

## Отчет по лабораторной работе №9

### 1.Проверяем наличие ssh-сервера sshd

```
yaroslav@yaroslav-VirtualBox:~$ ssh
usage: ssh [-46AaCfGgKkMnqsTtVvXxYy] [-B bind_interface]
          [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
          [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
          [-i identity_file] [-J [user@]host[:port]] [-L address]
          [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]
          [-Q query_option] [-R address] [-S ctl_path] [-W host:port]
          [-w local_tun[:remote_tun]] destination [command [argument ...]]
```

### 2.Проверяем наличие ssh-клиента с помощью команды find

```
root@yaroslav-VirtualBox:~# find / -name ssh
/etc/ssh
/snap/core22/634/etc/default/ssh
/snap/core22/634/etc/init.d/ssh
/snap/core22/634/etc/ssh
/snap/core22/634/usr/bin/ssh
/snap/core22/634/usr/share/bash-completion/completions/ssh
/snap/core20/1822/etc/default/ssh
/snap/core20/1822/etc/init.d/ssh
/snap/core20/1822/etc/ssh
/snap/core20/1822/usr/bin/ssh
/snap/core20/1822/usr/share/bash-completion/completions/ssh
/usr/share/bash-completion/completions/ssh
/usr/lib/apt/methods/ssh
/usr/bin/ssh
find: '/run/user/1000/doc': Permission denied
find: '/run/user/1000/gvfs': Permission denied
/run/user/1000/keyring/ssh
root@yaroslav-VirtualBox:~#
```

```
root@yaroslav-VirtualBox:~# apt update
Hit:1 http://ru.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://ru.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://ru.archive.ubuntu.com/ubuntu jammy-backports InRelease [108 kB]
Get:4 http://ru.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [66
6 kB]
Get:5 http://ru.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [416
```

```

root@yaroslav-VirtualBox:~# apt install openssh-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  ncurses-term openssh-sftp-server ssh-import-id
Suggested packages:
  molly-guard monkeysphere ssh-askpass
The following NEW packages will be installed:
  ncurses-term openssh-server openssh-sftp-server ssh-import-id
0 upgraded, 4 newly installed, 0 to remove and 207 not upgraded.
Need to get 750 kB of archives.
After this operation, 6 046 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://ru.archive.ubuntu.com/ubuntu jammy-updates/main amd64 openssh-sftp
-server amd64 1:8.9p1-3ubuntu0.1 [38,7 kB]
Get:2 http://ru.archive.ubuntu.com/ubuntu jammy-updates/main amd64 openssh-serv
er amd64 1:8.9p1-3ubuntu0.1 [434 kB]
Get:3 http://ru.archive.ubuntu.com/ubuntu jammy-updates/main amd64 ncurses-term
all 6.3-2ubuntu0.1 [267 kB]
Get:4 http://ru.archive.ubuntu.com/ubuntu jammy/main amd64 ssh-import-id all 5.
11-0ubuntu1 [10,1 kB]
Fetched 750 kB in 11s (69,5 kB/s)
Preconfiguring packages ...
Selecting previously unselected package openssh-sftp-server.
(Reading database ... 197860 files and directories currently installed.)
Preparing to unpack .../openssh-sftp-server_1%3a8.9p1-3ubuntu0.1_amd64.deb ...

```

Статус работы службы можно посмотреть командой `$ sudo systemctl status ssh`

```

root@yaroslav-VirtualBox:~# systemctl status ssh
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: ✓)
   Active: active (running) since Mon 2023-06-05 07:12:49 MSK; 5min ago
     Docs: man:sshd(8)
           man:sshd_config(5)
  Main PID: 4297 (sshd)
    Tasks: 1 (limit: 4616)
   Memory: 1.8M
      CPU: 21ms
   CGroup: /system.slice/ssh.service
           └─4297 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

июн 05 07:12:49 yaroslav-VirtualBox systemd[1]: Starting OpenBSD Secure Shell s
июн 05 07:12:49 yaroslav-VirtualBox sshd[4297]: Server listening on 0.0.0.0 po
июн 05 07:12:49 yaroslav-VirtualBox sshd[4297]: Server listening on :: port 22.
июн 05 07:12:49 yaroslav-VirtualBox systemd[1]: Started OpenBSD Secure Shell s
lines 1-16/16 (END)

```

### 3. включаем ssh в список доверенных служб

```

root@yaroslav-VirtualBox:~# ufw allow ssh
Rules updated
Rules updated (v6)
root@yaroslav-VirtualBox:~#

```

4. подключиться через ssh к удаленному серверу

(находим ip)

```
root@yaroslav-VirtualBox:~# ssh yarik@192.168.0.14
yarik@192.168.0.14's password:
Linux yarik 6.1.0-kali9-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.27-1kali1 (2023-05-12) x86_64

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

Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
(yarik@yarik)-[~]
$
```

```
(root@yarik)-[~]
# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.14 netmask 255.255.255.0 broadcast 192.168.0.255
    inet6 fe80::a00:27ff:fed2:49d8 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:d2:49:d8 txqueuelen 1000 (Ethernet)
    RX packets 162 bytes 17625 (17.2 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 132 bytes 15865 (15.4 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 4 bytes 240 (240.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 4 bytes 240 (240.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

5.открываем удаленно xinetd.conf через vi

```
(yarik@yarik)-[~]
$ vi xinetd.conf
```

6. ps -e на удалённой и локальной машине (результат одинаковый)

Activities Terminal июн 5 09:11

yarik@yarik: ~

Last login: Mon Jun 5 01:57:20 2023 from 192.168.0.13

(yarik@yarik)-[~]

```
$ ps -e
```

PID	TTY	TIME	CMD
1 ?		00:00:01	systemd
2 ?		00:00:00	kthreadd
3 ?		00:00:00	rcu_gp
4 ?		00:00:00	rcu_par_gp
5 ?		00:00:00	slub_flushwq
6 ?		00:00:00	netns
8 ?		00:00:00	kworker/0:0H-events_highpri
10 ?		00:00:00	mm_percpu_wq
11 ?		00:00:00	rcu_tasks_kthread
12 ?		00:00:00	rcu_tasks_rude_kthread
13 ?		00:00:00	rcu_tasks_trace_kthread
14 ?		00:00:00	ksoftirqd/0
15 ?		00:00:00	rcu_preempt
16 ?		00:00:00	migration/0
18 ?		00:00:00	cpuhp/0
19 ?		00:00:00	cpuhp/1
20 ?		00:00:00	migration/1
21 ?		00:00:00	ksoftirqd/1
26 ?		00:00:00	kdevtmpfs
27 ?		00:00:00	inet_frag_wq
28 ?		00:00:00	kauditd
30 ?		00:00:00	khungtaskd
31 ?		00:00:00	oom_reaper
33 ?		00:00:00	writeback
34 ?		00:00:00	kcompactd0
35 ?		00:00:00	kcmd

root@yarik: ~

File Actions Edit View Help

(root@yarik)-[~]

```
# ps -e
```

PID	TTY	TIME	CMD
1 ?		00:00:01	systemd
2 ?		00:00:00	kthreadd
3 ?		00:00:00	rcu_gp
4 ?		00:00:00	rcu_par_gp
5 ?		00:00:00	slub_flushwq
6 ?		00:00:00	netns
8 ?		00:00:00	kworker/0:0H-events_highpri
10 ?		00:00:00	mm_percpu_wq
11 ?		00:00:00	rcu_tasks_kthread
12 ?		00:00:00	rcu_tasks_rude_kthread
13 ?		00:00:00	rcu_tasks_trace_kthread
14 ?		00:00:00	ksoftirqd/0
15 ?		00:00:00	rcu_preempt
16 ?		00:00:00	migration/0
18 ?		00:00:00	cpuhp/0
19 ?		00:00:00	cpuhp/1
20 ?		00:00:00	migration/1
21 ?		00:00:00	ksoftirqd/1
26 ?		00:00:00	kdevtmpfs
27 ?		00:00:00	inet_frag_wq
28 ?		00:00:00	kauditd
30 ?		00:00:00	khungtaskd
31 ?		00:00:00	oom_reaper
33 ?		00:00:00	writeback
34 ?		00:00:00	kcompactd0
35 ?		00:00:00	ksmd
36 ?		00:00:00	khugepaged
37 ?		00:00:00	kintegrityd



## 7. удаленно перезагружаем компьютер

```
(yarik@yarik)-[~]
$ sudo reboot
[sudo] password for yarik:
Sorry, try again.
[sudo] password for yarik:

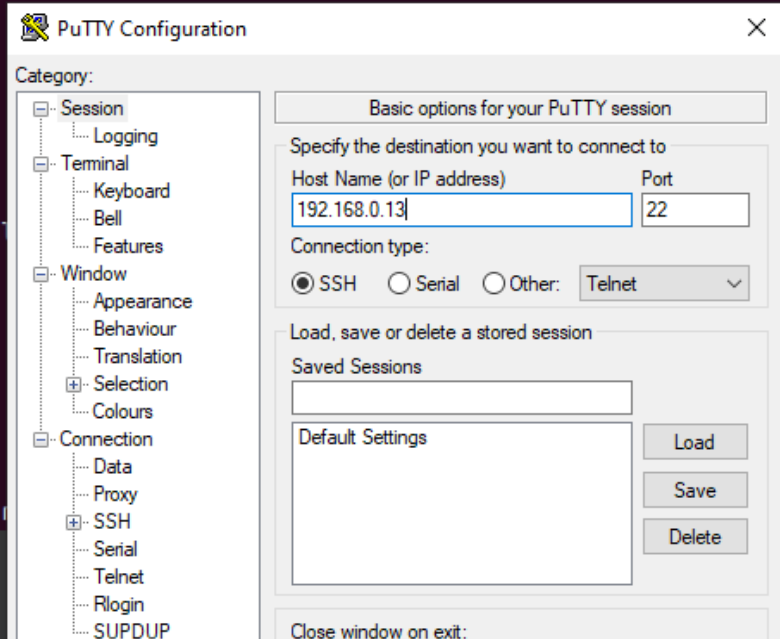
Broadcast message from root@yarik on pts/4 (Mon 2023-06-05 02:14:21 EDT):

The system will reboot now!

Connection to 192.168.0.14 closed by remote host.
Connection to 192.168.0.14 closed.
root@yaroslav-VirtualBox:~#
```

## 8. с помощью putty подключаемся удаленно

```
root@yaroslav-VirtualBox:~# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.13 netmask 255.255.255.0 broadcast 192.168.0.255
    ether 08:00:27:00:00:00 txqueuelen 1000 (Ethernet)
    RX packets 0  rxbytes 0  rxerrors 0  collisions 0
    TX packets 0  txbytes 0  txerrors 0  collisions 0
```



The screenshot shows the PuTTY Configuration dialog box. The 'Category' list on the left has 'SSH' selected. The 'Basic options for your PuTTY session' tab is active. Under 'Specify the destination you want to connect to', the 'Host Name (or IP address)' field contains '192.168.0.13' and the 'Port' field contains '22'. The 'Connection type' section has 'SSH' selected with a radio button, and 'Telnet' is shown in a dropdown menu. Below this, the 'Load, save or delete a stored session' section shows a list of 'Saved Sessions' with 'Default Settings' listed. To the right of this list are 'Load', 'Save', and 'Delete' buttons. At the bottom, there is a 'Close window on exit:' checkbox.

```
yaroslav@yaroslav-VirtualBox: ~  
login as: yaroslav  
yaroslav@192.168.0.13's password:  
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.19.0-41-generic x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:       https://ubuntu.com/advantage  
  
* 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.  
  
212 updates can be applied immediately.  
102 of these updates are standard security updates.  
To see these additional updates run: apt list --upgradable  
  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status
```

## 9. запускаю удалённо графическое приложение (startx)

```
linuxx [Работает] - Oracle VM VirtualBox  
Файл  Машина  Вид  Ввод  Устройства  Справка  
Activities  июн 5 09:35  
  
yaroslav@yaroslav-VirtualBox: ~  
xinit: connection to X server lost  
  
waiting for X server to shut down (II) Server terminated successfully (0). Closing log file.  
  
yaroslav@yaroslav-VirtualBox:~$ ^C  
yaroslav@yaroslav-VirtualBox:~$ sudo startx  
  
X.Org X Server 1.21.1.3  
X Protocol Version 11, Revision 0  
Current Operating System: Linux yaroslav-VirtualBox 5.19.0-41-generic #42~22.04.1  
P PREEMPT_DYNAMIC Tue Apr 18 17:40:00 UTC 2 x86_64  
Kernel command line: BOOT_IMAGE=/boot/vmlinuz-5.19.0-41-generic root=UUID=9883eb9  
0-ala3-0ff22ff81d52 ro quiet splash  
xorg-server 2:21.1.3-2ubuntu2.7 (For technical support please see http://www.ubuntu.com) port)  
Current version of pixman: 0.40.0  
  Before reporting problems, check http://wiki.x.org  
  to make sure that you have the latest version.  
Markers: (--) probed, (**) from config file, (==) default setting,  
  (++) from command line, (!!) notice, (II) informational,  
  (WW) warning, (EE) error, (NI) not implemented, (??) unknown.  
(==) Log file: "/var/log/Xorg.2.log", Time: Mon Jun  5 09:33:52 2023  
(==) Using system config directory "/usr/share/X11/xorg.conf.d"  
VMware: No 3D enabled (0, Success).  
xinit: connection to X server lost  
  
waiting for X server to shut down (II) Server terminated successfully (0). Closing log file.  
  
yaroslav@yaroslav-VirtualBox:~$
```