

Week 6

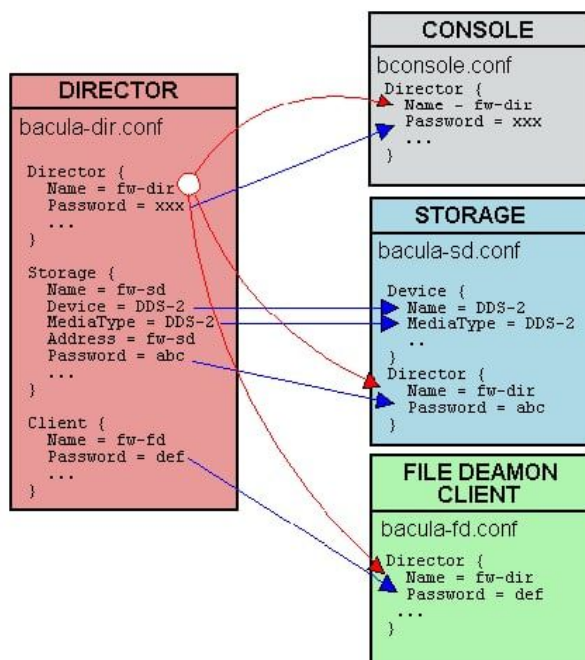
Session 1

Backup&Restore

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Preparation:

I configured all the passwords with the following restrictions:



Install Bacula and its database & Configure Postfix and Postgres SQL for Bacula

On Bacula Client:

```
sudo apt install bacula-client
```

Enter the Postfix configuration data for internet site

Select «Yes “to configure the PostgreSQL database server and “localhost” for its hostname.

On Bacula server:

`sudo apt install bacula`

Postfix and PostgreSQL configuration is the same

Configure the bacula storage daemon on your client

Create a directory `mkdir /opt/backups` and change its owner `chown -R bacula:bacula /opt/backups`

Add a new device to the file `/etc/bacula/bacula-sd.conf`:

```
Device {
  Name = LocalSD
  Media Type = File
  Archive Device = /opt/backups
  LabelMedia = yes;
  Random Access = Yes;
  AutomaticMount = yes;
  RemovableMedia = no;
  AlwaysOpen = no;
  Maximum Concurrent Jobs = 5
}
```

Restart: `sudo systemctl restart bacula-sd.service`

Add storage information to `/etc/bacula/bacula-dir.conf`:

```
Storage {
  Name = LocalSD
  Address = 10.0.2.15
  Password = "123"
  Device = LocalSD
  Media Type = File
}
```

Set the backup schedule

To the same file add info about the FileSet, Schedule and Job:

```
FileSet {
  Name = "LocalFS"
  Include {
    Options {
      signature = MD5
    }
  }
  File = /home
}

Schedule {
  Name = "LocalDaily"
  Run = Full daily at 06:00
}

Job {
  Name = "LocalBackup"
  JobDefs = "DefaultJob"
  Enabled = yes
  Level = Full
  FileSet = "LocalFS"
  Schedule = "LocalDaily"
  Storage = LocalSD
  Write Bootstrap = "/var/lib/bacula/LocalhostBackup.bsr"
```

Restart the service: `systemctl restart bacula-dir`

Set the Job configuration backing up your home directory from server to client

Add the client IP to the FDAddress:

```
GNU nano 2.9.3 /etc/bacula/bacula-fd.conf Modified
#
Director {
  Name = cli2-VirtualBox-dir
  Password = "123"
}

#
# Restricted Director, used by tray-monitor to get the
# status of the file daemon
#
Director {
  Name = server-mon
  Password = "gaWSK0dHLjG8P7e4St0hx0qpYsG32g7tu"
  Monitor = yes
}

#
# "Global" File daemon configuration specifications
#
FileDaemon {
  # this is me
  Name = Ubuntu-Client-fd
  FDport = 9102 # where we listen for the director
  WorkingDirectory = /var/lib/bacula
  Pid Directory = /run/bacula
  Maximum Concurrent Jobs = 20
  Plugin Directory = /usr/lib/bacula
  FDAddress = 10.0.2.4
}
```

Save the file and restart the service.

```
sudo systemctl restart bacula-fd
```

Create a folder for restoring and change its owner:

```
mkdir /opt/restore
chown -R bacula:bacula /opt/restore
```

Set the server IP address in the

- 1) "Storage" section of /etc/bacula/bacula-sd.conf
- 2) "DirAddress" field in "Director section" of /etc/bacula/bacula-dir.conf
- 3) "Address" parameter of the "Storage" section of /etc/bacula/bacula-dir.conf
- 4) "Address" parameter in the /etc/bacula/bconsole.conf

```
#
# Bacula User Agent (or Console) Configuration File
#
# Copyright (C) 2000-2015 Kern Sibbald
# License: BSD 2-Clause; see file LICENSE-FOSS
#

Director {
  Name = cli2-VirtualBox-dir
  DIRport = 9101
  address = 10.0.2.15
  Password = "NT-l50FjEaLOyQetjdi6ZNDTjilyfj8PD"
}
```

```
Director {                                # define myself
  Name = cli2-VirtualBox-dir
  DIRport = 9101                          # where we listen for UA connections
  QueryFile = "/etc/bacula/scripts/query.sql"
  WorkingDirectory = "/var/lib/bacula"
  PidDirectory = "/run/bacula"
  Maximum Concurrent Jobs = 20
  Password = "NT-l50FjEaLOyQetjdi6ZNDTjilyfj8PD"      # Console password
  Messages = Daemon
  DirAddress = 10.0.2.15
}
```

```
Storage {                                # definition of myself
  Name = cli2-VirtualBox-sd
  SDPort = 9103                          # Director's port
  WorkingDirectory = "/var/lib/bacula"
  Pid Directory = "/run/bacula"
  Plugin Directory = "/usr/lib/bacula"
  Maximum Concurrent Jobs = 20
  SDAddress = 10.0.2.15
}
```

In /etc/bacula/bacula-dir.conf add a new "Client":

```

GNU nano 2.9.3          etc/bacula/bacula-dir.conf

Catalog = MyCatalog
Password = "0AuX0gLBR4rScWofg8uLSejbqfsb8Lby1"          # password
File Retention = 60 days          # 60 days
Job Retention = 6 months          # six months
AutoPrune = yes          # Prune expired Jobs/Files
}

#
# Second Client (File Services) to backup
# You should change Name, Address, and Password before using
#
Client {
  Name = Ubuntu-Client-fd
  Address = 10.0.2.4
  FDPort = 9102
  Catalog = MyCatalog
  Password = "123"          # password for FileDaemon 2
  File Retention = 60 days          # 60 days
  Job Retention = 6 months          # six months
  AutoPrune = yes          # Prune expired Jobs/Files
}

```

Add a new "FileSet" - "RemoteFS":

```

GNU nano 2.9.3          etc/bacula/bacula-dir.conf          Modified

# List of files to be backed up
FileSet {
  Name = "Full Set"
  Include {
    Options {
      signature = MD5
    }
  }
}

FileSet {
  Name = "RemoteFS"
  Include {
    Options {
      signature = MD5
    }
  }
}
File = /home/cli2
}
}

```

Add a new "Schedule":

```

Schedule {
  Name = "LocalDaily"
  Run = Full daily at 06:00
}

```


Add a new "Pool":

```
Pool {  
    Name = RemotePool  
    Pool Type = Backup  
    Label Format = "RM-"  
}
```

Add a new Job:

```
Job {  
    Name = "RemoteRestore"  
    Type = Restore  
    Client = "Ubuntu-Client-fd"  
    FileSet = "Full Set"  
    Storage = LocalSD  
    Pool = "RemotePool"  
    Messages = Standard  
    Where = /opt/restore  
    Bootstrap = "/var/lib/bacula/RemoteBackup.bsr"  
}
```

Add a new Job:

```
Job {  
    Name = "LocalBackup"  
    JobDefs = "DefaultJob"  
    Enabled = yes  
    Level = Full  
    FileSet = "LocalFS"  
    Schedule = "LocalDaily"  
    Storage = LocalSD  
    Write Bootstrap = "/var/lib/bacula/LocalhostBackup.bsr"  
}
```

Restart the Bacula service `sudo systemctl restart bacula-dir`

Verify your backups

```
*Run
A job name must be specified.
The defined Job resources are:
    1: BackupClient1
    2: BackupCatalog
    3: RestoreFiles
    4: LocalBackup
    5: RemoteBackup
    6: RemoteRestore
Select Job resource (1-6): 5
Run Backup job
JobName: RemoteBackup
Level: Full
Client: Ubuntu-Client-fd
FileSet: RemoteFS
Pool: RemotePool (From Job resource)
Storage: LocalSD (From Job resource)
When: 2020-11-28 16:28:58
Priority: 10
```

```
ted Jobs:
Level      Status    Finished      Name
=====
Full       Error     28-Nov-2020 16:59 RemoteBackup
Full       Error     28-Nov-2020 17:29 RemoteBackup
Full       Error     28-Nov-2020 17:38 RemoteBackup
Full       OK        28-Nov-2020 18:15 RemoteBackup
```

```
cli2@cli2-VirtualBox:/opt/backups$ ls
RM-0001
```


Restore your backup into a temporary folder in your client.

```
*run
A job name must be specified.
The defined Job resources are:
  1: BackupClient1
  2: BackupCatalog
  3: RestoreFiles
  4: LocalBackup
  5: RemoteBackup
  6: RemoteRestore
Select Job resource (1-6): 6
Run Restore job
JobName:          RemoteRestore
Bootstrap:        /var/lib/bacula/RemoteBackup.bsr
Where:            /opt/restore
Replace:          Always
FileSet:          Full Set
Backup Client:    <NULL>
Restore Client:   Ubuntu-Client-fd
Storage:          LocalSD
When:             2020-11-28 19:38:02
Catalog:          MyCatalog
Priority:          10
Plugin Options:   *None*
```

Restore	OK	28-Nov-2020 19:38 RemoteRestore
---------	----	---------------------------------