


# Bacula Director:

- Bacula:
- Bacula:
  - Bacula Director:
  - Bacula Storage:
  - Bacula FileDaemon ():
- Bacula: .
- Bacula: BackUp and Restore
  - Bacula:
  - Bacula:
- Bacula Director
  - (Main conf)
  - (Bacula Catalog)
  - (DefaultJob)
  - (Storage)
  - (Pool's)
  - (Messages)
  - (Other conf)
  -
- ()
  - (Schedule's)
  - (Client)
  - (FileSet's)
  - (Job's)
  - (chmod and chown on file's and dir's)
- Bacula Admin Tool (bat.conf)
- Bacula Console (bconsole.conf)
- 

-  :
- 1.
  - 2.
  - 3.
  - 4.
  - 5.
  - 6.
  - 7.
  - 8.
  - 9.
  10. ()
  - 11.

## Bacula Director

.

Bacula **/etc/bacula/bacula-dir.conf** 300, . . .

Bacula :

```
sudo mkdir /etc/bacula/backup-default-conf
```

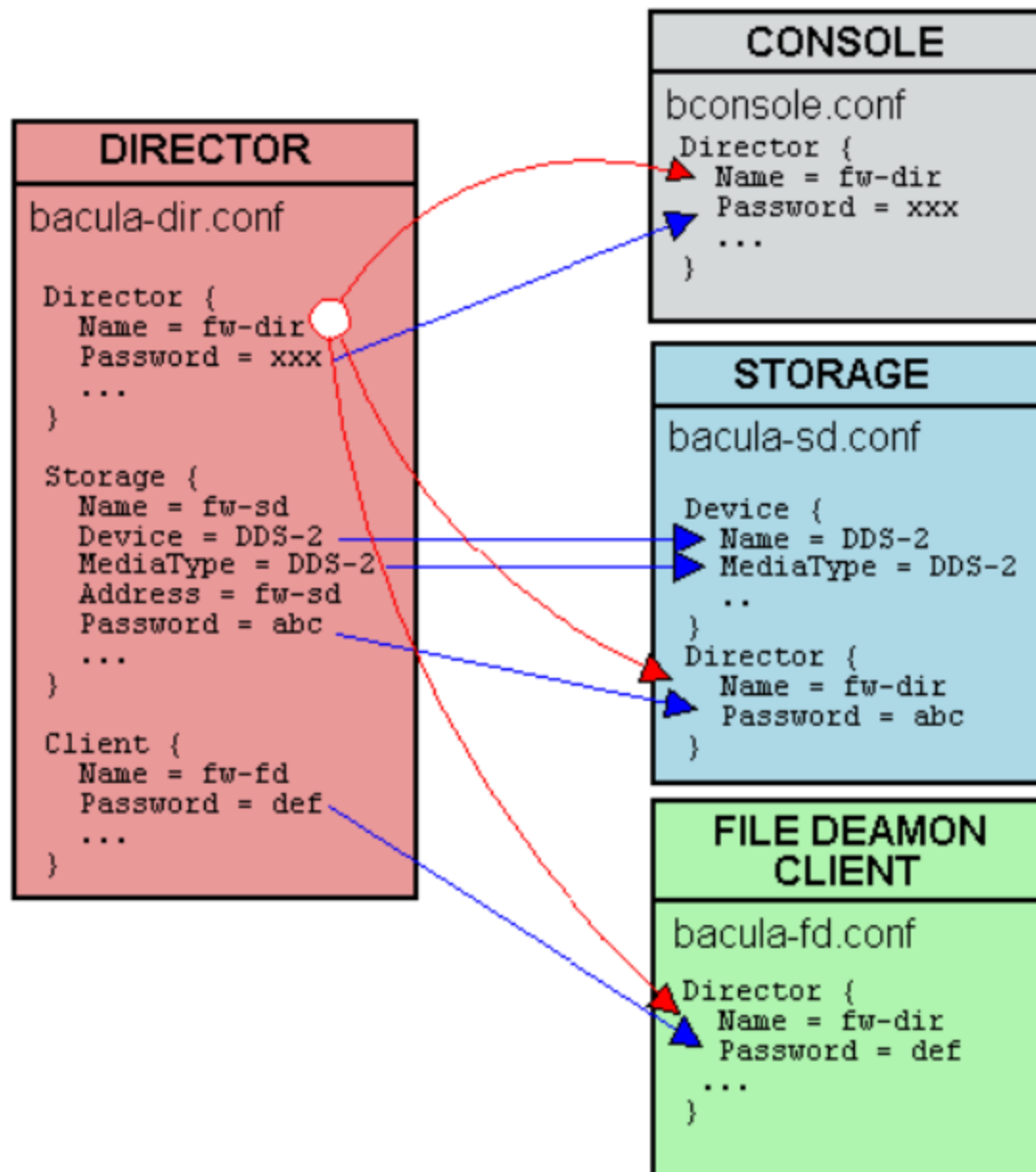
:

```
sudo mv /etc/bacula/bacula-dir.conf /etc/bacula/backup-default-conf/bacula-dir.conf
```

():

```
sudo touch /etc/bacula/bacula-dir.conf
```

### (Main conf)



```
Director {
    #
    Name = dir-dir
    # ( )
    DIRport = 9101
```

```

# , sql      Bacula Catalog
QueryFile = "/etc/bacula/scripts/query.sql"

#      -

WorkingDirectory = "/var/lib/bacula"

# pid-
PidDirectory = "/run/bacula"

#      .

# (      )

Maximum Concurrent Jobs = 1

#

Password = "dirpass"

#      (      Messages)

Messages = Daemon

# fqdn      IP-

DirAddress = 192.168.244.70
}

```

### (Bacula Catalog)

, (/etc/bacula/bacula-dir.conf):

 IP

```

Catalog {
    # Bacula Catalog
    Name = BaculaCatalog

    #      PostgreSQL
    DB Address = 192.168.244.70

    #

    DB PORT = 5432

    #      PostgreSQL
    dbname = bacula
}

```

```

#      PostgreSQL
dbuser = bacula

#      PostgreSQL
dbpassword = bacula
}

```

## (DefaultJob)

```

- , .
. , , .
: Bacula , .
, (/etc/bacula/bacula-dir.conf):

```

```

JobDefs {
    #
    Name = "DefaultJob"
    # (backup, restore ..)
    Type = Backup
    # (Full, Incremental, Differential .)
    Level = Incremental
    #
    Client = dir-fd
    #
    FileSet = "Full Set"
    #
    Schedule = "WeeklyCycle"
    #
    Storage = stor-sd
    #
    Messages = Standard
    # , . ,
    # ,

```

```
#
Pool = File

#
SpoolAttributes = yes

# .      1 (max)  10 (min),      .
Priority = 10

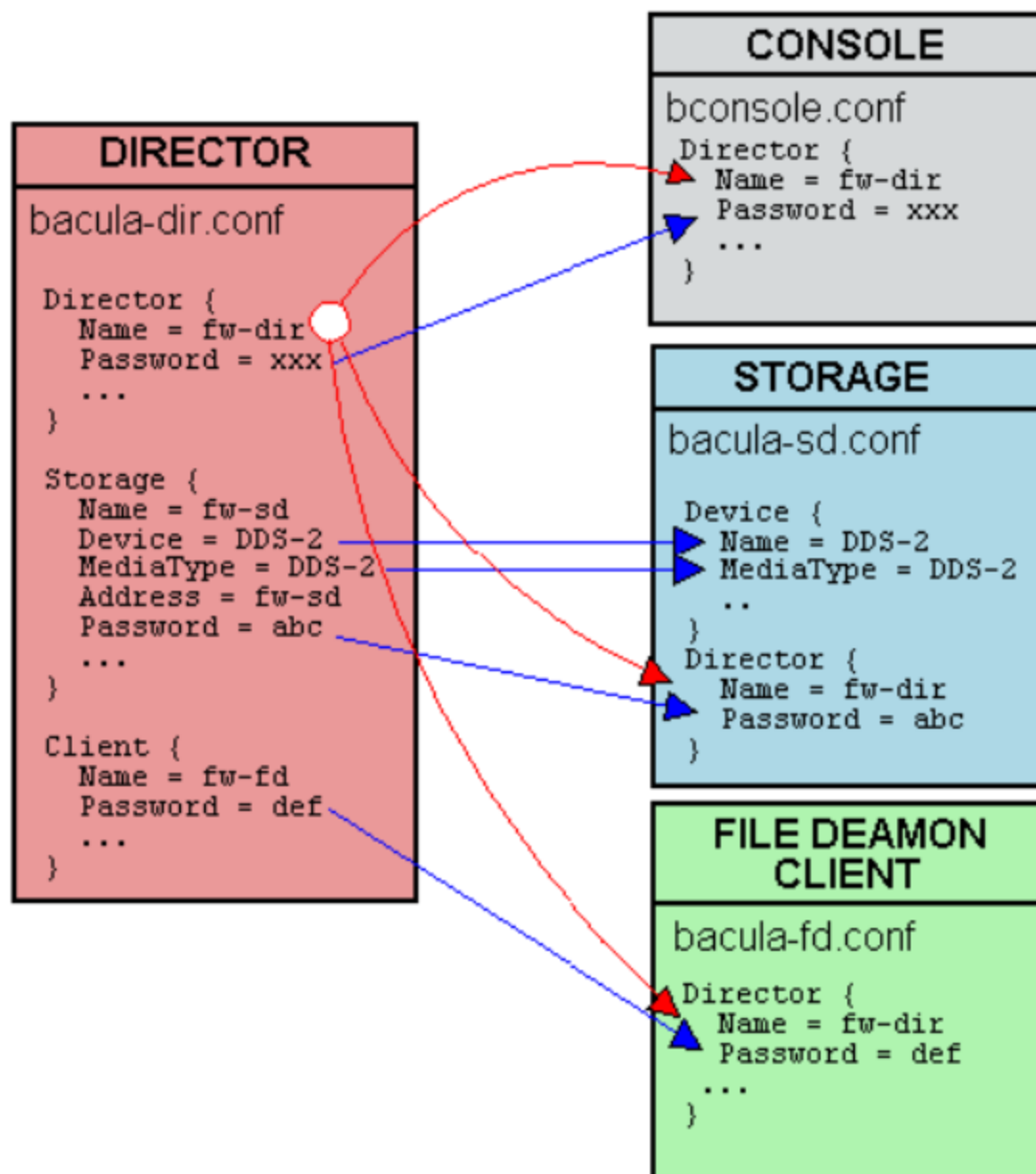
#
Write Bootstrap = "/var/lib/bacula/%c.bsr"
}
```

### (Storage)

, :



IP



```
Storage {
    #
    Name = stor-sd
    # fqdn    IP- .
    #        "localhost"
    Address = 192.168.244.80
    #
```

```

SDPort = 9103

#
Password = "storpas"

# , bacula-sd.conf

Device = Autochanger1

# Media Type Device

Media Type = File1

# .

# ( )

Maximum Concurrent Jobs = 1
}

```

## (Pool's)

, :

```

Pool {

# ,

Name = File

#

Pool Type = Backup

# Bacula

Recycle = yes

# ,

Volume Retention = 365 days

# , Volume Retention

AutoPrune = yes

#

Maximum Volume Bytes = 50G

#

Maximum Volumes = 100

#

```

```
Label Format = "Vol-"  
  
}
```

## (Messages)

```
#  
Messages {  
    #  
    Name = Standard  
    #  
    mailcommand = "/usr/sbin/bsmtp -h localhost -f \"\\(Bacula\\) \\  
Bacula: %t %e of %c %l\" %r"  
    #  
    operatorcommand = "/usr/sbin/bsmtp -h localhost -f \"\\(Bacula\\) \\  
Bacula: Intervention needed for %j\" %r"  
    # = =  
    mail = root = all, !skipped  
    #  
    operator = root = mount  
    #  
    console = all, !skipped, !saved  
    # =  
    append = "/var/log/bacula/bacula.log" = all, !skipped  
    # Log;  
    catalog = all  
}  
  
# Bacula  
Messages {  
    #
```



```

Name = Daemon

#

mailcommand = "/usr/sbin/bsmtp -h localhost -f \"\\(Bacula\\) \<%r\>\" -s \"
Bacula daemon message\" %r"

# = =

mail = root = all, !skipped

#

console = all, !skipped, !saved

# =

append = "/var/log/bacula/bacula.log" = all, !skipped

}

```

### (Other conf)

, ( /etc/bacula/bacula-dir.conf ) :

```

#

# «job.d» «client.d» «fileset.d» «schedule.d»

@|"sh -c 'for f in /etc/bacula/job.d/*.conf ; do echo @${f} ; done'"

@|"sh -c 'for f in /etc/bacula/client.d/*.conf ; do echo @${f} ; done'"

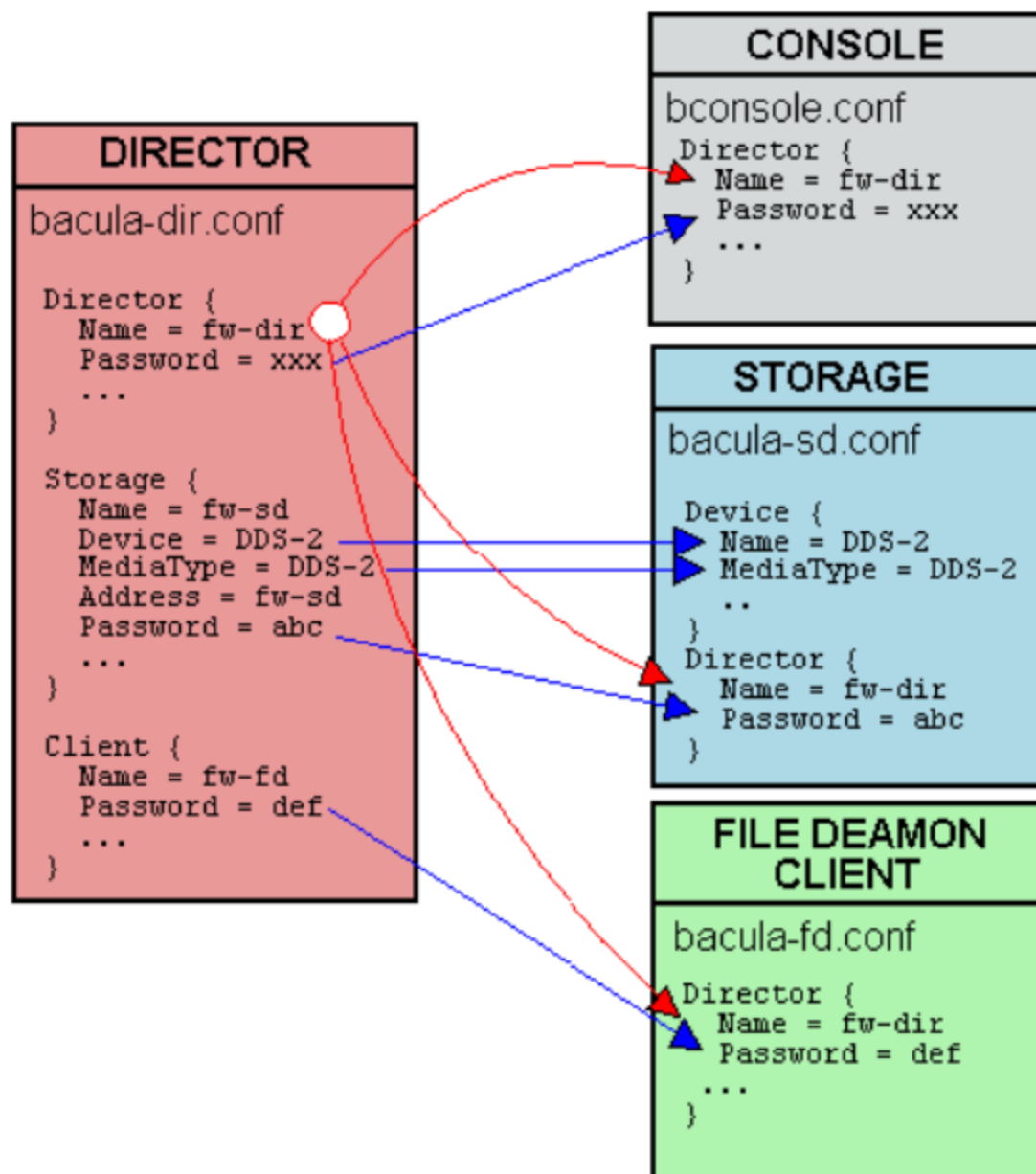
@|"sh -c 'for f in /etc/bacula/fileset.d/*.conf ; do echo @${f} ; done'"

@|"sh -c 'for f in /etc/bacula/schedule.d/*.conf ; do echo @${f} ; done'"

```



IP



```

Director {
    #
    Name = dir-dir
    #      (      )
    DIRport = 9101
    #      ,      sql      Bacula Catalog
    QueryFile = "/etc/bacula/scripts/query.sql"

```

```
# -  
WorkingDirectory = "/var/lib/bacula"
```

```
# pid-  
PidDirectory = "/run/bacula"
```

```
# .  
# ( )  
Maximum Concurrent Jobs = 1
```

```
#  
Password = "dirpass"
```

```
# ( Messages )  
Messages = Daemon
```

```
# fqdn IP-  
DirAddress = 192.168.244.70  
}
```

```
Catalog {  
# Bacula Catalog  
Name = BaculaCatalog  
# PostgreSQL  
DB Address = 192.168.244.70  
#
```

```
DB PORT = 5432  
# PostgreSQL  
dbname = bacula
```

```
# PostgreSQL  
dbuser = bacula  
# PostgreSQL  
dbpassword = bacula
```

```
}
```

```

JobDefs {
    #
    Name = "DefaultJob"
    # (backup, restore ..)
    Type = Backup
    # (Full, Incremental, Differential .)
    Level = Incremental
    #
    Client = dir-fd
    #
    FileSet = "Full Set"
    #
    Schedule = "WeeklyCycle"
    #
    Storage = stor-sd
    #
    Messages = Standard
    # , . ,
    # ,
    #
    Pool = File
    #
    SpoolAttributes = yes
    # . 1 (max) 10 (min), .
    Priority = 10
    #
    Write Bootstrap = "/var/lib/bacula/%c.bsr"
}

```

```

Storage {
    #
    Name = stor-sd
    # fqdn    IP- .
    #        "localhost"
    Address = 192.168.244.80
    #
    SDPort = 9103
    #
    Password = "storpass"
    #      ,      bacula-sd.conf
    Device = Autochanger1
    #      Media Type  Device
    Media Type = File1
    #      .
    # (      )
    Maximum Concurrent Jobs = 1
}

Pool {
    #      ,
    Name = File
    #
    Pool Type = Backup
    # Bacula
    Recycle = yes
    #      ,
    Volume Retention = 365 days
    #      ,      Volume Retention

```

```
AutoPrune = yes

#
Maximum Volume Bytes = 50G

#
Maximum Volumes = 100

#
Label Format = "Vol-"
}

#
Messages {

#
Name = Standard

#
mailcommand = "/usr/sbin/bsmtp -h localhost -f \"\\(Bacula\\) \\<%r\\>\" -s \"
Bacula: %t %e of %c %l\" %r"

#
operatorcommand = "/usr/sbin/bsmtp -h localhost -f \"\\(Bacula\\) \\<%r\\>\" -s \"
Bacula: Intervention needed for %j\" %r"

# = =
mail = root = all, !skipped

#
operator = root = mount

#
console = all, !skipped, !saved

# =
append = "/var/log/bacula/bacula.log" = all, !skipped

# Log;
catalog = all
}
```

```

#           Bacula

Messages {

    #

    Name = Daemon

    #

    mailcommand = "/usr/sbin/bsmtp -h localhost -f \"\\(Bacula\\) \\<%r\\>\" -s \"
Bacula daemon message\" %r"

    # = =

    mail = root = all, !skipped

    #

    console = all, !skipped, !saved

    # =

    append = "/var/log/bacula/bacula.log" = all, !skipped
}

#

# «job.d» «client.d» «fileset.d» «schedule.d»

@|"sh -c 'for f in /etc/bacula/job.d/*.conf ; do echo @${f} ; done'"
@|"sh -c 'for f in /etc/bacula/client.d/*.conf ; do echo @${f} ; done'"
@|"sh -c 'for f in /etc/bacula/fileset.d/*.conf ; do echo @${f} ; done'"
@|"sh -c 'for f in /etc/bacula/schedule.d/*.conf ; do echo @${f} ; done'"

```

( )

, .

**DefaultJob ( ), Storage ( ), Pool ( ) Messages ( )** . . . , . . .

:

«schedule.d»

```
sudo mkdir /etc/bacula/schedule.d/
```

«client.d»

```
sudo mkdir /etc/bacula/client.d/
```

«fileset.d»

```
sudo mkdir /etc/bacula/fileset.d/
```

«job.d»

```
sudo mkdir /etc/bacula/job.d/
```

## (Schedule's)

():

```
sudo touch /etc/bacula/schedule.d/dir-fd.conf
```

:

```
Schedule {  
    #  
    Name = "WeeklyCycle"  
    # ,  
    Run = Full 1st sun at 23:05  
    Run = Differential 2nd-5th sun at 23:05  
    Run = Incremental mon-sat at 23:05  
}
```

Bacula Catalog ():

```
sudo touch /etc/bacula/schedule.d/catalog.conf
```

:

```
Schedule {  
    #  
    Name = "WeeklyCycleAfterBackup"  
    # ,  
    Run = Full sun-sat at 23:10  
}
```

## (Client)

():

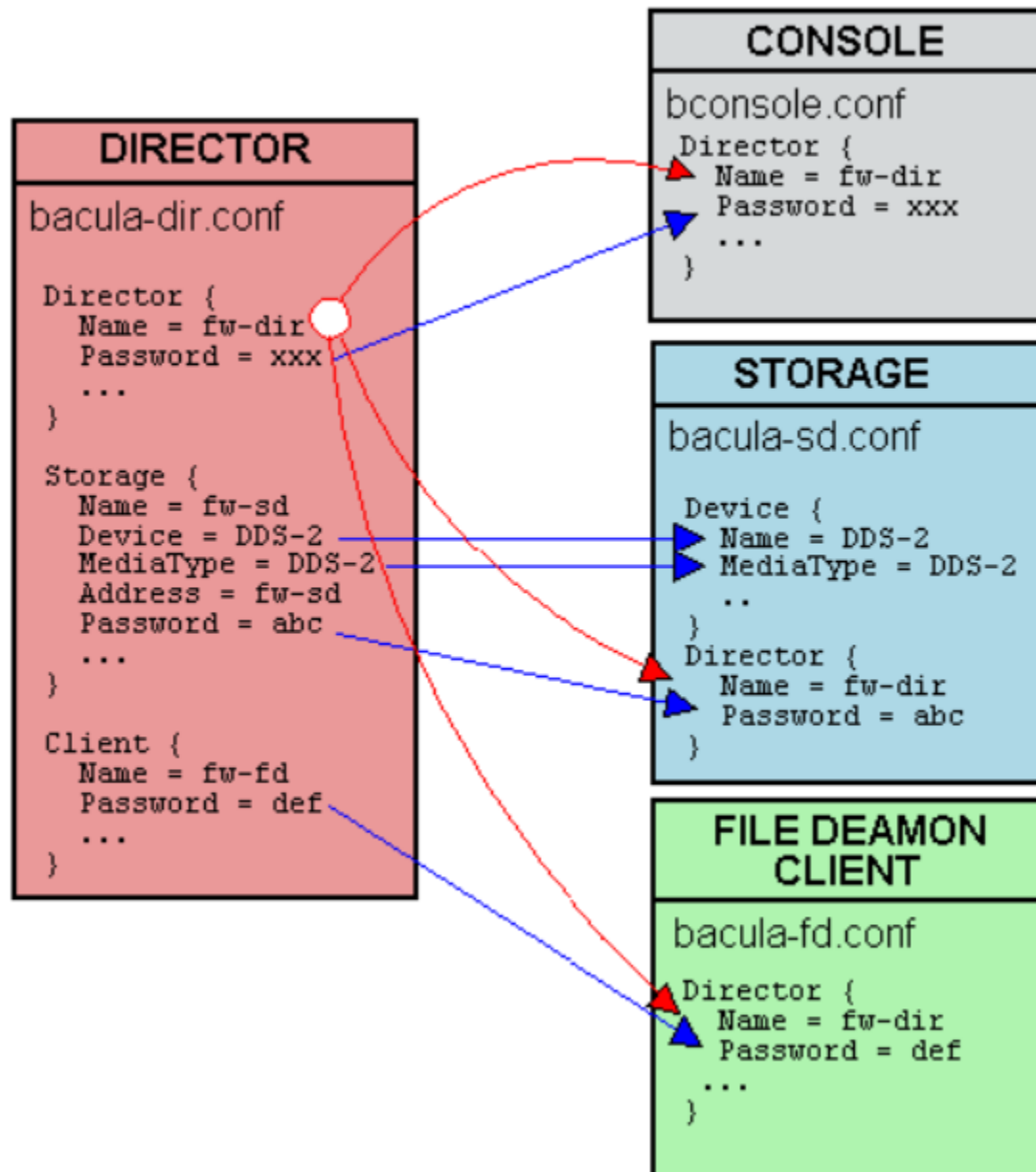


```
sudo touch /etc/bacula/client.d/dir-fd.conf
```

:



IP



```
Client {
    #
    Name = dir-fd
```

```

# fqdn    IP-
Address = 192.168.244.90

# ,
FDPort = 9102

# PostgreSQL    Bacula
Catalog = BaculaCatalog

#
Password = "clientpass"

# ,
File Retention = 60 days

# ,
Job Retention = 6 months

#    Bacula Catalog
AutoPrune = yes
}

```

### (FileSet's)

:

```
sudo touch /etc/bacula/fileset.d/dir-fd.conf
```

:

```

FileSet {
    #
    Name = "Full Set"

    #    /

    Include {
        #    /

    Options {
        #

        #    ,

```

```

#      md5
signature = MD5

#
Compression = GZIP

#      ,
recurse = yes

#      ACL
aclsupport = yes

#      ,

# !!!
xattrsupport = yes
}

#
#      ,      .
File = /home
}

#      /,
#
Exclude {
File = /tmp
}
}

```

Bacula Catalog:

```
sudo touch /etc/bacula/fileset.d/catalog.conf
```

:

```

FileSet {
#
Name = "Catalog"

```

```

#      /
Include {
#      /
Options {
#
#      ,
#      md5
signature = MD5
#
Compression = GZIP
#      ACL
aclsupport = yes
#      ,
# !!!
xattrsupport = yes
}
#
#      ,      .
File = /var/lib/bacula/bacula.sql
}
}

```

### (Job's)

():

```
sudo touch /etc/bacula/job.d/backup-dir-fd.conf
```

:

```

Job {
#
Name = "BackupClient1"

```

```
#  
JobDefs = "DefaultJob"  
}
```

```
()::
```

```
sudo touch /etc/bacula/job.d/restore-dir-fd.conf
```

```
:
```

```
Job {  
    #  
    Name = "RestoreFiles"  
    #    (backup, restore ..)  
    Type = Restore  
    #  
    Client=dir-fd  
    #  
    FileSet="Full Set"  
    #  
    Storage = stor-sd  
    #  
    Pool = File  
    #  
    Messages = Standard  
    #  
    Where = /restore  
}
```

Bacula Catalog:

```
sudo touch /etc/bacula/job.d/catalog.conf
```

```
:
```

```

Job {
    #
    Name = "BackupCatalog"
    #
    JobDefs = "DefaultJob"
    #
    Level = Full
    #
    FileSet="Catalog"
    #
    Schedule = "WeeklyCycleAfterBackup"
    #
    RunBeforeJob = "/etc/bacula/scripts/make_catalog_backup.pl BaculaCatalog"
    #
    RunAfterJob = "/etc/bacula/scripts/delete_catalog_backup"
    #
    Write Bootstrap = "/var/lib/bacula/%n.bsr"
    #
    Priority = 11
}

```

, :

```

14- 13:47 dir-dir JobId 3: shell command: run AfterJob "/etc/bacula/scripts/delete_catalog_backup"
14- 13:47 dir-dir JobId 3: Error: Runscript: AfterJob returned non-zero status=208. ERR=

```

/etc/bacula/job.d/catalog.conf RunBeforeJob RunAfterJob, , ( ):

```

#
#RunBeforeJob = "/etc/bacula/scripts/make_catalog_backup.pl BaculaCatalog"
#
#RunAfterJob = "/etc/bacula/scripts/delete_catalog_backup"

```

**(chmod and chown on file's and dir's)**

:

```
sudo chmod 644 /etc/bacula/bacula-dir.conf
sudo chown root:bacula /etc/bacula/bacula-dir.conf

sudo chmod 755 /etc/bacula/job.d/
sudo chown root:bacula /etc/bacula/job.d/
sudo chmod 644 /etc/bacula/job.d/*
sudo chown root:bacula /etc/bacula/job.d/*

sudo chmod 755 /etc/bacula/client.d/
sudo chown root:bacula /etc/bacula/client.d/
sudo chmod 644 /etc/bacula/client.d/*
sudo chown root:bacula /etc/bacula/client.d/*

sudo chmod 755 /etc/bacula/fileset.d/
sudo chown root:bacula /etc/bacula/fileset.d/
sudo chmod 644 /etc/bacula/fileset.d/*
sudo chown root:bacula /etc/bacula/fileset.d/*

sudo chmod 755 /etc/bacula/schedule.d/
sudo chown root:bacula /etc/bacula/schedule.d/
sudo chmod 644 /etc/bacula/schedule.d/*
sudo chown root:bacula /etc/bacula/schedule.d/*
```

## Bacula Admin Tool (bat.conf)

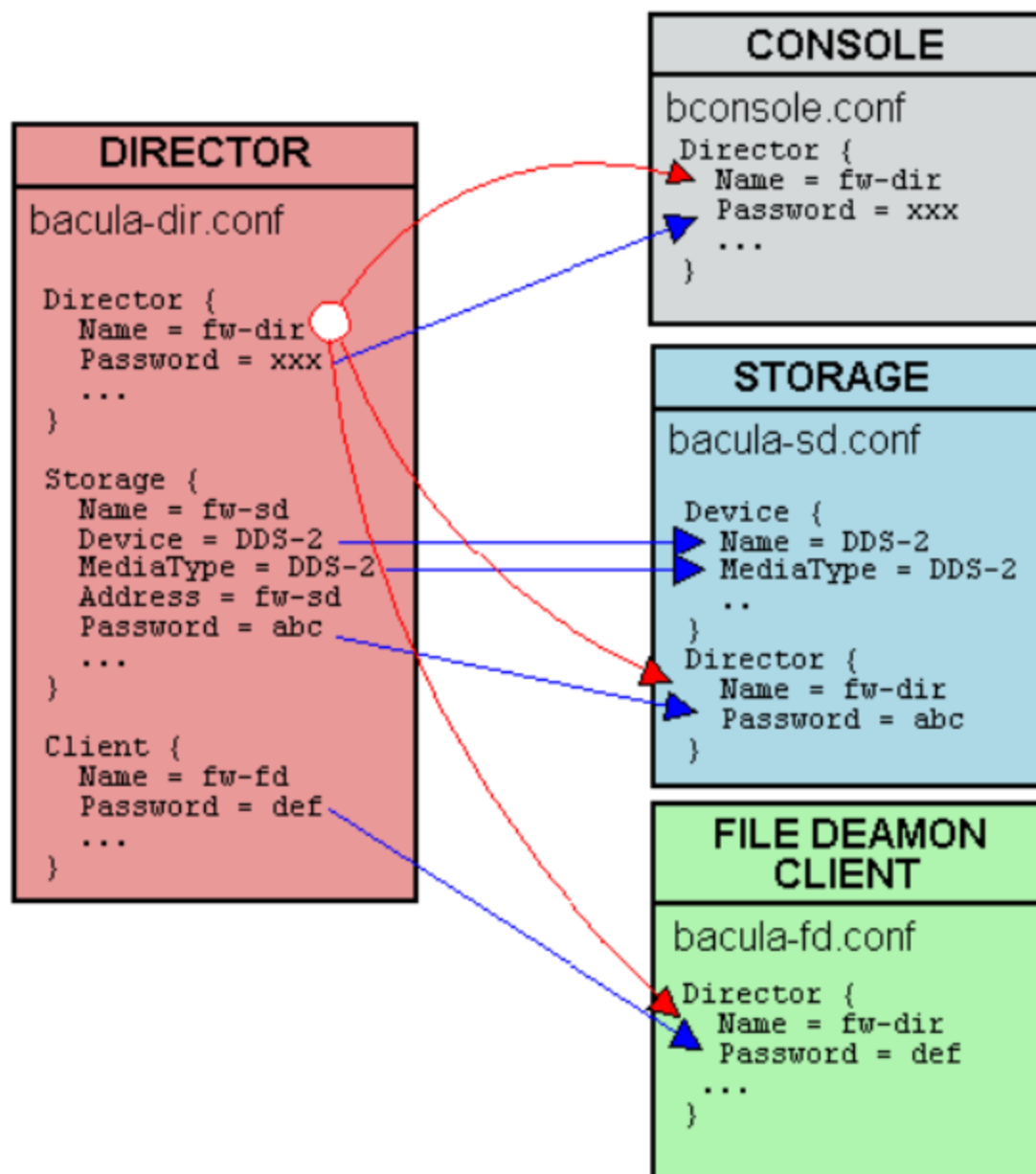
"Bacula Admin Tool"

:

```
sudo cp /etc/bacula/bat.conf /etc/bacula/backup-default-conf/bat.conf
```



IP



```

Director {

  #

Name = dir-dir

  #

DIRport = 9101

  # fqdn    IP-

address = 192.168.244.70

```



```
#  
Password = "dirpass"  
}
```

## Bacula Console (bconsole.conf)

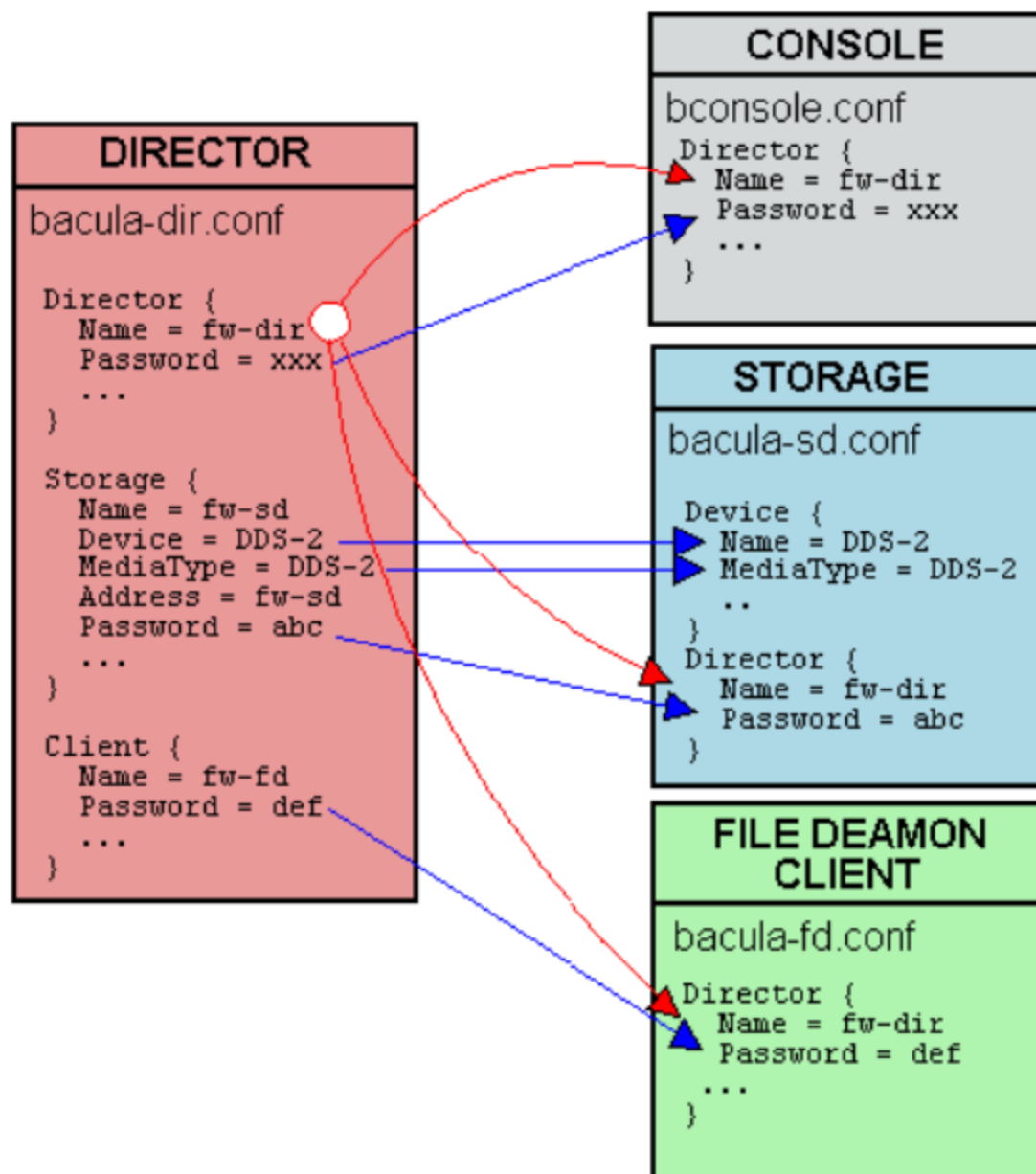
"Bacula Console"

:

```
sudo cp /etc/bacula/bconsole.conf /etc/bacula/backup-default-conf/bconsole.conf
```



IP



```
Director {

    #

    Name = dir-dir

    #

    DIRport = 9101

    # fqdn    IP-

    address = 192.168.244.70
```

```
#  
Password = "dirpass"  
}
```

:

```
sudo systemctl restart bacula-director.service
```

```
, . - Bacula , Bacula . :
```

```
sudo journalctl -xe
```

script.sh :



777 ( sudo chmod 777 script.sh )

sudo ( sudo ./script.sh )

IP ( , , , - )

, !!!

```
#!/bin/bash
```

```
mkdir /etc/bacula/backup-default-conf  
mv /etc/bacula/bacula-dir.conf /etc/bacula/backup-default-conf/bacula-dir.conf  
touch /etc/bacula/bacula-dir.conf  
mcedit /etc/bacula/bacula-dir.conf
```

```
mkdir /etc/bacula/schedule.d/  
mkdir /etc/bacula/client.d/  
mkdir /etc/bacula/fileset.d/  
mkdir /etc/bacula/job.d/
```

```
touch /etc/bacula/schedule.d/dir-fd.conf  
mcedit /etc/bacula/schedule.d/dir-fd.conf  
touch /etc/bacula/schedule.d/catalog.conf  
mcedit /etc/bacula/schedule.d/catalog.conf
```

```
touch /etc/bacula/client.d/dir-fd.conf  
mcedit /etc/bacula/client.d/dir-fd.conf
```

```
touch /etc/bacula/fileset.d/dir-fd.conf  
mcedit /etc/bacula/fileset.d/dir-fd.conf  
touch /etc/bacula/fileset.d/catalog.conf  
mcedit /etc/bacula/fileset.d/catalog.conf
```

```
touch /etc/bacula/job.d/backup-dir-fd.conf
mcedit /etc/bacula/job.d/backup-dir-fd.conf
touch /etc/bacula/job.d/restore-dir-fd.conf
mcedit /etc/bacula/job.d/restore-dir-fd.conf
touch /etc/bacula/job.d/catalog.conf
mcedit /etc/bacula/job.d/catalog.conf

chmod 644 /etc/bacula/bacula-dir.conf
chown root:bacula /etc/bacula/bacula-dir.conf

chmod 755 /etc/bacula/job.d/
chown root:bacula /etc/bacula/job.d/
chmod 644 /etc/bacula/job.d/*
chown root:bacula /etc/bacula/job.d/*

chmod 755 /etc/bacula/client.d/
chown root:bacula /etc/bacula/client.d/
chmod 644 /etc/bacula/client.d/*
chown root:bacula /etc/bacula/client.d/*

chmod 755 /etc/bacula/fileset.d/
chown root:bacula /etc/bacula/fileset.d/
chmod 644 /etc/bacula/fileset.d/*
chown root:bacula /etc/bacula/fileset.d/*

chmod 755 /etc/bacula/schedule.d/
chown root:bacula /etc/bacula/schedule.d/
chmod 644 /etc/bacula/schedule.d/*
chown root:bacula /etc/bacula/schedule.d/*

cp /etc/bacula/bat.conf /etc/bacula/backup-default-conf/bat.conf
mcedit /etc/bacula/bat.conf

cp /etc/bacula/bconsole.conf /etc/bacula/backup-default-conf/bconsole.conf
mcedit /etc/bacula/bconsole.conf

systemctl restart bacula-director.service
```



, , (!!!) .