

# Bacula Director:

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- Bacula:
  - Bacula Director:
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- Bacula: BackUp and Restore
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  - Bacula:
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- 1.
- 2.
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- 4.
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- 6.
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- 8.
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- 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
```

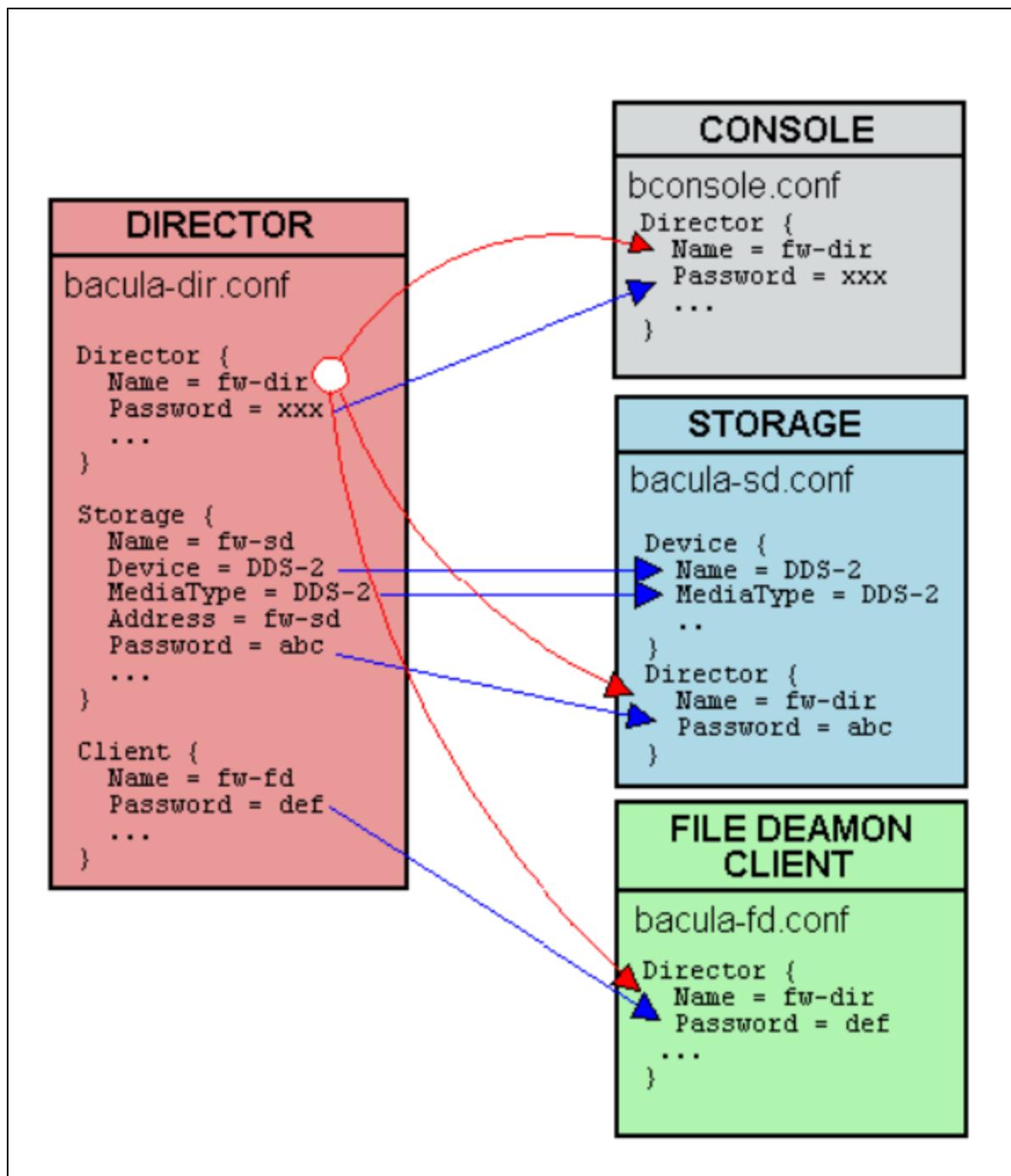
():

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

**(Main conf)**



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

}

```

### (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

**DIRECTOR**

```
bacula-dir.conf

Director {
  Name = fw-dir
  Password = xxx
  ...
}

Storage {
  Name = fw-sd
  Device = DDS-2
  MediaType = DDS-2
  Address = fw-sd
  Password = abc
  ...
}

Client {
  Name = fw-fd
  Password = def
  ...
}
```

**CONSOLE**

```
bconsole.conf
  Director {
    Name = fw-dir
    Password = xxx
    ...
  }
```

**STORAGE**

```
bacula-sd.conf
  Device {
    Name = DDS-2
    MediaType = DDS-2
    ...
  }
  Director {
    Name = fw-dir
    Password = abc
  }
```

**FILE DEAMON CLIENT**

```
bacula-fd.conf
  Director {
    Name = fw-dir
    Password = def
    ...
  }
```

```
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'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\"\") \\\<%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
}

```

### (Other conf)

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

```

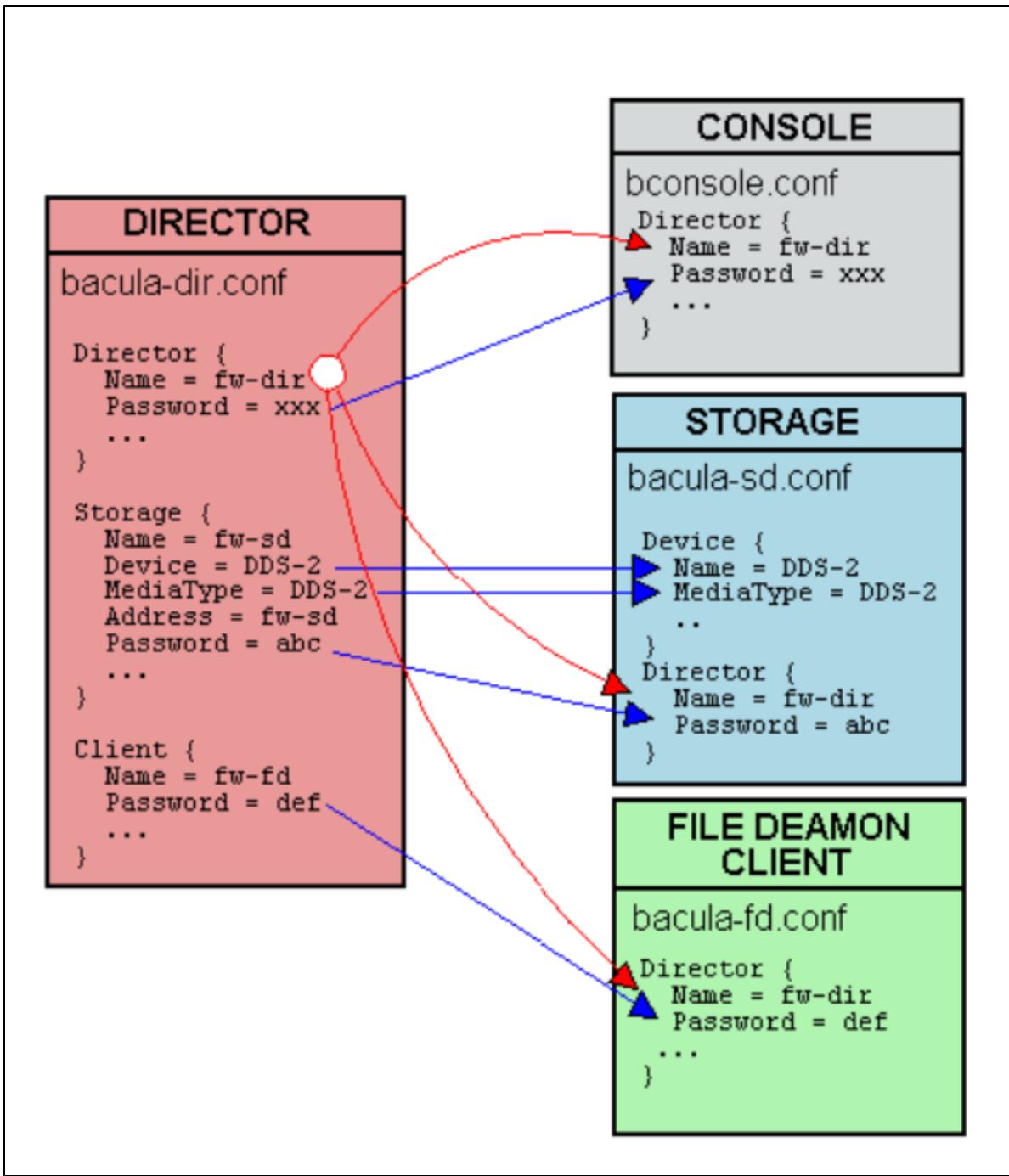
#
# «job.d» «client.d» «fileset.d» «schedule.d»

@| "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)

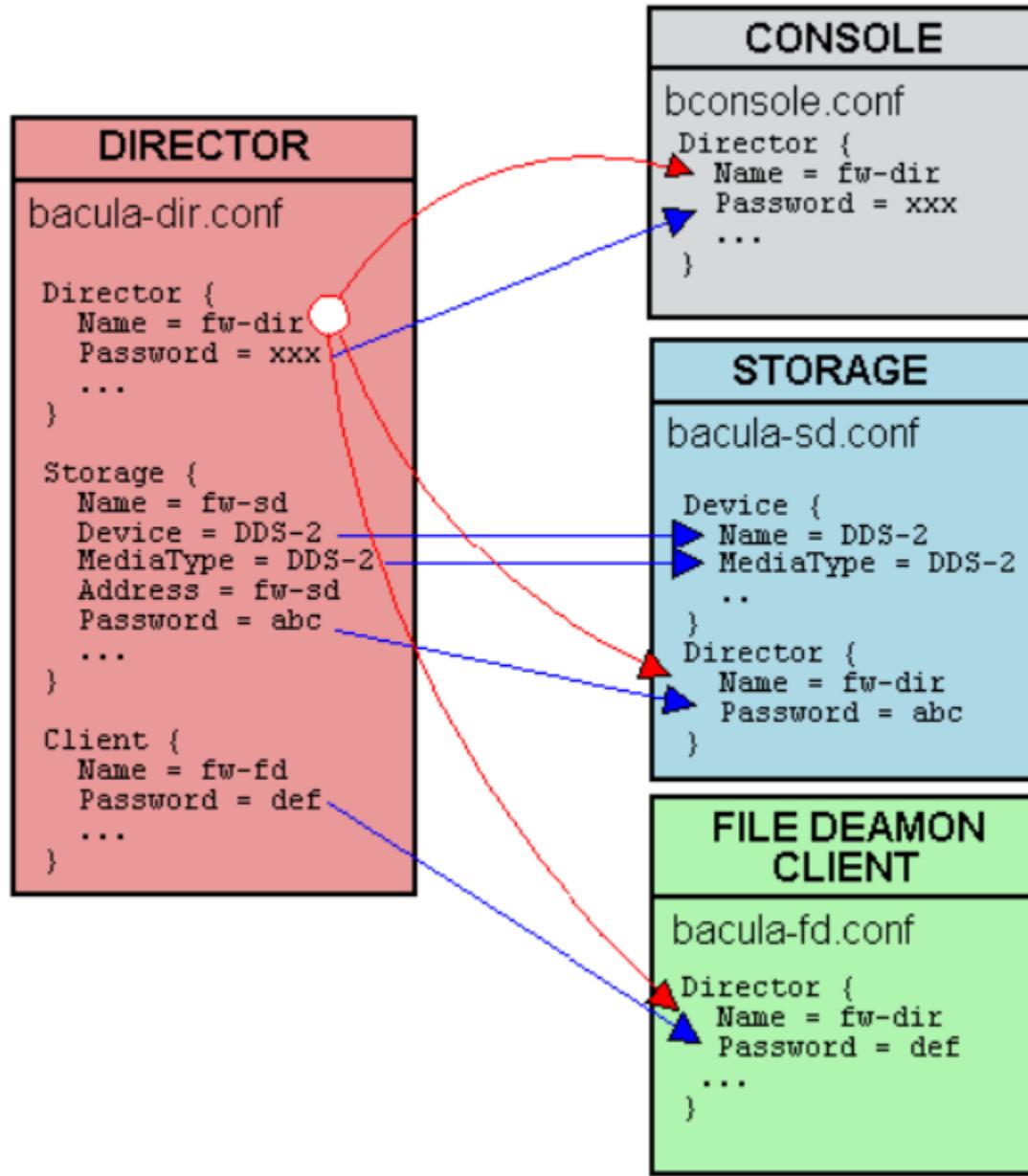
():

```
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/*
```

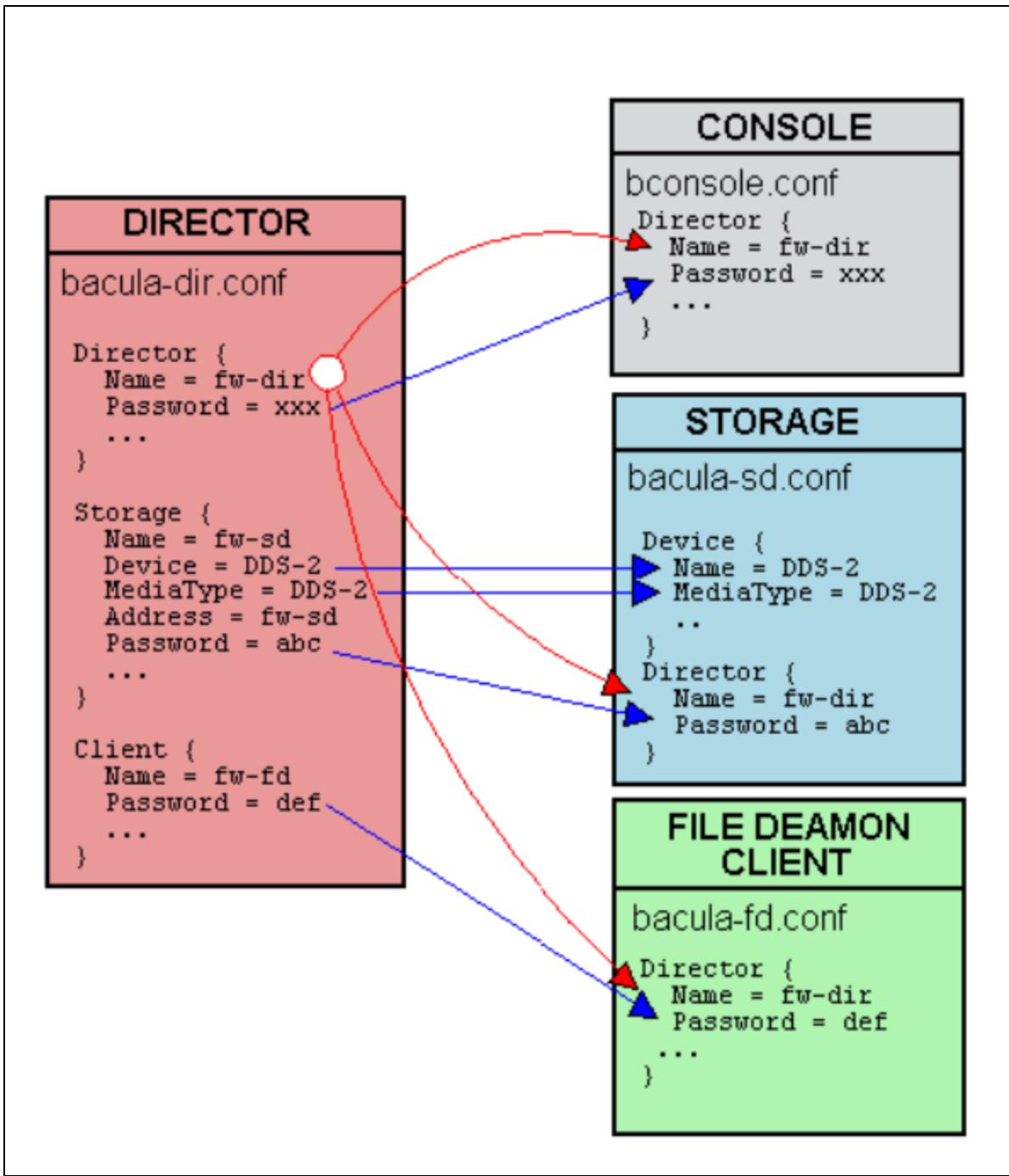
## Bacula Admin Tool (bat.conf)

"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)

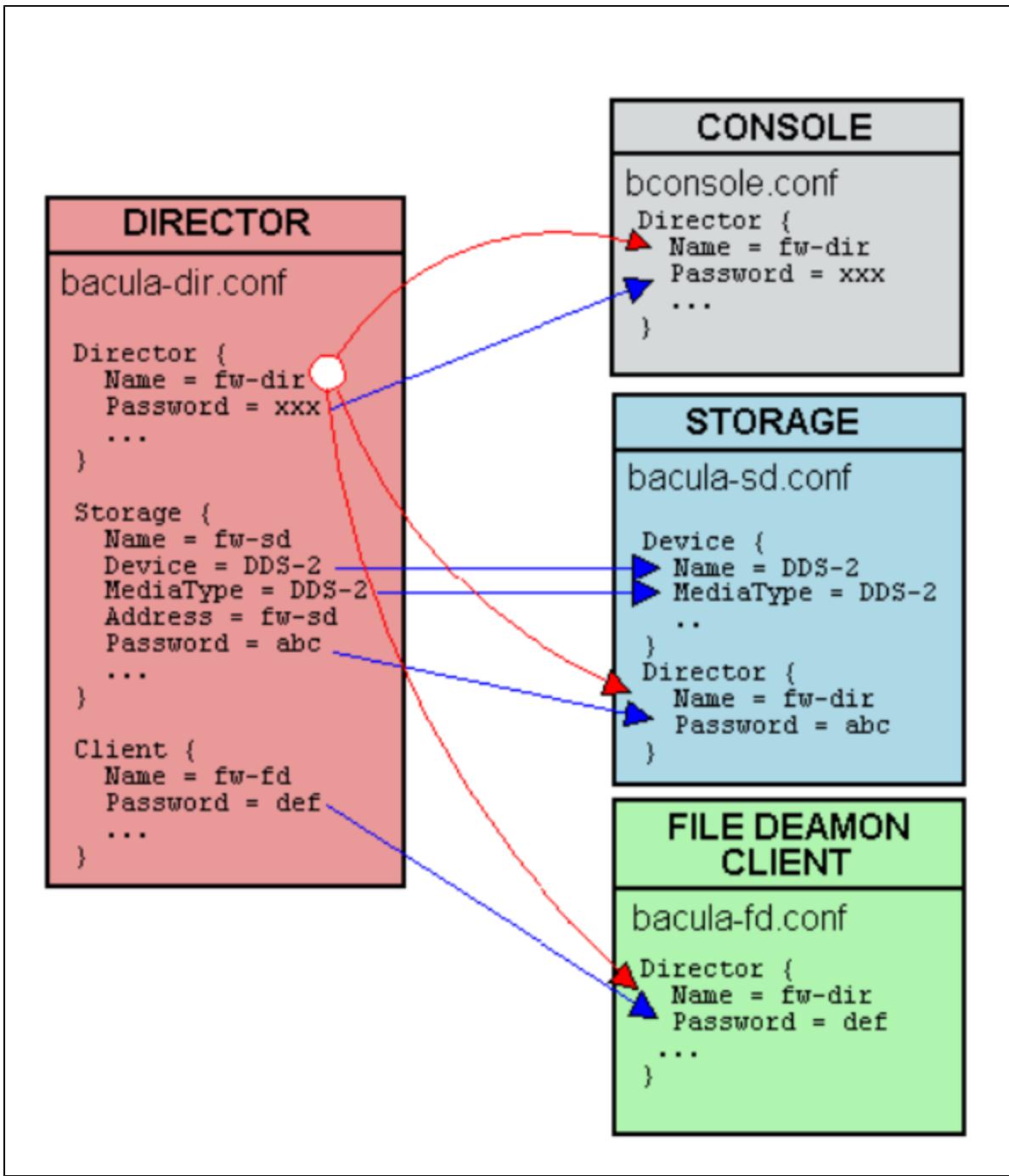
"Bacula Console"

:

```
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
```

!, , !!! .