

# Отчет по лабораторная работа №1

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# Установка виртуальной машины (UTM)



# Загрузка дистрибутива Ubuntu 20.04

## Ubuntu 20.04

- Architecture: ARM64
- Memory: 8 GiB
- Disk: 10 GiB
- Display: VGA
- SPICE tools: Installed

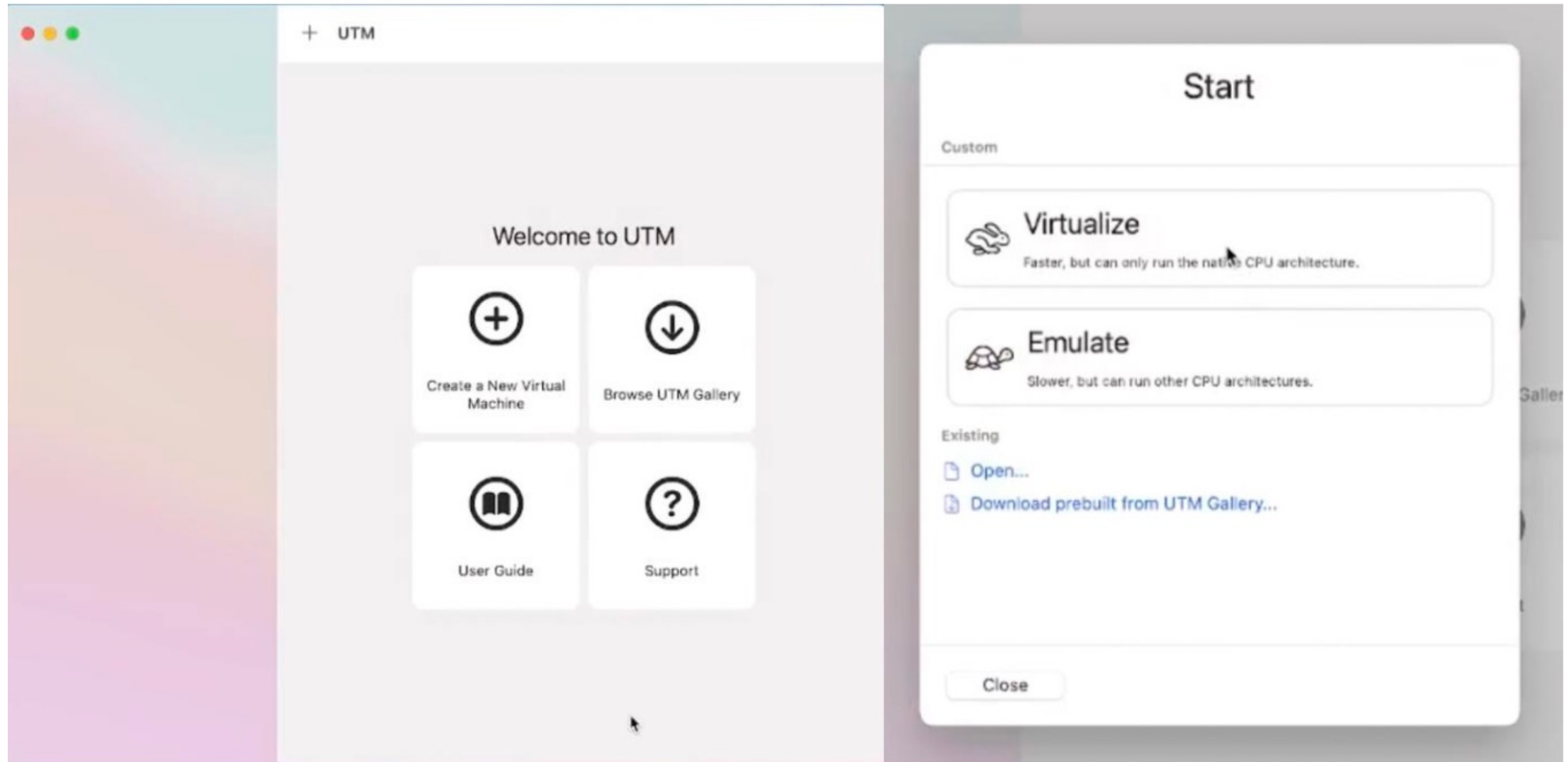


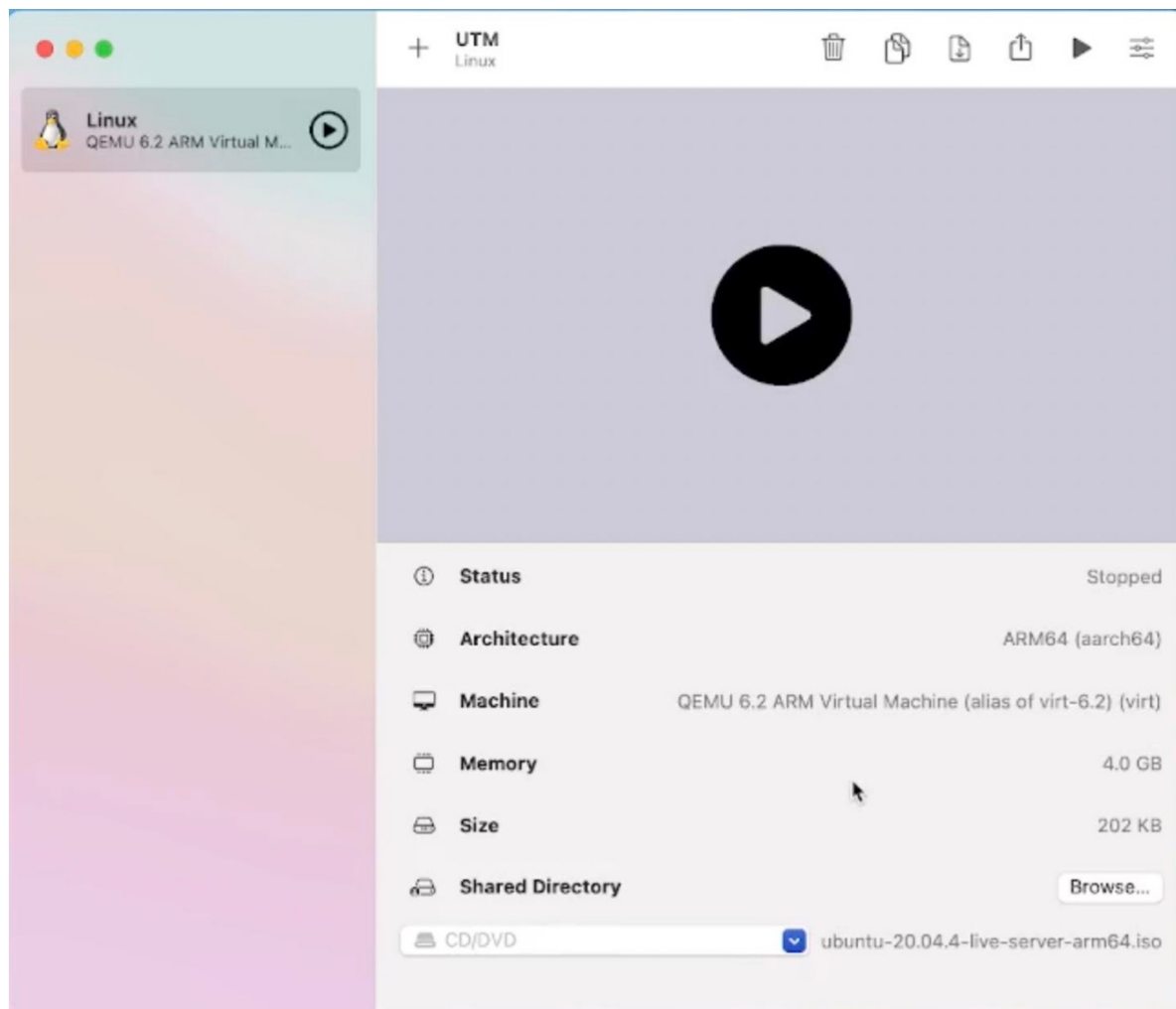
This guide is designed to only work with Apple Silicon Macs.

## Downloads

- [UTM for Mac](#) (v3.0 or higher)
- [Ubuntu Server for ARM](#) (20.04.1 or higher)

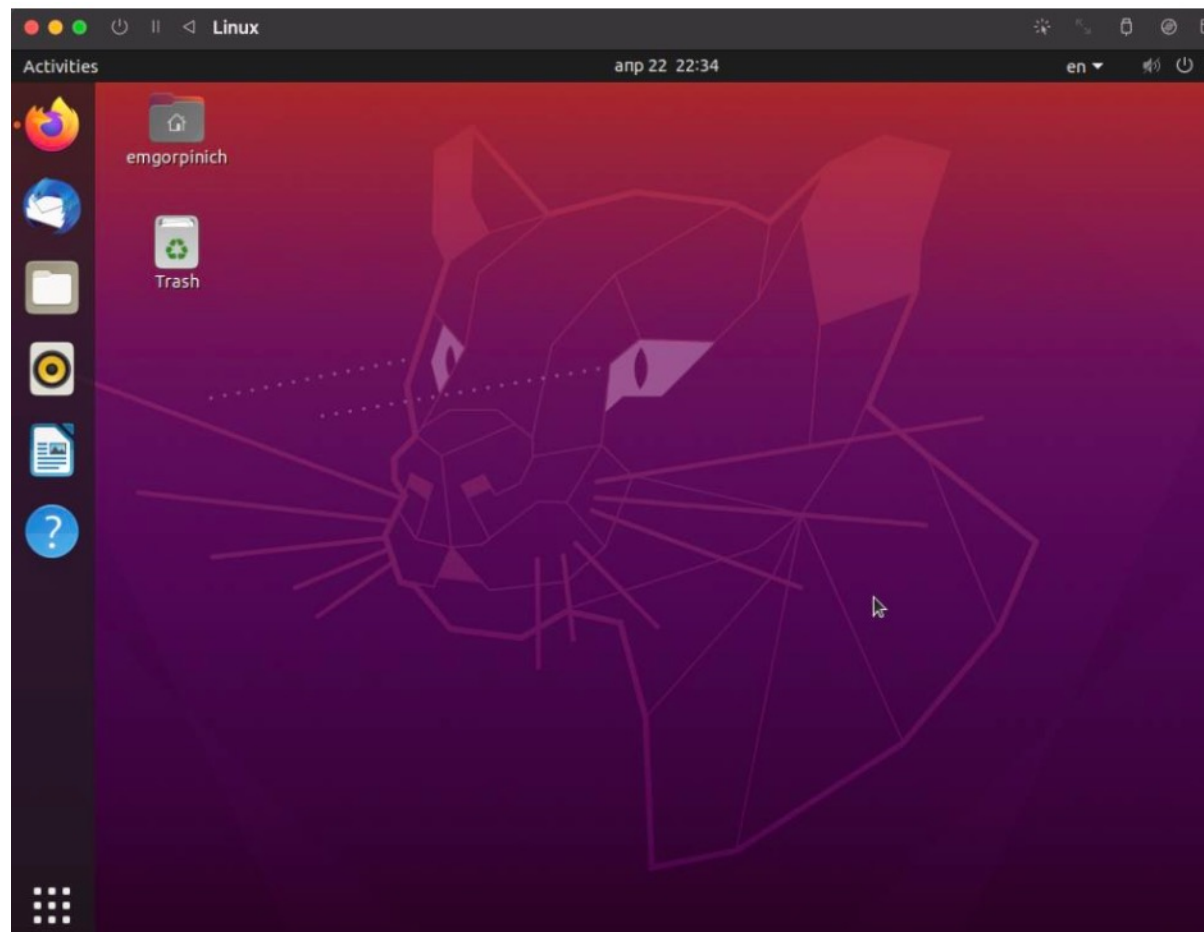
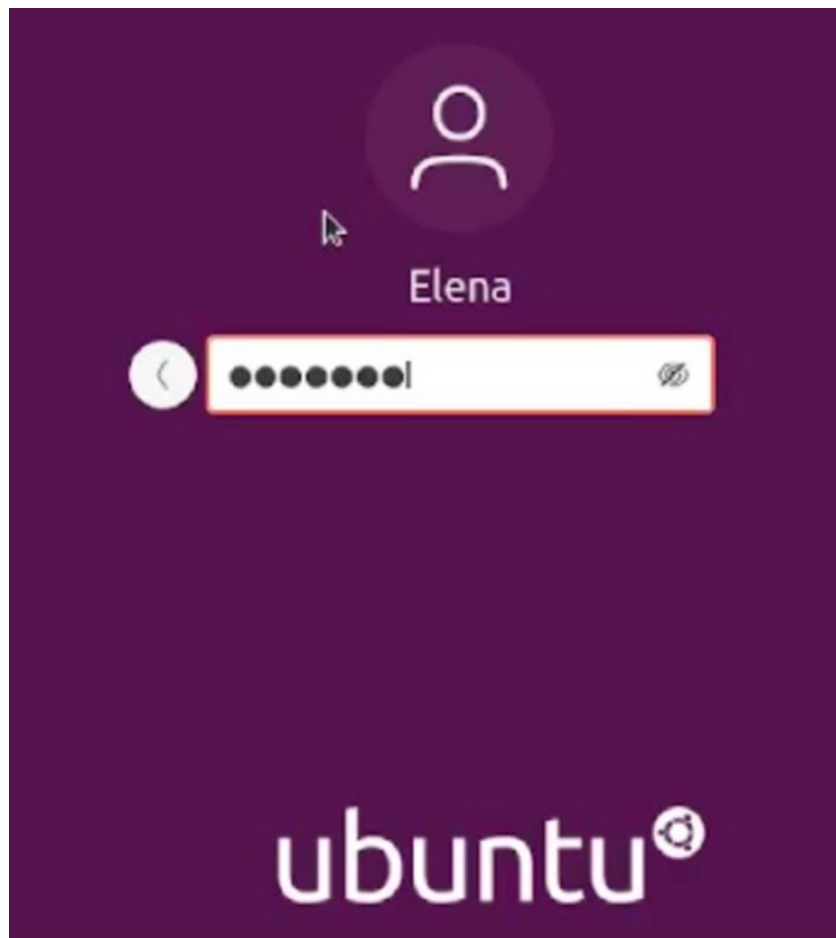
# Создание виртуальной машины





# Настройка виртуальной машины

# Запуск виртуальной машины



```
emgorpinich@emgorpinich:~$ su -  
Password:  
su: Authentication failure
```

```
emgorpinich@emgorpinich:~$ adduser -G wheel emgorpinich
```

```
emgorpinich@emgorpinich:~$ passwd emgorpinich  
Changing password for emgorpinich.  
Current password:  
New password:  
Retype new password:
```

```
emgorpinich@emgorpinich:~$ hostnamectl set-hostname emgorpinich  
emgorpinich@emgorpinich:~$ hostnamectl  
Static hostname: emgorpinich  
Icon name: computer-vm  
Chassis: vm  
Machine ID: b5fe172d270347c5bcf6c08d53f8bad7  
Boot ID: 061108fa9841481491378521fd77ffd8  
Virtualization: qemu  
Operating System: Ubuntu 20.04.4 LTS  
Kernel: Linux 5.4.0-109-generic  
Architecture: arm64
```

# Установка имени пользователя и названия хоста



# Выполнение домашнего задания

- Версия ядра Linux

```
emgorpinich@emgorpinich:~$ dmesg | grep -i "Linux version"
[ 0.000000] Linux version 5.4.0-109-generic (buildd@bos02-arm64-052) (gcc version 9.4.0 (Ubuntu 9.4.0-1ubuntu1~20.04.1)) #123-Ubuntu SMP Fri Apr 8 09:12:14 UTC 2022 (Ubuntu 5.4.0-109.123-generic 5.4.178)
```

- Частота процессора

```
emgorpinich@emgorpinich:~$ dmesg | grep -i "mhz"
[ 0.000000] arch_timer: cp15 timer(s) running at 24.00MHz (virt).
[ 0.000000] sched_clock: 56 bits at 24MHz, resolution 41ns, wraps every 4398046511097ns
```

- Модель процессора

```
emgorpinich@emgorpinich:~$ dmesg | grep -i "CPU0"
[ 0.000000] Detected PIPT I-cache on CPU0
```

- Объем доступной оперативной памяти

```
emgorpinich@emgorpinich:~$ dmesg | grep -i "memory"
[ 0.000000] Early memory node ranges
[ 0.000000] Memory: 3882204K/4194304K available (14076K kernel code, 2244K rwddata, 11536K rodata, 6976K init, 1114K bss, 279332K reserved, 32768K cma-reserved)
[ 0.274895] Freeing initrd memory: 88164K
[ 0.517522] Freeing unused kernel memory: 6976K
[ 0.656095] [TMM] Zone kernel: Available graphics memory: 2005056 KiB
```

- Тип обнаруженного гипервизора

```
emgorpinich@emgorpinich:~$ dmesg | grep -i "detected"
[ 0.000000] pscl: PSCIv0.2 detected in firmware.
[ 0.000000] Detected PIPT I-cache on CPU0
[ 0.000000] CPU features: detected: Kernel page table isolation (KPTI)
[ 0.000765] Detected PIPT I-cache on CPU1
[ 0.000989] Detected PIPT I-cache on CPU2
[ 0.001192] Detected PIPT I-cache on CPU3
[ 0.001407] Detected PIPT I-cache on CPU4
[ 0.001624] Detected PIPT I-cache on CPU5
[ 0.001891] Detected PIPT I-cache on CPU6
[ 0.002212] Detected PIPT I-cache on CPU7
[ 0.002403] CPU features: detected: Privileged Access Never
[ 0.002403] CPU features: detected: LSE atomic instructions
[ 0.002404] CPU features: detected: User Access Override
[ 0.002404] CPU features: detected: Common not Private translations
[ 0.002404] CPU features: detected: Data cache clean to Point of Persistence
[ 0.002405] CPU features: detected: RAS Extension Support
[ 0.002405] CPU features: detected: Data cache clean to the PoU not required for I/D coherence
[ 0.002406] CPU features: detected: CRC32 instructions
[ 0.002406] CPU features: detected: Speculation barrier (SB)
[ 0.002406] CPU features: detected: Data cache clean to Point of Deep Persistence
[ 0.085466] ACPI: MCFG table detected, 1 entries
[ 0.447723] hub 1-0:1.0: 6 ports detected
[ 0.449618] uhci_hcd 0000:00:06.0: detected 2 ports
[ 0.451689] hub 2-0:1.0: 2 ports detected
[ 0.453000] uhci_hcd 0000:00:07.0: detected 2 ports
[ 0.454979] hub 3-0:1.0: 2 ports detected
[ 0.456033] uhci_hcd 0000:00:08.0: detected 2 ports
[ 0.458150] hub 4-0:1.0: 2 ports detected
[ 0.463402] hub 5-0:1.0: 4 ports detected
[ 0.465543] hub 6-0:1.0: 4 ports detected
[ 0.651335] [drm] pci: virtio-gpu-pci detected at 0000:00:01.0
[ 1.733404] hub 5-4:1.0: 8 ports detected
```



# Выполнение домашнего задания

- Тип файловой системы корневого раздела.

```
emgorpinich@emgorpinich:~$ mount | grep "^/dev"
/dev/mapper/ubuntu--vg-ubuntu--lv on / type ext4 (rw,relatime)
/dev/nvme0n1p2 on /boot type ext4 (rw,relatime)
/dev/nvme0n1p1 on /boot/efi type vfat (rw,relatime,fmask=0022,dmask=0022,codepage=437,ioccharset=iso8859-1,shortname=mixed,errors=remount-ro)
```

- Последовательность монтирования файловых систем.

```
emgorpinich@emgorpinich:~$ mount
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,noexec,relatime,size=1941100k,nr_inodes=485275,mode=755)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,nodev,noexec,relatime,size=401012k,mode=755)
/dev/mapper/ubuntu--vg-ubuntu--lv on / type ext4 (rw,relatime)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev)
tmpfs on /run/lock type tmpfs (rw,nosuid,nodev,noexec,relatime,size=5120k)
tmpfs on /sys/fs/cgroup type tmpfs (ro,nosuid,nodev,noexec,mode=755)
cgroup2 on /sys/fs/cgroup/unified type cgroup2 (rw,nosuid,nodev,noexec,relatime,nsdelegate)
```