



Fitas Magnéticas Bacula

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Udemy.com

Bacula Book

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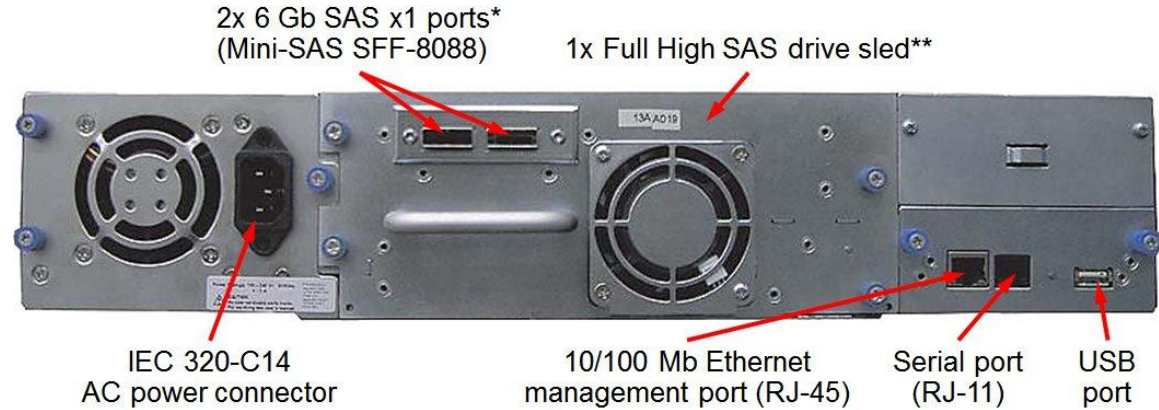
Telegram: @baculabr

- Medium Changer (mediumx), Drive(s) e Slots
- Mídia Removível
- Escrita Seqüêncial
- Taxa de transferência mínima exigida
- Escrita multiplexada
- Reciclagem atômica



- Drive Manual LTO
- Autoloader LTO
- Tape Library LTO
- Cartuchos
- RDX
- VTL

- SAS (Mini-sas)
- Ethernet Bridge
- Fibre Channel



* LTO Ultrium 4 Full High SAS drive sled has 2x 3 Gb SAS x1 ports

** Half High SAS drives sleds and Full High and Half High Fibre Channel drive sleds also are available



- Código de Barras



- Fitas de Limpeza (Auto Cleaning)

Requisitos Bacula para Robôs de Fitas

- bacula-sd (Storage Daemon)
bacula-postgresql-x.x.x..el7.x86_64.rpm
bacula-enterprise-postgresql-x.x.x..el7.x86_64.rpm
- <http://www.bacula.it/community/script-instalacao-bacula-community-9-x-pacotes-oficiais/>
(bacula.org ou baculasystems.com)

Requisitos do SO

- CentOS
- Pacotes mt e mt-mtx
- `usermod -aG tape bacula`
- Dispositivos da Tape Library (Plug-n-Play)


```
[root@enterprisebacula ~]# lsscsi -g
[0:0:0:0]   disk      QEMU      QEMU HARDDISK    2.5+  /dev/sda      /dev/sg0
[2:0:0:0]   cd/dvd    QEMU      QEMU DVD-ROM     2.5+  /dev/sr0      /dev/sg1
[3:0:0:0]   mediumx STK      L700          0106  /dev/sch1     /dev/sg11
[3:0:3:0]   tape     IBM       ULT3580-TD4    0106  /dev/st1      /dev/sg3
[3:0:4:0]   tape     IBM       ULT3580-TD4    0106  /dev/st2      /dev/sg4
```

```
[root@enterprisebacula ~]# ls -lah /dev/tape/by-id/  
lrwxrwxrwx 1 root root 10 Mai 27 08:23 scsi-350223344ab000300-nst -> ../../nst1  
lrwxrwxrwx 1 root root 9 Mai 27 08:23 scsi-350223344ab000400 -> ../../st2  
lrwxrwxrwx 1 root root 10 Mai 27 08:23 scsi-350223344ab000400-nst -> ../../nst2  
lrwxrwxrwx 1 root root 10 Mai 27 08:23 scsi-SSTK_L700_XYZZY_A -> ../../sg11
```

Configuração de bacula-sd.conf

- Autochanger:
`/dev/tape/by-id/scsi-SSTK_L700_XYZZY_A`
- Drive-0:
`/dev/tape/by-id/scsi-350223344ab000300-nst`
- Drive-1:
`/dev/tape/by-id/scsi-350223344ab000400-nst`



```
#### /opt/bacula/etc/bacula-sd.conf ####
```

```
Autochanger {
```

```
  Name = "TapeLibrary"
```

```
  ChangerCommand = "/opt/bacula/scripts/mtx-changer %c %o %S %a %d"
```

```
  ChangerDevice = "/dev/tape/by-id/scsi-SSTK_L700_XYZZY_A"
```

```
  Device = "Drive-0","Drive-1"
```

```
}
```



```
#### /opt/bacula/etc/bacula-sd.conf ####
```

```
Device {
```

```
  Name = "Drive-0"
```

```
  ArchiveDevice = "/dev/tape/by-id/scsi-350223344ab000300-nst"
```

```
  DriveIndex = 0
```

```
  MediaType = "LTO"
```

```
  MaximumConcurrentJobs = 10
```

```
  AutomaticMount = yes
```

```
  MaximumFileSize = 5GB
```

```
  RemovableMedia = yes
```

```
  # MaximumBlockSize = 258048
```

```
}
```



```
#### /opt/bacula/etc/bacula-sd.conf ####
```

```
Device {
```

```
  Name = "Drive-1"
```

```
  ArchiveDevice = "/dev/tape/by-id/scsi-350223344ab000400-nst"
```

```
  DriveIndex = 1
```

```
  MediaType = "LTO"
```

```
  MaximumConcurrentJobs = 10
```

```
  AutomaticMount = yes
```

```
  MaximumFileSize = 5GB
```

```
  RemovableMedia = yes
```

```
  # MaximumBlockSize = 258048
```

```
}
```



```
#### /opt/bacula/etc/bacula-dir.conf ####
```

```
Autochanger {  
  Name = "TapeLibrary"  
  Address = 192.168.0.205  
  AllowCompression = no  
  Autochanger = "TapeLibrary"  
  Device = "TapeLibrary"  
  MediaType = "LTO"  
  MaximumConcurrentJobs = 20  
  Password = "xxxx"  
  SdPort = 9103  
}
```

- Reiniciar daemons de armazenamento e Director
- Comandos de operação do Bacula (bconsole):
 - Testar SD com: `status storage`
 - Inventário do Bacula: `update slots`
 - Criação dos volumes mas fitas: `label barcodes pool=Scratch`

- Crie novos pools para o novo armazenamento "TapeLibrary" no bacula-dir.conf (ex.: *Daily-Tape, Weekly-Tape, Monthly-Tape etc.*)

```
#### /opt/bacula/etc/bacula-dir.conf ####
```

```
Pool {  
  Name = "Tape-Daily"  
  Storage = "TapeLibrary"  
  VolumeRetention = 6 days  
  CleaningPrefix = 'CLN'  
  AutoPrune = yes  
  PoolType = "Backup"  
}
```

- Aplicar mudanças na configuração do Director
(reinicie o daemon ou comando `reload` no bconsole)
- Execute uma tarefa de backup em um novo Conjunto de Fitas
(o Bacula escolherá uma fita e carregará/descarregará fitas automaticamente)
- Verifique a execução do backup

- Outros comandos de operações de fita do Bacula (bconsole):
 - Reciclar uma fita: `purge`
 - Forçar o Bacula carregar uma fita no Drive: `mount`
 - Forçar o Bacula descarregar uma fita do Drive: `release` or `umount`
(o `umount` requer a montagem de outra fita no lugar)

- Exemplos de operações de fita **mt** do Linux Shell:
 - `mt -f /dev/tape/by-id/scsi-350223344ab000400-nst rewind`
Rebobina fita carregada
 - `mt -f /dev/tape/by-id/scsi-350223344ab000400-nst weof`
“Apagar” rápido da fita
 - `mt -f /dev/tape/by-id/scsi-350223344ab000400-nst erase`
Apagar lento e verdadeiro da fita

- Exemplos de operações de fita mtx do Linux Shell:
 - `mtx -f /dev/tape/by-id/scsi-SSTK_L700_XYZZY_A status`
Inventário da TL pelo Linux
 - `mtx -f /dev/tape/by-id/scsi-SSTK_L700_XYZZY_A load 10 0`
Carrega fita do slot **10** para o drive **0**
 - `mtx -f /dev/tape/by-id/scsi-SSTK_L700_XYZZY_A unload 10 0`
Descarrega fita do slot **10** para o drive **0**
 - `mtx -f /dev/tape/by-id/scsi-SSTK_L700_XYZZY_A transfer 10 5`
Transfere fita do slot **10** para o **5**



```
[root@enterprisebacula ~]# service bacula-sd stop
Redirecting to /bin/systemctl stop bacula-sd.service
[root@enterprisebacula ~]# /opt/bacula/bin/btape /dev/tape/by-id/scsi-350223344ab000300-nst
Tape block granularity is 1024 bytes.
btape: butil.c:293-0 Using device: "/dev/tape/by-id/scsi-350223344ab000300-nst" for writing.
btape: btape.c:476-0 open device "Drive-1" (/dev/tape/by-id/scsi-350223344ab000300-nst): OK
*speed
btape: btape.c:1060-0 Test with zero data, should give the maximum throughput.
btape: btape.c:909-0 Begin writing 3 files of 1.073 GB with raw blocks of 258048 bytes.
+++++++
btape: btape.c:610-0 Wrote 1 EOF to "Drive-1" (/dev/tape/by-id/scsi-350223344ab000300-nst)
btape: btape.c:409-0 Volume bytes=1.073 GB. Write rate = 1.073 GB/s
+++++++

#### etc.
```