



Лабораторная работа № 12.

Синхронизация времени

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1. Цель работы

Получение навыков по управлению системным временем и настройке синхронизации времени.

. Задание

- 1. Изучение команды по настройке параметров времени
- 2. Настройка сервер в качестве сервера синхронизации времени для локальной сети
- 3. скрипты для Vagrant, фиксирующие действия по установке и настройке NTP-сервера и клиента

1. Настройка параметров времени

```
RTC in local TZ: no
[root@client.yassine.net ~]# date
Sat Dec 17 01:32:51 PM UTC 2022
[root@client.yassine.net ~]#
```

```
in mic,password).
[root@client.yassine.net ~]# timedatectl
          Local time: Sat 2022-12-17 13:31:13 UTC
          Universal time: Sat 2022-12-17 13:31:13 UTC
                RTC time: Sat 2022-12-17 13:31:13
                Time zone: UTC (UTC, +0000)
System clock synchronized: yes
              NTP service: active
          RTC in local TZ: no
[root@client.yassine.net ~]#
```

```
[root@client.yassine.net ~]# hwclock
2022-12-17 13:34:37.572182+00:00
[root@client.yassine.net ~]#
```

-Управление синхронизацией времени

```
[root@server.yassine.net ~]# chronyc sources
MS Name/IP address          Stratum Poll Reach LastRx Last sample
=====
^- ns.aksinet.net            2   6   377   45  -3965us[-4178us] +/-  57ms
^- 193.192.36.3              2   6   377   48   +28us[ +28us] +/-  69ms
^* ntp1.doorhan.ru           1   6   377   54   -11ms[ -11ms] +/-  13ms
^- broadband-77-37-138-237.> 2   6   377   63 -2298us[-2298us] +/-  39ms
[root@server.yassine.net ~]#
```

```
root@server:~
# 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.
allow 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

# Save NTS keys and cookies.
-- INSERT --
```

```
[root@server.yassine.net ~]# dnf -y install chrony
Last metadata expiration check: 1:24:12 ago on Sat 17 Dec 2022 12:09:36 PM UTC.
Package chrony-4.1-3.el9.rocky.0.1.x86_64 is already installed.
Dependencies resolved.

=====
Package           Architecture Version                      Repository      Size
=====
Upgrading:
chrony             x86_64      4.2-1.el9.rocky.1.0         baseos         312 k

Transaction Summary
=====
Upgrade 1 Package

Total download size: 312 k
Downloading Packages:
chrony-4.2-1.el9.rocky.1.0.x86_64.rpm              713 kB/s | 312 kB    00:00
-----
Total                                              276 kB/s | 312 kB    00:01
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
```

. Внесение изменений в настройки внутреннего окружения виртуальных машин

```
server.vm.provision "server ntp",  
type: "shell",  
preserve_order: true,  
path: "provision/server/ntp.sh"
```

```
server.vm.provider "virtualbox" do |v|
```

```
root@client:/vagrant/client

#!/bin/bash
echo "Provisioning script $0"
echo "Copy configuration files"
cp -R /vagrant/provision/client/ntp/etc/* /etc
restorecon -vR /etc
echo "Restart chronyd service"
systemctl restart chronyd
```

```
root@server:/vagrant/provision/server 012-ntp.pdf

root@server:/vagrant/provision/server x root@server:~ x

#!/bin/bash
echo "Provisioning script $0"
echo "Install needed packages"
dnf -y install chrony
echo "Copy configuration files"
cp -R /vagrant/provision/server/ntp/etc/* /etc
restorecon -vR /etc
echo "Configure firewall"
firewall-cmd --add-service=ntp
firewall-cmd --add-service=ntp --permanent
echo "Restart chronyd service"
systemctl restart chronyd
```

ВЫВОД

- Получил навыков по управлению системным временем и настройке синхронизации времени.