating the changes

Calculating the changes
MarkInstall libflashrom1:amd64 < none -> 1.2-5build1 @un uN Ib > FU=1
Installing libftdi1-2 as Depends of libflashrom1
MarkInstall libftdi1-2:amd64 < none -> 1.5-5build3 @un uN > FU=0

Do you want to start the upgrade?

4 packages are going to be removed. 107 new packages are going to be
installed. 608 packages are going to be upgraded.

You have to download a total of 848 M. This download will take about
1 minute with your connection.

Installing the upgrade can take several hours. Once the download has
finished, the process cannot be canceled.

Continue [yN] Details [d]y_
```

Mouse integration ...
Don't show again

Right Ctrl

UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

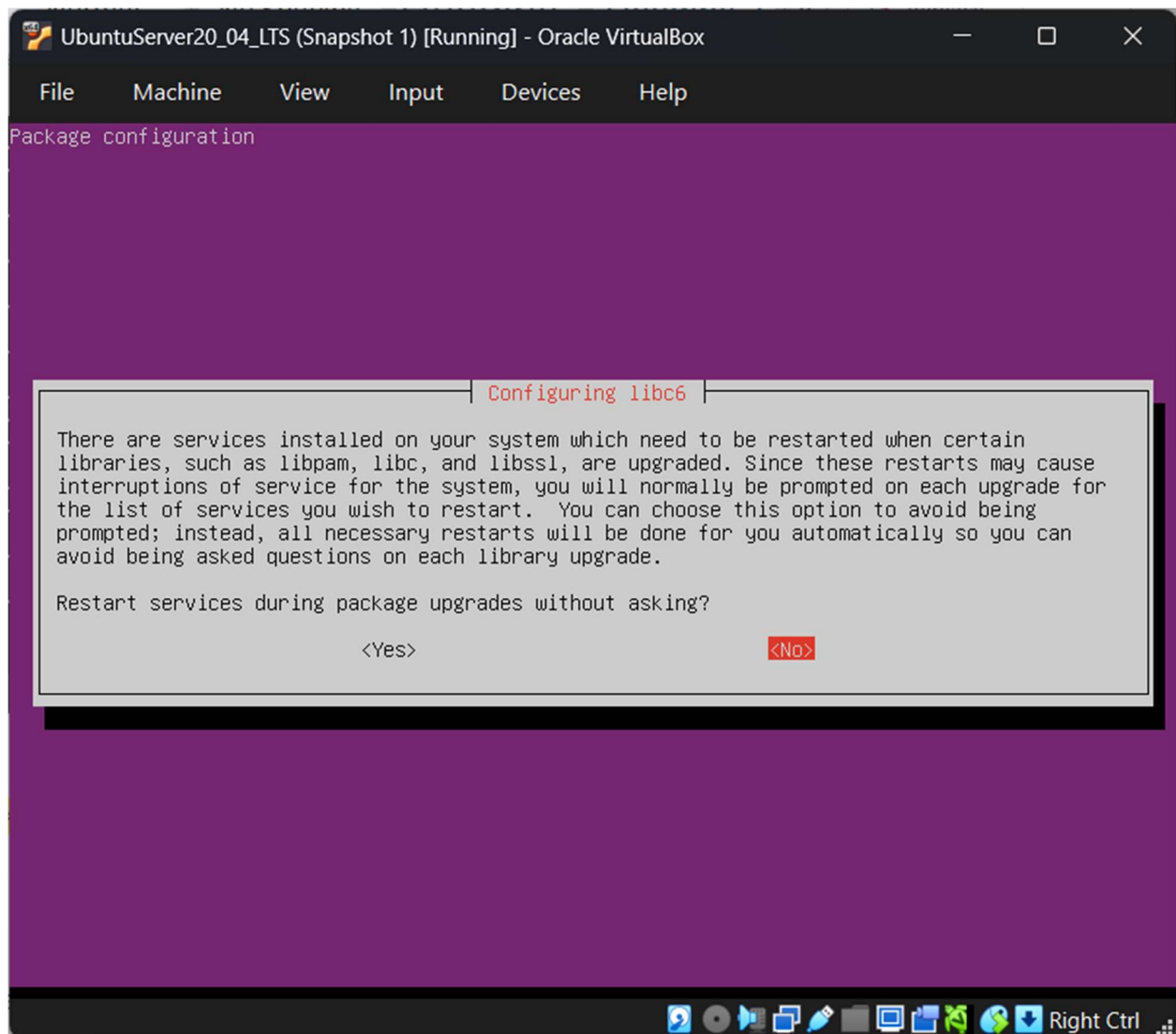
File Machine View Input Devices Help

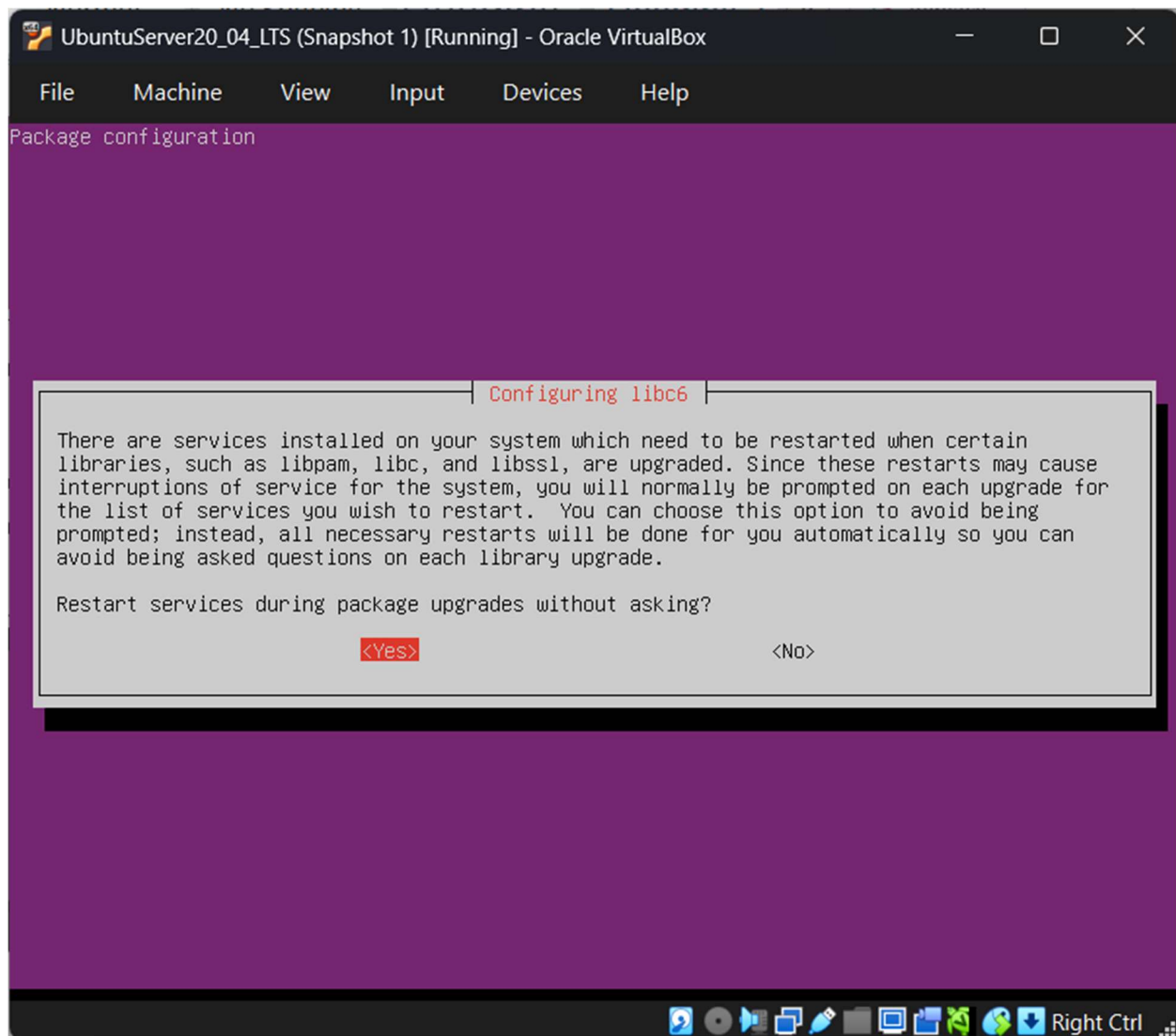
```
B]
Get:190 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 libefivar amd64 37-6ubuntu2 [42.8 kB]
Get:191 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 libefiboot1 amd64 37-6ubuntu2 [42.8 kB]
Get:192 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 sensible-utils amd64 0.0.18-1ubuntu1 [15.9 kB]
Get:193 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 ucf all 3.0043-1 [15.9 kB]
Get:194 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 libbrotli1 amd64 1.0.9-2build1 [308 kB]
Get:195 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 libpng16-16 amd64 1.6.39-2ubuntu0.1 [308 kB]
B]
Get:196 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libfreetype6 amd64 2.11.1+dfsg-1ubuntu0.3 [388 kB]
Get:197 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 gettext-base amd64 0.21-4ubuntu4 [37.8 kB]
Get:198 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 ncurses-base all 6.3-2ubuntu0.1 [20.2 kB]
Get:199 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 libslang2 amd64 2.3.2-5build4 [468 kB]
Get:200 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 libnewt0.52 amd64 0.52.21-5ubuntu2 [45.9 kB]
Get:201 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 whiptail amd64 0.52.21-5ubuntu2 [17.3 kB]
Get:202 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 linux-base all 4.5ubuntu9+22.04.1 [19.1 kB]
Get:203 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libext2fs2 amd64 1.46.5-2ubuntu1.2 [208 kB]
Get:204 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 e2fsprogs amd64 1.46.5-2ubuntu1.2 [590 kB]
Get:205 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 liblzo2-2 amd64 2.10-2build3 [53.7 kB]
Get:206 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 btrfs-progs amd64 5.16.2-1 [824 kB]
Get:207 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libgcc-s1 amd64 12.3.0-1ubuntu1~22.04.2 [53.9 kB]
Get:208 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 libmpdec3 amd64 2.5.1-2build2 [86.8 kB]
Get:209 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libsqlite3-0 amd64 3.37.2-2ubuntu0.5 [643 kB]
Get:210 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libpython3.10-stdlib amd64 3.10.12-1~22.04.11 [1,850 kB]
Get:211 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 python3.10 amd64 3.10.12-1~22.04.11 [508 kB]
8% [211 python3.10 10.9 kB/508 kB 2%]
10.9 MB/s 1min 11s
```

Mouse integration ...

Don't show again

Right Ctrl





UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File	Machine	View	Input	Devices	Help
------	---------	------	-------	---------	------

```
Preparing to unpack .../33-ubuntu-release-upgrader-core_1%3a22.04.20_all.deb ...
Unpacking ubuntu-release-upgrader-core (1:22.04.20) over (1:20.04.41) ...
Preparing to unpack .../34-libyaml-0-2_0.2.2-1build2_amd64.deb ...
Unpacking libyaml-0-2:amd64 (0.2.2-1build2) over (0.2.2-1) ...
Preparing to unpack .../35-python3-yaml_5.4.1-1ubuntu1_amd64.deb ...
Unpacking python3-yaml (5.4.1-1ubuntu1) over (5.3.1-1ubuntu0.1) ...
Preparing to unpack .../36-libprocps8_2%3a3.3.17-6ubuntu2.1_amd64.deb ...
Unpacking libprocps8:amd64 (2:3.3.17-6ubuntu2.1) over (2:3.3.16-1ubuntu2.4) ...
Preparing to unpack .../37-procps_2%3a3.3.17-6ubuntu2.1_amd64.deb ...
Unpacking procps (2:3.3.17-6ubuntu2.1) over (2:3.3.16-1ubuntu2.4) ...
Preparing to unpack .../38-update-manager-core_1%3a22.04.22_all.deb ...
Unpacking update-manager-core (1:22.04.22) over (1:20.04.10.23) ...
Preparing to unpack .../39-python3-update-manager_1%3a22.04.22_all.deb ...
Unpacking python3-update-manager (1:22.04.22) over (1:20.04.10.23) ...
Preparing to unpack .../40-python3-distupgrade_1%3a22.04.20_all.deb ...
Unpacking python3-distupgrade (1:22.04.20) over (1:20.04.41) ...
Preparing to unpack .../41-ubuntu-pro-client-110n_36ubuntu0~22.04_amd64.deb ...
Unpacking ubuntu-pro-client-110n (36ubuntu0~22.04) over (36ubuntu0~20.04) ...
Preparing to unpack .../42-ubuntu-pro-client_36ubuntu0~22.04_amd64.deb ...
Unpacking ubuntu-pro-client (36ubuntu0~22.04) over (36ubuntu0~20.04) ...
Preparing to unpack .../43-ubuntu-advantage-tools_36ubuntu0~22.04_all.deb ...
Unpacking ubuntu-advantage-tools (36ubuntu0~22.04) over (36ubuntu0~20.04) ...
Preparing to unpack .../44-debconf-i18n_1.5.79ubuntu1_all.deb ...
Unpacking debconf-i18n (1.5.79ubuntu1) over (1.5.73) ...
Preparing to unpack .../45-debconf_1.5.79ubuntu1_all.deb ...
Unpacking debconf (1.5.79ubuntu1) over (1.5.73) ...
Setting up debconf (1.5.79ubuntu1) ...
(Reading database ... 78312 files and directories currently installed.)
Preparing to unpack .../update-notifier-common_3.192.54.8_all.deb ...
Unpacking update-notifier-common (3.192.54.8) over (3.192.30.19) ...
Selecting previously unselected package libpython3.10-minimal:amd64.
Preparing to unpack .../libpython3.10-minimal_3.10.12-1~22.04.11_amd64.deb ...
Unpacking libpython3.10-minimal:amd64 (3.10.12-1~22.04.11) ...
Selecting previously unselected package python3.10-minimal.
Preparing to unpack .../python3.10-minimal_3.10.12-1~22.04.11_amd64.deb ...
Unpacking python3.10-minimal (3.10.12-1~22.04.11) ...
```

Right Ctrl

UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...
Processing triggers for linux-image-5.15.0-157-generic (5.15.0-157.167) ...
/etc/kernel/postinst.d/initramfs-tools:
update-initramfs: Generating /boot/initrd.img-5.15.0-157-generic
/etc/kernel/postinst.d/zz-update-grub:
Sourcing file `/etc/default/grub'
Sourcing file `/etc/default/grub.d/init-select.cfg'
Generating grub configuration file ...
Found linux image: /boot/vmlinuz-5.15.0-157-generic
Found initrd image: /boot/initrd.img-5.15.0-157-generic
Found linux image: /boot/vmlinuz-5.4.0-216-generic
Found initrd image: /boot/initrd.img-5.4.0-216-generic
Warning: os-prober will not be executed to detect other bootable partitions.
Systems on them will not be added to the GRUB boot configuration.
Check GRUB_DISABLE_OS_PROBER documentation entry.
done
Reading package lists... Done
Building dependency tree
Reading state information... Done

Processing snap replacements

refreshing snap lxd

Searching for obsolete software
Reading state information... Done

Remove obsolete packages?

78 packages are going to be removed.

Continue [yN] Details [d]
```

Right Ctrl

UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...
Processing triggers for linux-image-5.15.0-157-generic (5.15.0-157.167) ...
/etc/kernel/postinst.d/initramfs-tools:
update-initramfs: Generating /boot/initrd.img-5.15.0-157-generic
/etc/kernel/postinst.d/zz-update-grub:
Sourcing file `/etc/default/grub'
Sourcing file `/etc/default/grub.d/init-select.cfg'
Generating grub configuration file ...
Found linux image: /boot/vmlinuz-5.15.0-157-generic
Found initrd image: /boot/initrd.img-5.15.0-157-generic
Found linux image: /boot/vmlinuz-5.4.0-216-generic
Found initrd image: /boot/initrd.img-5.4.0-216-generic
Warning: os-prober will not be executed to detect other bootable partitions.
Systems on them will not be added to the GRUB boot configuration.
Check GRUB_DISABLE_OS_PROBER documentation entry.
done
Reading package lists... Done
Building dependency tree
Reading state information... Done

Processing snap replacements

refreshing snap lxd

Searching for obsolete software
Reading state information... Done

Remove obsolete packages?

78 packages are going to be removed.

Continue [yN] Details [d]y
```

Right Ctrl

```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

Removing perl-modules-5.30 (5.30.0-9ubuntu0.5) ...
Removing popularity-contest (1.71ubuntu3) ...
Removing python3-entrypoints (0.4-1) ...
Removing python3-requests-unixsocket (0.2.0-2) ...
Removing python3-simplejson (3.17.6-1build1) ...
Removing session-migration (0.3.6) ...
Removing sound-theme-freedesktop (0.8-2ubuntu1) ...
Removing libasn1-8-heimdal:amd64 (7.7.0+dfsg-3ubuntu1) ...
Removing libroken18-heimdal:amd64 (7.7.0+dfsg-3ubuntu1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.11) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for libglib2.0-0:amd64 (2.72.4-0ubuntu2.6) ...
No schema files found: removed existing output file.
(Reading database ... 79402 files and directories currently installed.)
Purging configuration files for session-migration (0.3.6) ...
Purging configuration files for libpython3.8-minimal:amd64 (3.8.10-0ubuntu1~20.04.18) ...
Purging configuration files for at (3.2.5-1ubuntu1) ...
Purging configuration files for libssl1.1:amd64 (1.1.1f-1ubuntu2.24) ...
Purging configuration files for popularity-contest (1.71ubuntu3) ...
Purging configuration files for ltrace (0.7.3-6.1ubuntu6.22.04.1) ...
Purging configuration files for bsdmainutils (12.1.7+nmu3ubuntu2) ...
Purging configuration files for python3.8-minimal (3.8.10-0ubuntu1~20.04.18) ...
Purging configuration files for language-selector-common (0.219.1) ...
Purging configuration files for crda (3.18-1build1) ...
Purging configuration files for accountsservice (22.07.5-2ubuntu1.5) ...
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...

System upgrade is complete.

Restart required

To finish the upgrade, a restart is required.
If you select 'y' the system will be restarted.

Continue [yN] _
```


UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
Removing perl-modules-5.30 (5.30.0-9ubuntu0.5) ...
Removing popularity-contest (1.71ubuntu3) ...
Removing python3-entrypoints (0.4-1) ...
Removing python3-requests-unixsocket (0.2.0-2) ...
Removing python3-simplejson (3.17.6-1build1) ...
Removing session-migration (0.3.6) ...
Removing sound-theme-freedesktop (0.8-2ubuntu1) ...
Removing libasn1-8-heimdal:amd64 (7.7.0+dfsg-3ubuntu1) ...
Removing libroken18-heimdal:amd64 (7.7.0+dfsg-3ubuntu1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.11) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for libglib2.0-0:amd64 (2.72.4-0ubuntu2.6) ...
No schema files found: removed existing output file.
(Reading database ... 79402 files and directories currently installed.)
Purging configuration files for session-migration (0.3.6) ...
Purging configuration files for libpython3.8-minimal:amd64 (3.8.10-0ubuntu1~20.04.18) ...
Purging configuration files for at (3.2.5-1ubuntu1) ...
Purging configuration files for libssl1.1:amd64 (1.1.1f-1ubuntu2.24) ...
Purging configuration files for popularity-contest (1.71ubuntu3) ...
Purging configuration files for ltrace (0.7.3-6.1ubuntu6.22.04.1) ...
Purging configuration files for bsdmainutils (12.1.7+nmu3ubuntu2) ...
Purging configuration files for python3.8-minimal (3.8.10-0ubuntu1~20.04.18) ...
Purging configuration files for language-selector-common (0.219.1) ...
Purging configuration files for crda (3.18-1build1) ...
Purging configuration files for accountsservice (22.07.5-2ubuntu1.5) ...
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...

System upgrade is complete.

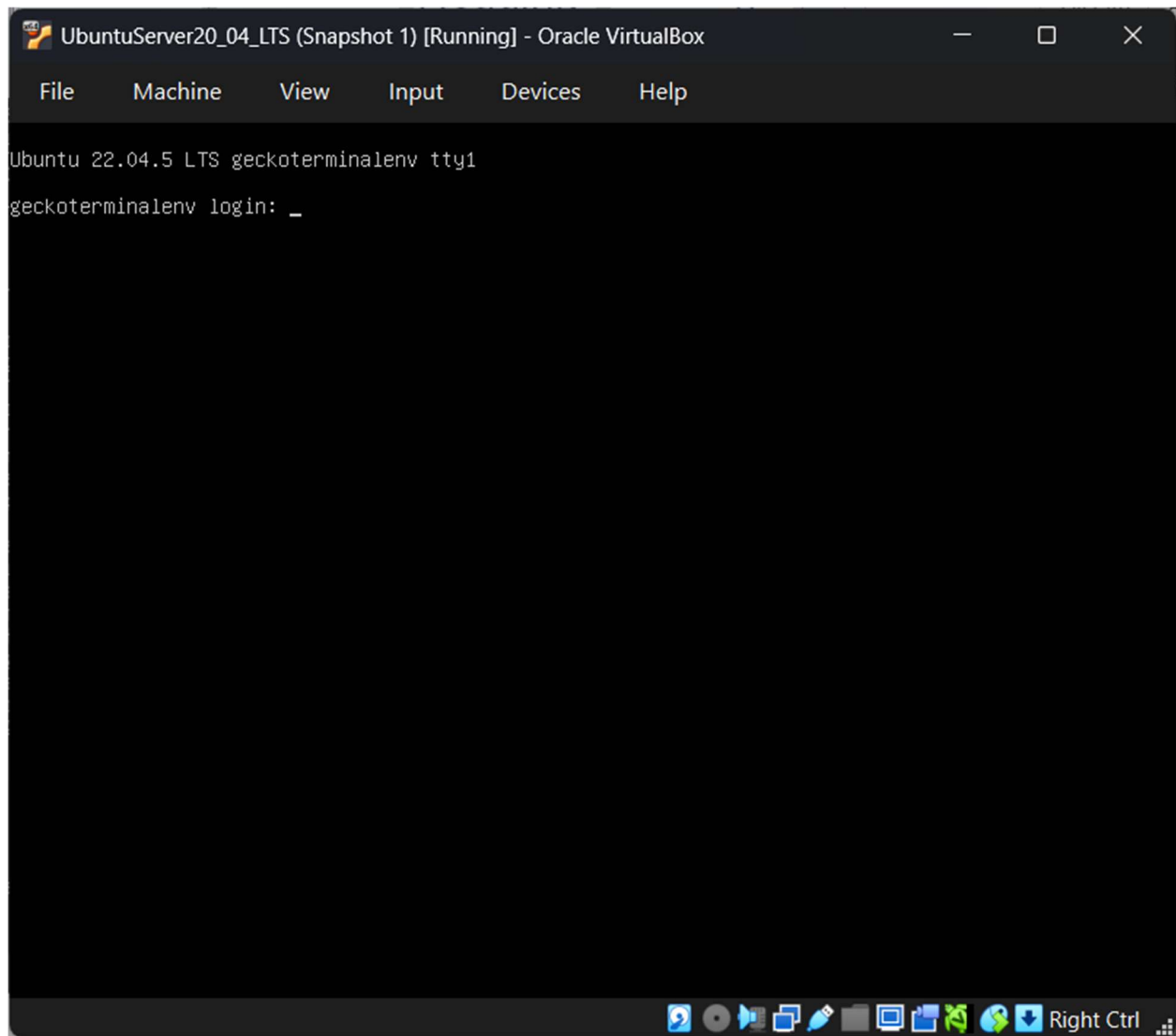
Restart required

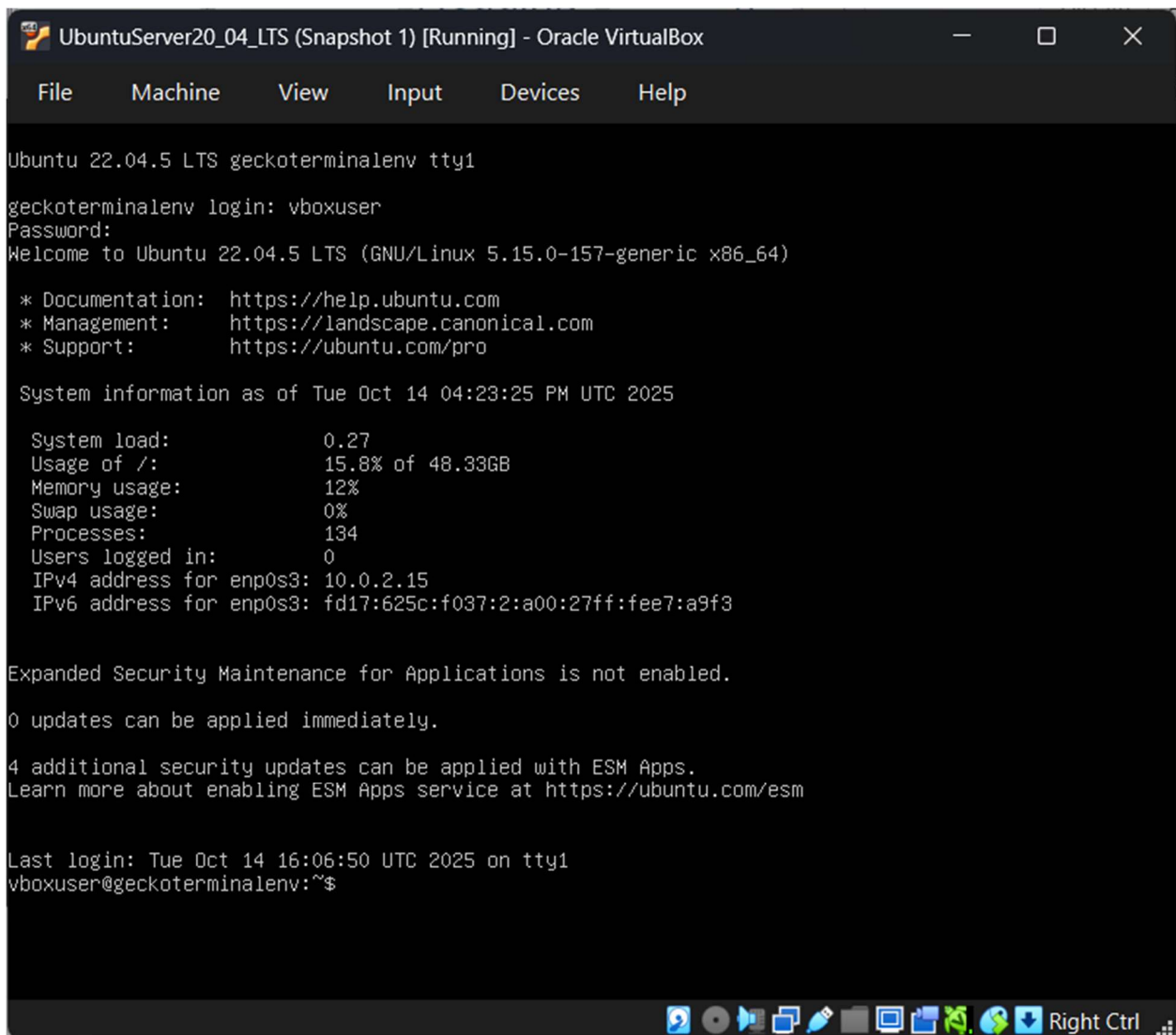
To finish the upgrade, a restart is required.
If you select 'y' the system will be restarted.

Continue [yN] y_
```

Right Ctrl

Restart Once Again:





```
Ubuntu 22.04.5 LTS geckoterminalenv tty1
geckoterminalenv login: vboxuser
Password:
Welcome to Ubuntu 22.04.5 LTS (GNU/Linux 5.15.0-157-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Tue Oct 14 04:23:25 PM UTC 2025

System load:            0.27
Usage of /:              15.8% of 48.33GB
Memory usage:           12%
Swap usage:             0%
Processes:              134
Users logged in:        0
IPv4 address for enp0s3: 10.0.2.15
IPv6 address for enp0s3: fd17:625c:f037:2:a00:27ff:fee7:a9f3

Expanded Security Maintenance for Applications is not enabled.

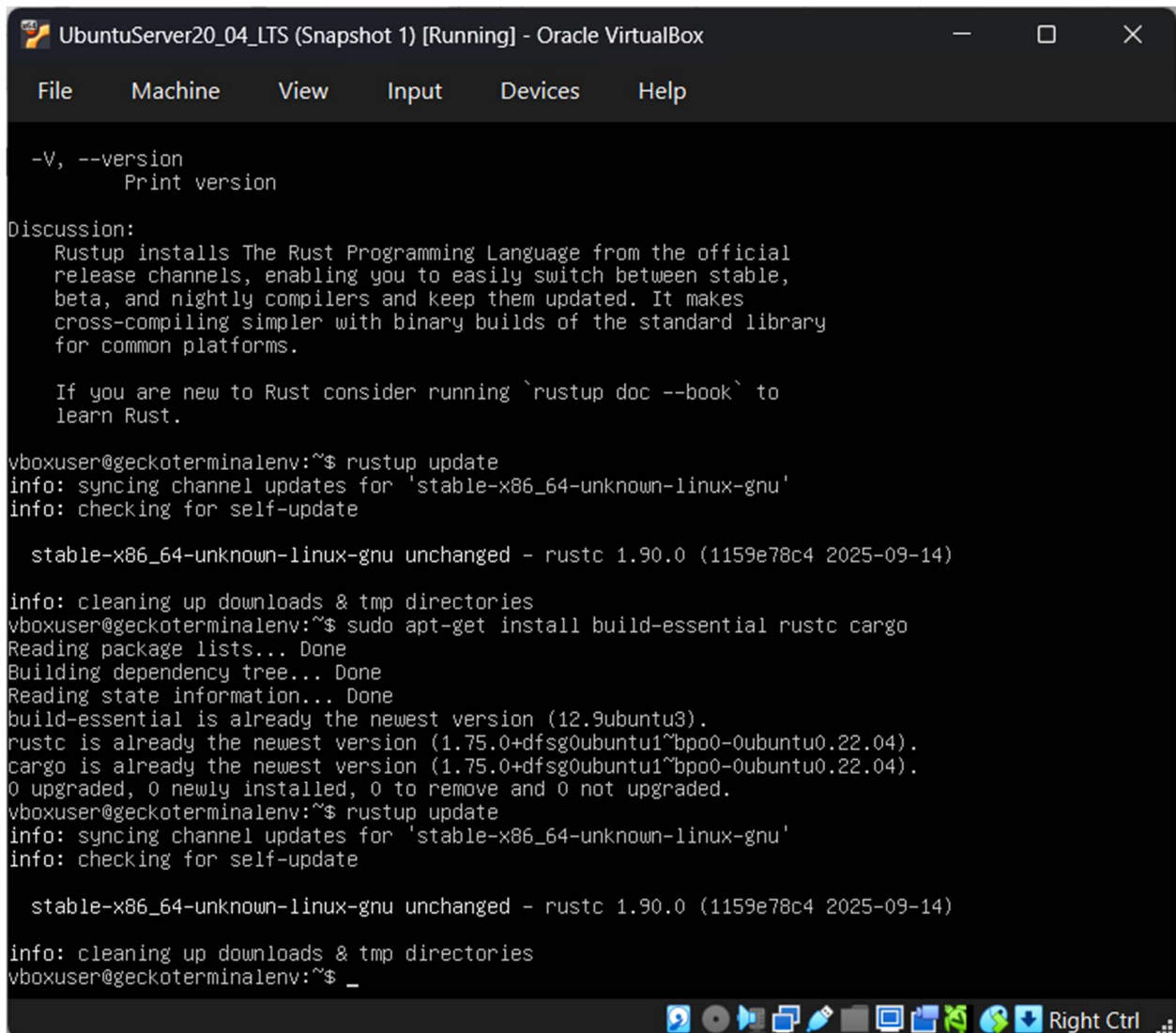
0 updates can be applied immediately.

4 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

Last login: Tue Oct 14 16:06:50 UTC 2025 on tty1
vboxuser@geckoterminalenv:~$
```

```
sudo apt-get install build-essential rustc cargo
```

```
rustup update
```



```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

-V, --version
    Print version

Discussion:
  Rustup installs The Rust Programming Language from the official
  release channels, enabling you to easily switch between stable,
  beta, and nightly compilers and keep them updated. It makes
  cross-compiling simpler with binary builds of the standard library
  for common platforms.

  If you are new to Rust consider running `rustup doc --book` to
  learn Rust.

vboxuser@geckoterminalenv:~$ rustup update
info: syncing channel updates for 'stable-x86_64-unknown-linux-gnu'
info: checking for self-update

stable-x86_64-unknown-linux-gnu unchanged - rustc 1.90.0 (1159e78c4 2025-09-14)

info: cleaning up downloads & tmp directories
vboxuser@geckoterminalenv:~$ sudo apt-get install build-essential rustc cargo
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
build-essential is already the newest version (12.9ubuntu3).
rustc is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
cargo is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
vboxuser@geckoterminalenv:~$ rustup update
info: syncing channel updates for 'stable-x86_64-unknown-linux-gnu'
info: checking for self-update

stable-x86_64-unknown-linux-gnu unchanged - rustc 1.90.0 (1159e78c4 2025-09-14)

info: cleaning up downloads & tmp directories
vboxuser@geckoterminalenv:~$ _
```

Here are the steps to install Anaconda using apt-get on a Debian-based system like Ubuntu:

- **Install the public GPG key:** This key is used to verify the authenticity of packages from the Anaconda repository.

Code

```
curl https://repo.anaconda.com/pkgsgpgkeys/anaconda.asc | gpg --dearmor >
conda.gpg
sudo install -o root -g root -m 644 conda.gpg /usr/share/keyrings/conda-archive-
keyring.gpg
```

- **Add the Anaconda Debian repository to your sources list:** This tells apt where to find Anaconda packages.

Code

```
echo "deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyring.gpg]
https://repo.anaconda.com/pkgsgpgkeys/anaconda.asc conda stable main" | sudo tee
/etc/apt/sources.list.d/conda.list
```

```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

stable-x86_64-unknown-linux-gnu unchanged - rustc 1.90.0 (1159e78c4 2025-09-14)
info: cleaning up downloads & tmp directories
vboxuser@geckoterminalenv:~$ sudo apt-get install build-essential rustc cargo
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
build-essential is already the newest version (12.9ubuntu3).
rustc is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
cargo is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
vboxuser@geckoterminalenv:~$ rustup update
info: syncing channel updates for 'stable-x86_64-unknown-linux-gnu'
info: checking for self-update

stable-x86_64-unknown-linux-gnu unchanged - rustc 1.90.0 (1159e78c4 2025-09-14)
info: cleaning up downloads & tmp directories
vboxuser@geckoterminalenv:~$ conda create -n gecko_env_3_11 python=3.11
conda: command not found
vboxuser@geckoterminalenv:~$ cd Downloads
-bash: cd: Downloads: No such file or directory
vboxuser@geckoterminalenv:~$ ls
vboxuser@geckoterminalenv:~$ curl https://repo.anaconda.com/pkgs/misc/gpgkeys/anaconda.asc | gpg --d
earmor > conda.gpg
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 1709 100 1709    0     0  9270      0 --:--:-- --:--:-- --:--:--  9237
vboxuser@geckoterminalenv:~$ sudo install -o root -g root -m 644 conda.gpg /usr/share/keyrings/conda
-archive-keyring.gpg
vboxuser@geckoterminalenv:~$ echo "deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyri
ng.gpg] https://repo.anaconda.com/pkgs/misc/debrepo/conda stable main" | sudo tee /etc/apt/sources.l
ist.d/conda.list
deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyring.gpg] https://repo.anaconda.com/p
kgs/misc/debrepo/conda stable main
vboxuser@geckoterminalenv:~$
```

- **Update your package lists:** This refreshes apt's knowledge of available packages, including those from the newly added Anaconda repository.

Code

```
sudo apt-get update
```

```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

stable-x86_64-unknown-linux-gnu unchanged - rustc 1.90.0 (1159e78c4 2025-09-14)
info: cleaning up downloads & tmp directories
vboxuser@geckoterminalenv:~$ sudo apt-get install build-essential rustc cargo
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
build-essential is already the newest version (12.9ubuntu3).
rustc is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
cargo is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
vboxuser@geckoterminalenv:~$ rustup update
info: syncing channel updates for 'stable-x86_64-unknown-linux-gnu'
info: checking for self-update

stable-x86_64-unknown-linux-gnu unchanged - rustc 1.90.0 (1159e78c4 2025-09-14)
info: cleaning up downloads & tmp directories
vboxuser@geckoterminalenv:~$ conda create -n gecko_env_3_11 python=3.11
conda: command not found
vboxuser@geckoterminalenv:~$ cd Downloads
-bash: cd: Downloads: No such file or directory
vboxuser@geckoterminalenv:~$ ls
vboxuser@geckoterminalenv:~$ curl https://repo.anaconda.com/pkgs/misc/gpgkeys/anaconda.asc | gpg --d
earmor > conda.gpg
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 1709 100 1709    0     0  9270      0 --:--:-- --:--:-- --:--:--  9237
vboxuser@geckoterminalenv:~$ sudo install -o root -g root -m 644 conda.gpg /usr/share/keyrings/conda
-archive-keyring.gpg
vboxuser@geckoterminalenv:~$ echo "deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyri
ng.gpg] https://repo.anaconda.com/pkgs/misc/debrepo/conda stable main" | sudo tee /etc/apt/sources.l
ist.d/conda.list
deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyring.gpg] https://repo.anaconda.com/p
kgs/misc/debrepo/conda stable main
vboxuser@geckoterminalenv:~$ sudo apt-get update
```



```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

rustc is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
cargo is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
vboxuser@geckoterminalenv:~$ rustup update
info: syncing channel updates for 'stable-x86_64-unknown-linux-gnu'
info: checking for self-update

stable-x86_64-unknown-linux-gnu unchanged - rustc 1.90.0 (1159e78c4 2025-09-14)

info: cleaning up downloads & tmp directories
vboxuser@geckoterminalenv:~$ conda create -n gecko_env_3_11 python=3.11
conda: command not found
vboxuser@geckoterminalenv:~$ cd Downloads
-bash: cd: Downloads: No such file or directory
vboxuser@geckoterminalenv:~$ ls
vboxuser@geckoterminalenv:~$ curl https://repo.anaconda.com/pkgs/misc/gpgkeys/anaconda.asc | gpg --d
earmor > conda.gpg
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 1709 100 1709    0     0  9270      0 --:--:-- --:--:-- --:--:--  9237
vboxuser@geckoterminalenv:~$ sudo install -o root -g root -m 644 conda.gpg /usr/share/keyrings/conda
-archive-keyring.gpg
vboxuser@geckoterminalenv:~$ echo "deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyri
ng.gpg] https://repo.anaconda.com/pkgs/misc/debrepo/conda stable main" | sudo tee /etc/apt/sources.l
ist.d/conda.list
deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyring.gpg] https://repo.anaconda.com/p
kgs/misc/debrepo/conda stable main
vboxuser@geckoterminalenv:~$ sudo apt-get update
Get:1 https://repo.anaconda.com/pkgs/misc/debrepo/conda stable InRelease [3,961 B]
Hit:2 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease
Get:4 https://repo.anaconda.com/pkgs/misc/debrepo/conda stable/main amd64 Packages [4,620 B]
Hit:5 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:6 http://us.archive.ubuntu.com/ubuntu jammy-security InRelease
Fetched 8,581 B in 1s (10.8 kB/s)
Reading package lists... Done
vboxuser@geckoterminalenv:~$ _
```



```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

rustc is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
cargo is already the newest version (1.75.0+dfsg0ubuntu1~bpo0-0ubuntu0.22.04).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
vboxuser@geckoterminalenv:~$ rustup update
info: syncing channel updates for 'stable-x86_64-unknown-linux-gnu'
info: checking for self-update

stable-x86_64-unknown-linux-gnu unchanged - rustc 1.90.0 (1159e78c4 2025-09-14)

info: cleaning up downloads & tmp directories
vboxuser@geckoterminalenv:~$ conda create -n gecko_env_3_11 python=3.11
conda: command not found
vboxuser@geckoterminalenv:~$ cd Downloads
-bash: cd: Downloads: No such file or directory
vboxuser@geckoterminalenv:~$ ls
vboxuser@geckoterminalenv:~$ curl https://repo.anaconda.com/pkgs/misc/gpgkeys/anaconda.asc | gpg --d
earmor > conda.gpg
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 1709 100 1709    0     0  9270      0 --:--:-- --:--:-- --:--:--  9237
vboxuser@geckoterminalenv:~$ sudo install -o root -g root -m 644 conda.gpg /usr/share/keyrings/conda
-archive-keyring.gpg
vboxuser@geckoterminalenv:~$ echo "deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyri
ng.gpg] https://repo.anaconda.com/pkgs/misc/debrepo/conda stable main" | sudo tee /etc/apt/sources.l
ist.d/conda.list
deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyring.gpg] https://repo.anaconda.com/p
kgs/misc/debrepo/conda stable main
vboxuser@geckoterminalenv:~$ sudo apt-get update
Get:1 https://repo.anaconda.com/pkgs/misc/debrepo/conda stable InRelease [3,961 B]
Hit:2 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease
Get:4 https://repo.anaconda.com/pkgs/misc/debrepo/conda stable/main amd64 Packages [4,620 B]
Hit:5 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:6 http://us.archive.ubuntu.com/ubuntu jammy-security InRelease
Fetched 8,581 B in 1s (10.8 kB/s)
Reading package lists... Done
vboxuser@geckoterminalenv:~$ sudo apt-get install conda_
```

```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

conda: command not found
vboxuser@geckoterminalenv:~$ cd Downloads
-bash: cd: Downloads: No such file or directory
vboxuser@geckoterminalenv:~$ ls
vboxuser@geckoterminalenv:~$ curl https://repo.anaconda.com/pkg/misc/gpgkeys/anaconda.asc | gpg --d
earmor > conda.gpg
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 1709 100 1709    0     0  9270      0 --:--:-- --:--:-- --:--:--  9237
vboxuser@geckoterminalenv:~$ sudo install -o root -g root -m 644 conda.gpg /usr/share/keyrings/conda
-archive-keyring.gpg
vboxuser@geckoterminalenv:~$ echo "deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyri
ng.gpg] https://repo.anaconda.com/pkg/misc/debrepo/conda stable main" | sudo tee /etc/apt/sources.l
ist.d/conda.list
deb [arch=amd64 signed-by=/usr/share/keyrings/conda-archive-keyring.gpg] https://repo.anaconda.com/p
kgs/misc/debrepo/conda stable main
vboxuser@geckoterminalenv:~$ sudo apt-get update
Get:1 https://repo.anaconda.com/pkg/misc/debrepo/conda stable InRelease [3,961 B]
Hit:2 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease
Get:4 https://repo.anaconda.com/pkg/misc/debrepo/conda stable/main amd64 Packages [4,620 B]
Hit:5 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:6 http://us.archive.ubuntu.com/ubuntu jammy-security InRelease
Fetched 8,581 B in 1s (10.8 kB/s)
Reading package lists... Done
vboxuser@geckoterminalenv:~$ sudo apt-get install conda
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  conda
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 138 MB of archives.
After this operation, 387 MB of additional disk space will be used.
Get:1 https://repo.anaconda.com/pkg/misc/debrepo/conda stable/main amd64 conda amd64 24.5.0-0 [138
MB]
31% [1 conda 52.8 MB/138 MB 38%]
```

```

Hit:2 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease
Get:4 https://repo.anaconda.com/pkg/misc/debrepo/conda stable/main amd64 Packages [4,620 B]
Hit:5 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:6 http://us.archive.ubuntu.com/ubuntu jammy-security InRelease
Fetched 8,581 B in 1s (10.8 kB/s)
Reading package lists... Done
vboxuser@geckoterminalenv:~$ sudo apt-get install conda
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  conda
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 138 MB of archives.
After this operation, 387 MB of additional disk space will be used.
Get:1 https://repo.anaconda.com/pkg/misc/debrepo/conda stable/main amd64 conda amd64 24.5.0-0 [138 MB]
Fetched 138 MB in 11s (12.6 MB/s)
Selecting previously unselected package conda.
(Reading database ... 79378 files and directories currently installed.)
Preparing to unpack .../conda_24.5.0-0_amd64.deb ...
Unpacking conda (24.5.0-0) ...
Setting up conda (24.5.0-0) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
vboxuser@geckoterminalenv:~$ _

```

UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
Hit:2 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease
Get:4 https://repo.anaconda.com/pkg/misc/debrepo/conda stable/main amd64 Packages [4,620 B]
Hit:5 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:6 http://us.archive.ubuntu.com/ubuntu jammy-security InRelease
Fetched 8,581 B in 1s (10.8 kB/s)
Reading package lists... Done
vboxuser@geckoterminalenv:~$ sudo apt-get install conda
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  conda
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 138 MB of archives.
After this operation, 387 MB of additional disk space will be used.
Get:1 https://repo.anaconda.com/pkg/misc/debrepo/conda stable/main amd64 conda amd64 24.5.0-0 [138 MB]
Fetched 138 MB in 11s (12.6 MB/s)
Selecting previously unselected package conda.
(Reading database ... 79378 files and directories currently installed.)
Preparing to unpack .../conda_24.5.0-0_amd64.deb ...
Unpacking conda (24.5.0-0) ...
Setting up conda (24.5.0-0) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

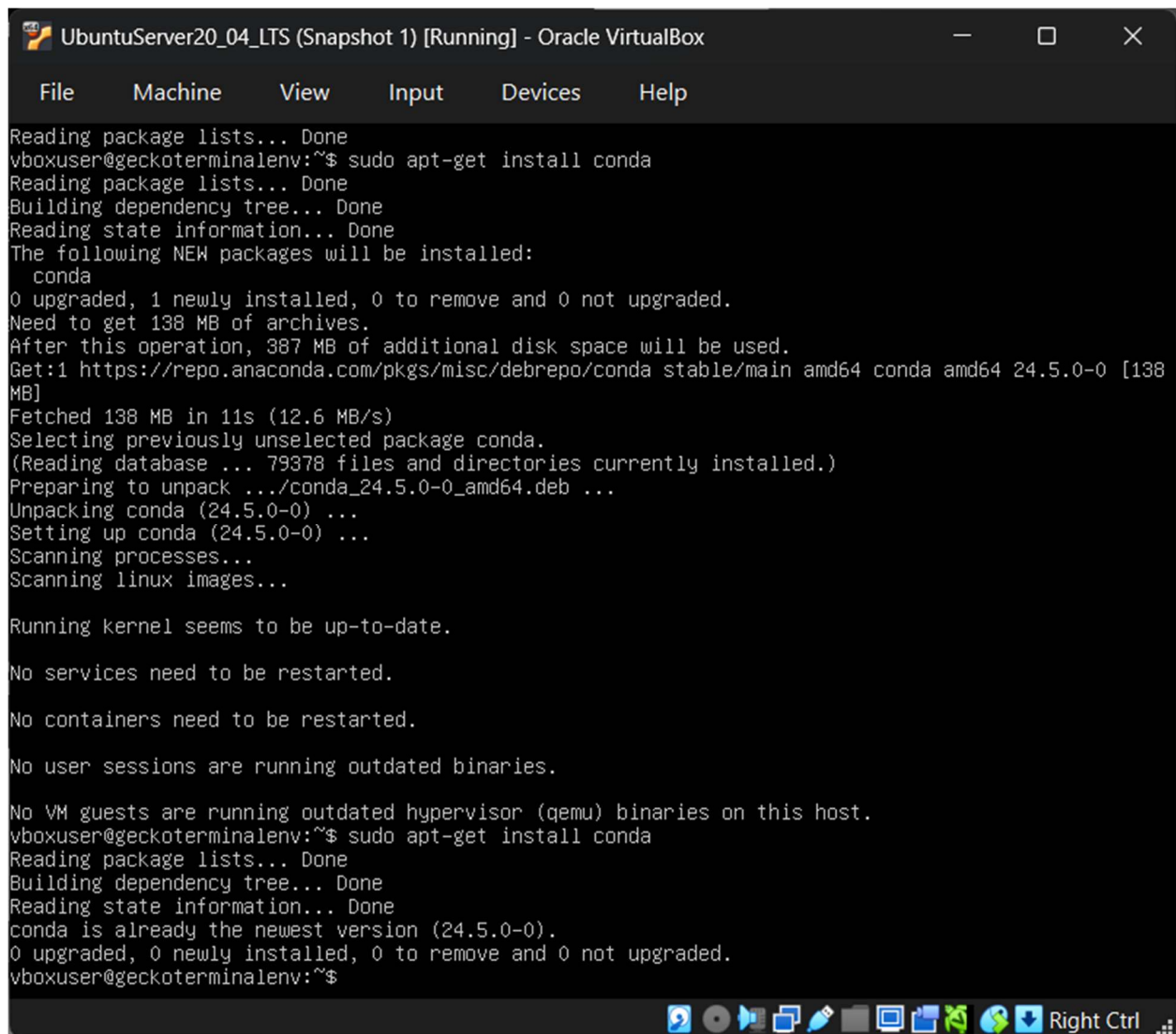
No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
vboxuser@geckoterminalenv:~$ sudo apt-get install conda_
```

Right Ctrl



```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Reading package lists... Done
vboxuser@geckoterminalenv:~$ sudo apt-get install conda
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  conda
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 138 MB of archives.
After this operation, 387 MB of additional disk space will be used.
Get:1 https://repo.anaconda.com/pkg/misc/debrepo/conda stable/main amd64 conda amd64 24.5.0-0 [138 MB]
Fetched 138 MB in 11s (12.6 MB/s)
Selecting previously unselected package conda.
(Reading database ... 79378 files and directories currently installed.)
Preparing to unpack .../conda_24.5.0-0_amd64.deb ...
Unpacking conda (24.5.0-0) ...
Setting up conda (24.5.0-0) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
vboxuser@geckoterminalenv:~$ sudo apt-get install conda
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
conda is already the newest version (24.5.0-0).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
vboxuser@geckoterminalenv:~$
```

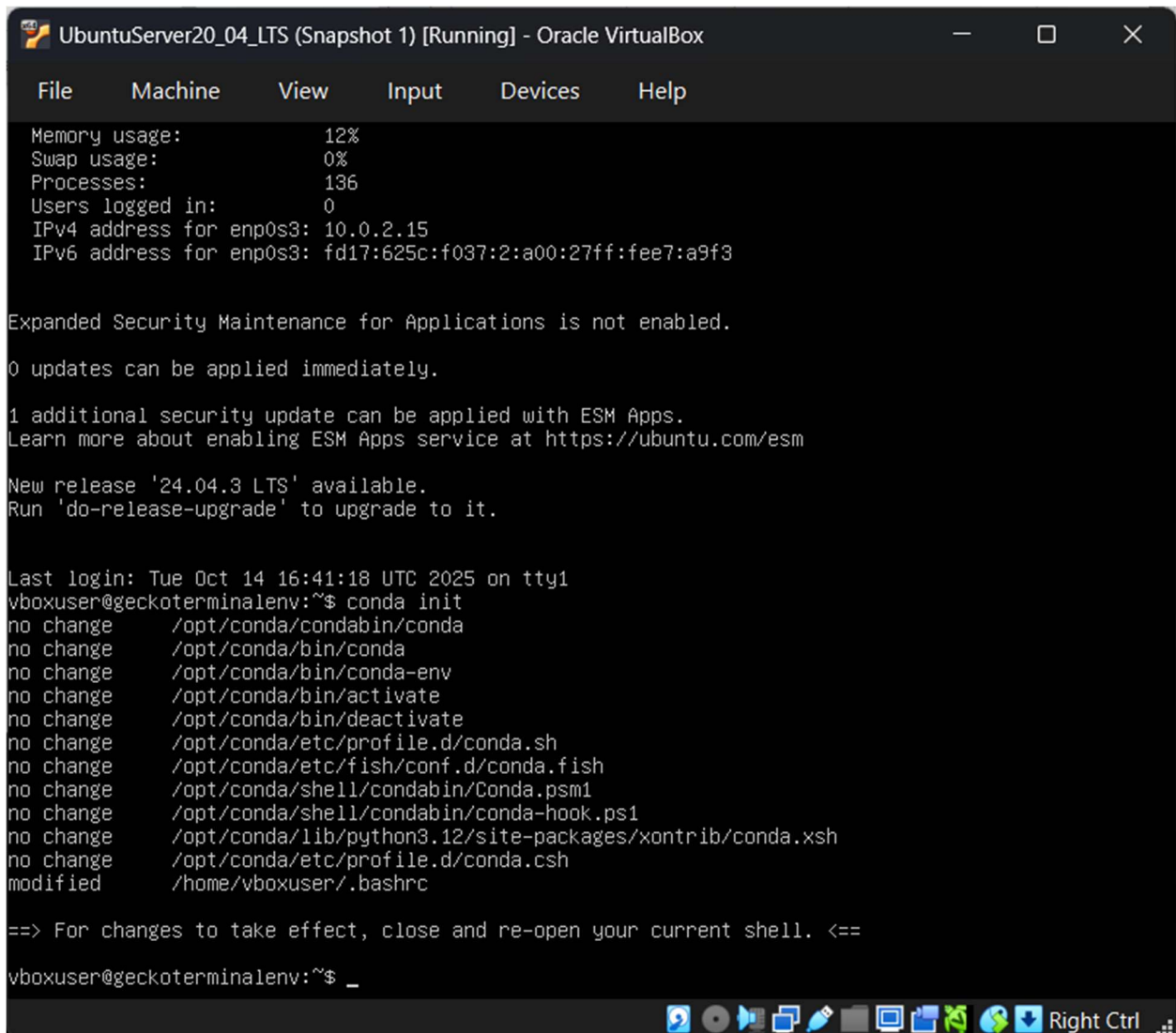
After installation, you might need to initialize your shell for conda to work correctly. This typically involves running `conda init` and then restarting your shell session.

But first, restart

`sudo shutdown -r now`

```
sudo ln -s /opt/conda/etc/profile.d/conda.sh /etc/profile.d
```

```
sudo shutdown -r now
```



```
UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Memory usage: 12%
Swap usage: 0%
Processes: 136
Users logged in: 0
IPv4 address for enp0s3: 10.0.2.15
IPv6 address for enp0s3: fd17:625c:f037:2:a00:27ff:fee7:a9f3

Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
1 additional security update can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

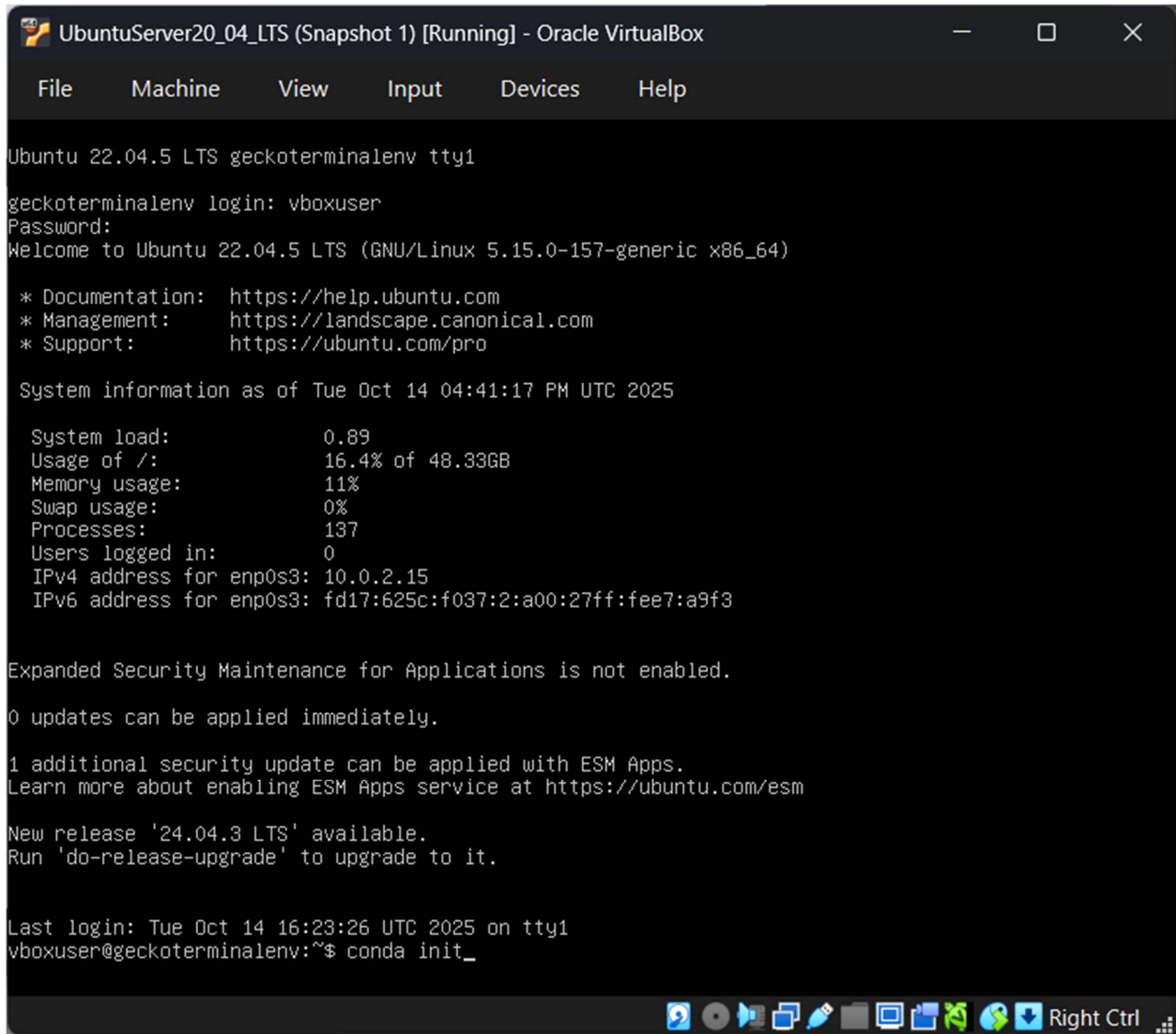
New release '24.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue Oct 14 16:41:18 UTC 2025 on tty1
vboxuser@geckoterminalenv:~$ conda init
no change /opt/conda/condabin/conda
no change /opt/conda/bin/conda
no change /opt/conda/bin/conda-env
no change /opt/conda/bin/activate
no change /opt/conda/bin/deactivate
no change /opt/conda/etc/profile.d/conda.sh
no change /opt/conda/etc/fish/conf.d/conda.fish
no change /opt/conda/shell/condabin/Conda.psm1
no change /opt/conda/shell/condabin/conda-hook.ps1
no change /opt/conda/lib/python3.12/site-packages/xontrib/conda.xsh
no change /opt/conda/etc/profile.d/conda.csh
modified /home/vboxuser/.bashrc

==> For changes to take effect, close and re-open your current shell. <==

vboxuser@geckoterminalenv:~$ _
```


conda init



The screenshot shows a terminal window titled "UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox". The terminal output includes the login process for 'vboxuser', system information (Ubuntu 22.04.5 LTS, GNU/Linux 5.15.0-157-generic x86_64), and system status (0 updates available). The prompt is 'vboxuser@geckoterminalenv:~\$' and the command 'conda init_' is entered.

```
Ubuntu 22.04.5 LTS geckoterminalenv tty1
geckoterminalenv login: vboxuser
Password:
Welcome to Ubuntu 22.04.5 LTS (GNU/Linux 5.15.0-157-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Tue Oct 14 04:41:17 PM UTC 2025

System load:          0.89
Usage of /:            16.4% of 48.33GB
Memory usage:         11%
Swap usage:           0%
Processes:            137
Users logged in:      0
IPv4 address for enp0s3: 10.0.2.15
IPv6 address for enp0s3: fd17:625c:f037:2:a00:27ff:fee7:a9f3

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

1 additional security update can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

New release '24.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue Oct 14 16:23:26 UTC 2025 on tty1
vboxuser@geckoterminalenv:~$ conda init_
```

nano ~/.bashrc

/opt/conda/bin:/opt/conda/condabin

UbuntuServer20_04_LTS (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
Reading package lists... Done
vboxuser@geckoterminalenv:~$ sudo apt-get install conda
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  conda
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 138 MB of archives.
After this operation, 387 MB of additional disk space will be used.
Get:1 https://repo.anaconda.com/pkg/misc/debrepo/conda stable/main amd64 conda amd64 24.5.0-0 [138 MB]
Fetched 138 MB in 11s (12.6 MB/s)
Selecting previously unselected package conda.
(Reading database ... 79378 files and directories currently installed.)
Preparing to unpack .../conda_24.5.0-0_amd64.deb ...
Unpacking conda (24.5.0-0) ...
Setting up conda (24.5.0-0) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

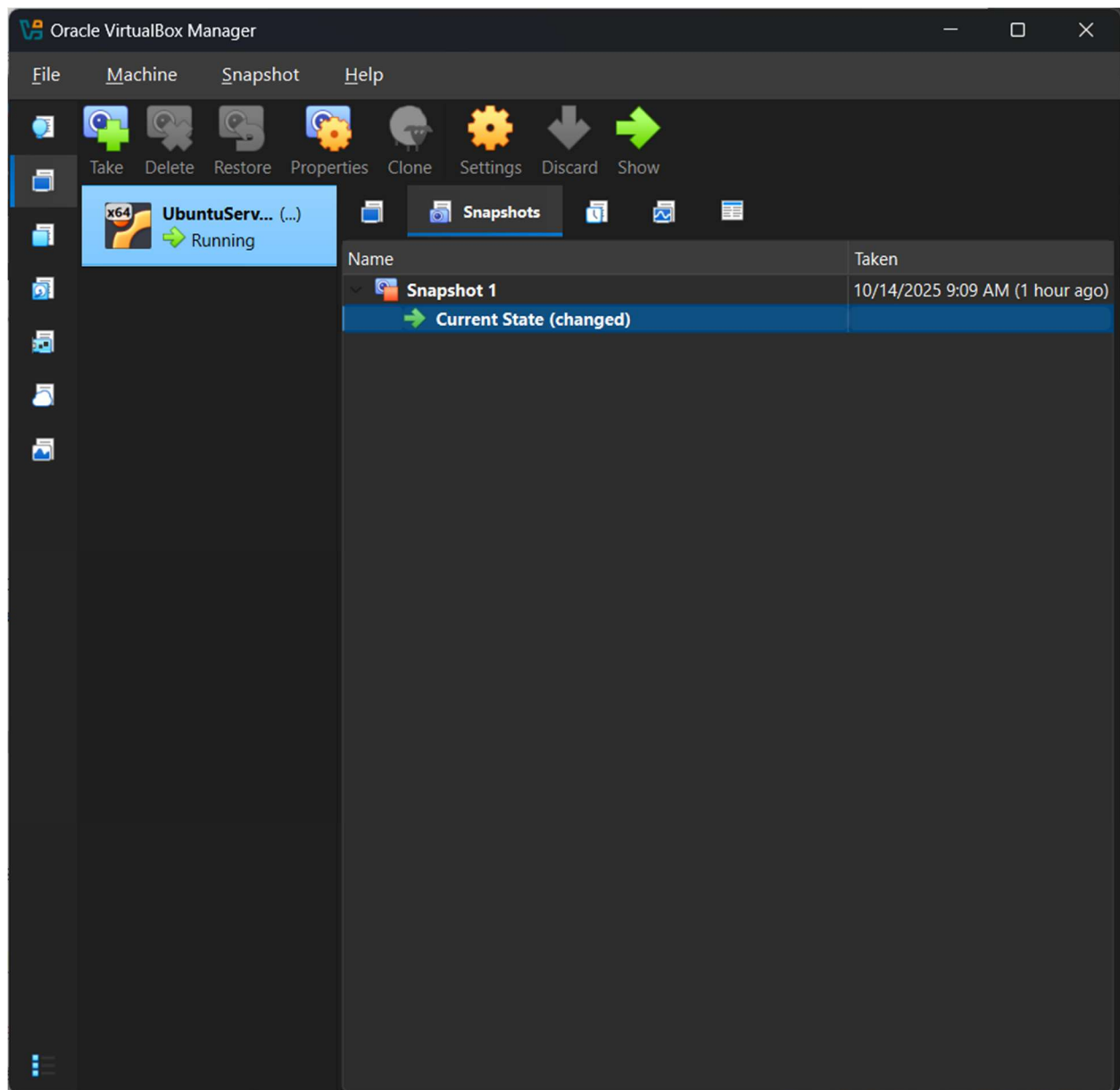
No services need to be restarted.

No containers need to be restarted.

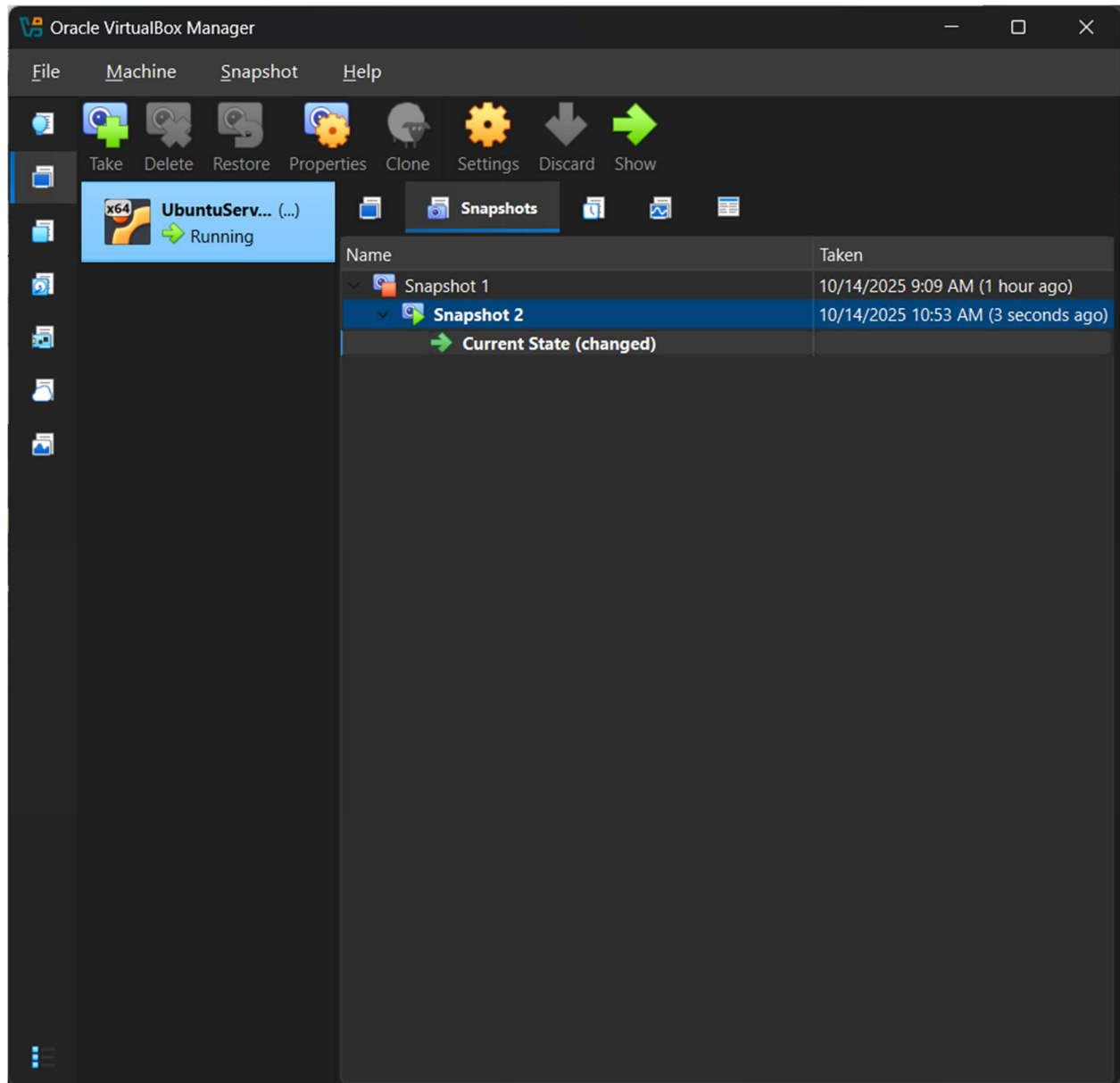
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
vboxuser@geckoterminalenv:~$ sudo apt-get install conda
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
conda is already the newest version (24.5.0-0).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
vboxuser@geckoterminalenv:~$ conda init_
```

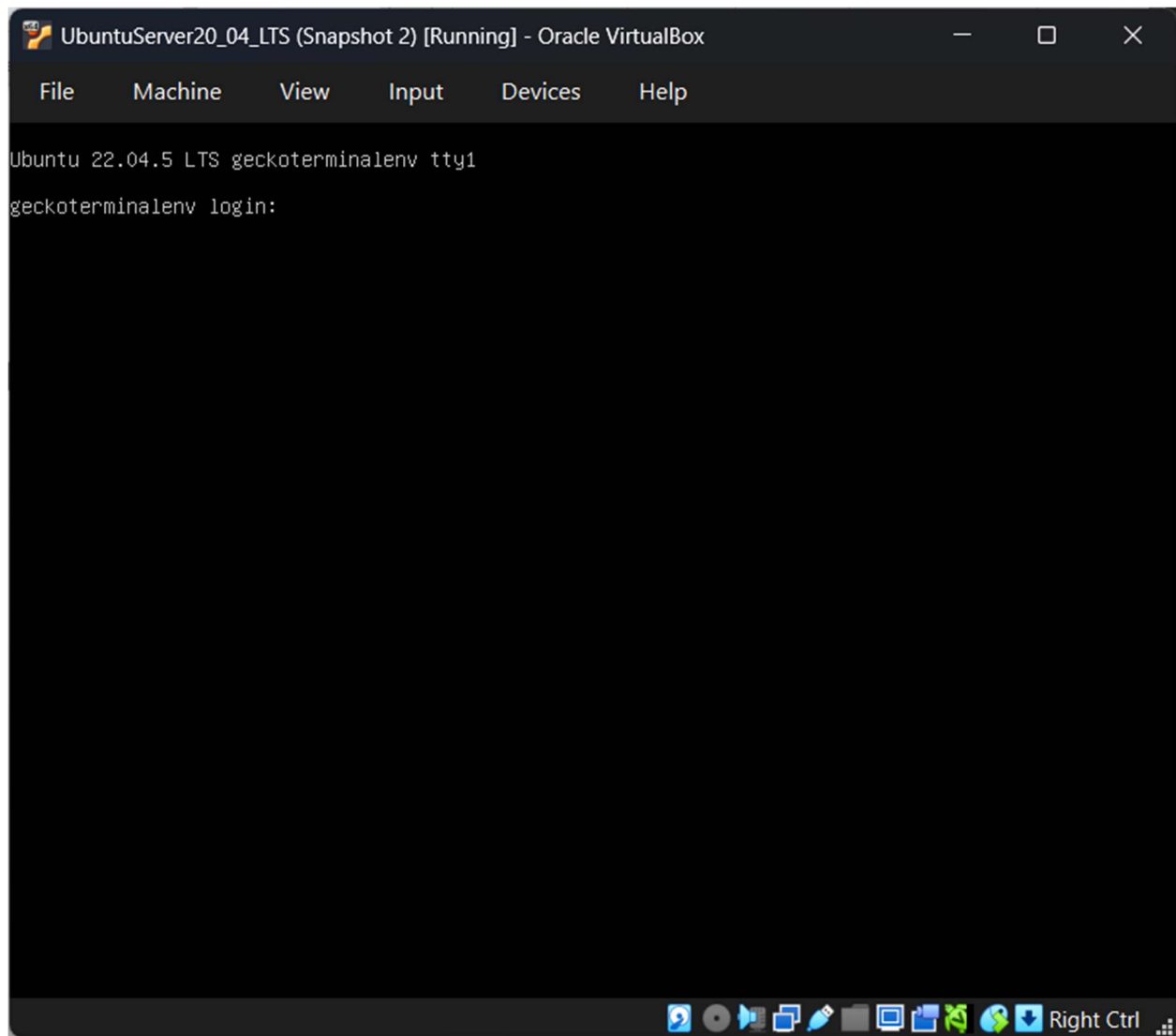
Right Ctrl



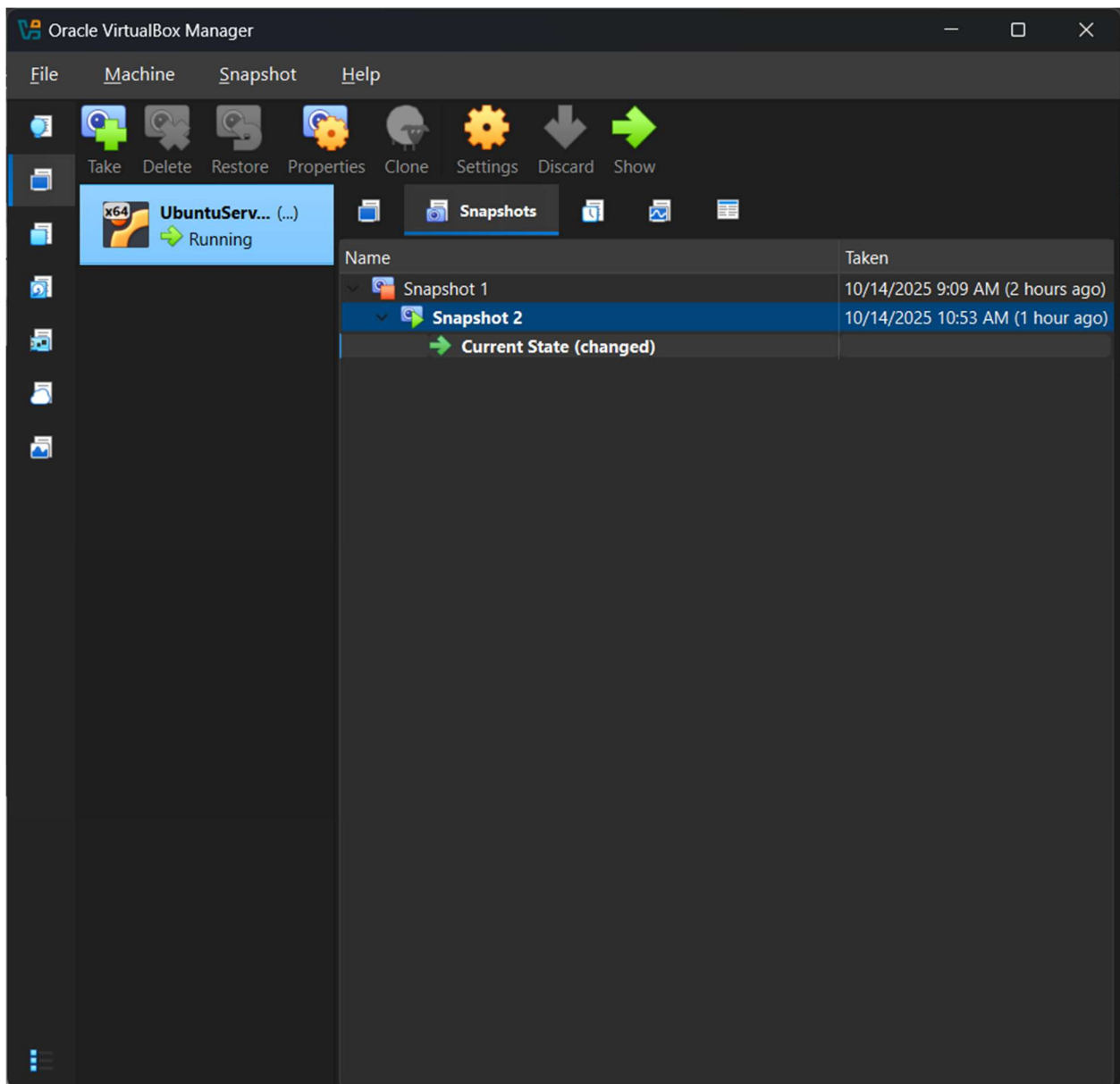
Take a Snapshot in case things go wrong.



```
sudo shutdown -r now
```

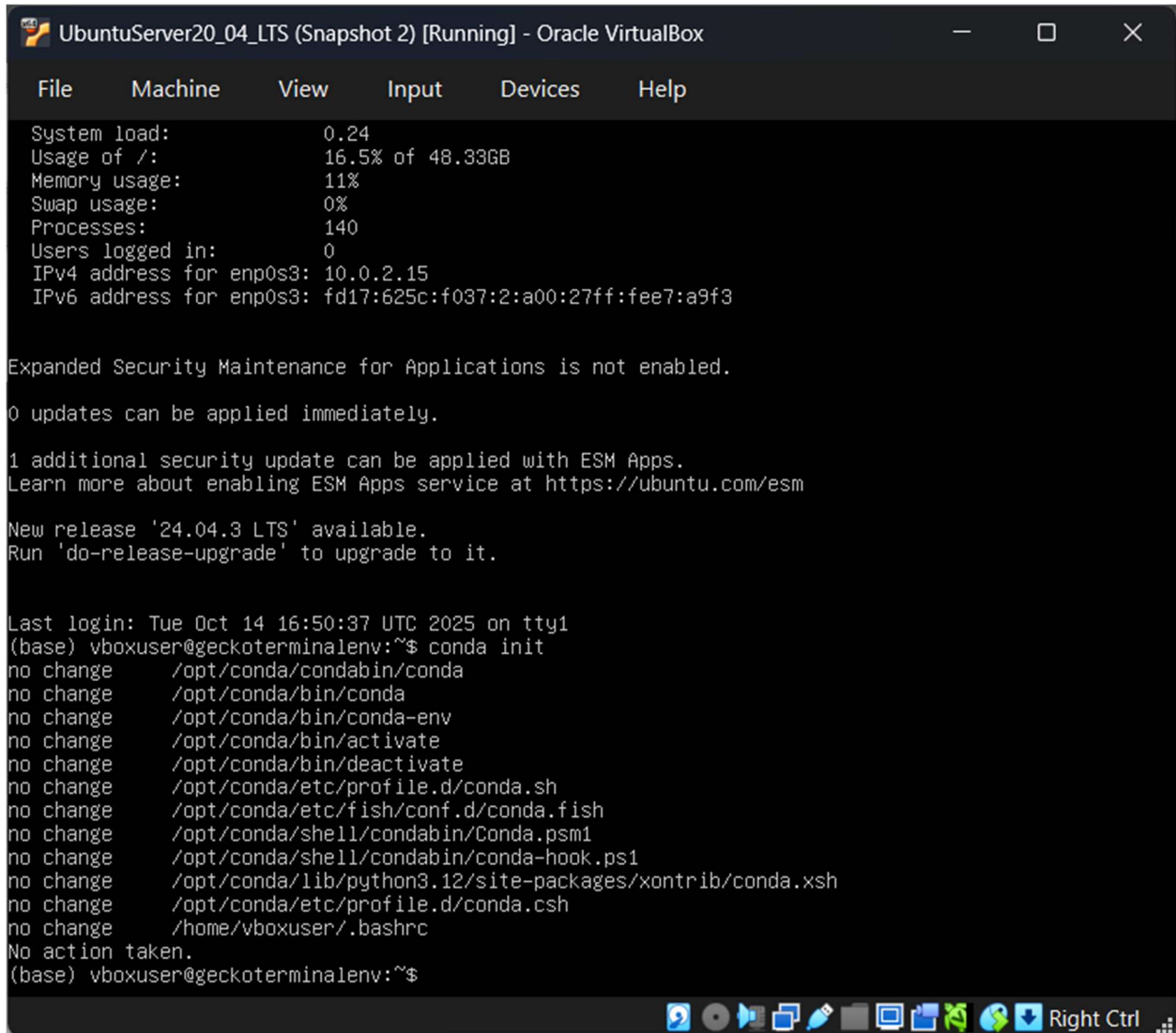


Shutdown Virtual Machine



Lock In The Snapshot, by shutting down VM

conda init



The screenshot shows a terminal window titled "UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox". The terminal displays system statistics, security updates, and the output of the 'conda init' command.

```
File      Machine    View      Input     Devices   Help

System load:                0.24
Usage of /:                  16.5% of 48.33GB
Memory usage:                11%
Swap usage:                  0%
Processes:                   140
Users logged in:             0
IPv4 address for enp0s3:    10.0.2.15
IPv6 address for enp0s3:    fd17:625c:f037:2:a00:27ff:fee7:a9f3

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

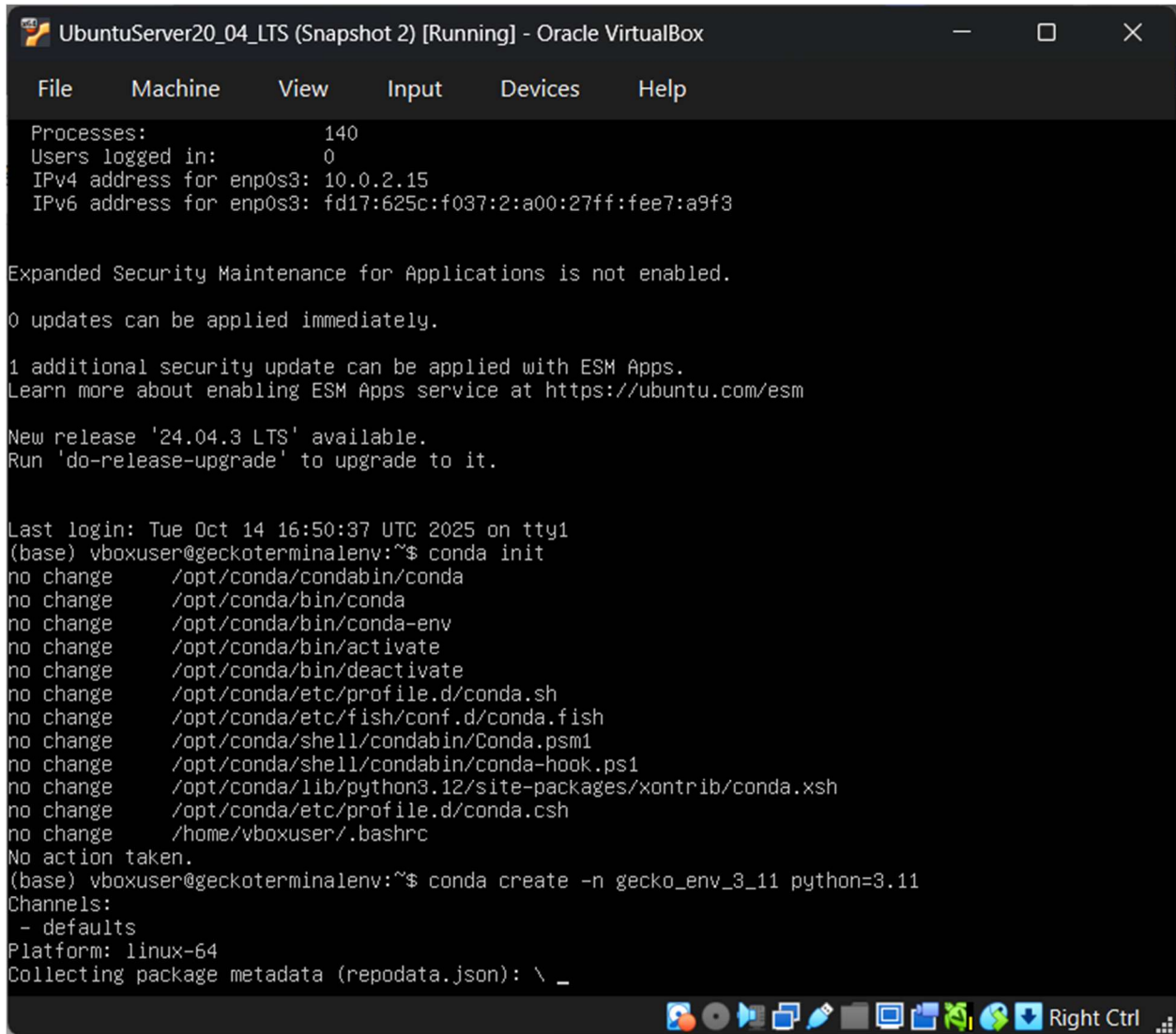
1 additional security update can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

New release '24.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue Oct 14 16:50:37 UTC 2025 on tty1
(base) vboxuser@geckoterminalenv:~$ conda init
no change      /opt/conda/condabin/conda
no change      /opt/conda/bin/conda
no change      /opt/conda/bin/conda-env
no change      /opt/conda/bin/activate
no change      /opt/conda/bin/deactivate
no change      /opt/conda/etc/profile.d/conda.sh
no change      /opt/conda/etc/fish/conf.d/conda.fish
no change      /opt/conda/shell/condabin/Conda.psm1
no change      /opt/conda/shell/condabin/conda-hook.ps1
no change      /opt/conda/lib/python3.12/site-packages/xontrib/conda.xsh
no change      /opt/conda/etc/profile.d/conda.csh
no change      /home/vboxuser/.bashrc
No action taken.
(base) vboxuser@geckoterminalenv:~$
```

The terminal window includes a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". The bottom of the window shows a taskbar with various application icons and a "Right Ctrl" button.

conda create -n gecko_env_3_11 python=3.11



```
UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Processes: 140
Users logged in: 0
IPv4 address for enp0s3: 10.0.2.15
IPv6 address for enp0s3: fd17:625c:f037:2:a00:27ff:fee7:a9f3

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

1 additional security update can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

New release '24.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

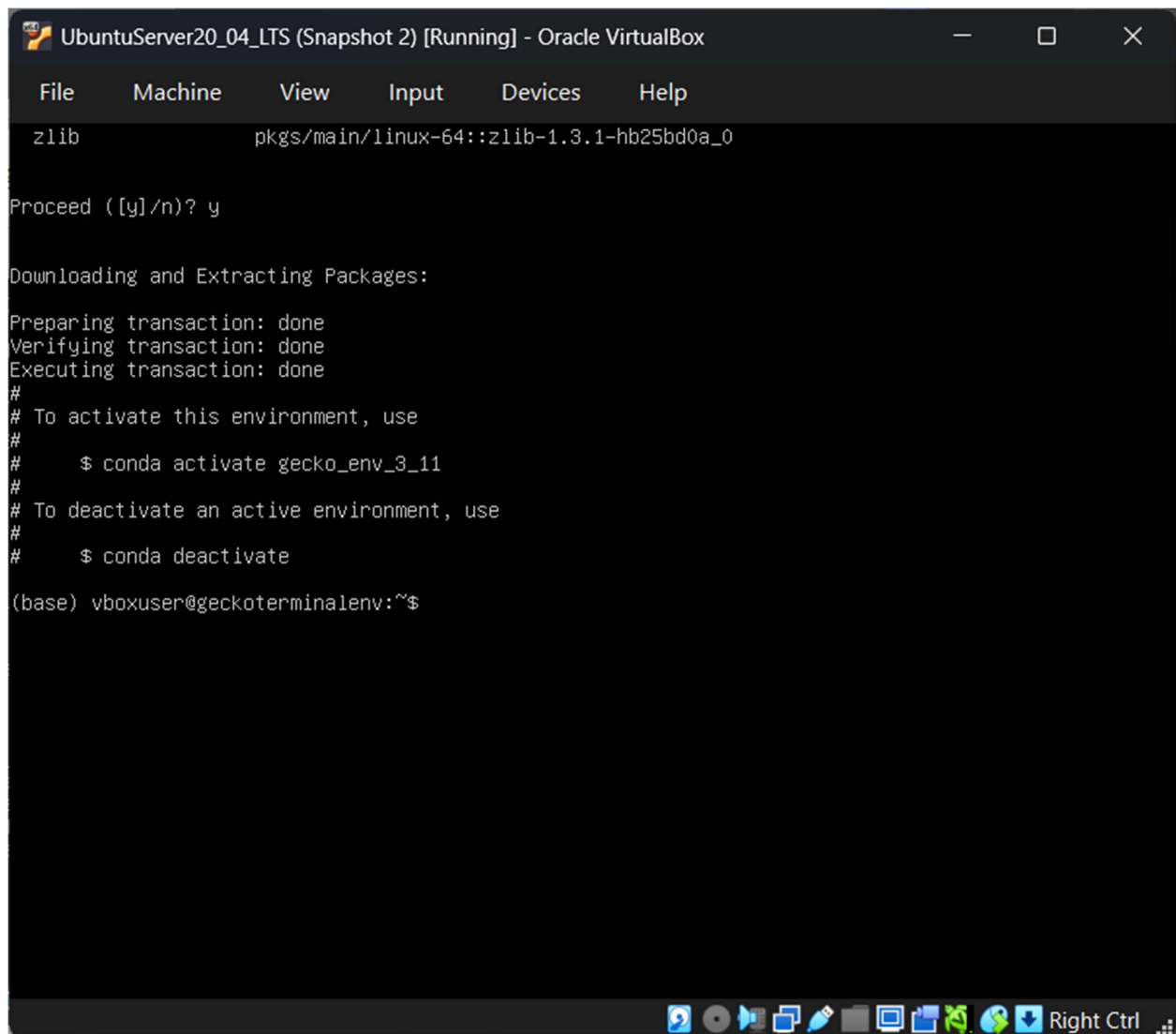
Last login: Tue Oct 14 16:50:37 UTC 2025 on tty1
(base) vboxuser@geckoterminalenv:~$ conda init
no change      /opt/conda/condabin/conda
no change      /opt/conda/bin/conda
no change      /opt/conda/bin/conda-env
no change      /opt/conda/bin/activate
no change      /opt/conda/bin/deactivate
no change      /opt/conda/etc/profile.d/conda.sh
no change      /opt/conda/etc/fish/conf.d/conda.fish
no change      /opt/conda/shell/condabin/Conda.psm1
no change      /opt/conda/shell/condabin/conda-hook.ps1
no change      /opt/conda/lib/python3.12/site-packages/xontrib/conda.xsh
no change      /opt/conda/etc/profile.d/conda.csh
no change      /home/vboxuser/.bashrc
No action taken.
(base) vboxuser@geckoterminalenv:~$ conda create -n gecko_env_3_11 python=3.11
Channels:
 - defaults
Platform: linux-64
Collecting package metadata (repodata.json): \ _
```


Total: 61.1 MB

The following NEW packages will be INSTALLED:

_libgcc_mutex	pkgs/main/linux-64::_libgcc_mutex-0.1-main
_openmp_mutex	pkgs/main/linux-64::_openmp_mutex-5.1-1_gnu
bzip2	pkgs/main/linux-64::bzip2-1.0.8-h5eee18b_6
ca-certificates	pkgs/main/linux-64::ca-certificates-2025.9.9-h06a4308_0
expat	pkgs/main/linux-64::expat-2.7.1-h6a678d5_0
ld_impl_linux-64	pkgs/main/linux-64::ld_impl_linux-64-2.44-h153f514_2
libffi	pkgs/main/linux-64::libffi-3.4.4-h6a678d5_1
libgcc-ng	pkgs/main/linux-64::libgcc-ng-11.2.0-h1234567_1
libgomp	pkgs/main/linux-64::libgomp-11.2.0-h1234567_1
libstdcxx-ng	pkgs/main/linux-64::libstdcxx-ng-11.2.0-h1234567_1
libuuid	pkgs/main/linux-64::libuuid-1.41.5-h5eee18b_0
libxcb	pkgs/main/linux-64::libxcb-1.17.0-h9b100fa_0
libzlib	pkgs/main/linux-64::libzlib-1.3.1-hb25bd0a_0
ncurses	pkgs/main/linux-64::ncurses-6.5-h7934f7d_0
openssl	pkgs/main/linux-64::openssl-3.0.18-hd6dcaed_0
pip	pkgs/main/noarch::pip-25.2-pyh872135_0
pthread-stubs	pkgs/main/linux-64::pthread-stubs-0.3-h0ce48e5_1
python	pkgs/main/linux-64::python-3.11.13-h1a3bd86_0
readline	pkgs/main/linux-64::readline-8.3-hc2a1206_0
setuptools	pkgs/main/linux-64::setuptools-80.9.0-py311h06a4308_0
sqlite	pkgs/main/linux-64::sqlite-3.50.2-hb25bd0a_1
tk	pkgs/main/linux-64::tk-8.6.15-h54e0aa7_0
tzdata	pkgs/main/noarch::tzdata-2025b-h04d1e81_0
wheel	pkgs/main/linux-64::wheel-0.45.1-py311h06a4308_0
xorg-libx11	pkgs/main/linux-64::xorg-libx11-1.8.12-h9b100fa_1
xorg-libxau	pkgs/main/linux-64::xorg-libxau-1.0.12-h9b100fa_0
xorg-libxdmcp	pkgs/main/linux-64::xorg-libxdmcp-1.1.5-h9b100fa_0
xorg-xorgproto	pkgs/main/linux-64::xorg-xorgproto-2024.1-h5eee18b_1
xz	pkgs/main/linux-64::xz-5.6.4-h5eee18b_1
zlib	pkgs/main/linux-64::zlib-1.3.1-hb25bd0a_0

Proceed ([y]/n)? y_



The screenshot shows a terminal window titled "UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox". The terminal output shows the installation of the 'zlib' package from the repository 'pkgs/main/linux-64::zlib-1.3.1-hb25bd0a_0'. After the installation, the user is prompted to proceed, and they respond with 'y'. The terminal then shows the download and extraction of packages, followed by the preparation, verification, and execution of the transaction. Finally, the terminal displays instructions on how to activate and deactivate the Conda environment, and the prompt changes to '(base) vboxuser@geckoterminalenv:~\$'.

```
File Machine View Input Devices Help
zlib pkgs/main/linux-64::zlib-1.3.1-hb25bd0a_0

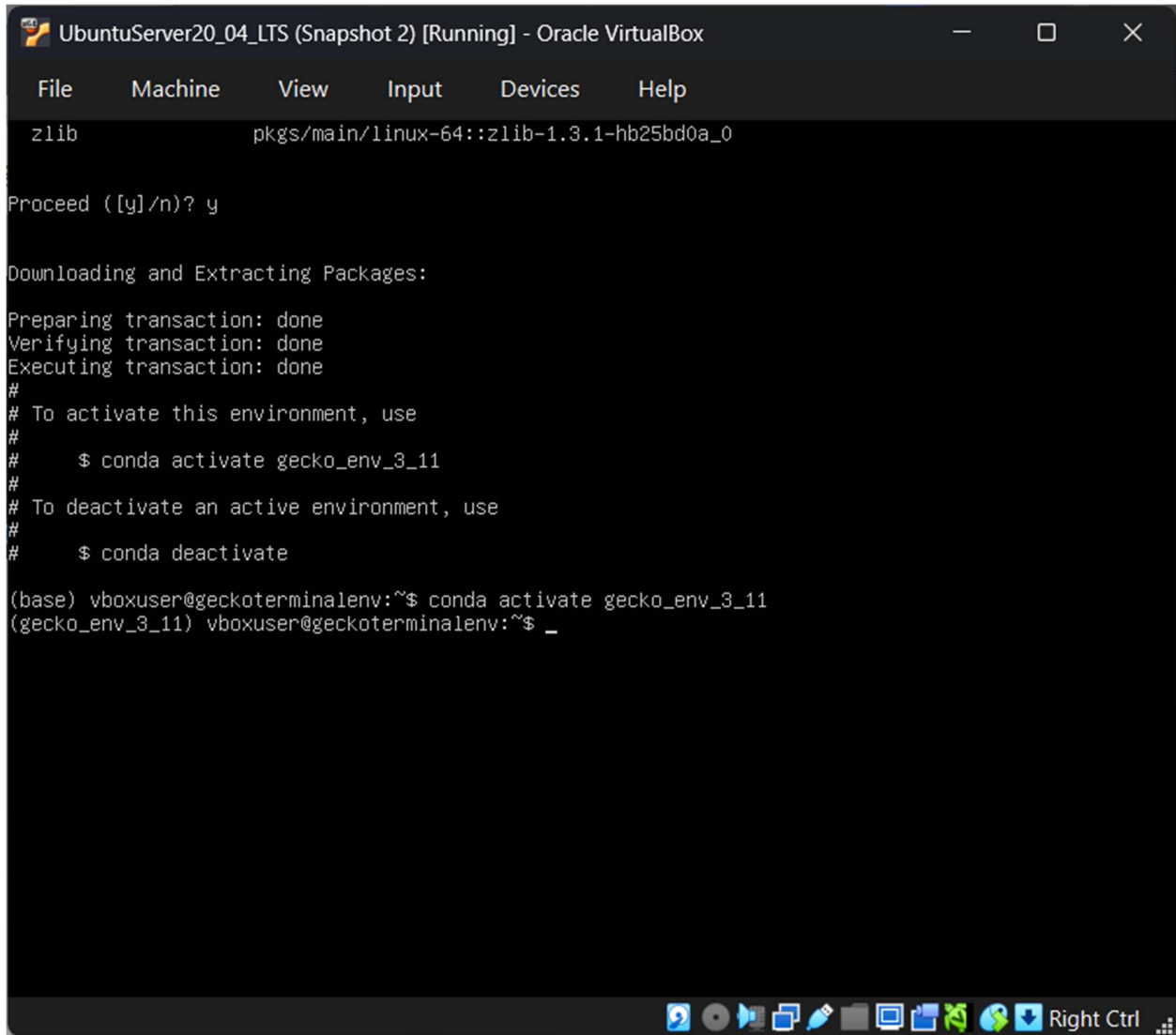
Proceed ([y]/n)? y

Downloading and Extracting Packages:
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#   $ conda activate gecko_env_3_11
#
# To deactivate an active environment, use
#
#   $ conda deactivate

(base) vboxuser@geckoterminalenv:~$
```

4. Activate Conda Environment

conda activate gecko_env_3_11



The screenshot shows a terminal window titled "UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox". The terminal output shows the installation of the 'zlib' package from 'pkgs/main/linux-64::zlib-1.3.1-hb25bd0a_0'. It prompts for confirmation to proceed, which is answered 'y'. The installation process is shown as complete. The terminal then displays instructions on how to activate and deactivate the environment. Finally, the user runs 'conda activate gecko_env_3_11', and the prompt changes from '(base)' to '(gecko_env_3_11)'.

```
File      Machine  View  Input  Devices  Help
zlib      pkgs/main/linux-64::zlib-1.3.1-hb25bd0a_0

Proceed ([y]/n)? y

Downloading and Extracting Packages:
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#     $ conda activate gecko_env_3_11
#
# To deactivate an active environment, use
#
#     $ conda deactivate

(base) vboxuser@geckoterminalenv:~$ conda activate gecko_env_3_11
(gecko_env_3_11) vboxuser@geckoterminalenv:~$ _
```

Install github tools

git clone https://github.com/snogcel/geckoterminal_collector.git

```
UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

examine the history and state (see also: git help revisions)
  bisect    Use binary search to find the commit that introduced a bug
  diff      Show changes between commits, commit and working tree, etc
  grep      Print lines matching a pattern
  log       Show commit logs
  show      Show various types of objects
  status    Show the working tree status

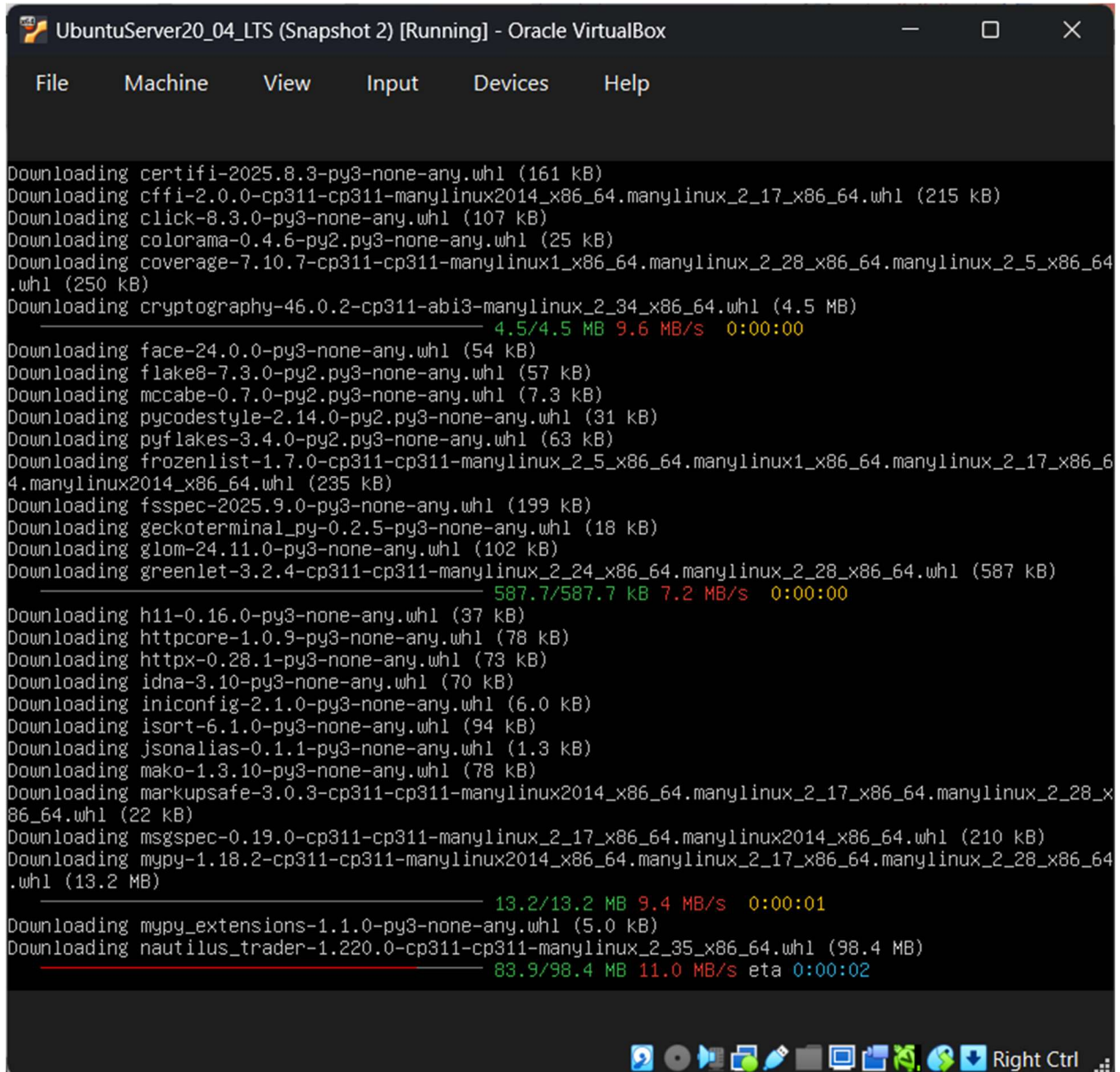
grow, mark and tweak your common history
  branch    List, create, or delete branches
  commit    Record changes to the repository
  merge     Join two or more development histories together
  rebase    Reapply commits on top of another base tip
  reset     Reset current HEAD to the specified state
  switch    Switch branches
  tag       Create, list, delete or verify a tag object signed with GPG

collaborate (see also: git help workflows)
  fetch     Download objects and refs from another repository
  pull      Fetch from and integrate with another repository or a local branch
  push      Update remote refs along with associated objects

'git help -a' and 'git help -g' list available subcommands and some
concept guides. See 'git help <command>' or 'git help <concept>'
to read about a specific subcommand or concept.
See 'git help git' for an overview of the system.
(gecko_env_3_11) vboxuser@geckoterminalenv:~$ ls
conda.gpg
(gecko_env_3_11) vboxuser@geckoterminalenv:~$ git clone https://github.com/snogcel/geckoterminal_collector.git
Cloning into 'geckoterminal_collector'...
remote: Enumerating objects: 2386, done.
remote: Total 2386 (delta 0), reused 0 (delta 0), pack-reused 2386 (from 2)
Receiving objects: 100% (2386/2386), 58.13 MiB | 10.80 MiB/s, done.
Resolving deltas: 100% (1306/1306), done.
Updating files: 100% (780/780), done.
(gecko_env_3_11) vboxuser@geckoterminalenv:~$ _
```

```
cd geckoterminal_collector
```

```
pip install -r requirements.txt
```



```
UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

Downloading certifi-2025.8.3-py3-none-any.whl (161 kB)
Downloading cffi-2.0.0-cp311-cp311-manylinux2014_x86_64.manylinux_2_17_x86_64.whl (215 kB)
Downloading click-8.3.0-py3-none-any.whl (107 kB)
Downloading colorama-0.4.6-py2.py3-none-any.whl (25 kB)
Downloading coverage-7.10.7-cp311-cp311-manylinux1_x86_64.manylinux_2_28_x86_64.manylinux_2_5_x86_64
.whl (250 kB)
Downloading cryptography-46.0.2-cp311-abi3-manylinux_2_34_x86_64.whl (4.5 MB)
4.5/4.5 MB 9.6 MB/s 0:00:00
Downloading face-24.0.0-py3-none-any.whl (54 kB)
Downloading flake8-7.3.0-py2.py3-none-any.whl (57 kB)
Downloading mccabe-0.7.0-py2.py3-none-any.whl (7.3 kB)
Downloading pycodestyle-2.14.0-py2.py3-none-any.whl (31 kB)
Downloading pyflakes-3.4.0-py2.py3-none-any.whl (63 kB)
Downloading frozenlist-1.7.0-cp311-cp311-manylinux_2_5_x86_64.manylinux1_x86_64.manylinux_2_17_x86_6
4.manylinux2014_x86_64.whl (235 kB)
Downloading fsspec-2025.9.0-py3-none-any.whl (199 kB)
Downloading geckoterminal_py-0.2.5-py3-none-any.whl (18 kB)
Downloading glom-24.11.0-py3-none-any.whl (102 kB)
Downloading greenlet-3.2.4-cp311-cp311-manylinux_2_24_x86_64.manylinux_2_28_x86_64.whl (587 kB)
587.7/587.7 kB 7.2 MB/s 0:00:00
Downloading h11-0.16.0-py3-none-any.whl (37 kB)
Downloading httpcore-1.0.9-py3-none-any.whl (78 kB)
Downloading httpx-0.28.1-py3-none-any.whl (73 kB)
Downloading idna-3.10-py3-none-any.whl (70 kB)
Downloading iniconfig-2.1.0-py3-none-any.whl (6.0 kB)
Downloading isort-6.1.0-py3-none-any.whl (94 kB)
Downloading jsonalias-0.1.1-py3-none-any.whl (1.3 kB)
Downloading mako-1.3.10-py3-none-any.whl (78 kB)
Downloading markupsafe-3.0.3-cp311-cp311-manylinux2014_x86_64.manylinux_2_17_x86_64.manylinux_2_28_x
86_64.whl (22 kB)
Downloading msgspec-0.19.0-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (210 kB)
Downloading mypy-1.18.2-cp311-cp311-manylinux2014_x86_64.manylinux_2_17_x86_64.manylinux_2_28_x86_64
.whl (13.2 MB)
13.2/13.2 MB 9.4 MB/s 0:00:01
Downloading mypy_extensions-1.1.0-py3-none-any.whl (5.0 kB)
Downloading nautilus_trader-1.220.0-cp311-cp311-manylinux_2_35_x86_64.whl (98.4 MB)
83.9/98.4 MB 11.0 MB/s eta 0:00:02
```

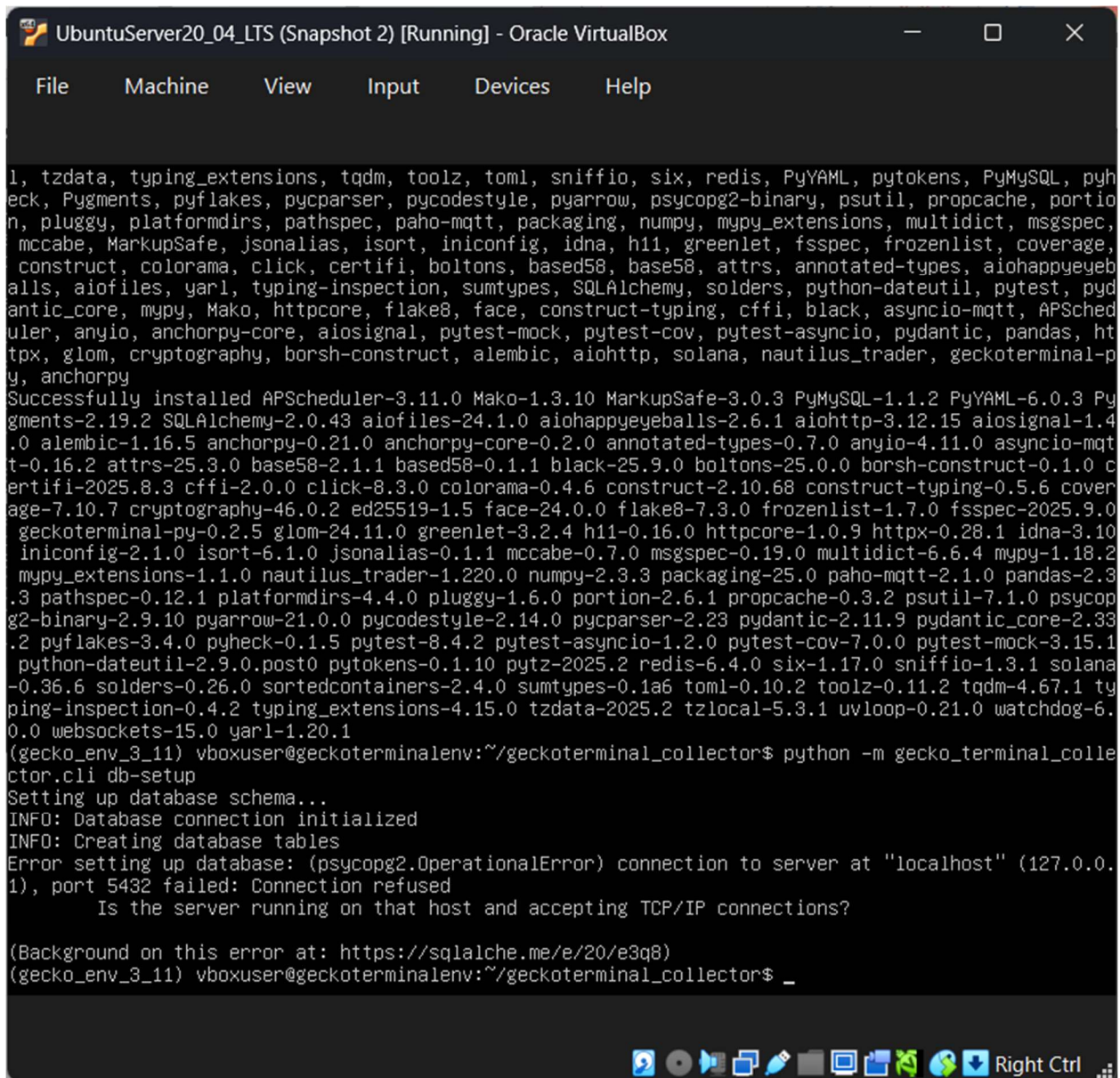

UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

```
use the standardized build interface by setting the `--use-pep517` option, (possibly combined with `
--no-build-isolation`), or adding a `pyproject.toml` file to the source tree of 'ed25519'. Discussio
n can be found at https://github.com/pypa/pip/issues/6334
Building wheel for ed25519 (setup.py) ... done
Created wheel for ed25519: filename=ed25519-1.5-cp311-cp311-linux_x86_64.whl size=69140 sha256=145
f6d8146c316df1ac0588799ae561d5e98780756d21d368f68ec62ca9fbad1
Stored in directory: /home/vboxuser/.cache/pip/wheels/29/ee/7f/dcbc82c274c565cb7f13479d7212a3c99a3
7f41234dae3cb71
Successfully built construct ed25519
Installing collected packages: sortedcontainers, pytz, ed25519, websockets, watchdog, uvloop, tzloca
l, tzdata, typing_extensions, tqdm, toolz, toml, sniffio, six, redis, PyYAML, pytokens, PyMySQL, pyh
eck, Pygments, pyflakes, pycparser, pycodestyle, pyarrow, psycopg2-binary, psutil, procpache, portio
n, pluggy, platformdirs, pathspec, paho-mqtt, packaging, numpy, mypy_extensions, multidict, msgspec,
mccabe, MarkupSafe, jsonalias, isort, iniconfig, idna, h11, greenlet, fsspec, frozenlist, coverage,
construct, colorama, click, certifi, boltons, based58, base58, attrs, annotated-types, aiohappyeyeb
alls, aiofiles, yarl, typing-inspection, sumtypes, SQLAlchemy, solders, python-dateutil, pytest, pyd
antic_core, mpy, Mako, httpcore, flake8, face, construct-typing, cffi, black, asyncio-mqtt, APSched
uler, anyio, anchorpy-core, aiosignal, pytest-mock, pytest-cov, pytest-asyncio, pydantic, pandas, ht
tpx, glom, cryptography, borsh-construct, alembic, aiohttp, solana, nautilus_trader, geckoterminal-p
y, anchorpy
Successfully installed APScheduler-3.11.0 Mako-1.3.10 MarkupSafe-3.0.3 PyMySQL-1.1.2 PyYAML-6.0.3 Py
gments-2.19.2 SQLAlchemy-2.0.43 aiofiles-24.1.0 aiohappyeyeballs-2.6.1 aiohttp-3.12.15 aiosignal-1.4
.0 alembic-1.16.5 anchorpy-0.21.0 anchorpy-core-0.2.0 annotated-types-0.7.0 anyio-4.11.0 asyncio-mqt
t-0.16.2 attrs-25.3.0 base58-2.1.1 based58-0.1.1 black-25.9.0 boltons-25.0.0 borsh-construct-0.1.0 c
ertifi-2025.8.3 cffi-2.0.0 click-8.3.0 colorama-0.4.6 construct-2.10.68 construct-typing-0.5.6 cover
age-7.10.7 cryptography-46.0.2 ed25519-1.5 face-24.0.0 flake8-7.3.0 frozenlist-1.7.0 fsspec-2025.9.0
geckoterminal-py-0.2.5 glom-24.11.0 greenlet-3.2.4 h11-0.16.0 httpcore-1.0.9 httpx-0.28.1 idna-3.10
iniconfig-2.1.0 isort-6.1.0 jsonalias-0.1.1 mccabe-0.7.0 msgspec-0.19.0 multidict-6.6.4 mpy-1.18.2
mypy_extensions-1.1.0 nautilus_trader-1.220.0 numpy-2.3.3 packaging-25.0 paho-mqtt-2.1.0 pandas-2.3
.3 pathspec-0.12.1 platformdirs-4.4.0 pluggy-1.6.0 portion-2.6.1 procpache-0.3.2 psutil-7.1.0 psycop
g2-binary-2.9.10 pyarrow-21.0.0 pycodestyle-2.14.0 pycparser-2.23 pydantic-2.11.9 pydantic_core-2.33
.2 pyflakes-3.4.0 pyheck-0.1.5 pytest-8.4.2 pytest-asyncio-1.2.0 pytest-cov-7.0.0 pytest-mock-3.15.1
python-dateutil-2.9.0.post0 pytokens-0.1.10 pytz-2025.2 redis-6.4.0 six-1.17.0 sniffio-1.3.1 solana
-0.36.6 solders-0.26.0 sortedcontainers-2.4.0 sumtypes-0.1a6 toml-0.10.2 toolz-0.11.2 tqdm-4.67.1 ty
ping-inspection-0.4.2 typing_extensions-4.15.0 tzdata-2025.2 tzlocal-5.3.1 uvloop-0.21.0 watchdog-6.
0.0 websockets-15.0 yarl-1.20.1
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$
```

Right Ctrl

```
python -m gecko_terminal_collector.cli db-setup
```



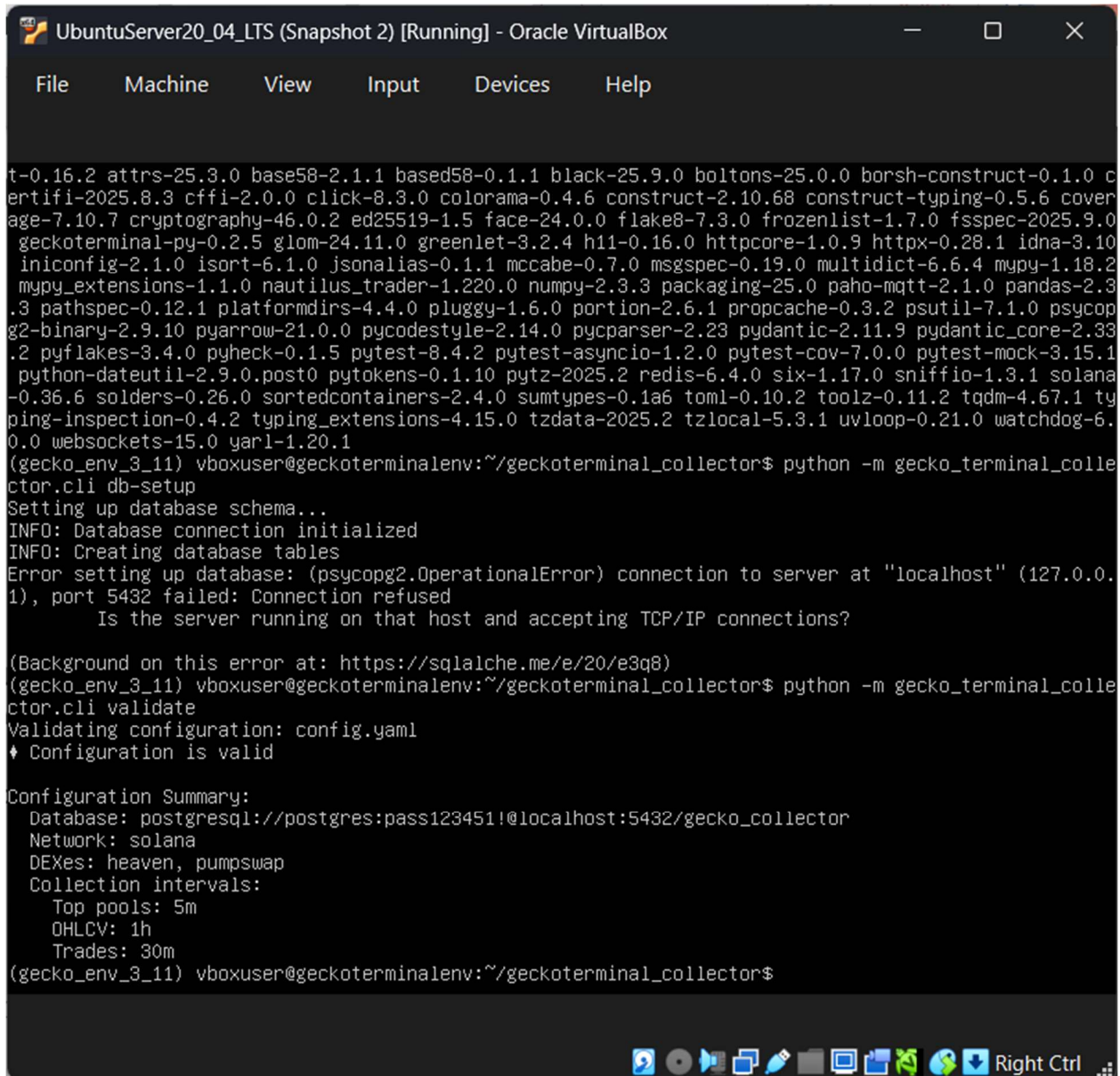
The screenshot shows a terminal window titled "UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox". The terminal output lists a large number of installed Python packages, including tzdata, typing_extensions, tqdm, toolz, toml, sniffio, six, redis, PyYAML, pytokens, PyMySQL, pyheck, Pygments, pyflakes, pycparser, pycodestyle, pyarrow, psycopg2-binary, psutil, propcache, portion, pluggy, platformdirs, pathspec, paho-mqtt, packaging, numpy, mpy_extensions, multidict, msgspec, mccabe, MarkupSafe, jsonalias, isort, iniconfig, idna, h11, greenlet, fsspec, frozenlist, coverage, construct, colorama, click, certifi, boltons, based58, base58, attrs, annotated-types, aiohappyeyeballs, aiofiles, yarl, typing-inspection, sumtypes, SQLAlchemy, solders, python-dateutil, pytest, pydantic_core, mpy, Mako, httpcore, flake8, face, construct-typing, cffi, black, asyncio-mqtt, APScheduler, anyio, anchorpy-core, aiosignal, pytest-mock, pytest-cov, pytest-asyncio, pydantic, pandas, httpx, glom, cryptography, borsh-construct, alembic, aiohttp, solana, nautilus_trader, geckoterminal-py, and anchorpy. Following the list, the command `python -m gecko_terminal_collector.cli db-setup` is executed. The output indicates that the database schema is being set up, the database connection is initialized, and database tables are being created. However, an error occurs: `Error setting up database: (psycopg2.OperationalError) connection to server at "localhost" (127.0.0.1), port 5432 failed: Connection refused`. A message asks if the server is running on that host and accepting TCP/IP connections. A link is provided for background information: <https://sqlalche.me/e/20/e3q8>. The terminal ends with the prompt `(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ _`.

```
1, tzdata, typing_extensions, tqdm, toolz, toml, sniffio, six, redis, PyYAML, pytokens, PyMySQL, pyheck, Pygments, pyflakes, pycparser, pycodestyle, pyarrow, psycopg2-binary, psutil, propcache, portion, pluggy, platformdirs, pathspec, paho-mqtt, packaging, numpy, mpy_extensions, multidict, msgspec, mccabe, MarkupSafe, jsonalias, isort, iniconfig, idna, h11, greenlet, fsspec, frozenlist, coverage, construct, colorama, click, certifi, boltons, based58, base58, attrs, annotated-types, aiohappyeyeballs, aiofiles, yarl, typing-inspection, sumtypes, SQLAlchemy, solders, python-dateutil, pytest, pydantic_core, mpy, Mako, httpcore, flake8, face, construct-typing, cffi, black, asyncio-mqtt, APScheduler, anyio, anchorpy-core, aiosignal, pytest-mock, pytest-cov, pytest-asyncio, pydantic, pandas, httpx, glom, cryptography, borsh-construct, alembic, aiohttp, solana, nautilus_trader, geckoterminal-py, anchorpy
Successfully installed APScheduler-3.11.0 Mako-1.3.10 MarkupSafe-3.0.3 PyMySQL-1.1.2 PyYAML-6.0.3 Pygments-2.19.2 SQLAlchemy-2.0.43 aiofiles-24.1.0 aiohappyeyeballs-2.6.1 aiohttp-3.12.15 aiosignal-1.4.0 alembic-1.16.5 anchorpy-0.21.0 anchorpy-core-0.2.0 annotated-types-0.7.0 anyio-4.11.0 asyncio-mqtt-0.16.2 attrs-25.3.0 base58-2.1.1 based58-0.1.1 black-25.9.0 boltons-25.0.0 borsh-construct-0.1.0 certifi-2025.8.3 cffi-2.0.0 click-8.3.0 colorama-0.4.6 construct-2.10.68 construct-typing-0.5.6 coverage-7.10.7 cryptography-46.0.2 ed25519-1.5 face-24.0.0 flake8-7.3.0 frozenlist-1.7.0 fsspec-2025.9.0 geckoterminal-py-0.2.5 glom-24.11.0 greenlet-3.2.4 h11-0.16.0 httpcore-1.0.9 httpx-0.28.1 idna-3.10 iniconfig-2.1.0 isort-6.1.0 jsonalias-0.1.1 mccabe-0.7.0 msgspec-0.19.0 multidict-6.6.4 mpy-1.18.2 mpy_extensions-1.1.0 nautilus_trader-1.220.0 numpy-2.3.3 packaging-25.0 paho-mqtt-2.1.0 pandas-2.3.3 pathspec-0.12.1 platformdirs-4.4.0 pluggy-1.6.0 portion-2.6.1 propcache-0.3.2 psutil-7.1.0 psycopg2-binary-2.9.10 pyarrow-21.0.0 pycodestyle-2.14.0 pycparser-2.23 pydantic-2.11.9 pydantic_core-2.33.2 pyflakes-3.4.0 pyheck-0.1.5 pytest-8.4.2 pytest-asyncio-1.2.0 pytest-cov-7.0.0 pytest-mock-3.15.1 python-dateutil-2.9.0.post0 pytokens-0.1.10 pytz-2025.2 redis-6.4.0 six-1.17.0 sniffio-1.3.1 solana-0.36.6 solders-0.26.0 sortedcontainers-2.4.0 sumtypes-0.1a6 toml-0.10.2 toolz-0.11.2 tqdm-4.67.1 typing-inspection-0.4.2 typing_extensions-4.15.0 tzdata-2025.2 tzlocal-5.3.1 uvloop-0.21.0 watchdog-6.0.0 websockets-15.0 yarl-1.20.1
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_collector.cli db-setup
Setting up database schema...
INFO: Database connection initialized
INFO: Creating database tables
Error setting up database: (psycopg2.OperationalError) connection to server at "localhost" (127.0.0.1), port 5432 failed: Connection refused
Is the server running on that host and accepting TCP/IP connections?

(Background on this error at: https://sqlalche.me/e/20/e3q8)
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ _
```



```
python -m gecko_terminal_collector.cli validate
```



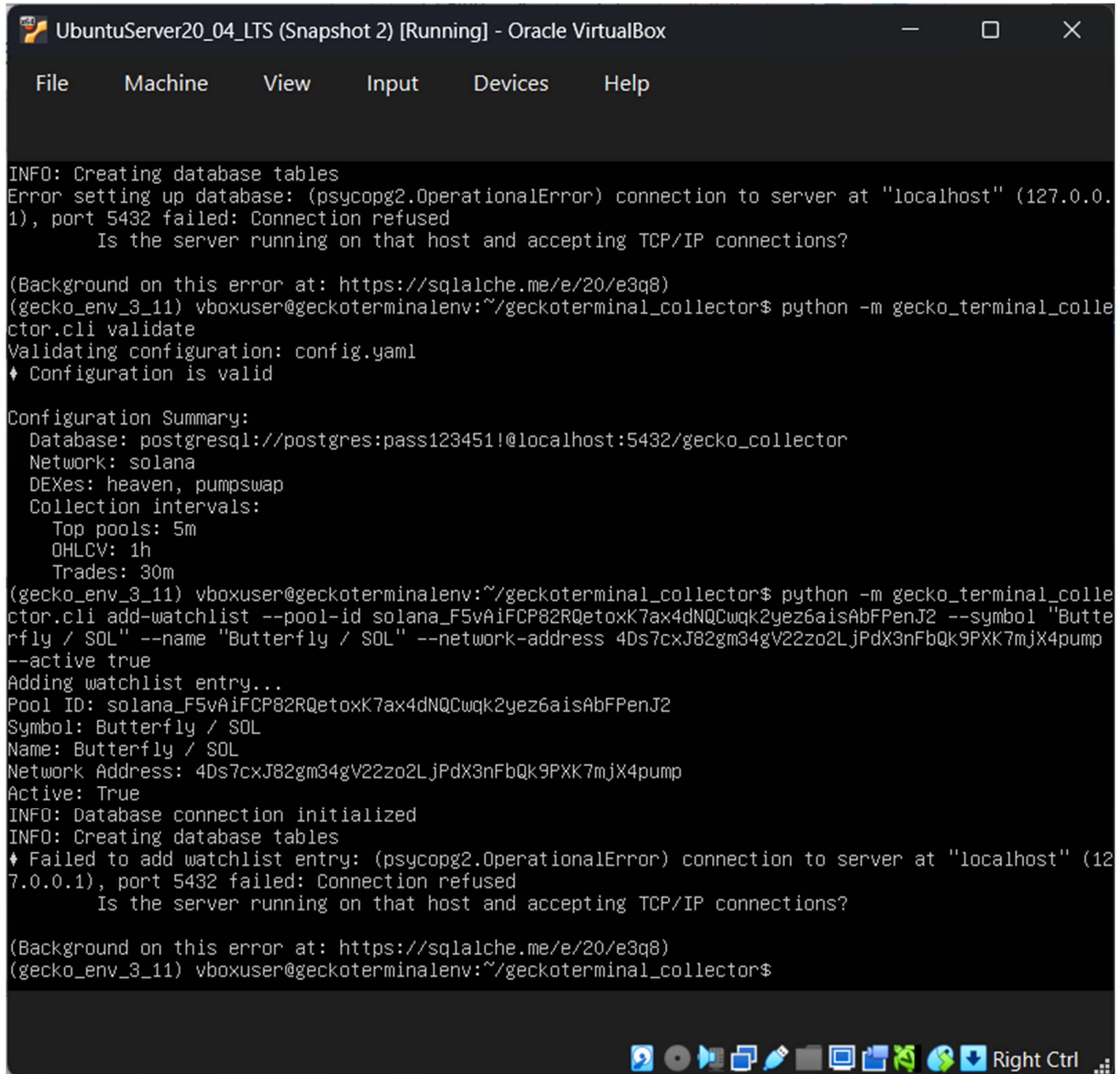
```
UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

t-0.16.2 attrs-25.3.0 base58-2.1.1 based58-0.1.1 black-25.9.0 boltons-25.0.0 borsh-construct-0.1.0 c
ertifi-2025.8.3 cffi-2.0.0 click-8.3.0 colorama-0.4.6 construct-2.10.68 construct-typing-0.5.6 cover
age-7.10.7 cryptography-46.0.2 ed25519-1.5 face-24.0.0 flake8-7.3.0 frozenlist-1.7.0 fsspec-2025.9.0
geckoterminal-py-0.2.5 glom-24.11.0 greenlet-3.2.4 h11-0.16.0 httpcore-1.0.9 httpx-0.28.1 idna-3.10
iniconfig-2.1.0 isort-6.1.0 jsonalias-0.1.1 mccabe-0.7.0 msgspec-0.19.0 multidict-6.6.4 mypy-1.18.2
mypy_extensions-1.1.0 nautilus_trader-1.220.0 numpy-2.3.3 packaging-25.0 paho-mqtt-2.1.0 pandas-2.3
.3 pathspec-0.12.1 platformdirs-4.4.0 pluggy-1.6.0 portion-2.6.1 propcache-0.3.2 psutil-7.1.0 psycop
g2-binary-2.9.10 pyarrow-21.0.0 pycodestyle-2.14.0 pycparser-2.23 pydantic-2.11.9 pydantic_core-2.33
.2 pyflakes-3.4.0 pyheck-0.1.5 pytest-8.4.2 pytest-asyncio-1.2.0 pytest-cov-7.0.0 pytest-mock-3.15.1
python-dateutil-2.9.0.post0 pytokens-0.1.10 pytz-2025.2 redis-6.4.0 six-1.17.0 sniffio-1.3.1 solana
-0.36.6 solders-0.26.0 sortedcontainers-2.4.0 sumtypes-0.1a6 toml-0.10.2 toolz-0.11.2 tqdm-4.67.1 ty
ping-inspection-0.4.2 typing_extensions-4.15.0 tzdata-2025.2 tzlocal-5.3.1 uvloop-0.21.0 watchdog-6.
0.0 websockets-15.0 yarl-1.20.1
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_colle
ctor.cli db-setup
Setting up database schema...
INFO: Database connection initialized
INFO: Creating database tables
Error setting up database: (psycopg2.OperationalError) connection to server at "localhost" (127.0.0.
1), port 5432 failed: Connection refused
        Is the server running on that host and accepting TCP/IP connections?

(Background on this error at: https://sqlalche.me/e/20/e3q8)
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_colle
ctor.cli validate
Validating configuration: config.yaml
♦ Configuration is valid

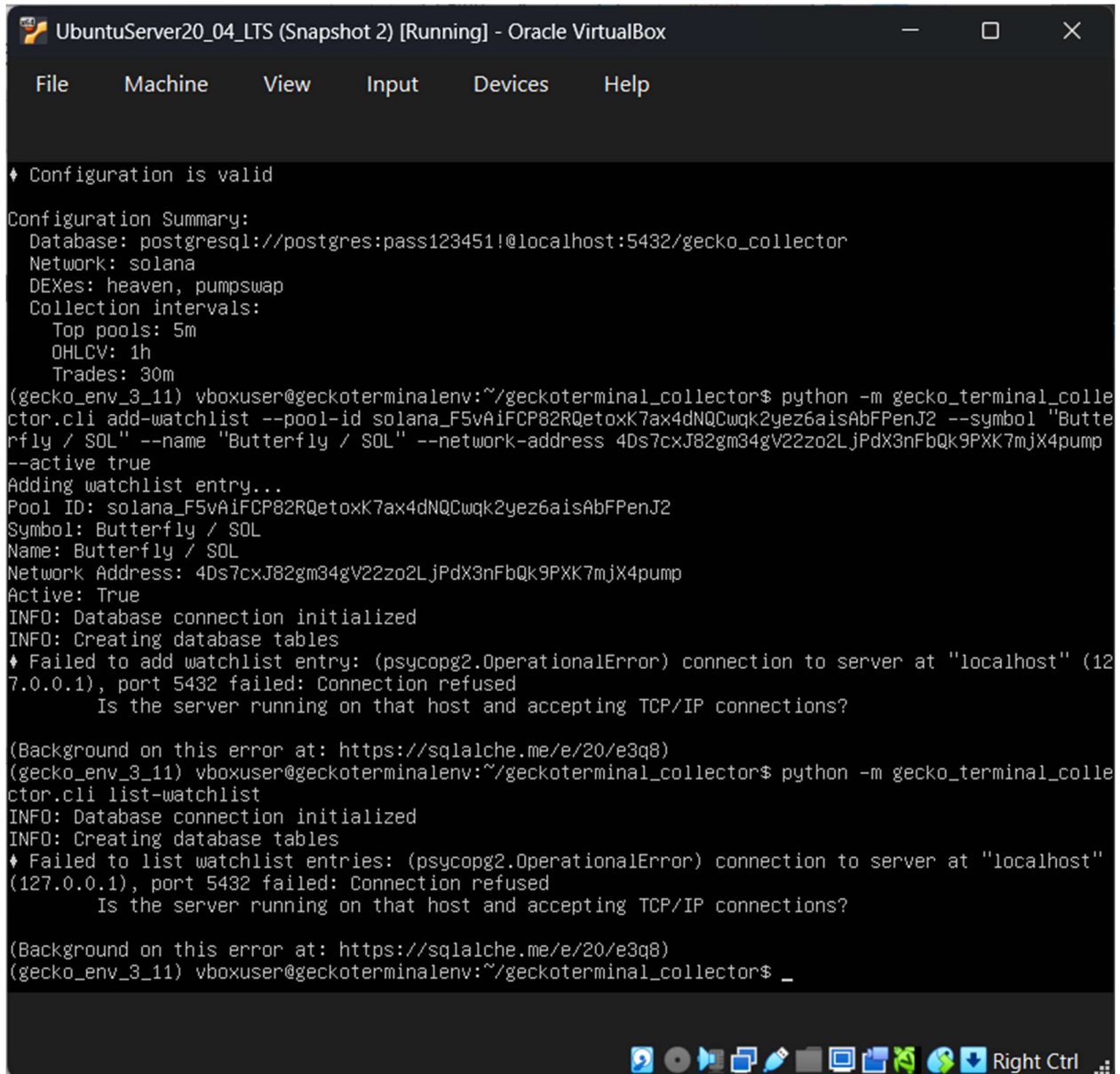
Configuration Summary:
  Database: postgresql://postgres:pass123451!@localhost:5432/gecko_collector
  Network: solana
  DEXes: heaven, pumpswap
  Collection intervals:
    Top pools: 5m
    OHLCV: 1h
    Trades: 30m
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$
```

```
python -m gecko_terminal_collector.cli add-watchlist --pool-id  
solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2 --symbol "Butterfly / SOL" --  
name "Butterfly / SOL" --network-address  
4Ds7cxJ82gm34gV22zo2LjPdX3nFbQk9PXXK7mjX4pump --active true
```



```
INFO: Creating database tables  
Error setting up database: (psycopg2.OperationalError) connection to server at "localhost" (127.0.0.1), port 5432 failed: Connection refused  
Is the server running on that host and accepting TCP/IP connections?  
  
(Background on this error at: https://sqlalche.me/e/20/e3q8)  
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_collector.cli validate  
Validating configuration: config.yaml  
♦ Configuration is valid  
  
Configuration Summary:  
Database: postgresql://postgres:pass123451!@localhost:5432/gecko_collector  
Network: solana  
DEXes: heaven, pumpswap  
Collection intervals:  
Top pools: 5m  
OHLCV: 1h  
Trades: 30m  
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_collector.cli add-watchlist --pool-id solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2 --symbol "Butterfly / SOL" --name "Butterfly / SOL" --network-address 4Ds7cxJ82gm34gV22zo2LjPdX3nFbQk9PXXK7mjX4pump --active true  
Adding watchlist entry...  
Pool ID: solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2  
Symbol: Butterfly / SOL  
Name: Butterfly / SOL  
Network Address: 4Ds7cxJ82gm34gV22zo2LjPdX3nFbQk9PXXK7mjX4pump  
Active: True  
INFO: Database connection initialized  
INFO: Creating database tables  
♦ Failed to add watchlist entry: (psycopg2.OperationalError) connection to server at "localhost" (127.0.0.1), port 5432 failed: Connection refused  
Is the server running on that host and accepting TCP/IP connections?  
  
(Background on this error at: https://sqlalche.me/e/20/e3q8)  
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$
```

```
python -m gecko_terminal_collector.cli list-watchlist
```



```
UbuntuServer20_04_LTS (Snapshot 2) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

♦ Configuration is valid

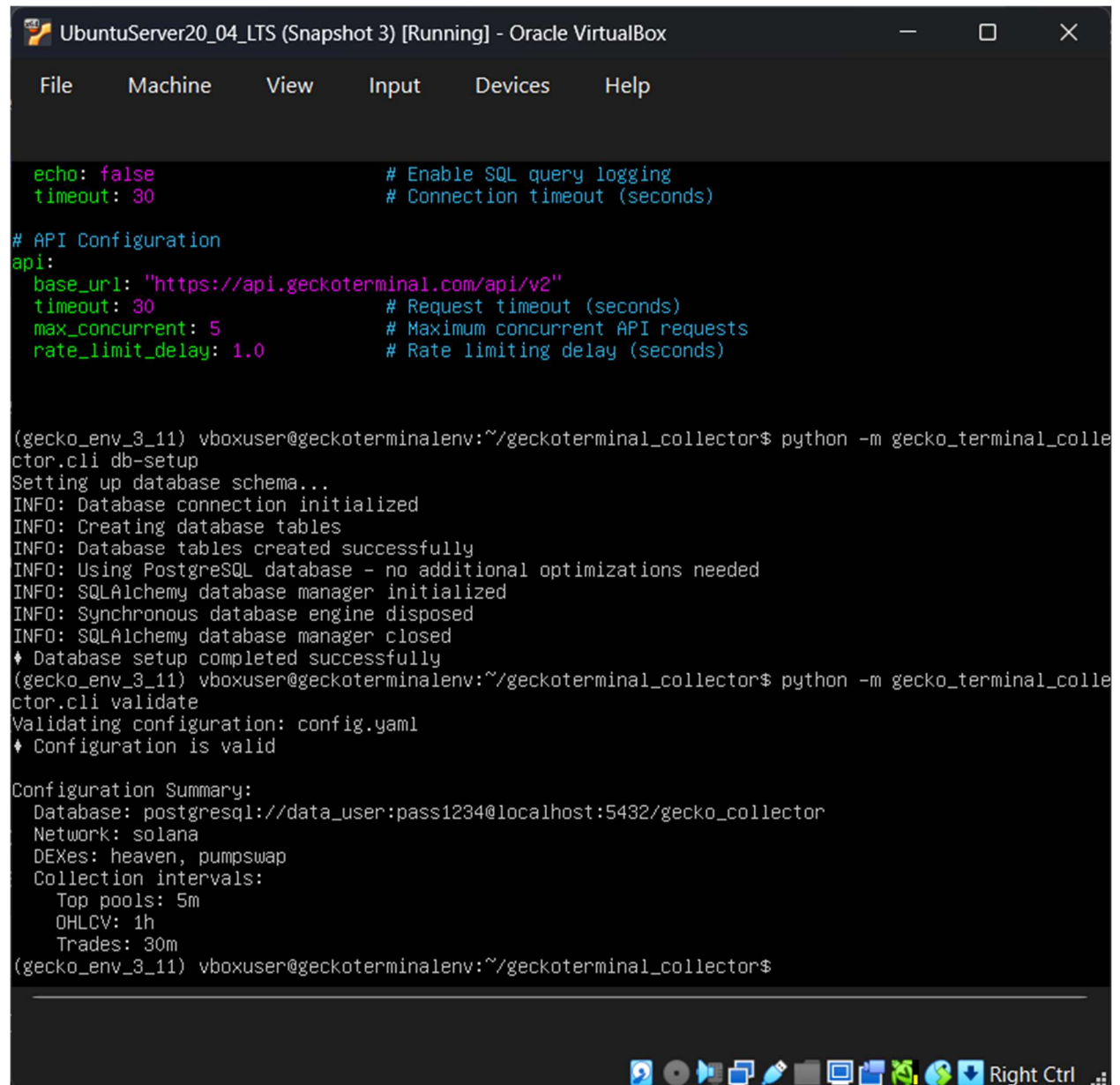
Configuration Summary:
  Database: postgresql://postgres:pass123451!@localhost:5432/gecko_collector
  Network: solana
  DEXes: heaven, pumpswap
  Collection intervals:
    Top pools: 5m
    OHLCV: 1h
    Trades: 30m
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_collector.cli add-watchlist --pool-id solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2 --symbol "Butterfly / SOL" --name "Butterfly / SOL" --network-address 4Ds7cxJ82gm34gV22zo2LjPdX3nFbQk9PXK7mjX4pump --active true
Adding watchlist entry...
Pool ID: solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2
Symbol: Butterfly / SOL
Name: Butterfly / SOL
Network Address: 4Ds7cxJ82gm34gV22zo2LjPdX3nFbQk9PXK7mjX4pump
Active: True
INFO: Database connection initialized
INFO: Creating database tables
♦ Failed to add watchlist entry: (psycopg2.OperationalError) connection to server at "localhost" (127.0.0.1), port 5432 failed: Connection refused
    Is the server running on that host and accepting TCP/IP connections?

(Background on this error at: https://sqlalche.me/e/20/e3q8)
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_collector.cli list-watchlist
INFO: Database connection initialized
INFO: Creating database tables
♦ Failed to list watchlist entries: (psycopg2.OperationalError) connection to server at "localhost" (127.0.0.1), port 5432 failed: Connection refused
    Is the server running on that host and accepting TCP/IP connections?

(Background on this error at: https://sqlalche.me/e/20/e3q8)
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ _
```

```
python -m gecko_terminal_collector.cli db-setup
```

```
python -m gecko_terminal_collector.cli validate
```



```
UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox
File Machine View Input Devices Help

echo: false                # Enable SQL query logging
timeout: 30                 # Connection timeout (seconds)

# API Configuration
api:
  base_url: "https://api.geckoterminal.com/api/v2"
  timeout: 30               # Request timeout (seconds)
  max_concurrent: 5         # Maximum concurrent API requests
  rate_limit_delay: 1.0     # Rate limiting delay (seconds)

(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_collector.cli db-setup
Setting up database schema...
INFO: Database connection initialized
INFO: Creating database tables
INFO: Database tables created successfully
INFO: Using PostgreSQL database - no additional optimizations needed
INFO: SQLAlchemy database manager initialized
INFO: Synchronous database engine disposed
INFO: SQLAlchemy database manager closed
♦ Database setup completed successfully
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_collector.cli validate
Validating configuration: config.yaml
♦ Configuration is valid

Configuration Summary:
  Database: postgresql://data_user:pass1234@localhost:5432/gecko_collector
  Network: solana
  DEXes: heaven, pumpswap
  Collection intervals:
    Top pools: 5m
    OHLCV: 1h
    Trades: 30m
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$
```

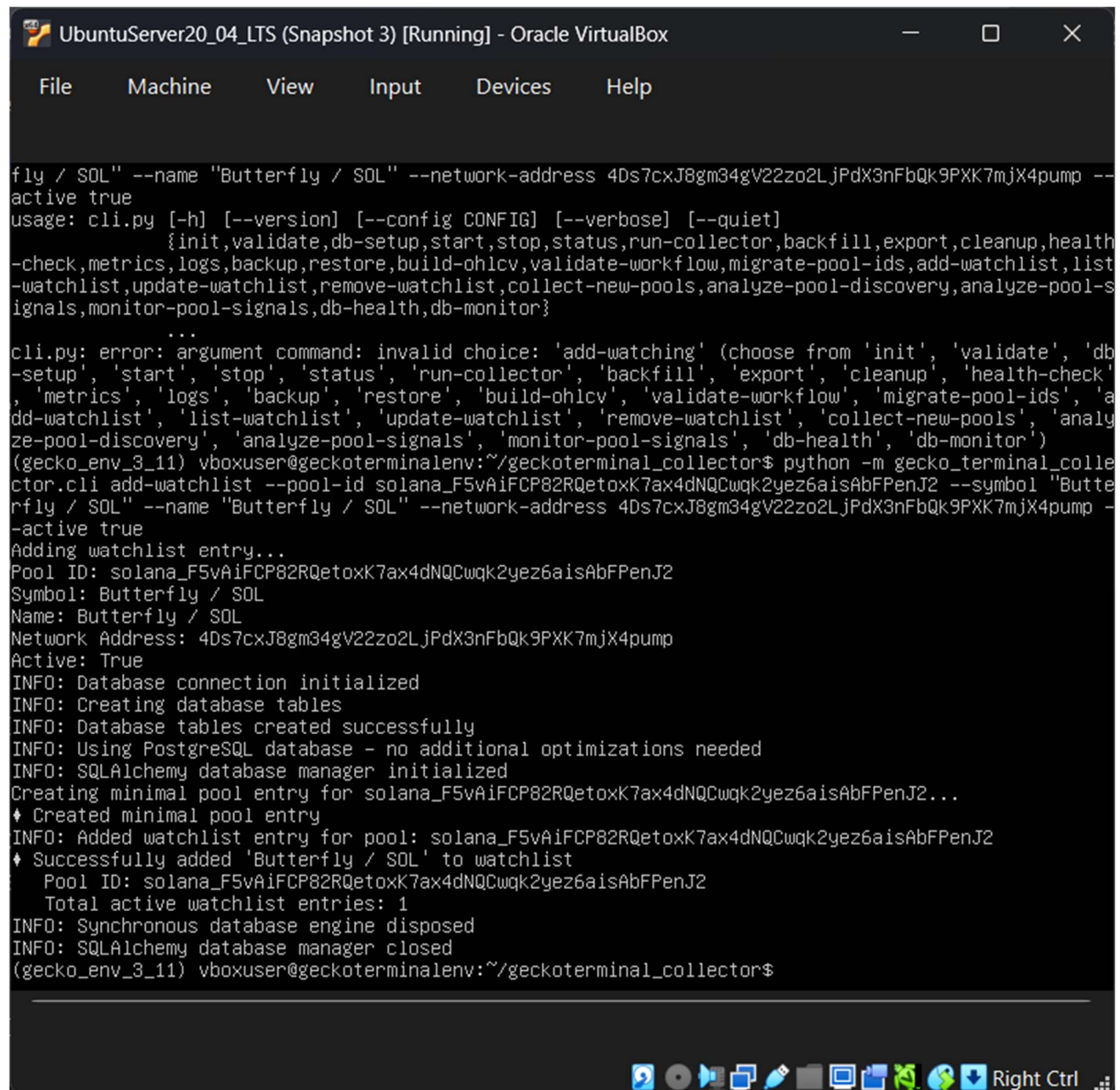
```

execution new_pools_solana_1760555137_collector_new_pools_solana for new_pools_solana: success (1.16s
, 40 records)
2025-10-15 19:05:38,190 - gecko_terminal_collector.scheduling.scheduler - INFO - Collection complete
d for new_pools_solana: 40 records in 1.15s
2025-10-15 19:05:38,191 - apscheduler.executors.default - INFO - Job "Collector: new_pools_solana (t
rigger: interval[0:10:00], next run at: 2025-10-15 19:15:36 UTC)" executed successfully
2025-10-15 19:05:38,202 - httpx - INFO - HTTP Request: GET https://api.geckoterminal.com/api/v2/netw
orks/solana/dexes/heaven/pools "HTTP/1.1 200 OK"
2025-10-15 19:05:38,302 - gecko_terminal_collector.database.sqlalchemy_manager - INFO - Stored 0 new
pools, updated 20 existing pools
2025-10-15 19:05:38,303 - gecko_terminal_collector.collectors.top_pools - INFO - Stored/updated 0 po
ol records
2025-10-15 19:05:38,304 - gecko_terminal_collector.collectors.top_pools - INFO - Processed 0 pools f
or DEX: heaven
2025-10-15 19:05:38,305 - gecko_terminal_collector.collectors.top_pools - INFO - Collecting top pool
s for DEX: pumpswap
2025-10-15 19:05:38,637 - httpx - INFO - HTTP Request: GET https://api.geckoterminal.com/api/v2/netw
orks/solana/dexes/pumpswap/pools "HTTP/1.1 200 OK"
2025-10-15 19:05:38,738 - gecko_terminal_collector.database.sqlalchemy_manager - INFO - Stored 0 new
pools, updated 20 existing pools
2025-10-15 19:05:38,740 - gecko_terminal_collector.collectors.top_pools - INFO - Stored/updated 0 po
ol records
2025-10-15 19:05:38,741 - gecko_terminal_collector.collectors.top_pools - INFO - Processed 0 pools f
or DEX: pumpswap
2025-10-15 19:05:38,741 - gecko_terminal_collector.collectors.top_pools - INFO - Top pools collectio
n completed: 0 pools processed, 0 errors
2025-10-15 19:05:38,743 - gecko_terminal_collector.utils.metadata - INFO - Updated metadata for top_
pools_solana: Success rate: 100.0%, Total runs: 76, Records collected: 0
2025-10-15 19:05:38,744 - gecko_terminal_collector.monitoring.execution_history - INFO - Completed e
xecution top_pools_solana_1760555137_collector_top_pools_solana for top_pools_solana: success (1.72s
, 0 records)
2025-10-15 19:05:38,745 - gecko_terminal_collector.scheduling.scheduler - INFO - Collection complete
d for top_pools_solana: 0 records in 1.72s
2025-10-15 19:05:38,746 - apscheduler.executors.default - INFO - Job "Collector: top_pools_solana (t
rigger: interval[0:05:00], next run at: 2025-10-15 19:10:36 UTC)" executed successfully
^C2025-10-15 19:09:12,414 - __main__ - INFO - Received signal 2, initiating shutdown...

```

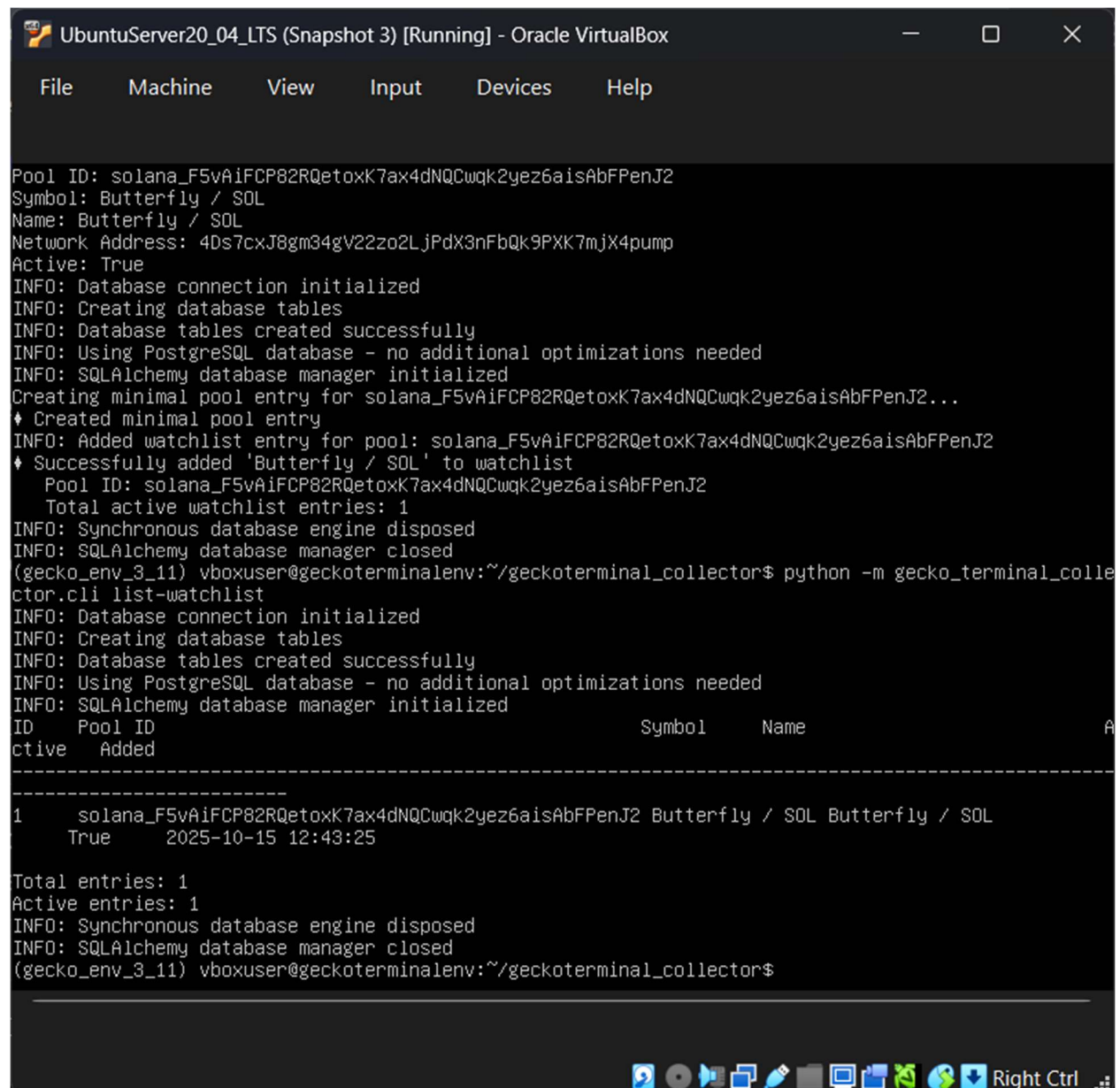


```
python -m gecko_terminal_collector.cli add-watchlist --pool-id  
solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2 --symbol "Butterfly / SOL" --  
name "Butterfly / SOL" --network-address  
4Ds7cxJ82gm34gV22zo2LjPdX3nFbQk9PXXK7mjX4pump --active true
```



```
UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox  
File Machine View Input Devices Help  
  
fly / SOL" --name "Butterfly / SOL" --network-address 4Ds7cxJ8gm34gV22zo2LjPdX3nFbQk9PXXK7mjX4pump --  
active true  
usage: cli.py [-h] [--version] [--config CONFIG] [--verbose] [--quiet]  
            {init,validate,db-setup,start,stop,status,run-collector,backfill,export,cleanup,health  
-check,metrics,logs,backup,restore,build-ohlcv,validate-workflow,migrate-pool-ids,add-watchlist,list  
-watchlist,update-watchlist,remove-watchlist,collect-new-pools,analyze-pool-discovery,analyze-pool-s  
ignals,monitor-pool-signals,db-health,db-monitor}  
...  
cli.py: error: argument command: invalid choice: 'add-watching' (choose from 'init', 'validate', 'db  
-setup', 'start', 'stop', 'status', 'run-collector', 'backfill', 'export', 'cleanup', 'health-check'  
, 'metrics', 'logs', 'backup', 'restore', 'build-ohlcv', 'validate-workflow', 'migrate-pool-ids', 'a  
dd-watchlist', 'list-watchlist', 'update-watchlist', 'remove-watchlist', 'collect-new-pools', 'analy  
ze-pool-discovery', 'analyze-pool-signals', 'monitor-pool-signals', 'db-health', 'db-monitor')  
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_colle  
ctor.cli add-watchlist --pool-id solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2 --symbol "Butte  
rfly / SOL" --name "Butterfly / SOL" --network-address 4Ds7cxJ8gm34gV22zo2LjPdX3nFbQk9PXXK7mjX4pump --  
-active true  
Adding watchlist entry...  
Pool ID: solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2  
Symbol: Butterfly / SOL  
Name: Butterfly / SOL  
Network Address: 4Ds7cxJ8gm34gV22zo2LjPdX3nFbQk9PXXK7mjX4pump  
Active: True  
INFO: Database connection initialized  
INFO: Creating database tables  
INFO: Database tables created successfully  
INFO: Using PostgreSQL database - no additional optimizations needed  
INFO: SQLAlchemy database manager initialized  
Creating minimal pool entry for solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2...  
♦ Created minimal pool entry  
INFO: Added watchlist entry for pool: solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2  
♦ Successfully added 'Butterfly / SOL' to watchlist  
  Pool ID: solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2  
  Total active watchlist entries: 1  
INFO: Synchronous database engine disposed  
INFO: SQLAlchemy database manager closed  
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$
```

```
python -m gecko_terminal_collector.cli list-watchlist
```

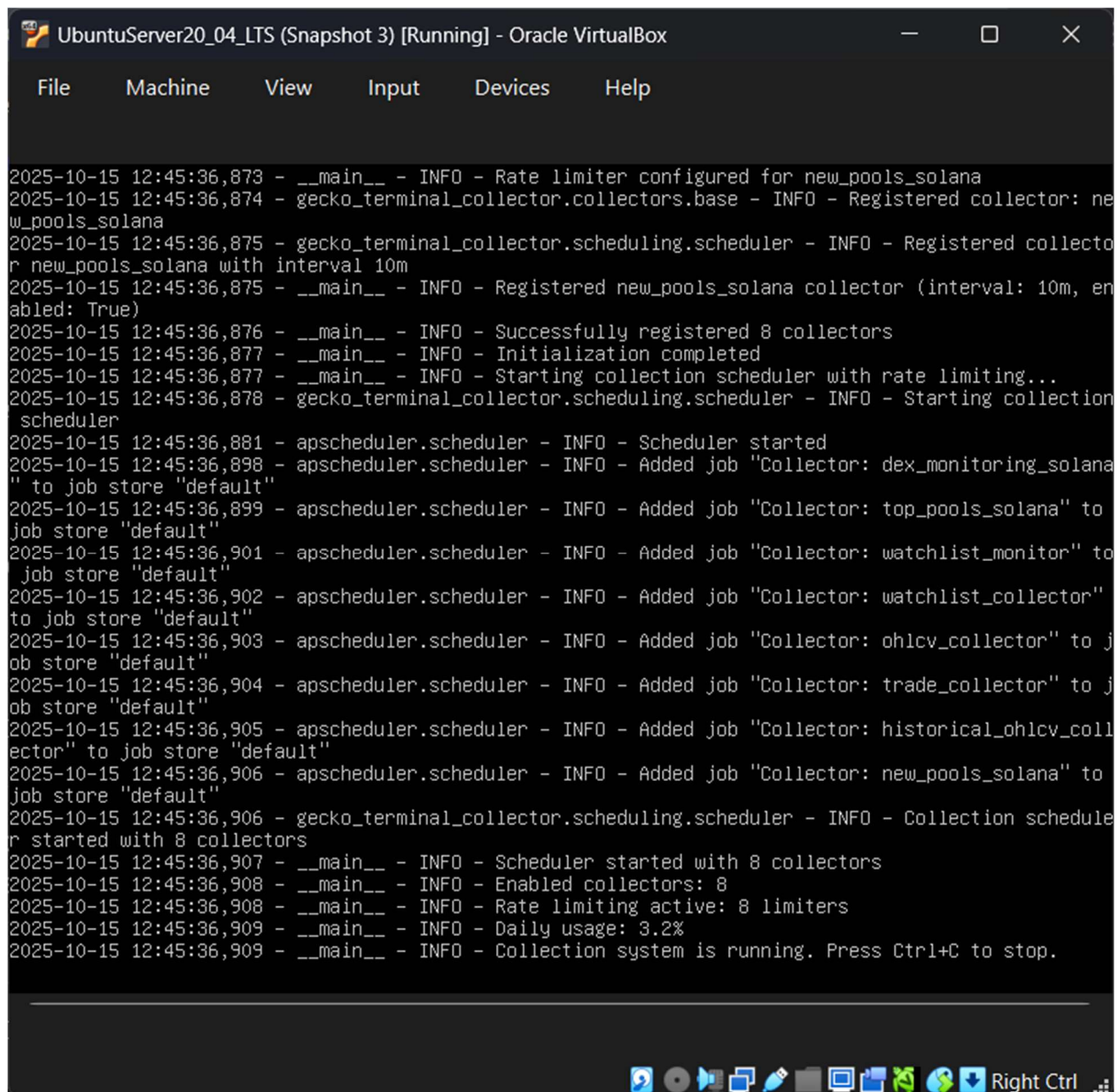


```
Pool ID: solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2
Symbol: Butterfly / SOL
Name: Butterfly / SOL
Network Address: 4Ds7cxJ8gm34gV22zo2LjPdX3nFbQk9PXXK7mjX4pump
Active: True
INFO: Database connection initialized
INFO: Creating database tables
INFO: Database tables created successfully
INFO: Using PostgreSQL database - no additional optimizations needed
INFO: SQLAlchemy database manager initialized
Creating minimal pool entry for solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2...
♦ Created minimal pool entry
INFO: Added watchlist entry for pool: solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2
♦ Successfully added 'Butterfly / SOL' to watchlist
  Pool ID: solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2
  Total active watchlist entries: 1
INFO: Synchronous database engine disposed
INFO: SQLAlchemy database manager closed
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ python -m gecko_terminal_collector.cli list-watchlist
INFO: Database connection initialized
INFO: Creating database tables
INFO: Database tables created successfully
INFO: Using PostgreSQL database - no additional optimizations needed
INFO: SQLAlchemy database manager initialized
ID      Pool ID                                     Symbol      Name
ctive   Added
-----
1       solana_F5vAiFCP82RQetoxK7ax4dNQCwqk2yez6aisAbFPenJ2 Butterfly / SOL Butterfly / SOL
True    2025-10-15 12:43:25

Total entries: 1
Active entries: 1
INFO: Synchronous database engine disposed
INFO: SQLAlchemy database manager closed
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$
```

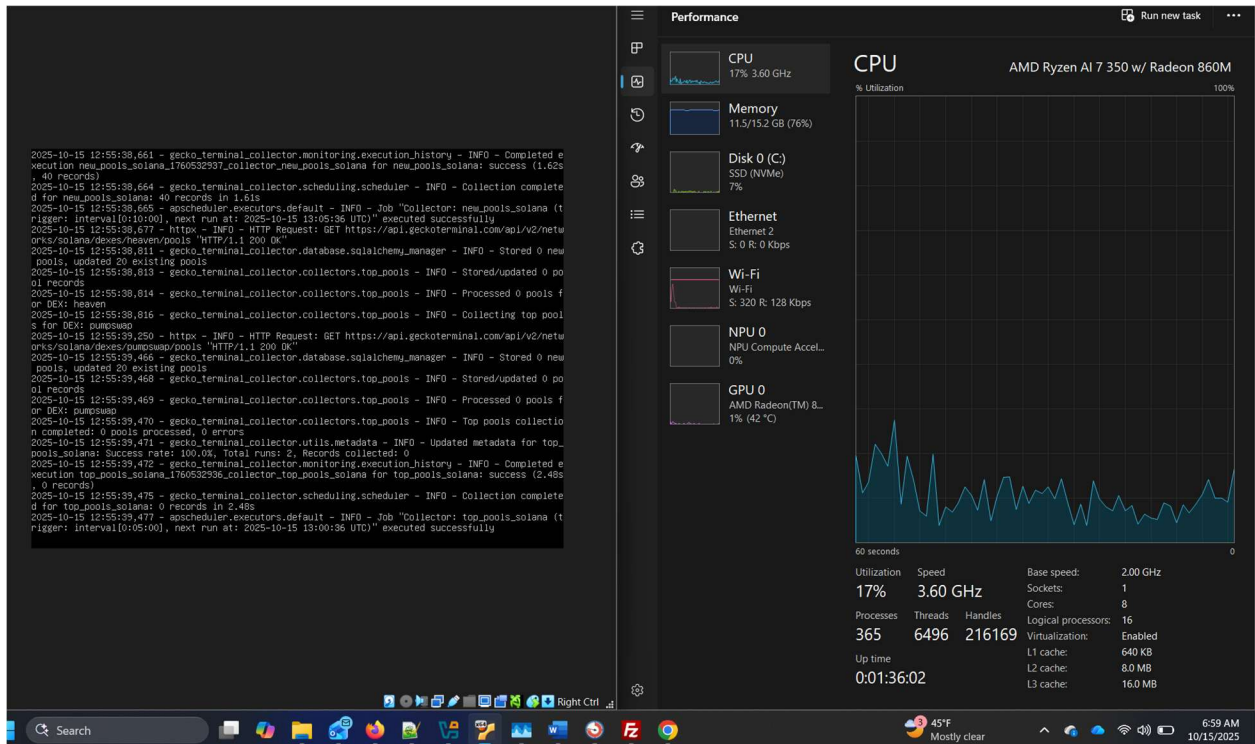
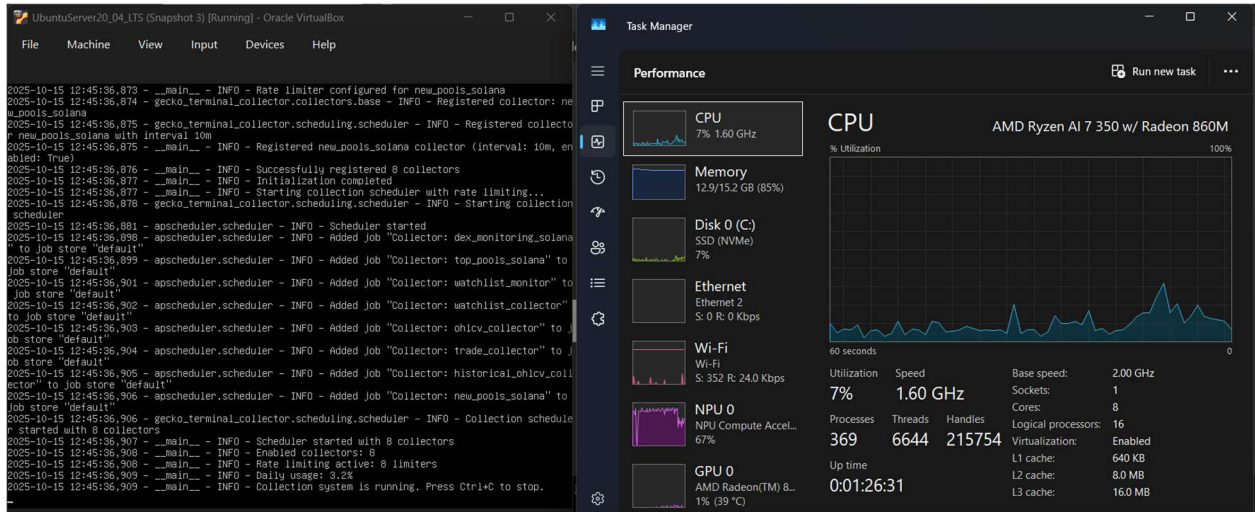

14. At this point, you're ready to begin capturing data

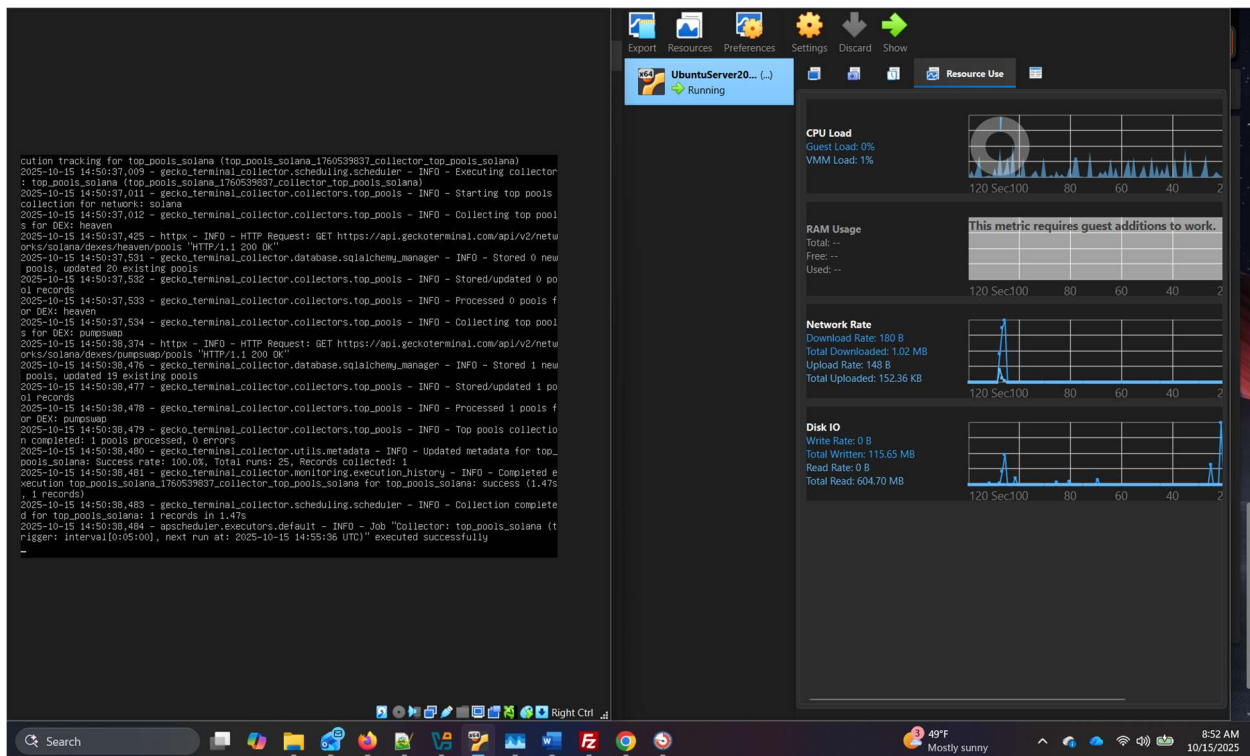
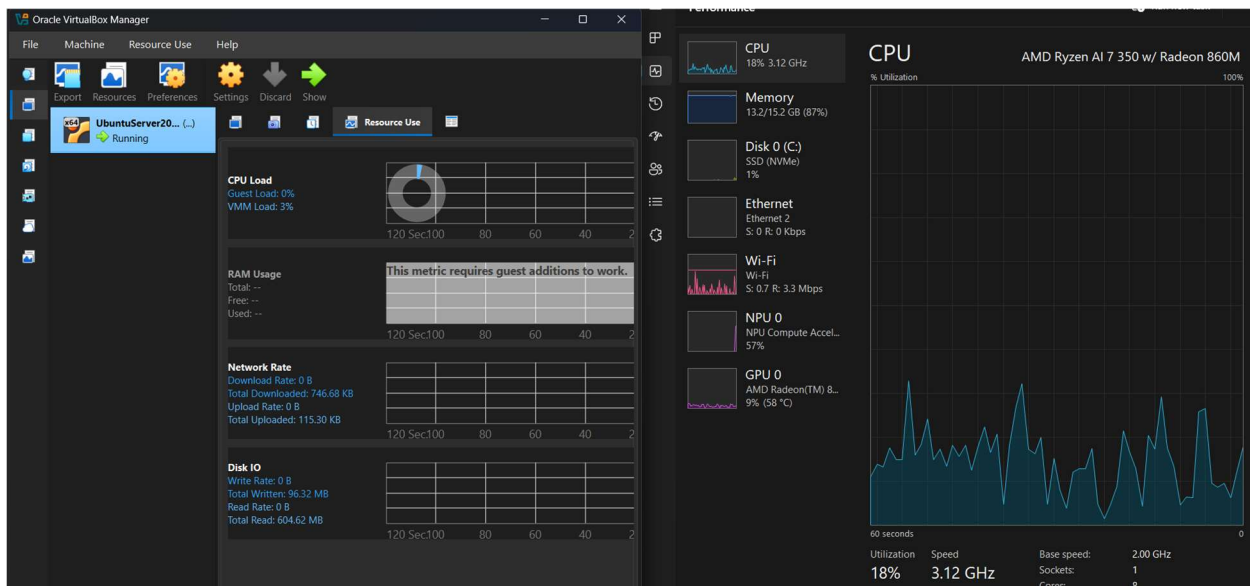
`python -m examples.cli_with_scheduler start`



The screenshot shows a terminal window titled "UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox". The terminal displays a series of log messages from a data collection system. The messages indicate that the system is configured with a rate limiter, registers collectors, starts a scheduler, and begins data collection. The final message states that the collection system is running and can be stopped with Ctrl+C.

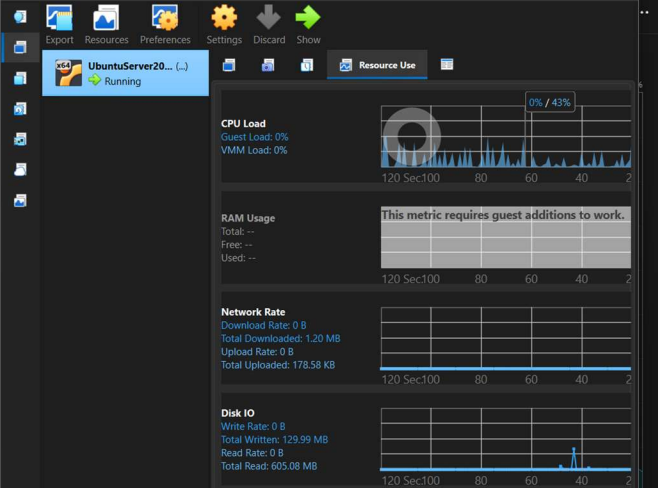
```
2025-10-15 12:45:36,873 - __main__ - INFO - Rate limiter configured for new_pools_solana
2025-10-15 12:45:36,874 - gecko_terminal_collector.collectors.base - INFO - Registered collector: new_pools_solana
2025-10-15 12:45:36,875 - gecko_terminal_collector.scheduling.scheduler - INFO - Registered collector new_pools_solana with interval 10m
2025-10-15 12:45:36,875 - __main__ - INFO - Registered new_pools_solana collector (interval: 10m, enabled: True)
2025-10-15 12:45:36,876 - __main__ - INFO - Successfully registered 8 collectors
2025-10-15 12:45:36,877 - __main__ - INFO - Initialization completed
2025-10-15 12:45:36,877 - __main__ - INFO - Starting collection scheduler with rate limiting...
2025-10-15 12:45:36,878 - gecko_terminal_collector.scheduling.scheduler - INFO - Starting collection scheduler
2025-10-15 12:45:36,881 - apscheduler.scheduler - INFO - Scheduler started
2025-10-15 12:45:36,898 - apscheduler.scheduler - INFO - Added job "Collector: dex_monitoring_solana" to job store "default"
2025-10-15 12:45:36,899 - apscheduler.scheduler - INFO - Added job "Collector: top_pools_solana" to job store "default"
2025-10-15 12:45:36,901 - apscheduler.scheduler - INFO - Added job "Collector: watchlist_monitor" to job store "default"
2025-10-15 12:45:36,902 - apscheduler.scheduler - INFO - Added job "Collector: watchlist_collector" to job store "default"
2025-10-15 12:45:36,903 - apscheduler.scheduler - INFO - Added job "Collector: ohlcv_collector" to job store "default"
2025-10-15 12:45:36,904 - apscheduler.scheduler - INFO - Added job "Collector: trade_collector" to job store "default"
2025-10-15 12:45:36,905 - apscheduler.scheduler - INFO - Added job "Collector: historical_ohlcv_collector" to job store "default"
2025-10-15 12:45:36,906 - apscheduler.scheduler - INFO - Added job "Collector: new_pools_solana" to job store "default"
2025-10-15 12:45:36,906 - gecko_terminal_collector.scheduling.scheduler - INFO - Collection scheduler started with 8 collectors
2025-10-15 12:45:36,907 - __main__ - INFO - Scheduler started with 8 collectors
2025-10-15 12:45:36,908 - __main__ - INFO - Enabled collectors: 8
2025-10-15 12:45:36,908 - __main__ - INFO - Rate limiting active: 8 limiters
2025-10-15 12:45:36,909 - __main__ - INFO - Daily usage: 3.2%
2025-10-15 12:45:36,909 - __main__ - INFO - Collection system is running. Press Ctrl+C to stop.
```





This metric requires guest additions to work.

```
2025-10-15 15:25:37.979 - gecko_terminal_collector.monitoring.execution_history - INFO - Completed execution new_pools_solana.1760541937_collector_new_pools_solana for new_pools_solana: success (0.96s, 40 records)
2025-10-15 15:25:37.980 - gecko_terminal_collector.scheduling.scheduler - INFO - Collection completed for new_pools_solana: 40 records in 0.96s
2025-10-15 15:25:37.981 - apscheduler.executors.default - INFO - Job "Collector: new_pools_solana (trigger: interval[0:10:00], next run at: 2025-10-15 15:30:36 UTC)" executed successfully
2025-10-15 15:25:37.992 - httpx - INFO - HTTP Request: GET https://api.geckoterminal.com/api/v2/metrics/solana/dexes/heaven/pools "HTTP/1.1 200 OK"
2025-10-15 15:25:38.066 - gecko_terminal_collector.database.sqlalchemy_manager - INFO - Stored 0 new pools, updated 20 existing pools
2025-10-15 15:25:38.057 - gecko_terminal_collector.collectors.top_pools - INFO - Stored/updated 0 pool records
2025-10-15 15:25:38.057 - gecko_terminal_collector.collectors.top_pools - INFO - Processed 0 pools for DEX: heaven
2025-10-15 15:25:38.058 - gecko_terminal_collector.collectors.top_pools - INFO - Collecting top pools for DEX: pumpswap
2025-10-15 15:25:38.481 - httpx - INFO - HTTP Request: GET https://api.geckoterminal.com/api/v2/metrics/solana/dexes/pumpswap/pools "HTTP/1.1 200 OK"
2025-10-15 15:25:38.560 - gecko_terminal_collector.database.sqlalchemy_manager - INFO - Stored 1 new pools, updated 19 existing pools
2025-10-15 15:25:38.551 - gecko_terminal_collector.collectors.top_pools - INFO - Stored/updated 1 pool records
2025-10-15 15:25:38.562 - gecko_terminal_collector.collectors.top_pools - INFO - Processed 1 pools for DEX: pumpswap
2025-10-15 15:25:38.562 - gecko_terminal_collector.collectors.top_pools - INFO - Top pools collection completed: 1 pools processed, 0 errors
2025-10-15 15:25:38.563 - gecko_terminal_collector.utils.metadata - INFO - Updated metadata for top_pools_solana: Success rate: 100.0%, Total runs: 32, Records collected: 1
2025-10-15 15:25:38.564 - gecko_terminal_collector.monitoring.execution_history - INFO - Completed execution top_pools_solana.1760541937_collector_top_pools_solana for top_pools_solana: success (1.55s, 1 records)
2025-10-15 15:25:38.565 - gecko_terminal_collector.scheduling.scheduler - INFO - Collection completed for top_pools_solana: 1 records in 1.55s
2025-10-15 15:25:38.566 - apscheduler.executors.default - INFO - Job "Collector: top_pools_solana (trigger: interval[0:05:00], next run at: 2025-10-15 15:30:36 UTC)" executed successfully
-
```



UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox

FileMachineViewInputDevicesHelp

```
2025-10-15 19:10:37,045 - apscheduler.scheduler - INFO - Scheduler has been shut down
2025-10-15 19:10:38,213 - gecko_terminal_collector.scheduling.scheduler - INFO - Collection scheduler stopped
2025-10-15 19:10:38,214 - __main__ - INFO - Scheduler stopped
2025-10-15 19:10:38,219 - gecko_terminal_collector.database.connection - INFO - Synchronous database engine disposed
2025-10-15 19:10:38,220 - gecko_terminal_collector.database.sqlalchemy_manager - INFO - SQLAlchemy database manager closed
2025-10-15 19:10:38,220 - __main__ - INFO - Database connections closed
2025-10-15 19:10:38,221 - __main__ - INFO - Shutdown completed
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ psql
psql: error: connection to server on socket "/var/run/postgresql/.s.PGSQL.5432" failed: FATAL: role "vboxuser" does not exist
(gecko_env_3_11) vboxuser@geckoterminalenv:~/geckoterminal_collector$ sudo -i -u postgres
[sudo] password for vboxuser:
postgres@geckoterminalenv:~$ psql
psql (14.19 (Ubuntu 14.19-0ubuntu0.22.04.1))
Type "help" for help.

postgres=# \c gecko_collector;
You are now connected to database "gecko_collector" as user "postgres".
gecko_collector=# \dt
          List of relations
Schema |      Name      | Type | Owner
-----+-----+-----+-----
public | collection_metadata | table | data_user
public | dexes           | table | data_user
public | discovery_metadata | table | data_user
public | new_pools_history | table | data_user
public | ohlcv_data       | table | data_user
public | pools           | table | data_user
public | tokens          | table | data_user
public | trades          | table | data_user
public | watchlist       | table | data_user
(9 rows)

gecko_collector=#
```

search

```
UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox
gecko_collector=# cls
SELECT * FROM collection_metadata ORDER BY last_run DESC;
ERROR: syntax error at or near "cls"
LINE 1: cls
        ^

gecko_collector=# ;
gecko_collector=# SELECT * FROM collection_metadata ORDER BY last_run DESC;
 id | collector_type | last_run | last_success | run_co
unt | error_count | last_error | metadata_json | created_at | updated_at
-----+-----+-----+-----+-----+-----
 2 | new_pools_solana | 2025-10-15 19:05:37.034573+00 | 2025-10-15 19:05:37.034573+00 |
38 | 0 | {} | 2025-10-15 12:55:38.669+00 | 2025-10-15 19:05:38
.194508+00
 1 | top_pools_solana | 2025-10-15 19:05:37.022061+00 | 2025-10-15 19:05:37.022061+00 |
76 | 0 | {} | 2025-10-15 12:50:39.709445+00 | 2025-10-15 19:05:38
.750816+00
 3 | trade_collector | 2025-10-15 18:45:37.331916+00 | 2025-10-15 18:45:37.331916+00 |
12 | 0 | {} | 2025-10-15 13:15:38.335375+00 | 2025-10-15 18:45:39
.206307+00
 6 | ohlcv_collector | 2025-10-15 18:45:37.314712+00 | 2025-10-15 18:45:37.314712+00 |
6 | 0 | {} | 2025-10-15 13:45:52.903395+00 | 2025-10-15 18:45:54
.960488+00
 7 | watchlist_collector | 2025-10-15 18:45:37.279894+00 | 2025-10-15 18:45:37.279894+00 |
6 | 0 | {} | 2025-10-15 13:45:53.07983+00 | 2025-10-15 18:45:55
.187625+00
 4 | watchlist_monitor | 2025-10-15 18:45:37.264008+00 | 2025-10-15 18:45:37.264008+00 |
6 | 0 | {} | 2025-10-15 13:45:37.3084+00 | 2025-10-15 18:45:37
.36844+00
 5 | dex_monitoring_solana | 2025-10-15 18:45:37.232625+00 | 2025-10-15 18:45:37.232625+00 |
6 | 0 | {} | 2025-10-15 13:45:38.419392+00 | 2025-10-15 18:45:39
.197509+00
(7 rows)

(END)
```


UbuntuServer20_04_LTS (Snapshot 3) [Running] - Oracle VirtualBox					
type	name	signal_score	momentum_indicator	activity_score	volatility_score
pool	Rizzoween / SOL	5.2300	0.2510	21.8000	0.7530
pool	Rizzoween / SOL	18.1507	0.0000	20.6000	0.0000
pool	ZBT--PRE / SOL	58.3126	13.8830	19.8286	41.6490
pool	Shiba Inu / SOL	4.2104	0.0000	20.6000	0.0000
pool	GT / SOL	9.4176	4.4110	16.9333	13.2330
pool	Mookie / SOL	2.7030	1.8000	1.2000	5.4000
pool	Rizzoween / SOL	78.5988	197.7730	75.2481	100.0000
pool	Freedom / SOL	17.9601	6.4630	32.8174	19.3890
pool	gay / SOL	36.9502	-19.2750	24.6667	57.8250
pool	*♦♦♦ / SOL	40.2953	37.7920	22.4000	100.0000
pool	Proton / SOL	46.8113	12.9760	61.5180	38.9280
pool	Xiaomi / SOL	95.0212	910.9570	83.7570	100.0000
pool	ecxdece / SOL	4.2110	0.0000	20.6000	0.0000
pool	I Am Rich / SOL	4.6142	-1.6070	10.5333	4.8210
pool	NALA / SOL	9.7702	-2.5040	30.1684	7.5120
pool	NBI / SOL	7.7000	4.4740	8.4667	13.4220
pool	Bye-Nance / SOL	9.9557	-6.3030	7.0571	18.9090
pool	NIM / SOL	39.0278	39.8480	15.6667	100.0000
pool	CDI / USD1	3.8064	-2.6750	1.2000	8.0250
pool	Proton / SOL	2.2339	-0.3370	8.4667	1.0110
pool	Byenance / SOL	53.0750	168.2360	27.6788	100.0000
pool	token2049 / SOL	39.8271	70.5320	22.4000	100.0000
pool	♦♦♦♦ / SOL	2.9334	0.5960	8.4667	1.7880
pool	Wait / SOL	31.3186	16.7420	3.6000	50.2260
pool	croco / SOL	17.8487	6.7380	30.0000	20.2140
pool	Proton / SOL	8.7075	-3.1490	23.0000	9.4470
pool	CZ ♦♦♦ / SOL	70.2849	96191.3680	72.4506	100.0000
pool	♦♦♦ / SOL	32.9356	7.3350	75.2593	22.0050
pool	\$JY / SOL	4.2110	0.0000	20.6000	0.0000
pool	Blacks / SOL	83.8586	36.2540	100.0000	100.0000
pool	ELF V1 / SOL	15.1528	5.0460	21.6000	15.1380
pool	♦♦♦ / SOL	4.1648	0.0000	20.6000	0.0000
pool	ELF V1 / SOL	30.6461	12.8400	12.0545	38.5200
pool	Gold / SOL	1.6676	-0.0200	7.0000	0.0600

To Learn More, Provide your Email Address for a guide on OHLCV Data Collection