

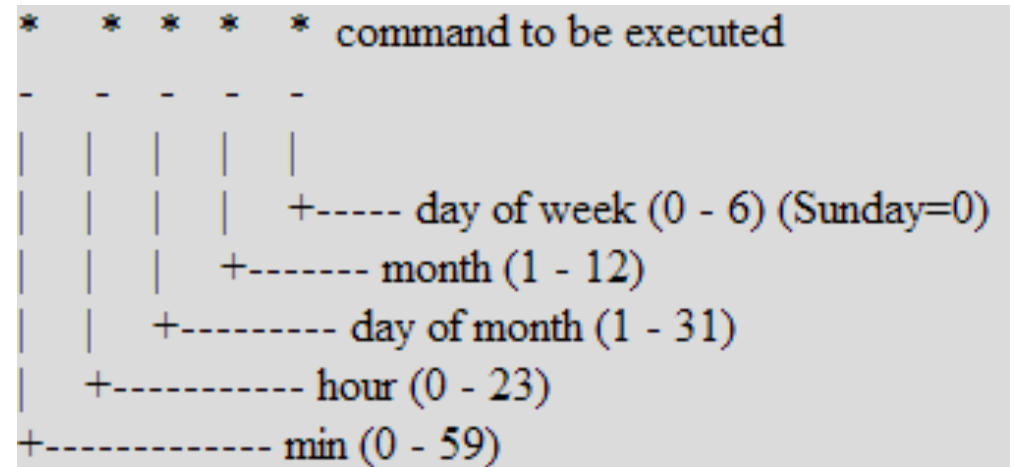
ESCALONAMENTO DE TAREFAS { cron
anacron

GESTÃO DE LOGS { rsyslog
logger
logrotate

GESTÃO DE UTILIZADORES

crontab

```
00 10 * * mon-fri echo "10 horas, dia da semana"
00 00 * * sat-sun echo "meia noite, fim de semana"
00 20 * * fri echo "20H de sexta-feira"
00 04 * * * echo "4 da manhã"
00 04 * * * tar cvfj /root/etc.`date +"%Y%m%d"`.tar.bz2 /etc
30 04 1,8,15,22 * * tar cvfj /backup/home.`date
+"%Y%m%d"`.tar.bz2 /home/
```



The diagram illustrates the crontab syntax with five fields for scheduling, each represented by an asterisk (*) and a vertical line (|). The fields are: minute, hour, day of month, month, and day of week. The command to be executed is shown to the right of the day of week field. The fields are separated by spaces and the command is preceded by a space. The fields are labeled as follows:

- minute (0 - 59)
- hour (0 - 23)
- day of month (1 - 31)
- month (1 - 12)
- day of week (0 - 6) (Sunday=0)

The command to be executed is shown to the right of the day of week field.

crontab

- “cron do sistema”
- Diretorias e ficheiros importantes:
 - /etc/crontab
 - /etc/cron.hourly/*
 - /etc/cron.daily/*
 - /etc/cron.weekly/*
 - /etc/cron.monthly/*

```
ubuntu@ubuntu-vnml:/etc$ ls -l cron.daily
total 56
-rwxr-xr-x 1 root root 311 2007-03-05 06:38 anacron
-rwxr-xr-x 1 root root 219 2007-04-12 21:26 apport
-rwxr-xr-x 1 root root 5566 2007-03-14 17:44 apt
-rwxr-xr-x 1 root root 314 2007-02-26 15:51 aptitude
-rwxr-xr-x 1 root root 502 2006-12-20 13:02 bsdmainutils
-rwxr-xr-x 1 root root 3961 2007-01-15 18:06 exim4-base
-rwxr-xr-x 1 root root 419 2007-03-05 06:52 find.portslocate
-rwxr-xr-x 1 root root 89 2006-06-19 19:21 logrotate
-rwxr-xr-x 1 root root 946 2007-04-05 20:48 man-db
-rwxr-xr-x 1 root root 383 2007-02-07 06:38 samba
-rwxr-xr-x 1 root root 189 2007-02-22 00:37 slocate
-rwxr-xr-x 1 root root 3283 2006-12-20 14:46 standard
-rwxr-xr-x 1 root root 1181 2007-03-08 16:46 sysklogd
```

crontab

Ficheiro /etc/crontab

```
# /etc/crontab: system-wide crontab
# Unlike any other crontab you don't have to run the `crontab'
# command to install the new version when you edit this file
# and files in /etc/cron.d. These files also have username fields,
# that none of the other crontabs do.

SHELL=/bin/sh
PATH=/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin

# m h dom mon dow user  command
17 * * * * root    cd / && run-parts --report /etc/cron.hourly
25 6 * * * root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.daily )
47 6 * * 7 root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.weekly )
52 6 1 * * root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.monthly )
#
```

test -x
run-parts

anacron

Ficheiro /etc/anacrontab

```
# /etc/anacrontab: configuration file for anacron
# See anacron(8) and anacrontab(5) for details.
SHELL=/bin/sh
PATH=/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin
# These replace cron's entries
1      5      cron.daily      nice run-parts --report /etc/cron.daily
7      10     cron.weekly    nice run-parts --report /etc/cron.weekly
@monthly 15     cron.monthly  nice run-parts --report /etc/cron.monthly
```

Tempo (dias)
@monthly

Atraso

Identificador

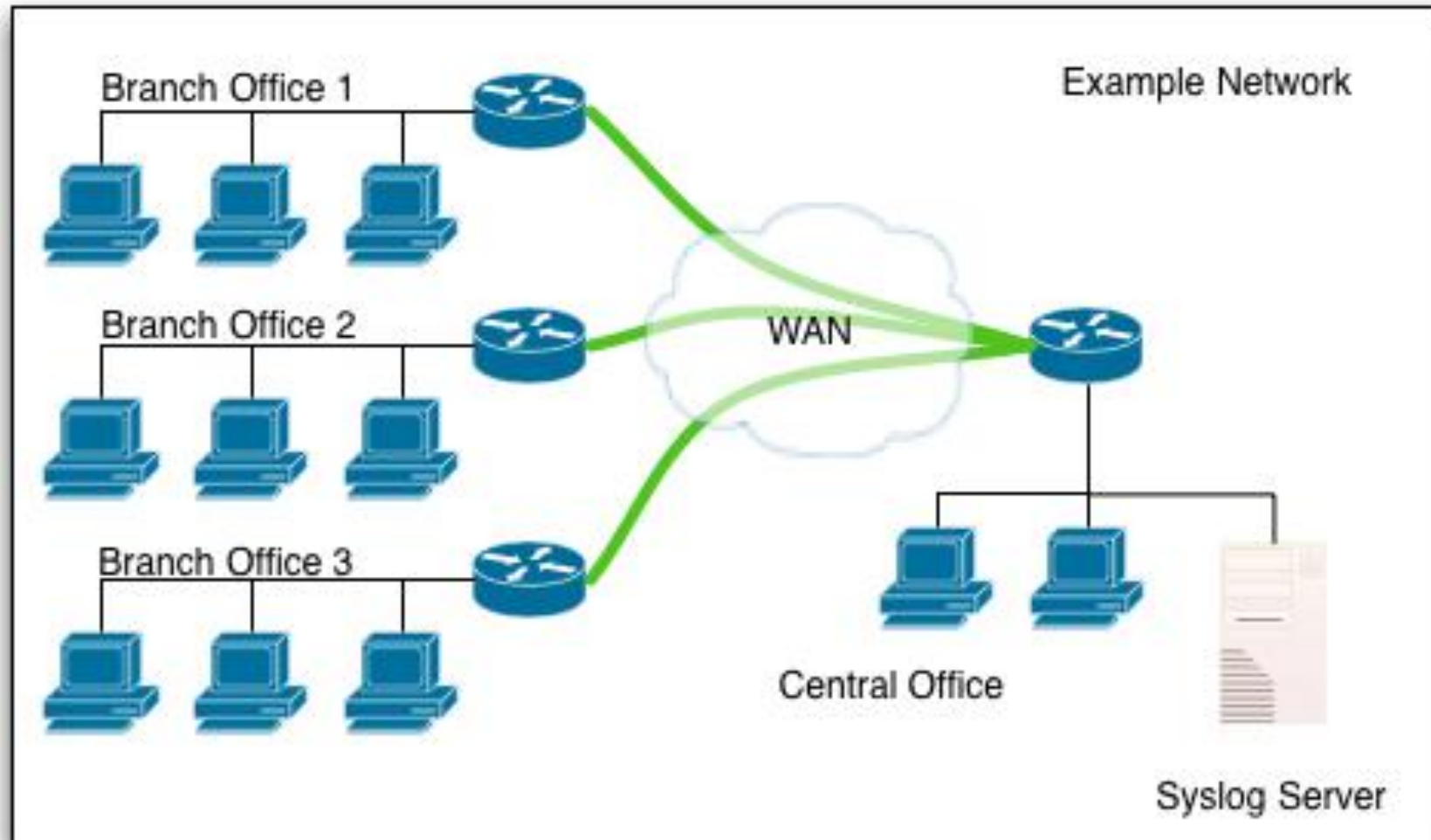
Comando

```
nice
run-parts
```

EXECUÇÃO ASSÍNCRONA

BOAS PRÁTICAS

rsyslog



rsyslog: tipos de mensagem

- **Origem:** kern, user, mail, daemon, security (ou auth), syslog, lpr, news, uucp, cron, authpriv, ftp, local0 a local7
- **Prioridades (menor → maior):** debug, info, notice, config (ou warning, ou warn), err (ou error), crit, alert, emerg (ou panic), none

`rsyslog.conf`: ficheiro destino

1) ficheiro regular

2) ficheiro especial

- terminal
- impressora

3) Outra máquina

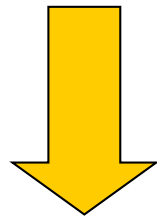
- permite centralizar os logs do sistema

/etc/rsyslog.conf

```
# destino ficheiro de texto:
# o '-' omite sincronização imediata
*.debug                /var/log/debug
*.=info;*.notice       -/var/log/messages
# destino terminal e consola:
mail.*                 /dev/console
*.warn                 /dev/tty7
# destino máquina de rede:
kern.crit               @sounix.estg.ipleiria.pt
# destino lista de utilizadores:
authpriv.crit          root,mantunes
# destino todos os utilizadores logados:
*.crit                 *
```

O comando logger

```
ubuntu@ubuntu-vnuml:/$ logger -i -s -p local3.warning -t `whoami` "msg via logger"  
ubuntu[2522]: msg via logger
```



```
ubuntu@ubuntu-vnuml:/var/log$ tail -n 5 -f /var/log/syslog  
Oct 22 20:10:23 ubuntu-vnuml dhclient: DHCPACK from 192.168.42.254  
Oct 22 20:10:23 ubuntu-vnuml NetworkManager: <information>^IDHCP daemon state is  
now 3 (renew) for interface eth1  
Oct 22 20:10:23 ubuntu-vnuml dhclient: bound to 192.168.42.132 -- renewal in 885  
seconds.  
Oct 22 20:17:01 ubuntu-vnuml /USR/SBIN/CRON[2546]: (root) CMD ( cd / && run-pa  
rts --report /etc/cron.hourly)  
Oct 22 20:17:22 ubuntu-vnuml ubuntu[2561]: msg via logger
```

Gestão de contas de utilizadores

Contas de utilizadores

- ficheiro `/etc/passwd`
- ficheiro `/etc/shadow`
- ficheiro `/etc/group`
- ficheiro `/etc/gshadow`
- Adicionar utilizadores
`adduser` | `useradd`
- Remover utilizadores
- Desactivar utilizadores
- Utilitários

Super utilizadores

- Escolher password de `root`
- Tornar-se `root` (`sudo`)
- Outros pseudo-utilizadores

Gestão centralizada

Automatização de tarefas

Exemplos

/etc/passwd

```
root:lga4FjuGpZ2so:0:0:The System,,x6096,:/:/bin/csh
jl:x:100:0:Jim Lane,ECT8-3,,:/staff/fl:/bin/sh
```

/etc/shadow

```
mantunes:$6$qJp2XW1d$ZaULMIEEUb7Y5.qOCzh9IROYQOobXBazXvjt0:15328:0:99999:7:::
```

/etc/group

```
sys:x:3:root
general:x:502:mantunes,user1
```

/etc/gshadow

```
general:!!!:mantunes:user1,user2
```

id
groups

Passos para a criação de um utilizador

1. Editar `/etc/passwd` e `/etc/shadow` com dados da conta

- `vipw` faz lock ao ficheiro durante a edição e trata inconsistências
- opção `"-s"` edita o ficheiro `/etc/shadow` correspondente

2. Definir password inicial

```
# passwd user
```

3. Criar e definir permissões da diretoria de login

```
# mkdir /home/staff/mantunes
```

```
# chown mantunes.docentes /home/staff/mantunes
```

```
# chmod 700 /home/staff/mantunes
```

Passos para a criação de um utilizador

4. Copiar ficheiros de *startup* para diretoria de login do utilizador

- `.bashrc`, `.bash_profile` (bash)
- `.login`, `.cshrc`, `.logout` (csh)
- `.Xdefaults`, `.Xclients`, `.xsession` (X-Windows)

```
# cp /etc/skel/.[a-zA-Z]* ~mantunes
# chmod 644 ~mantunes/.[a-zA-Z]*
# chown mantunes ~mantunes/.[a-zA-Z]*
# chgrp docentes ~mantunes/.[a-zA-Z]*
```

tPc

- /etc/passwd
- /etc/group
- /etc/shadow
- /etc/skel/*
- /etc/crontab
- logwatch
- logrotate
- crontab
- adduser /useradd
- deluser /userdel
- moduser /usermod
- passwd
- chage
- pwgen
- vipw