

Trabalho de Instalação - Etapa I Tarefa

Integrantes:

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VMs utilizadas:

ntp	192.168.1.16/22
http	192.168.1.17/22

Login de acesso (VMs):

Usuário: aluno
Senha: grupoi2022

Os dados de acesso são iguais para as duas VMs.

Serviço de sincronização de tempo (NTP)

Implementação do protocolo NTP (Network Time Protocol) na VM - 192.168.1.16 para que seja sincronizado corretamente o horário e a data da máquina pelo serviço Chronyd. O chronyd é uma implementação dinâmica do NTP, que nos permite sincronizar o relógio do sistema com servidores NTP, relógios de referência e entrada manual através do teclado. Além disso, o Chronyd também pode ser usado como servidor NTPv4 (RFC 5905) com o objetivo de fornecer um serviço de horário para outros computadores na rede.

Comandos utilizados:

1. sudo su
2. apt-get update

```
[16:13:09] DEBIAN: root@debian [/home/aluno]$ apt-get update
Obter:1 http://deb.debian.org/debian bullseye InRelease [116 kB]
Obter:2 http://security.debian.org/debian-security bullseye-security InRelease [44,1 kB]
Obter:3 http://deb.debian.org/debian bullseye-updates InRelease [39,4 kB]
Obter:4 http://security.debian.org/debian-security bullseye-security/main Sources [133 kB]
Obter:5 http://security.debian.org/debian-security bullseye-security/main amd64 Packages [164 kB]
Obter:6 http://security.debian.org/debian-security bullseye-security/main Translation-en [103 kB]
Obter:7 http://deb.debian.org/debian bullseye/main Sources [8.627 kB]
Obter:8 http://deb.debian.org/debian bullseye-updates/main Sources.diff/Index [8.361 B]
Obter:9 http://deb.debian.org/debian bullseye-updates/main amd64 Packages.diff/Index [8.361 B]
Obter:10 http://deb.debian.org/debian bullseye-updates/main Sources T-2022-06-11-2007.01-F-2022-01-24-2024.03.pdiff [355 B]
Obter:10 http://deb.debian.org/debian bullseye-updates/main Sources T-2022-06-11-2007.01-F-2022-01-24-2024.03.pdiff [355 B]
Obter:11 http://deb.debian.org/debian bullseye-updates/main amd64 Packages T-2022-06-11-2007.01-F-2022-01-24-2024.03.pdiff [1.188 B]
Obter:11 http://deb.debian.org/debian bullseye-updates/main amd64 Packages T-2022-06-11-2007.01-F-2022-01-24-2024.03.pdiff [1.188 B]
Obter:12 http://deb.debian.org/debian bullseye/main amd64 Packages [8.182 kB]
Obter:13 http://deb.debian.org/debian bullseye/main Translation-en [6.241 kB]
Baixados 23,7 MB em 6s (3.783 kB/s)
Lendo listas de pacotes... Pronto
N: Repository 'http://deb.debian.org/debian bullseye InRelease' changed its 'Version' value from '11.2' to '11.3'
```

3. apt-get install chrony

```
[16:15:53] DEBIAN: root@debian [/home/aluno]$ apt-get install chrony
Lendo listas de pacotes... Pronto
Construindo árvore de dependências... Pronto
Lendo informação de estado... Pronto
Os seguintes pacotes foram instalados automaticamente e já não são necessários:
  libevent-core-2.1-7 libevent-pthreads-2.1-7 libopts23 ntp
Utilize 'apt autoremove' para os remover.
Pacotes sugeridos:
  networkd-dispatcher
Os pacotes a seguir serão REMOVIDOS:
  ntp
Os NOVOS pacotes a seguir serão instalados:
  chrony
0 pacotes atualizados, 1 pacotes novos instalados, 1 a serem removidos e 51 não atualizados.
É preciso baixar 287 kB de arquivos.
Depois desta operação, 1.525 kB de espaço em disco serão liberados.
Você quer continuar? [S/n] s
Obter:1 http://deb.debian.org/debian bullseye/main amd64 chrony amd64 4.0-8+deb11u2 [287 kB]
Baixados 287 kB em 0s (1.706 kB/s)
dpkg: ntp: problemas com dependências, mas mesmo assim a remover conforme você pediu:
systemd depende de systemd-timesyncd | time-daemon; porém:
  Pacote systemd-timesyncd não está instalado.
  Pacote time-daemon não está instalado.
  Pacote systemd-timesyncd, o qual fornece time-daemon não está instalado.
  Pacote ntp, o qual fornece time-daemon está para ser removido.

(Lendo banco de dados ... 30786 ficheiros e directórios actualmente instalados.)
A remover ntp (1:4.2.9pl5+dfsg-1) ...
A seleccionar pacote anteriormente não seleccionado chrony.
(Lendo banco de dados ... 30732 ficheiros e directórios actualmente instalados.)
A preparar para descompactar .../chrony 4.0-8+deb11u2 amd64.deb ...
A descompactar chrony (4.0-8+deb11u2) ...
Configurando chrony (4.0-8+deb11u2) ...

Creating config file /etc/chrony/chrony.conf with new version

Creating config file /etc/chrony/chrony.keys with new version
dpkg-statoverride: aviso: --update foi dada mas /var/log/chrony não existe
Created symlink /etc/systemd/system/chronyd.service - /lib/systemd/system/chrony.service.
Created symlink /etc/systemd/system/multi-user.target.wants/chrony.service - /lib/systemd/system/chrony.service.
A processar 'triggers' para man-db (2.9.4-2) ...
```

4. systemctl restart systemd-timedated

5. systemctl status chronyd

```
[12:51:13] DEBIAN: root@ntp [/home/aluno]$ systemctl status chronyd
● chrony.service - chrony, an NTP client/server
   Loaded: loaded (/lib/systemd/system/chrony.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2022-07-05 16:16:04 -03; 6 days ago
     Docs: man:chronyd(8)
           man:chronyc(1)
           man:chrony.conf(5)
   Main PID: 22245 (chronyd)
      Tasks: 2 (limit: 1133)
    Memory: 1.2M
         CPU: 1.677s
    CGroup: /system.slice/chrony.service
            └─22245 /usr/sbin/chronyd -F 1
              └─22246 /usr/sbin/chronyd -F 1

jul 05 16:16:04 debian systemd[1]: Starting chrony, an NTP client/server...
jul 05 16:16:04 debian chronyd[22245]: chronyd version 4.0 starting (+CMDMON +NTP +REFCLOCK +RTC +PRIVDROP +SCFILTER +SIGND +ASYNCDNS +NTS +SECHASH +IPV6 -DEBUG)
jul 05 16:16:04 debian chronyd[22245]: Initial frequency -21.163 ppm
jul 05 16:16:04 debian chronyd[22245]: Using right/UTC timezone to obtain leap second data
jul 05 16:16:04 debian chronyd[22245]: Loaded seccomp filter
jul 05 16:16:04 debian systemd[1]: Started chrony, an NTP client/server.
jul 05 16:16:09 debian chronyd[22245]: Selected source 143.107.229.210 (2.debian.pool.ntp.org)
jul 05 16:16:09 debian chronyd[22245]: System clock TAI offset set to 37 seconds
```

Serviço instalado [comando realizado no dia (12/07/22)]:

Active: active (running) since Tue 2022-07-05 16:16:04 -03; 6 days ago

Versão:

chronyd version 4.0 starting

Comando: timedatectl

```
[10:59:15] DEBIAN: aluno@ntp [~]$ timedatectl
      Local time: ter 2022-07-12 11:01:22 -03
      Universal time: ter 2022-07-12 14:01:22 UTC
           RTC time: ter 2022-07-12 14:01:22
           Time zone: America/Sao_Paulo (-03, -0300)
System clock synchronized: yes
           NTP service: active
           RTC in local TZ: no
```

Identificando o status do NTP no servidor 192.168.1.16, podemos ver que o NTP service está ativo, zona utilizada é na América / São Paulo e o horário universal coordenado é o UTC-3.

Comando: chronyc tracking

```
[11:03:31] DEBIAN: aluno@ntp [~]$ chronyc tracking
Reference ID      : 8F6BE5D2 (143.107.229.210)
Stratum          : 3
Ref time (UTC)   : Tue Jul 12 13:38:12 2022
System time      : 0.000025440 seconds slow of NTP time
Last offset      : -0.000008034 seconds
RMS offset       : 0.000043640 seconds
Frequency        : 21.342 ppm slow
Residual freq    : +0.000 ppm
Skew             : 0.005 ppm
Root delay       : 0.024130726 seconds
Root dispersion  : 0.001831372 seconds
Update interval  : 1030.2 seconds
Leap status      : Normal
```

Verificando o correto funcionamento e a correção do tempo, bem como o uso do NTS.

Comando: chronyc sources

```
[11:05:20] DEBIAN: aluno@ntp [~]$ chronyc sources
MS Name/IP address      Stratum Poll Reach LastRx Last sample
=====
^- 52.67.171.238         3 10 377 227 +17us[ +17us] +/- 187ms
^- 194.0.5.123           2 10 377 321 -4016us[-4016us] +/- 83ms
^+ 200.192.232.8         2 10 377 755 -447us[ -447us] +/- 21ms
^* 143.107.229.210       2 10 377 44m +1264us[+1256us] +/- 14ms
```

Comando: chronyc -N authdata

```
[12:51:00] DEBIAN: root@ntp [/home/aluno]$ chronyc -N authdata
Name/IP address      Mode KeyID Type KLen Last Atmp NAK Cook CLen
=====
2.debian.pool.ntp.org - 0 0 0 - 0 0 0 0
2.debian.pool.ntp.org - 0 0 0 - 0 0 0 0
2.debian.pool.ntp.org - 0 0 0 - 0 0 0 0
2.debian.pool.ntp.org - 0 0 0 - 0 0 0 0
```

Implementando o serviço NTP na VM - 192.168.1.17 para receber a hora certa da VM - 192.168.1.16, máquina que foi configurada para receber a hora certa de um dos servidores do projeto NTP.br.

Serviço desativado.

```
[16:40:47] DEBIAN: root@debian [/home/aluno]$ timedatectl status
Local time: ter 2022-07-05 16:41:21 -03
Universal time: ter 2022-07-05 19:41:21 UTC
RTC time: ter 2022-07-05 19:41:21
Time zone: America/Sao_Paulo (-03, -0300)
System clock synchronized: yes
NTP service: n/a
RTC in local TZ: no
```

Comandos utilizados:

1. sudo su
2. apt-get update

```
[16:41:32] DEBIAN: root@debian [/home/aluno]$ apt-get update
Obter:1 http://security.debian.org/debian-security bullseye-security InRelease [44,1 kB]
Obter:2 http://deb.debian.org/debian bullseye InRelease [116 kB]
Obter:3 http://deb.debian.org/debian bullseye-updates InRelease [39,4 kB]
Obter:4 http://security.debian.org/debian-security bullseye-security/main Sources [133 kB]
Obter:5 http://security.debian.org/debian-security bullseye-security/main amd64 Packages [164 kB]
Obter:6 http://security.debian.org/debian-security bullseye-security/main Translation-en [103 kB]
Obter:7 http://deb.debian.org/debian bullseye/main Sources [8.627 kB]
Obter:8 http://deb.debian.org/debian bullseye-updates/main Sources.diff/Index [8.361 B]
Obter:9 http://deb.debian.org/debian bullseye-updates/main amd64 Packages.diff/Index [8.361 B]
Obter:10 http://deb.debian.org/debian bullseye-updates/main Sources T-2022-06-11-2007.01-F-2022-01-24-2024.03.pdiff [355 B]
Obter:10 http://deb.debian.org/debian bullseye-updates/main Sources T-2022-06-11-2007.01-F-2022-01-24-2024.03.pdiff [355 B]
Obter:11 http://deb.debian.org/debian bullseye-updates/main amd64 Packages T-2022-06-11-2007.01-F-2022-01-24-2024.03.pdiff [1.188 B]
Obter:11 http://deb.debian.org/debian bullseye-updates/main amd64 Packages T-2022-06-11-2007.01-F-2022-01-24-2024.03.pdiff [1.188 B]
Obter:12 http://deb.debian.org/debian bullseye/main amd64 Packages [8.182 kB]
Obter:13 http://deb.debian.org/debian bullseye/main Translation-en [6.241 kB]
Baixados 23,7 MB em 7s (3.613 kB/s)
Lendo listas de pacotes... Pronto
N: Repository 'http://deb.debian.org/debian bullseye InRelease' changed its 'Version' value from '11.2' to '11.3'
```

3. timedatectl show-timesync

```
[16:45:16] DEBIAN: root@debian [/etc/systemd]$ timedatectl show-timesync
SystemNTPServers=192.168.1.16
FallbackNTPServers=0.debian.pool.ntp.org 1.debian.pool.ntp.org 2.debian.pool.ntp.org 3.debian.pool.ntp.org
ServerName=192.168.1.16
ServerAddress=192.168.1.16
RootDistanceMaxUSec=5s
PollIntervalMinUSec=32s
PollIntervalMaxUSec=34min 8s
PollIntervalUSec=1min 4s
Frequency=0
```

4. apt-get install systemd-timesyncd

```
[16:41:54] DEBIAN: root@debian [/home/aluno]$ apt-get install systemd-timesyncd
Lendo listas de pacotes... Pronto
Construindo árvore de dependências... Pronto
Lendo informação de estado... Pronto
Os seguintes pacotes foram instalados automaticamente e já não são necessários:
  libevent-core-2.1-7 libevent-pthreads-2.1-7 libopts25 sntp
Utilize 'sudo apt autoremove' para os remover.
The following additional packages will be installed:
  libnss-systemd libpam-systemd libsystemd0 systemd
Pacotes sugeridos:
  systemd-container policykit-1
Os pacotes a seguir serão REMOVIDOS:
  ntp
Os NOVOS pacotes a seguir serão instalados:
  systemd-timesyncd
Os pacotes a seguir serão atualizados:
  libnss-systemd libpam-systemd libsystemd0 systemd
4 pacotes atualizados, 1 pacotes novos instalados, 1 a serem removidos e 47 não atualizados.
É preciso baixar 5.489 kB de arquivos.
Depois desta operação, 1.940 kB de espaço em disco serão liberados.
Você quer continuar? [S/n] s
Obter:1 http://deb.debian.org/debian bullseye/main amd64 libnss-systemd amd64 247.3-7 [198 kB]
Obter:2 http://deb.debian.org/debian bullseye/main amd64 libpam-systemd amd64 247.3-7 [283 kB]
Obter:3 http://deb.debian.org/debian bullseye/main amd64 systemd amd64 247.3-7 [4.500 kB]
Obter:4 http://deb.debian.org/debian bullseye/main amd64 libsystemd0 amd64 247.3-7 [376 kB]
Obter:5 http://deb.debian.org/debian bullseye/main amd64 systemd-timesyncd amd64 247.3-7 [131 kB]
Baixados 5.489 kB em 1s (10,5 MB/s)
Lendo logs de mudanças... Feito
(Lendo banco de dados ... 30786 ficheiros e directórios actualmente instalados.)
A preparar para desempacotar .../libnss-systemd_247.3-7_amd64.deb ...
A descompactar libnss-systemd:amd64 (247.3-7) sobre (247.3-6) ...
A preparar para desempacotar .../libpam-systemd_247.3-7_amd64.deb ...
```



```

A descompactar libnss-systemd:amd64 (247.3-7) sobre (247.3-6) ...
A preparar para desempacotar .../libpam-systemd_247.3-7_amd64.deb ...
A descompactar libpam-systemd:amd64 (247.3-7) sobre (247.3-6) ...
A preparar para desempacotar .../systemd_247.3-7_amd64.deb ...
A descompactar systemd (247.3-7) sobre (247.3-6) ...
A preparar para desempacotar .../libsystemd0_247.3-7_amd64.deb ...
A descompactar libsystemd0:amd64 (247.3-7) sobre (247.3-6) ...
Configurando libsystemd0:amd64 (247.3-7) ...
(Lendo banco de dados ... 30786 ficheiros e directórios actualmente instalados.)
A remover ntp (1:4.2.8pl5+dfsg-1) ...
A seleccionar pacote anteriormente não seleccionado systemd-timesyncd.
(Lendo banco de dados ... 30732 ficheiros e directórios actualmente instalados.)
A preparar para desempacotar .../systemd-timesyncd_247.3-7_amd64.deb ...
A descompactar systemd-timesyncd (247.3-7) ...
Configurando systemd (247.3-7) ...
Configurando systemd-timesyncd (247.3-7) ...
Configurando libpam-systemd:amd64 (247.3-7) ...
Configurando libnss-systemd:amd64 (247.3-7) ...
A processar 'triggers' para dbus (1.12.20-2) ...
A processar 'triggers' para libc-bin (2.31-13+deb11u2) ...
A processar 'triggers' para man-db (2.9.4-2) ...

```

5. timedatectl status

```

[16:42:14] DEBIAN: root@debian [/home/aluno]$ timedatectl status
          Local time: ter 2022-07-05 16:42:23 -03
          Universal time: ter 2022-07-05 19:42:23 UTC
              RTC time: ter 2022-07-05 19:42:24
          Time zone: America/Sao_Paulo (-03, -0300)
System clock synchronized: yes
          NTP service: active
          RTC in local TZ: no

```

6. cd /etc/systemd

7. cp timesyncd.conf timesyncd.conf.bkp

```

[16:42:23] DEBIAN: root@debian [/home/aluno]$ cd /etc/systemd
[16:42:52] DEBIAN: root@debian [/etc/systemd]$ ls
journal.conf  logind.conf  networkd.conf  pstore.conf  resolved.conf  sleep.conf  system  system.conf  timesyncd.conf  user  user.conf
[16:42:57] DEBIAN: root@debian [/etc/systemd]$ cp timesyncd.conf timesyncd.conf.bkp
[16:43:23] DEBIAN: root@debian [/etc/systemd]$ ls
journal.conf  logind.conf  networkd.conf  pstore.conf  resolved.conf  sleep.conf  system  system.conf  timesyncd.conf  timesyncd.conf.bkp  user  user.conf

```

8. vim timesyncd.conf

```

# This file is part of systemd.
#
# systemd is free software; you can redistribute it and/or modify it
# under the terms of the GNU Lesser General Public License as published by
# the Free Software Foundation; either version 2.1 of the License, or
# (at your option) any later version.
#
# Entries in this file show the compile time defaults.
# You can change settings by editing this file.
# Defaults can be restored by simply deleting this file.
#
# See timesyncd.conf(5) for details.

[Time]
NTP=192.168.1.16
#NTP=
#FallbackNTP=0.debian.pool.ntp.org 1.debian.pool.ntp.org 2.debian.pool.ntp.org 3.debian.pool.ntp.org
#RootDistanceMaxSec=5
#PollIntervalMinSec=32
#PollIntervalMaxSec=2048

```

Alteração do endereço de IP, do 192.168.1.17 para o 192.168.1.16.

9. `timedatectl set-ntp true`
10. `service systemd-timesyncd restart`
11. `timedatectl status`

```
[16:44:31] DEBIAN: root@debian [/etc/systemd]$ timedatectl set-ntp true
[16:44:47] DEBIAN: root@debian [/etc/systemd]$ service systemd-timesyncd restart
[16:45:03] DEBIAN: root@debian [/etc/systemd]$ timedatectl status
           Local time: ter 2022-07-05 16:45:16 -03
           Universal time: ter 2022-07-05 19:45:16 UTC
           RTC time: ter 2022-07-05 19:45:16
           Time zone: America/Sao_Paulo (-03, -0300)
System clock synchronized: yes
           NTP service: active
           RTC in local TZ: no
```

12. `timedatectl show-timesync`

```
[13:34:37] DEBIAN: root@http [/etc/systemd]$ timedatectl show-timesync
SystemNTPServers=192.168.1.16
FallbackNTPServers=0.debian.pool.ntp.org 1.debian.pool.ntp.org 2.debian.pool.ntp.org 3.debian.pool.ntp.org
ServerName=192.168.1.16
ServerAddress=192.168.1.16
RootDistanceMaxUSec=5s
PollIntervalMinUSec=32s
PollIntervalMaxUSec=34min 8s
PollIntervalUSec=34min 8s
Frequency=0
```

Servidor Web

Implementação de um servidor Web na VM - 192.168.1.17.

1. sudo su
2. apt-get update
3. apt install apache2

```
[13:53:13] DEBIAN: root@http [/home/aluno]$ service apache2 status
* apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Mon 2022-07-11 14:26:54 -03; 23h ago
     Docs: https://httpd.apache.org/docs/2.4/
   Process: 1015 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Process: 1460 ExecReload=/usr/sbin/apachectl graceful (code=exited, status=0/SUCCESS)
  Main PID: 1019 (apache2)
    Tasks: 55 (limit: 113)
   Memory: 12.9M
      CPU: 3.600s
   CGroup: /system.slice/apache2.service
           └─1019 /usr/sbin/apache2 -k start
             └─1460 /usr/sbin/apache2 -k start
             └─1465 /usr/sbin/apache2 -k start

jul 11 14:26:54 ntpdms systemd[1]: Starting The Apache HTTP Server...
jul 11 14:26:54 ntpdms apache2ctl[1019]: AH00557: apache2: apr_sockaddr_info_get() failed for ntpdms
jul 11 14:26:54 ntpdms apache2ctl[1019]: AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1. Set the 'ServerName' directive globally to suppress this message
jul 11 14:26:54 ntpdms systemd[1]: Started The Apache HTTP Server.
jul 12 00:00:26 http systemd[1]: Reloading The Apache HTTP Server.
jul 12 00:00:27 http apache2ctl[1463]: AH00557: apache2: apr_sockaddr_info_get() failed for http
jul 12 00:00:27 http apache2ctl[1463]: AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1. Set the 'ServerName' directive globally to suppress this message
jul 12 00:00:27 http systemd[1]: Reloaded The Apache HTTP Server.
```

4. cd /etc/apache2/sites-available
5. cp 000-default.conf grupoi2022-webserver.conf

```
[13:54:07] DEBIAN: root@http [/etc/apache2/sites-available]$ ls
000-default.conf  default-ssl.conf  grupoi2022-webserver.conf
```

6. mkdir /var/www/grupoi2022server
7. cd /var/www/grupoi2022server

```
[13:56:30] DEBIAN: root@http [/var/www]$ cd
[13:56:34] DEBIAN: root@http [~]$ cd /var
[13:56:42] DEBIAN: root@http [/var]$ ls
backups  cache  lib  local  lock  log  mail  opt  run  spool  tmp  www
[13:56:44] DEBIAN: root@http [/var]$ cd www
[13:56:47] DEBIAN: root@http [/var/www]$ ls
grupoi2022server  html
[13:56:49] DEBIAN: root@http [/var/www]$ cd grupoi2022server
```

8. vim index.html

```
[13:58:18] DEBIAN: root@http [/var/www/grupoi2022server]$ ls
index.html
```

192.168.1.17 - PuTTY

```
<html>
  <center><font size='+2' color='blue'> <b> Servidor Web </b> </font></center>
<hr>
  <p> <b> Integrantes: </b> </p>
  <p> &nbsp; Artur E. Silva </p>
  <p> &nbsp; Eduardo H. Haddad </p>
  <p> &nbsp; Igor A. dos Santos Alves Mendes </p>
  <p> &nbsp; Túlio Freire </p>
<hr>
  <p> LINK: <font color='blue'> <b> <a href="https://drive.google.com/drive/folders/1Sb6W25WbECQK118i2l0m-b-RpxVgGRVb?usp=sharing">_servidorWeb-UFLA-grupoi2022-arquivos </a></b> </font>
</html>
```

9. a2ensite grupoi2022-webserver.conf

```
[14:13:28] DEBIAN: root@http [/etc/apache2/sites-available]$ ls
000-default.conf  default-ssl.conf  grupoi2022-webserver.conf
[14:13:30] DEBIAN: root@http [/etc/apache2/sites-available]$ vim grupoi2022-webserver.conf
```

```
<VirtualHost *:80>
    # The ServerName directive sets the request scheme, hostname and port that
    # the server uses to identify itself. This is used when creating
    # redirection URLs. In the context of virtual hosts, the ServerName
    # specifies what hostname must appear in the request's Host: header to
    # match this virtual host. For the default virtual host (this file) this
    # value is not decisive as it is used as a last resort host regardless.
    # However, you must set it for any further virtual host explicitly.
    #ServerName www.example.com

    ServerAdmin webmaster@localhost
    # DocumentRoot /var/www/html
    DocumentRoot /var/www/grupoi2022server
    ServerName www.grupoi2022.ufla.br
    ServerAlias grupoi2022.ufla.br

    # Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
    # error, crit, alert, emerg.
    # It is also possible to configure the loglevel for particular
    # modules, e.g.
    #LogLevel info ssl:warn

    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined

    # For most configuration files from conf-available/, which are
    # enabled or disabled at a global level, it is possible to
    # include a line for only one particular virtual host. For example the
    # following line enables the CGI configuration for this host only
    # after it has been globally disabled with "a2disconf".
    #Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
```

10. a2dissite 000-default.conf

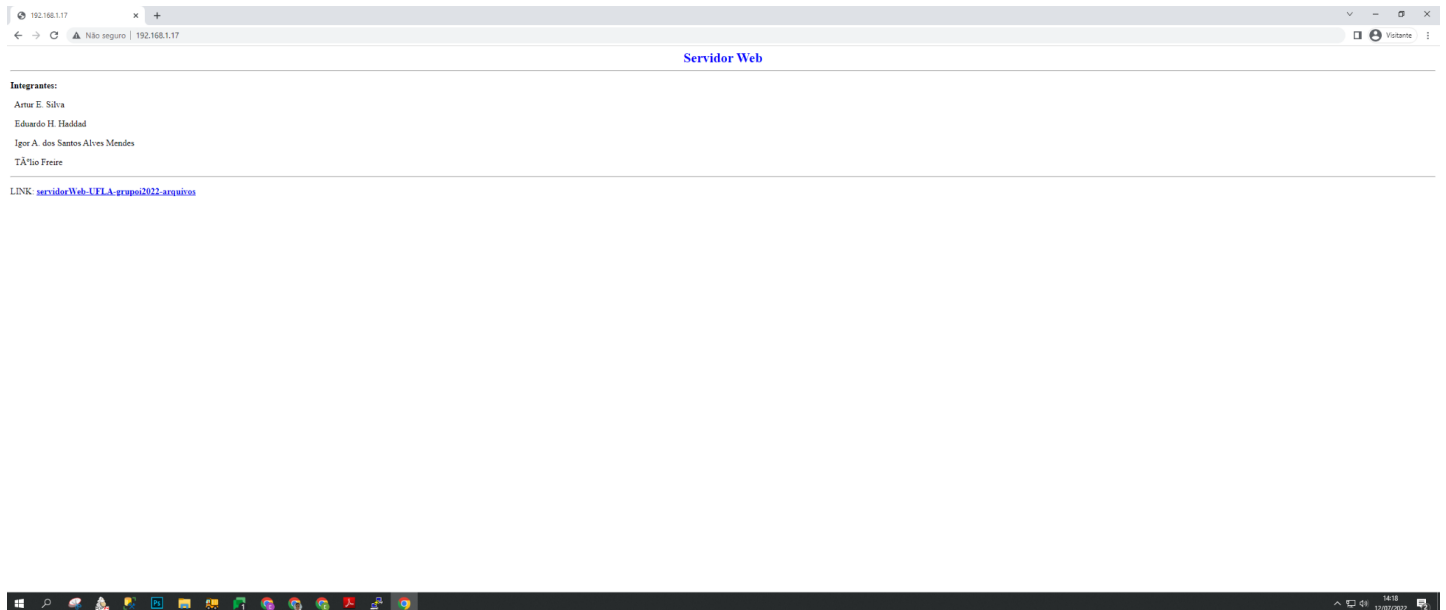
```
[14:13:05] DEBIAN: root@http [/etc/apache2]$ cd /etc/apache2/sites-available
[14:13:28] DEBIAN: root@http [/etc/apache2/sites-available]$ ls
000-default.conf  default-ssl.conf  grupoi2022-webserver.conf
```

11. apache2ctl configtest

```
[14:10:01] DEBIAN: root@http [/etc]$ apache2ctl configtest
AH00557: apache2: apr_sockaddr_info_get() failed for http
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1. Set the 'ServerName' directive globally to suppress this message
Syntax OK
```


12. `systemctl restart apache2`

13. Teste no navegador google chrome



Dificuldades encontradas:

A principal dificuldade foi na linguagem que é utilizada no Debian, para contornar o problema procuramos vídeos na internet para aprender um pouco da linguagem e conseguir fazer o trabalho. Tivemos dificuldade também na configuração do servidor WEB, conseguimos fazer a instalação com a ajuda do material que foi disponibilizado pelo professor Hermes P. Moraes.