

Лабораторная работа 12

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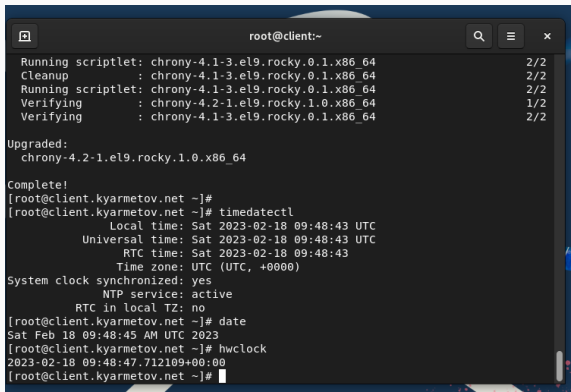
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Цель лабораторной работы

Получение навыков по управлению системным временем и настройке синхронизации времени.

Выполнение лабораторной работы

Настройка времени



```
root@client:~  
Running scriptlet: chrony-4.1-3.el9.rocky.0.1.x86_64 2/2  
Cleanup      : chrony-4.1-3.el9.rocky.0.1.x86_64 2/2  
Running scriptlet: chrony-4.1-3.el9.rocky.0.1.x86_64 2/2  
Verifying    : chrony-4.2-1.el9.rocky.1.0.x86_64 1/2  
Verifying    : chrony-4.1-3.el9.rocky.0.1.x86_64 2/2  
  
Upgraded:  
  chrony-4.2-1.el9.rocky.1.0.x86_64  
  
Complete!  
[root@client.kyarmetov.net ~]#  
[root@client.kyarmetov.net ~]# timedatectl  
    Local time: Sat 2023-02-18 09:48:43 UTC  
    Universal time: Sat 2023-02-18 09:48:43 UTC  
        RTC time: Sat 2023-02-18 09:48:43  
    Time zone: UTC (UTC, +0000)  
System clock synchronized: yes  
      NTP service: active  
    RTC in local TZ: no  
[root@client.kyarmetov.net ~]# date  
Sat Feb 18 09:48:45 AM UTC 2023  
[root@client.kyarmetov.net ~]# hwclock  
2023-02-18 09:48:47.712109+00:00  
[root@client.kyarmetov.net ~]#
```

Figure 1: команды настройки времени

Управление синхронизацией времени

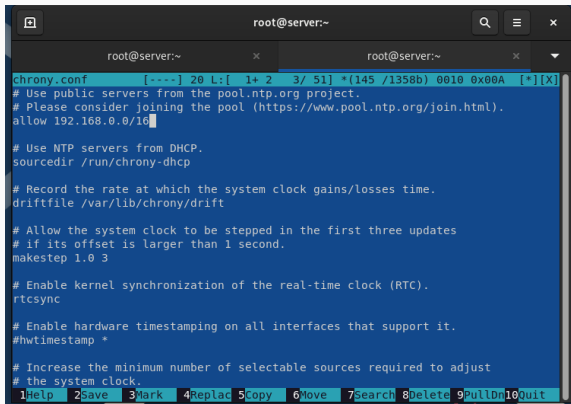
```
[root@server.kyarmetov.net ~]#  
[root@server.kyarmetov.net ~]# chronyc sources  
MS Name/IP address         Stratum Poll Reach LastRx Last sample  
=====
```

^- cello.corbina.net	2	6	377	62	+721us[+721us]	+/-	39ms
^- ground.corbina.net	2	6	377	64	+240us[+239us]	+/-	49ms
^* ntp.ix.ru	1	6	377	0	+278us[+276us]	+/-	2811us
^- 213.234.203.30	2	6	377	64	+2057us[+2056us]	+/-	80ms

```
[root@server.kyarmetov.net ~]#
```

Figure 2: источники для синхронизации часов

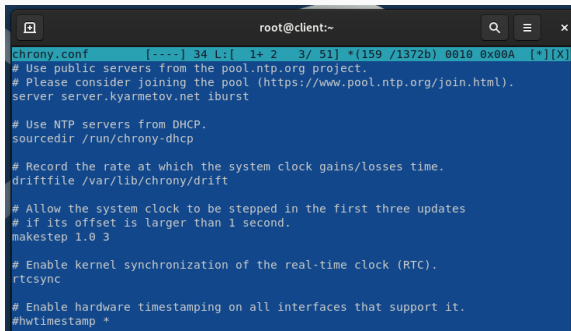
Создание собственного NTP-сервера



```
root@server:~  
chrony.conf [----] 20 L:[ 1+ 2 3/ 51] *(145 /1358b) 0010 0x00A [*][X]  
# Use public servers from the pool.ntp.org project.  
# Please consider joining the pool (https://www.pool.ntp.org/join.html).  
allow 192.168.0.0/16  
  
# Use NTP servers from DHCP.  
sourceaddr /run/chrony-dhcp  
  
# Record the rate at which the system clock gains/losses time.  
driftfile /var/lib/chrony/drift  
  
# Allow the system clock to be stepped in the first three updates  
# if its offset is larger than 1 second.  
makestep 1.0 3  
  
# Enable kernel synchronization of the real-time clock (RTC).  
rtcsync  
  
# Enable hardware timestamping on all interfaces that support it.  
#hwtimestamp *  
  
# Increase the minimum number of selectable sources required to adjust  
# the system clock.
```

Figure 3: файл /etc/chrony.conf

Конфигурация клиента NTP

A terminal window titled 'root@client:~' displays the configuration file /etc/chrony.conf. The file content is as follows:

```
chrony.conf [----] 34 L:[ 1+ 2 3/ 51] *(159 /1372b) 0010 0x00A [*][X]  
# Use public servers from the pool.ntp.org project.  
# Please consider joining the pool (https://www.pool.ntp.org/join.html).  
server server.kyarmetov.net iburst  
  
# Use NTP servers from DHCP.  
sourceclient /run/chrony-dhcp  
  
# Record the rate at which the system clock gains/losses time.  
driftfile /var/lib/chrony/drift  
  
# Allow the system clock to be stepped in the first three updates  
# if its offset is larger than 1 second.  
makestep 1.0 3  
  
# Enable kernel synchronization of the real-time clock (RTC).  
rtcsync  
  
# Enable hardware timestamping on all interfaces that support it.  
#hwtimestamp *
```

Figure 4: файл /etc/chrony.conf

Проверка синхронизации

```
[root@client.kyarmetov.net ~]#  
[root@client.kyarmetov.net ~]# mcedit /etc/chrony.conf  
  
[root@client.kyarmetov.net ~]# systemctl restart chrony  
Failed to restart chrony.service: Unit chrony.service not found.  
[root@client.kyarmetov.net ~]# systemctl restart chronyd  
[root@client.kyarmetov.net ~]#  
[root@client.kyarmetov.net ~]# chronyc sources  
MS Name/IP address         Stratum Poll Reach LastRx Last sample  
=====
```

MS	Name/IP address	Stratum	Poll	Reach	LastRx	Last sample
^?	www.kyarmetov.net	0	6	0	-	+0ns[+0ns] +/- 0ns

```
[root@client.kyarmetov.net ~]#
```

Figure 5: проверка синхронизации

Приобретены практические навыки по работе со службой синхронизации времени