Assignment:5

Task:1

Tasks:

Start Systemd Service

Task: Download any web server(Nginx, Apache) and run it via Systemd. Check the status of the service, restart it with some changes and make sure that service run when host get restatrted. Document the steps.

Certainly! Below are step-by-step instructions for installing Nginx, running it via Systemd, checking the service status, making changes and restarting the service, and configuring it to start automatically on system reboot.

Step 1: Install Nginx

sudo apt-get update

sudo apt-get install nginx

```
sunny28@Linux:~$ sudo apt install nginx
[sudo] password for sunny28:
sunny28 is not in the sudoers file.  This incident will be reported.
sunny28@Linux:~$ sudo apt install nginx
[sudo] password for sunny28:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libnginx-mod-http-geoip2 libnginx-mod-http-image-filter
  libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream
  libnginx-mod-stream-geoip2 nginx-common nginx-core
Suggested packages:
  fcgiwrap nginx-doc
The following NEW packages will be installed:
  libnginx-mod-http-geoip2 libnginx-mod-http-image-filter
  libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream
  libnginx-mod-stream-geoip2 nginx nginx-common nginx-core
0 upgraded, 9 newly installed, 0 to remove and 48 not upgraded.
Need to get 697 kB of archives.
After this operation, 2,395 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 nginx-common all 1.18.0-6ubuntu14.4 [40.0 kB]
Get:2 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-http-geoip2 amd64 1.18.0-6ubuntu14.4 [11.9 kB]
Get:3 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-http-image-filter amd64 1.18.0-6ubuntu14.4 [15.4 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-http-xslt-filter amd64 1.18.0-6ubuntu14.4 [13.7 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-mail amd64 1.18.0-6ubuntu14.4 [45.7 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-stream amd64 1.18.0-6ubuntu14.4 [72.9 kB]
Get:7 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libnginx-mod-stream-geoip2 amd64 1.18.0-6ubuntu14.4 [10.1 kB]
Get:8 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 nginx-core amd64 1.18.0-6ubuntu14.4 [484 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 nginx amd64 1.18.0-6ubuntu14.4 [3,872 B]
Fetched 697 kB in 6s (124 kB/s)
Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 204673 files and directories currently installed.)
Preparing to unpack .../0-nginx-common_1.18.0-6ubuntu14.4_all.deb ...
Unpacking nginx-common (1.18.0-6ubuntu14.4) ...
Selecting previously unselected package libnginx-mod-http-geoip2.
Preparing to unpack .../1-libnginx-mod-http-geoip2_1.18.0-6ubuntu14.4_amd64.deb
...
Unpacking libnginx-mod-http-geoip2 (1.18.0-6ubuntu14.4) ...
Selecting previously unselected package libnginx-mod-http-image-filter.
Preparing to unpack .../2-libnginx-mod-http-image-filter_1.18.0-6ubuntu14.4_amd6
4.deb ...
Unpacking libnginx-mod-http-image-filter (1.18.0-6ubuntu14.4) ...
Selecting previously unselected package libnginx-mod-http-xslt-filter.
Preparing to unpack .../3-libnginx-mod-http-xslt-filter_1.18.0-6ubuntu14.4_amd64
.deb ...
```

Step 2: Start Nginx and Check Status

sudo systemctl start nginx

sudo systemctl status nginx

```
sunny28@Linux:~$ systemctl start nginx
sunny28@Linux:~$ systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
     Loaded: loaded (/lib/systemd/system/nginx.service; enabled; vendor preset: enabled)
     Active: active (running) since Fri 2024-01-05 23:05:46 IST; 2min 14s ago
       Docs: man:nginx(8)
    Process: 6131 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
    Process: 6132 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
   Main PID: 6223 (nginx)
      Tasks: 4 (limit: 4072)
     Memory: 4.8M
        CPU: 70ms
     CGroup: /system.slice/nginx.service
             ├─6223 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
             ├─6226 "nginx: worker process" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" ""
             ├─6227 "nginx: worker process" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" "" ""
```

Step 3: Make Changes and Restart

sudo nano /etc/nginx/nginx.conf

```
user www-data;
worker_processes auto;
pid /run/nginx.pid;
include /etc/nginx/modules-enabled/*.conf;

events {
        worker_connections 768;
        # multi_accept on;
}

http {

        ##
        # Basic Settings
        ##

        sendfile on;
        tcp_nopush on;
        types_hash_max_size 2048;
        # server_tokens off;

        # server_names_hash_bucket_size 64;
        # server_name_in_redirect off;

        include /etc/nginx/mime.types;
        default_type application/octet-stream;

        ##
        # SSL Settings
        ##

        ssl_protocols TLSv1 TLSv1.1 TLSv1.2 TLSv1.3; # Dropping SSLv3, ref: POODLE
        ssl_prefer_server_ciphers on;

        ##
        # Logging Settings
        ##

        access_log /var/log/nginx/access.log;
        error_log /var/log/nginx/error.log;

        ##
        # Gzip Settings
        ##

        gzip on;
```

After making changes, restart Nginx**:**

sudo systemctl restart nginx

Step 4: Enable Auto-Start on Boot

sudo systemctl enable nginx