

# **Защита лабораторной работы № 12**

## **Синхронизация времени**

*Администрирование сетевых подсистем*

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## Цель работы

Получение навыков по управлению  
системным временем и настройке  
синхронизации  
времени.

## Настройка параметров времени

```
[saismael@client.saismael.net ~]$ timedatectl
    Local time: Sat 2022-12-17 17:38:11 UTC
    Universal time: Sat 2022-12-17 17:38:11 UTC
        RTC time: Sat 2022-12-17 17:35:58
        Time zone: UTC (UTC, +0000)
System clock synchronized: yes
        NTP service: active
    RTC in local TZ: no
[saismael@client.saismael.net ~]$ timedatectl list-timezones
Africa/Abidjan
Africa/Accra
Africa/Addis_Ababa
Africa/Algiers
Africa/Asmara
Africa/Asmera
Africa/Bamako
Africa/Bangui
Africa/Banjul
Africa/Bissau
Africa/Blantyre
Africa/Brazzaville
Africa/Bujumbura
Africa/Cairo
Africa/Casablanca
Africa/Ceuta
Africa/Conakry
```

```
[saismael@client.saismael.net ~]$ date
Sat Dec 17 05:40:17 PM UTC 2022
[saismael@client.saismael.net ~]$ hwclock
```

```
[root@client.saismael.net ~]# hwclock
2022-12-17 17:41:58.349435+00:00
```

```
[root@server.saismael.net ~]# chronyc sources
MS Name/IP address          Stratum Poll Reach LastRx Last sample
=====
^* 89.109.251.21              1   6   131    10   +153us[+1061us] +/- 4908us
^- ns1.ooonet.ru             2   6    17    21  +2627us[+6183us] +/-  57ms
^- 176x215x15x21.static.eka> 2   6    17    21  +2789us[+3697us] +/-  50ms
^- stratum2-1.ntp.mow01.ru.> 2   6    17    22  -4017us[-3109us] +/-  11ms
[root@server.saismael.net ~]#
```

```
[root@client.saismael.net ~]# chronyc sources
MS Name/IP address          Stratum Poll Reach LastRx Last sample
=====
^+ ns1.ooonet.ru             2   6   377    21  -5024us[-4754us] +/-  65ms
^* 78-36-18-184.dynamic.mur> 1   6   377    21   +678us[ +947us] +/-  21ms
^- tms04.deltatelesystems.ru 2   6   377    22   +15ms[ +15ms] +/-  82ms
^- 94.141.63.150             2   6   367    19  -2488us[-2488us] +/-  46ms
```



```
chrony.conf      [-M--]  1 L:[ 15+11 26/ 51] *(741 /1370b) 0097 0x061  [*][X]  
# 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.  
#minsources 2  
  
# Allow NTP client access from local network.  
Sallow 192.168.0.0/16  
  
# Serve time even if not synchronized to a time source.  
#local stratum 10  
  
# Require authentication (nts or key option) for all NTP sources.  
#authselectmode require  
  
# Specify file containing keys for NTP authentication.  
keyfile /etc/chrony.keys  
  
1Help  2Save  3Mark  4Replac 5Copy  6Move  7Search 8Delete 9PullDn10Quit
```

```
[root@server.saismael.net ~]# systemctl restart chronyd  
[root@server.saismael.net ~]#  
[root@server.saismael.net ~]# firewall-cmd --add-service=ntp --permanent  
success  
[root@server.saismael.net ~]# firewall-cmd --reload  
success
```

## Управление синхронизацией времени

```
chrony.conf      [-M--] 33 L:[ 1+ 0 1/ 52] *(33 /1403b) 0010 0x00A [*][X]
server server.saismael.net iburst
# Use public servers from the pool.ntp.org project.
# Please consider joining the pool (https://www.pool.ntp.org/join.html).
pool 2.rhel.pool.ntp.org iburst

# Use NTP servers from DHCP.
sourcedir /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
1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn10Quit
```

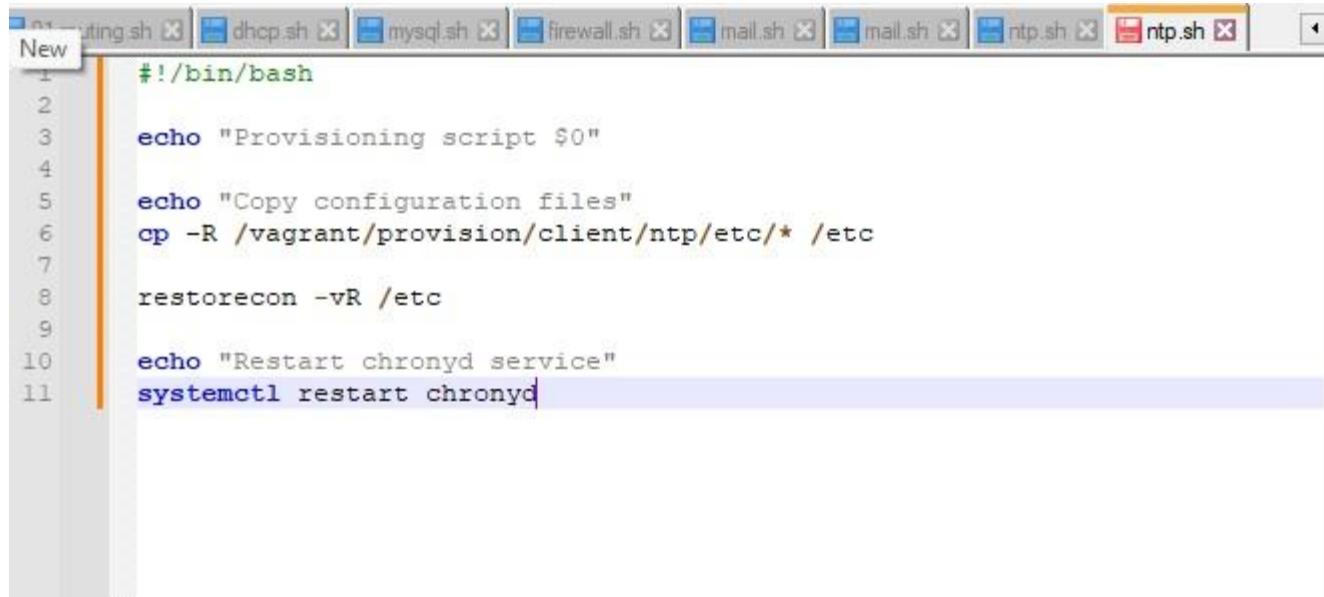
```
Success
[root@server.saismael.net ~]# chronyc sources
MS Name/IP address          Stratum Poll Reach LastRx Last sample
=====
^+ ns5.vlz.su                2   6   377    2  +7428us[ +12ms] +/-   57ms
^- tms04.deltatelesystems.ru 2   6   377    4   +18ms[ +23ms] +/-   95ms
^+ ns.iitp.ru                2   6   377    5 +4976us[+9131us] +/-   48ms
^* megamail.okonti.ru        2   6   377    2   +10ms[ +14ms] +/-   31ms
```

## Внесение изменений в настройки внутреннего окружения виртуальной машины

```

[root@client.saismael.net ~]#
[root@client.saismael.net ~]# cd /vagrant/provision/client
[root@client.saismael.net client]# mkdir -p /vagrant/provision/client/ntp/etc/
[root@client.saismael.net client]# cp
cp: missing file operand
Try 'cp --help' for more information.
[root@client.saismael.net client]# cp -R /etc/chrony.conf /vagrant/provision/client/ntp/etc/
[root@client.saismael.net client]#
[root@client.saismael.net client]# cd /vagrant/provision/client
[root@client.saismael.net client]# touch ntp.sh
[root@client.saismael.net client]# chmod +x ntp.sh
[root@client.saismael.net client]#

```



The screenshot shows a terminal window with a tab titled 'ntp.sh'. The script content is as follows:

```

1  #!/bin/bash
2
3  echo "Provisioning script $0"
4
5  echo "Copy configuration files"
6  cp -R /vagrant/provision/client/ntp/etc/* /etc
7
8  restorecon -vR /etc
9
10 echo "Restart chronyd service"
11 systemctl restart chronyd

```

Получил навыки по управлению системным временем и настройке синхронизации времени.