

## Systemd. Домашнее задание.

1. VM Centos 8 создана в среде VMware vSphere 7 средствами ansible.

Плейбук: newvm.yml

Nested Virtualization включена

Selinux, firewalld отключены

2. Написать сервис, который будет мониторить лог, на наличие ключевого слова.

Мониторим лог: /var/log/watchlog.log. Ключевое слов: ALERT

```
[root@centos-sys ~]# echo "ALERT 1" > /var/log/watchlog.log
```

Файл параметров для сервиса

```
[root@centos-sys ~]# echo WORD="ALERT" > /etc/sysconfig/watchlog
```

```
[root@centos-sys ~]# echo LOG=/var/log/watchlog.log >> /etc/sysconfig/watchlog
```

Скрипт мониторинга

```
[root@centos-sys ~]# vi /opt/watchlog.sh
```

```
[root@centos-sys ~]# chmod +x /opt/watchlog.sh
```

Юнит для сервиса

```
[root@centos-sys ~]# vi /etc/sysconfig/watchlog.service
```

Юнит для таймера

```
[root@centos-sys ~]# vi /etc/sysconfig/watchlog.timer
```

Стартуем таймер, смотрим результат

```
[root@centos-sys ~]# systemctl start watchlog.timer
```

```
[root@centos-sys ~]# tail -f /var/log/messages
```

Dec 20 16:39:32 centos-sys systemd[1]: Started Run watchlog script every 60 second.

Dec 20 16:39:32 centos-sys systemd[1]: Starting My watchlog service...

Dec 20 16:39:32 centos-sys root[1829]: Wed Dec 20 16:39:32 MSK 2023: Warning! ALERT

Dec 20 16:39:32 centos-sys systemd[1]: watchlog.service: Succeeded.

Dec 20 16:39:32 centos-sys systemd[1]: Started My watchlog service.

Dec 20 16:40:15 centos-sys systemd[1]: Starting My watchlog service...

Dec 20 16:40:15 centos-sys root[1838]: Wed Dec 20 16:40:15 MSK 2023: Warning! ALERT

Dec 20 16:40:15 centos-sys systemd[1]: watchlog.service: Succeeded.

Dec 20 16:40:15 centos-sys systemd[1]: Started My watchlog service.

Dec 20 16:41:15 centos-sys systemd[1]: Starting My watchlog service...

Dec 20 16:41:15 centos-sys root[1843]: Wed Dec 20 16:41:15 MSK 2023: Warning! ALERT

Dec 20 16:41:15 centos-sys systemd[1]: watchlog.service: Succeeded.

Dec 20 16:41:15 centos-sys systemd[1]: Started My watchlog service.

3. Из epel установить spawn-fcgi, переписать init-скрипт на unit-файл.

Устанавливаем spawn-fcgi и необходимые пакеты

```
[root@centos-sys ~]# yum install epel-release -y
```

Last metadata expiration check: 0:16:40 ago on Wed 20 Dec 2023 04:39:35 PM MSK.

Dependencies resolved.

Package	Architecture	Version	Repository	Size
Installing:				
epel-release	noarch	8-11.el8	extras	24 k
Transaction Summary				
Install 1 Package				

```
...
Downloading Packages:
epel-release-8-11.el8.noarch.rpm          10 kB/s | 24 kB    00:00
-----
Total                                     42 kB/s | 24 kB    00:00
Installed:
  epel-release-8-11.el8.noarch
Complete!
```

```
[root@centos-sys sysconfig]# yum install spawn-fcgi php php-cli mod_fcgid httpd -y
Last metadata expiration check: 1:19:32 ago on Wed 20 Dec 2023 04:56:32 PM MSK.
Dependencies resolved.
```

```
=====
```

Package	Architecture	Version	Repository	Size
=====				
Installing:				
httpd	x86_64	2.4.37-62.module_el8+657+88b2113f	appstream	1.4 M
...				
spawn-fcgi	x86_64	1.6.3-17.el8	epel	24 k
...				

Transaction Summary

```
=====
Install 16 Packages
Total download size: 9.1 M
Installed size: 31 M
Downloading Packages:
(1/16): apr-util-bdb-1.6.1-9.el8.x86_64.rpm          330 kB/s | 25 kB    00:00
...
(16/16): php-cli-7.2.24-1.module_el8.2.0+313+b04d0a66.x86_64.rpm  3.6 MB/s | 3.1 MB    00:00
-----
Total                                               925 kB/s | 9.1 MB    00:10
...
Installed:
  apr-1.6.3-12.el8.x86_64
...
  spawn-fcgi-1.6.3-17.el8.x86_64
Complete!
```

*Раскомментируем строки с переменными в файле параметров юнита*

```
[root@centos-sys sysconfig]# vi /etc/sysconfig/spawn-fcgi
```

*Создаём unit*

```
[root@centos-sys sysconfig]# vi /etc/systemd/system/spawn-fcgi.service
```

*Стартуем юнит, смотрим статус*

```
[root@centos-sys sysconfig]# systemctl start spawn-fcgi
```

```
[root@centos-sys sysconfig]# systemctl status spawn-fcgi
```

```
● spawn-fcgi.service - Spawn-fcgi startup service
   Loaded: loaded (/etc/systemd/system/spawn-fcgi.service; disabled; vendor preset: disabled)
   Active: active (running) since Wed 2023-12-20 18:31:27 MSK; 8s ago
 Main PID: 36487 (php-cgi)
    Tasks: 33 (limit: 11126)
   Memory: 19.0M
   CGroup: /system.slice/spawn-fcgi.service
```

```
└─36487 /usr/bin/php-cgi
```

...

```
└─36523 /usr/bin/php-cgi
```

Dec 20 18:31:27 centos-sys systemd[1]: Started Spawn-fcgi startup service.

*4. Дополнить `unit-файл` `apache httpd` возможностью запустить несколько экземпляров сервера с разными конфигурами*

*Для запуска нескольких экземпляров используем шаблон в конфигурации файла окружения, Добавляем в файл строку: `EnvironmentFile=/etc/sysconfig/httpd-%i`*

```
[root@centos-sys sysconfig]# vi /usr/lib/systemd/system/httpd.service
```

*В файле окружения задаётся опция запуска веб-сервера с необходимым конфигурационным файлом*

```
[root@centos-sys sysconfig]# echo "OPTIONS=-f conf/first.conf" > /etc/sysconfig/httpd-first
```

```
[root@centos-sys sysconfig]# echo "OPTIONS=-f conf/second.conf" > /etc/sysconfig/httpd-second
```

*Конфигурационные файлы для экземпляров веб-сервера*

```
[root@centos-sys sysconfig]# cp /etc/httpd/conf/httpd.conf /etc/httpd/conf/first.conf
```

```
[root@centos-sys sysconfig]# cp /etc/httpd/conf/httpd.conf /etc/httpd/conf/second.conf
```

```
[root@centos-sys sysconfig]# vi /etc/httpd/conf/second.conf
```

*Изменяем опции:*

```
PidFile /var/run/httpd-second.pid
```

```
Listen 8080
```

*Запускаем:*

```
[root@centos-sys conf]# systemctl start httpd@first
```

```
[root@centos-sys conf]# systemctl start httpd@second
```

```
[root@centos-sys conf]# ss -tnulp | grep httpd
```

```
tcp LISTEN 0 511 0.0.0.0:8080 0.0.0.0:*
```

```
users:(("httpd",pid=36909,fd=3),("httpd",pid=36908,fd=3),("httpd",pid=36907,fd=3),("httpd",pid=36906,fd=3),("httpd",pid=36904,fd=3))
```

```
tcp LISTEN 0 511 0.0.0.0:80 0.0.0.0:*
```

```
users:(("httpd",pid=36686,fd=3),("httpd",pid=36685,fd=3),("httpd",pid=36684,fd=3),("httpd",pid=36683,fd=3),("httpd",pid=36681,fd=3))
```

```
[root@centos-sys conf]# systemctl status httpd@second
```

● `httpd@second.service` - The Apache HTTP Server

Loaded: loaded (`/usr/lib/systemd/system/httpd@.service`; disabled; vendor preset: disabled)

Active: active (running) since Wed 2023-12-20 19:05:56 MSK; 39s ago

Docs: `man:httpd@.service(8)`

Process: 36901 ExecStartPre=`/bin/chown root.apache /run/httpd/instance-second` (code=exited, status=0/SUCCESS)

Process: 36900 ExecStartPre=`/bin/mkdir -m 710 -p /run/httpd/instance-second` (code=exited, status=0/SUCCESS)

Main PID: 36904 (`httpd`)

Status: "Running, listening on: port 8080"

Tasks: 214 (limit: 11126)

Memory: 27.4M

CGroup: `/system.slice/system-httpd.slice/httpd@second.service`

```
└─36904 /usr/sbin/httpd -DFOREGROUND -f conf/second.conf
```

...

└─36909 /usr/sbin/httpd -DFOREGROUND -f conf/second.conf

Dec 20 19:05:56 centos-sys systemd[1]: Starting The Apache HTTP Server...

Dec 20 19:05:56 centos-sys httpd[36904]: AH00558: httpd: Could not reliably determine the server's fully qualified>

Dec 20 19:05:56 centos-sys systemd[1]: Started The Apache HTTP Server.

Dec 20 19:05:56 centos-sys httpd[36904]: Server configured, listening on: port 8080