## **Laporan Praktikum 6**

#### **Administrasi Sistem**

Manajemen Log



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#### Manajemen Log

Manajemen Log berfungsi untuk memudahkan dalam manajemen file file log dan untuk membuat standar yang sama dalam penulisan format data log maka dibutuhkan sebuah sistem log.

Berikut merupakan **implementasi dari manajemen log** dan sistem operasi yang digunakan adalah **Ubuntu 16.04 LTS**:

#### Lab 6.1 Memeriksa service rsyslog

1. Untuk memeriksa apakah service rsyslog sudah berjalan atau belum maka Anda dapat memeriksanya dengan menjakankan perintah berikut:

```
pc18@pc18-desktop: ~
                                                                                File Edit View Search Terminal Help
pc18@pc18-desktop:~$ sudo systemctl status rsyslog
rsyslog.service - System Logging Service

Loaded: loaded (/lib/systemd/system/rsyslog.service; enabled; vendor preset:
   Active: active (running) since Wed 2018-12-26 08:23:58 WIB; 11min ago
     Docs: man:rsyslogd(8)
           http://www.rsyslog.com/doc/
 Main PID: 760 (rsyslogd)
    Tasks: 4 (limit: 4558)
   CGroup: /system.slice/rsyslog.service

└─760 /usr/sbin/rsyslogd -n
Des 26 08:23:58 pc18-desktop systemd[1]: Starting System Logging Service...
Des 26 08:23:58 pc18-desktop rsyslogd[760]: action 'file' treated as ':omusrmsg:
Des 26 08:23:58 pc18-desktop rsyslogd[760]:
Des 26 08:23:58 pc18-desktop rsyslogd[760]:
Des 26 08:23:58 pc18-desktop rsyslogd[760]: imuxsock: Acquired UNIX socket '/run
Des 26 08:23:58 pc18-desktop rsyslogd[760]: rsyslogd's groupid changed to 106
Des 26 08:23:58 pc18-desktop rsyslogd[760]: rsyslogd's userid changed to 102
Des 26 08:23:58 pc18-desktop rsyslogd[760]: [origin software="rsyslogd" swVersi
Des 26 08:23:58 pc18-desktop systemd[1]: Started System Logging Service.
Des 26 08:29:07 pc18-desktop rsyslogd[760]: [origin software="rsyslogd" swVersi
lines 1-20/20 (END)
```

2. Jika service rsyslog belum berjalan , Anda dapat menjalankannya dengan perintah sebagai berikut:

```
pc18@pc18-desktop: ~

File Edit View Search Terminal Help
pc18@pc18-desktop:~$ sudo systemctl start rsyslog
pc18@pc18-desktop:~$ □
```

#### Lab 6.2 Konfigurasi rsyslog – mendefiniskan log spesifik

- 1. Temukan file konfigurasi rsyslog di direktori /etc
  - File konfigurasi utama rsyslog adalah rsyslog.conf
  - File file dalam direktori /etc/rsyslog.d , merupakan file file konfigurasi spesifik

```
pc18@pc18-desktop: ~

File Edit View Search Terminal Help
pc18@pc18-desktop:~$ ls /etc | grep rsyslog
rsyslog.conf
rsyslog.d
pc18@pc18-desktop:~$
```

2. Buatlah file dengan nama 10-mylog.conf didalam direktori /etc/rsyslog.d/

```
pc18@pc18-desktop: /etc/rsyslog.d

File Edit View Search Terminal Help

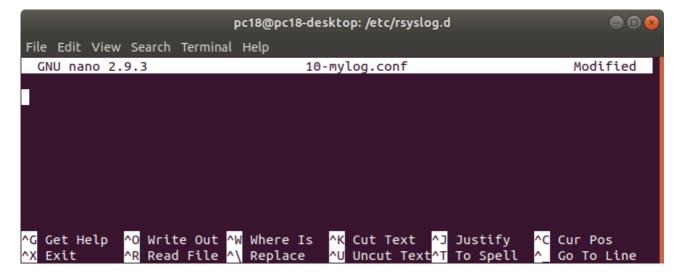
pc18@pc18-desktop:~$ cd /etc/rsyslog.d

pc18@pc18-desktop:/etc/rsyslog.d$ ls

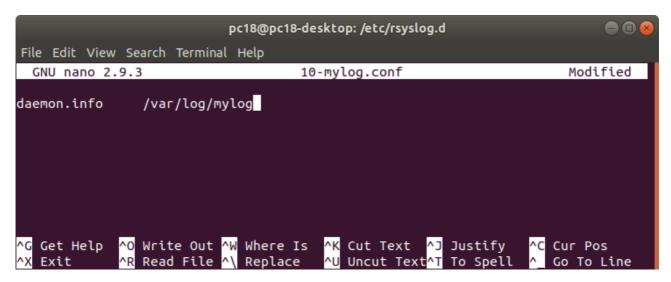
20-ufw.conf 50-default.conf

pc18@pc18-desktop:/etc/rsyslog.d$
```

Ketikkan sudo nano 10-mylog.conf maka akan seperti gambar berikut



• Kemudian isi seperti pada gambar dibawah



Periksa kembali apakah file 10-mylog.conf sudah terbuat atau belum

```
pc18@pc18-desktop:/etc/rsyslog.d

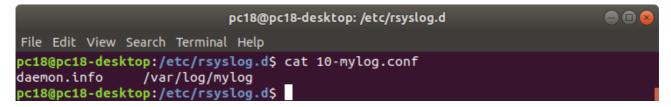
File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ ls

10-mylog.conf 20-ufw.conf 50-default.conf

pc18@pc18-desktop:/etc/rsyslog.d$
```

3. Isi file 10-mylog.conf adalah sebagai berikut:



4. Kemudian restart rsyslog dengan perintah berikut ini:

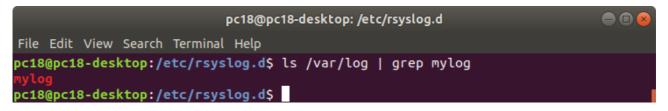
```
pc18@pc18-desktop:/etc/rsyslog.d © © ©

File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ sudo systemctl restart rsyslog

pc18@pc18-desktop:/etc/rsyslog.d$ [
```

5. Kemudian amati apakah file 'mylog' terbentuk atau ada pada direktori /var/log?



6. Selanjutnya uji penulisan pesan log seolah olah dari suatu fasilitas daemon tertentu dengan priority info, menggunakan perintah atau tool logger, seperti perintah berikut ini:

```
pc18@pc18-desktop:/etc/rsyslog.d

File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ sudo logger -p daemon.info -t 'STT-NF' "User B aru Berhasil diBuat Ke STT-NF APPS !!"

sudo logger -p daemon.info -t 'STT-NF' "User Baru Berhasil diBuat Ke STT-NF APPS ls /var/log | grep mylog"

pc18@pc18-desktop:/etc/rsyslog.d$
```

7. Amati isi dari file /var/log/mylog, dengan perintah:

```
pc18@pc18-desktop: /etc/rsyslog.d

File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ sudo tail /var/log/mylog

Dec 26 08:36:47 pc18-desktop ntfs-3g[4815]: Unmounting /dev/sdb (azhar)

Dec 26 08:38:45 pc18-desktop systemd[1]: Starting Cleanup of Temporary Directori es...

Dec 26 08:38:45 pc18-desktop systemd[1]: Started Cleanup of Temporary Directorie s.

Dec 26 08:39:01 pc18-desktop systemd[1]: Starting Clean php session files...

Dec 26 08:39:02 pc18-desktop systemd[1]: Started Clean php session files.

Dec 26 08:41:36 pc18-desktop systemd[1]: Stopping System Logging Service...

Dec 26 08:41:36 pc18-desktop systemd[1]: Starting System Logging Service...

Dec 26 08:41:36 pc18-desktop systemd[1]: Starting System Logging Service...

Dec 26 08:41:36 pc18-desktop systemd[1]: Started System Logging Service...

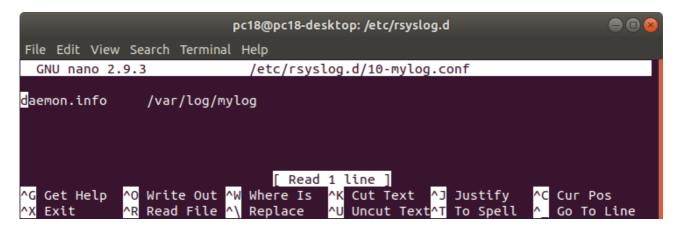
Dec 26 08:42:30 pc18-desktop STT-NF: User Baru Berhasil diBuat Ke STT-NF APPS ls /var/log | grep mylog

pc18@pc18-desktop:/etc/rsyslog.d$
```

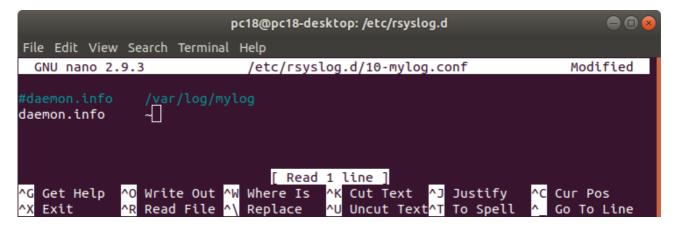
#### Lab 6.3 Konfigurasi rsyslog – mengesampingkan pesan log spesifik

- 1. Suatu pesan log dari suatu fasilitas dengan priority tertentu atau keseluruhan dapat dikesampingkan (discard)
- 2. Coba Anda ubah isi dari file /etc/rsyslog.d/10-mylog.conf, sehingga menjadi seperti berikut ini:
- Ketikkan perintah seperti berikut

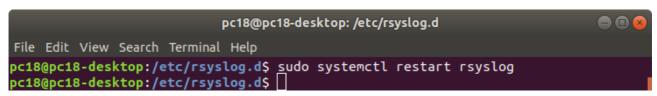
Jika perintah benar maka akan muncul isi file tersebut seperti berikut



Kemudian ubah isinya seperti berikut



3. Kemudian restart rsyslog



4. Selanjutnya perhatikan isi dari file /var/log/mylog saat ini ketika suatu fasilitas daemon mencoba mengirimkan pesan info, apakah tercatat dalam file /var/log/mylog? Lakukan perintah berikut ini:

```
pc18@pc18-desktop:/etc/rsyslog.d

File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo logger -p daemon.info -t 'STT-NF' "User L ogout"
pc18@pc18-desktop:/etc/rsyslog.d$
```

Pada file /var/log/mylog tidak tercatat pesan info diatas

```
pc18@pc18-desktop: /etc/rsyslog.d
                                                                           File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo tail /var/log/mylog
Dec 26 08:36:47 pc18-desktop ntfs-3g[4815]: Unmounting /dev/sdb (azhar)
Dec 26 08:38:45 pc18-desktop systemd[1]: Starting Cleanup of Temporary Directori
es...
Dec 26 08:38:45 pc18-desktop systemd[1]: Started Cleanup of Temporary Directorie
s.
Dec 26 08:39:01 pc18-desktop systemd[1]: Starting Clean php session files...
Dec 26 08:39:02 pc18-desktop systemd[1]: Started Clean php session files.
Dec 26 08:41:36 pc18-desktop systemd[1]: Stopping System Logging Service...
Dec 26 08:41:36 pc18-desktop systemd[1]: Stopped System Logging Service.
Dec 26 08:41:36 pc18-desktop systemd[1]: Starting System Logging Service...
Dec 26 08:41:36 pc18-desktop systemd[1]: Started System Logging Service.
Dec 26 08:42:30 pc18-desktop STT-NF: User Baru Berhasil diBuat Ke STT-NF APPS ls
/var/log | grep mylog
pc18@pc18-desktop:/etc/rsyslog.d$
```

- 5. Perhatikan juga apakah pesan tersebut tercatat dalam file log lainnya seperti dalam file /var/log/syslog?
- Pada file /var/log/syslog juga tidak terdapat pesan info tersebut

```
pc18@pc18-desktop:/etc/rsyslog.d

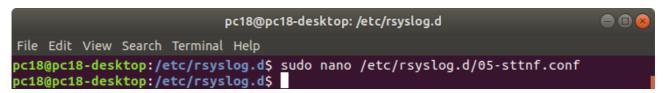
File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo cat /var/log/syslog | grep "User Logout"
pc18@pc18-desktop:/etc/rsyslog.d$
```

Namun pada file /var/log/auth.log terdapat pesan info tersebut

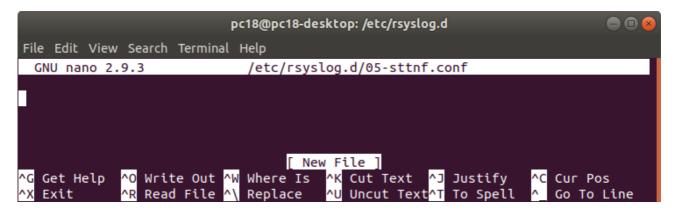
```
pc18@pc18-desktop: /etc/rsyslog.d
File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo cat /var/log/auth.log | grep "User Logout
Dec 26 08:46:06 pc18-desktop sudo:
                                       pc18 : TTY=pts/0 ; PWD=/etc/rsyslog.d ; U
SER=root ; COMMAND=/usr/bin/logger -p daemon.info -t STT-NF
Dec 26 08:48:18 pc18-desktop sudo:
                                       pc18 : TTY=pts/0 ; PWD=/etc/rsyslog.d ; U
SER=root ; COMMAND=/usr/bin/logger -p daemon.info -t STT-NF
Dec 26 08:54:00 pc18-desktop sudo:
                                       pc18 : TTY=pts/0 ; PWD=/etc/rsyslog.d ; U
SER=root; COMMAND=/usr/bin/logger -p daemon.info -t STT-NF
Dec 26 08:55:51 pc18-desktop sudo:
                                       pc18 : TTY=pts/0 ; PWD=/etc/rsyslog.d ; U
SER=root; COMMAND=/usr/bin/logger -p daemon.info -t STT-NF User Lo
pc18@pc18-desktop:/etc/rsyslog.d$
```

# Lab 6.4 Konfigurasi rsyslog – menerima log dari suatu program spesifik dengan konten spesifik

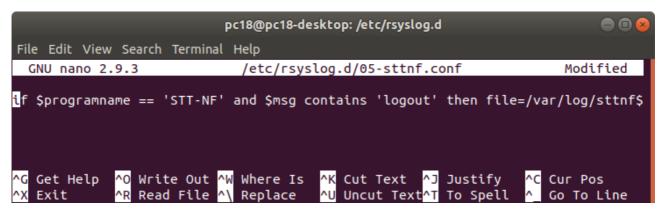
- Suatu pesan log dari suatu program spesifik dengan konten pesan mengandung suatu kata tertentu atau spesifik dan kemudian dicatat kedalam suatu file tertentu oleh rsyslog, dapat Anda terapkan dengan memanfaat fitur yang tersedia dari syslog.
- 2. Contoh Anda menginginkan rsyslog menerima pesan dari aplikasi atau program bernama 'STT-NF' dan dengan isi pesan mengandung kata 'logout', yang akan dicatat oleh rsyslog kedalam file /var/log/sttnf-logout
- 3. Buatlah file /etc/rsyslog.d/05-sttnf.conf, kemudian isi dengan baris berikut ini:
- Ketikkan perintah berikut



Jika file baru maka akan seperti berikut



Kemudian isi perintah if \$programname == 'STT-NF' and \$msg contains 'logout'
then file=/var/log/sttnf-logout



4. Restart rsyslog

```
pc18@pc18-desktop:/etc/rsyslog.d

File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ sudo systemctl restart rsyslog

pc18@pc18-desktop:/etc/rsyslog.d$
```

5. Kemudian coba kirim pesan log seolah olah dari program STT-NF menggunakan tool logger seperti berikut ini:

```
pc18@pc18-desktop:/etc/rsyslog.d © © © © File Edit View Search Terminal Help pc18@pc18-desktop:/etc/rsyslog.d$ sudo logger -p daemon.info -t 'STT-NF' "User L ogout By Admin" pc18@pc18-desktop:/etc/rsyslog.d$
```

- 6. Amati apa yang terjadi pada file /var/log/sttnf-logout ? Dan bagaimana pada file /var/log/syslog ?
- Yang terjadi pada file /var/log/sttnf-logout, terdapat pesan tersebut

```
pc18@pc18-desktop:/etc/rsyslog.d

File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ sudo cat /var/log/sttnf-logout | grep Logout

Dec 26 09:03:30 pc18-desktop sudo: pc18 : TTY=pts/0 ; PWD=/etc/rsyslog.d ; U

SER=root ; COMMAND=/usr/bin/logger -p daemon.info -t STT-NF User Logout By Admin

Dec 26 09:03:30 pc18-desktop STT-NF: User Logout By Admin

pc18@pc18-desktop:/etc/rsyslog.d$
```

Yang terjadi pada file /var/log/syslog, tidak ada pesan tersebut

```
pc18@pc18-desktop:/etc/rsyslog.d

File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo cat /var/log/syslog | grep Logout
pc18@pc18-desktop:/etc/rsyslog.d$
```

7. Kemudian coba lakukan lagi pengiriman pesan log dengan perintah berikut ini:

- 8. Amati apa yang terjadi pada file /var/log/sttnf-logout ? Dan bagaimana pada file /var/log/syslog ?
- Yang terjadi pada file /var/log/sttnf-logout

```
pc18@pc18-desktop: /etc/rsyslog.d
                                                                           File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo tail /var/log/sttnf-logout
Dec 26 09:10:51 pc18-desktop sudo: pam unix(sudo:session): session opened for us
er root by (uid=0)
Dec 26 09:10:51 pc18-desktop STT-NF: User Login By Admin
Dec 26 09:10:51 pc18-desktop sudo: pam_unix(sudo:session): session closed for us
er root
Dec 26 09:10:52 pc18-desktop sudo:
                                    pc18 : TTY=pts/0 ; PWD=/etc/rsyslog.d ; U
SER=root; COMMAND=/bin/cat /var/log/sttnf-logout
Dec 26 09:10:52 pc18-desktop sudo: pam_unix(sudo:session): session opened for us
er root by (uid=0)
Dec 26 09:10:52 pc18-desktop sudo: pam unix(sudo:session): session closed for us
er root
Dec 26 09:11:01 pc18-desktop CRON[6208]: pam unix(cron:session): session opened
for user root by (uid=0)
Dec 26 09:11:01 pc18-desktop CRON[6209]: (root) CMD (cp -rf /home/guest /tmp)
Dec 26 09:11:01 pc18-desktop CRON[6208]: pam_unix(cron:session): session closed
for user root
Dec 26 09:11:22 pc18-desktop sudo:
                                       pc18 : TTY=pts/0 ; PWD=/etc/rsyslog.d ; U
SER=root ; COMMAND=/usr/bin/tail /var/log/sttnf-logout
pc18@pc18-desktop:/etc/rsyslog.d$
```

Yang terjadi pada file /var/log/syslog

```
pc18@pc18-desktop:/etc/rsyslog.d

File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ sudo cat /var/log/syslog | grep Login
pc18@pc18-desktop:/etc/rsyslog.d$
```

9. Kemudian coba lakukan lagi pengiriman pesan log dengan perintah berikut ini:

```
pc18@pc18-desktop:/etc/rsyslog.d

File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ sudo logger -p daemon.info -t 'STT-NF' "User L ogout By Admin"

pc18@pc18-desktop:/etc/rsyslog.d$
```

- 10. Amati apa yang terjadi pada file /var/log/sttnf-logout ? Dan bagaimana pada file /var/log/syslog ?
- Yang terjadi pada file /var/log/sttnf-logout, pesan tersebut ada

```
pc18@pc18-desktop:/etc/rsyslog.d

File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ sudo cat /var/log/sttnf-logout | grep Logout

Dec 26 09:03:30 pc18-desktop sudo: pc18 : TTY=pts/0 ; PWD=/etc/rsyslog.d ; U

SER=root ; COMMAND=/usr/bin/logger -p daemon.info -t STT-NF User Logout By Admin

Dec 26 09:03:30 pc18-desktop STT-NF: User Logout By Admin

Dec 26 09:06:43 pc18-desktop sudo: pc18 : TTY=pts/0 ; PWD=/etc/rsyslog.d ; U

SER=root ; COMMAND=/usr/bin/logger -p daemon.info -t STT-NF User Logout By Admin

Dec 26 09:06:43 pc18-desktop STT-NF: User Logout By Admin

Dec 26 09:06:43 pc18-desktop STT-NF: User Logout By Admin
```

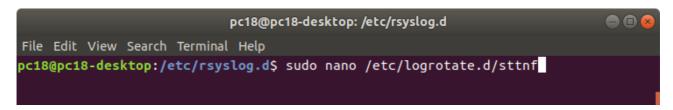
Yang terjadi pada file /var/log/syslog, pesan tersebut tidak ada

```
pc18@pc18-desktop:/etc/rsyslog.d 

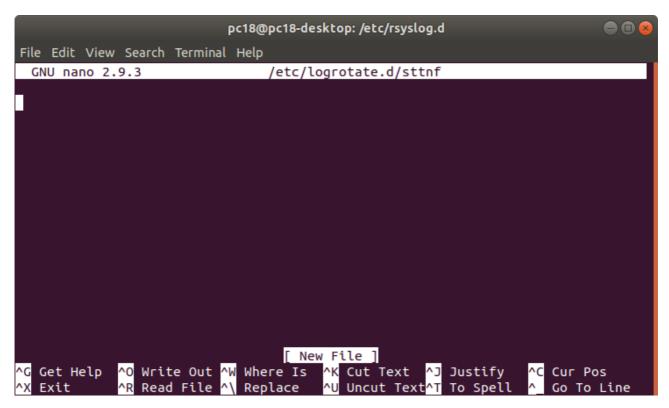
File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo cat /var/log/syslog | grep Logout
pc18@pc18-desktop:/etc/rsyslog.d$
```

#### Lab 6.5 Konfigurasi rotasi log

- 1. Atur rotasi log dari file /var/log/mylog agar dilakukan rotasi perhari , dan file rotasi dijaga sampai 6 rotasi
- 2. Buatlah file dengan nama sttnf didalam direktori /etc/logrotate.d
- Ketikkan perintah berikut untuk membuat file



Jika filenya masih baru maka akan kosong



3. Kemudian tuliskan baris berikut ini kedalam file tersebut:

```
pc18@pc18-desktop: /etc/rsyslog.d
                                                                            File Edit View Search Terminal Help
 GNU nano 2.9.3
                                                                       Modified
                                /etc/logrotate.d/sttnf
/var/log/mylog {
       daily
       missingok
       rotate 6
       compress
       delaycompress
       notifempty
       su root adm
       create 0640 root adm
       sharedscripts
       postrotate
                /usr/bin/logger -p mail.info 'ROTATE STTNF' "Rotasi Selesai"
       endscript
       prerotate
                /usr/bin/logger -p mail.info 'ROTATE STTNF' "Rotasi Mulai"
       endscript
             ^O Write Out ^W Where Is
                                       ^K Cut Text
                                                    ^J Justify
                                                                  ^C Cur Pos
^G Get Help
                Read File
                          ^\ Replace
                                       ^U Uncut Text^T To Spell
```

4. Kemudian lakukan rotasi secara paksa dengan perintah berikut ini:

```
pc18@pc18-desktop: /etc/rsyslog.d □ □ ❷

File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo logrotate -f /etc/logrotate.d/sttnf
pc18@pc18-desktop:/etc/rsyslog.d$
```

5. Lihat dalam direktori /var/log file dengan nama mylog dan mylog.1

```
pc18@pc18-desktop: /etc/rsyslog.d

File Edit View Search Terminal Help

pc18@pc18-desktop:/etc/rsyslog.d$ sudo ls -l /var/log | grep mylog

-rw-r---- 1 root adm 0 Des 26 09:17 mylog

-rw-r---- 1 syslog adm 8483839 Des 26 08:42 mylog.1

pc18@pc18-desktop:/etc/rsyslog.d$
```

• Isi file /var/log/mylog

```
pc18@pc18-desktop:/etc/rsyslog.d

File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo cat /var/log/mylog
pc18@pc18-desktop:/etc/rsyslog.d$
```

Isi file /var/log/mylog.1

```
pc18@pc18-desktop: /etc/rsyslog.d
                                                                           File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo tail /var/log/mylog.1
Dec 26 08:36:47 pc18-desktop ntfs-3g[4815]: Unmounting /dev/sdb (azhar)
Dec 26 08:38:45 pc18-desktop systemd[1]: Starting Cleanup of Temporary Directori
es...
Dec 26 08:38:45 pc18-desktop systemd[1]: Started Cleanup of Temporary Directorie
Dec 26 08:39:01 pc18-desktop systemd[1]: Starting Clean php session files...
Dec 26 08:39:02 pc18-desktop systemd[1]: Started Clean php session files.
Dec 26 08:41:36 pc18-desktop systemd[1]: Stopping System Logging Service...
Dec 26 08:41:36 pc18-desktop systemd[1]: Stopped System Logging Service.
Dec 26 08:41:36 pc18-desktop systemd[1]: Starting System Logging Service...
Dec 26 08:41:36 pc18-desktop systemd[1]: Started System Logging Service.
Dec 26 08:42:30 pc18-desktop STT-NF: User Baru Berhasil diBuat Ke STT-NF APPS ls
/var/log | grep mylog
pc18@pc18-desktop:/etc/rsyslog.d$
```

6. Amati juga pesan log di /var/log/syslog apakah ada pesan "Rotasi Mulai" dan "Rotate Selesai" jika ada maka rotasi berhasil dilakukan

```
pc18@pc18-desktop: /etc/rsyslog.d
                                                                           File Edit View Search Terminal Help
pc18@pc18-desktop:/etc/rsyslog.d$ sudo tail /var/log/syslog
Dec 26 09:17:01 pc18-desktop CRON[6383]: (root) CMD ( cd / && run-parts --repo
rt /etc/cron.hourly)
Dec 26 09:17:01 pc18-desktop CRON[6384]: (root) CMD (cp -rf /home/guest /tmp)
Dec 26 09:17:17 pc18-desktop pc18: ROTATE STTNF Rotasi Mulai
Dec 26 09:17:17 pc18-desktop pc18: ROTATE STTNF Rotasi Selesai
Dec 26 09:18:01 pc18-desktop CRON[6413]: (root) CMD (cp -rf /home/guest /tmp)
Dec 26 09:18:01 pc18-desktop CRON[6411]: (root) CMD (cp /var/log/auth.log /tmp)
Dec 26 09:18:01 pc18-desktop CRON[6412]: (root) CMD (cp /etc/passwd /tmp)
Dec 26 09:18:01 pc18-desktop CRON[6417]: (root) CMD (/usr/bin/wget -0 /tmp/xyz1.
html https://www.nurulfikri.ac.id)
Dec 26 09:18:01 pc18-desktop CRON[6410]: (CRON) info (No MTA installed, discardi
ng output)
Dec 26 09:19:01 pc18-desktop CRON[6428]: (root) CMD (cp -rf /home/guest /tmp)
pc18@pc18-desktop:/etc/rsyslog.d$
```

------Selesai-----

### Referensi

•	Modul praktikum Administrasi sistem dan jaringan – STT NF (Disusun oleh: Henry
	Saptono, S.Si, M.Kom)