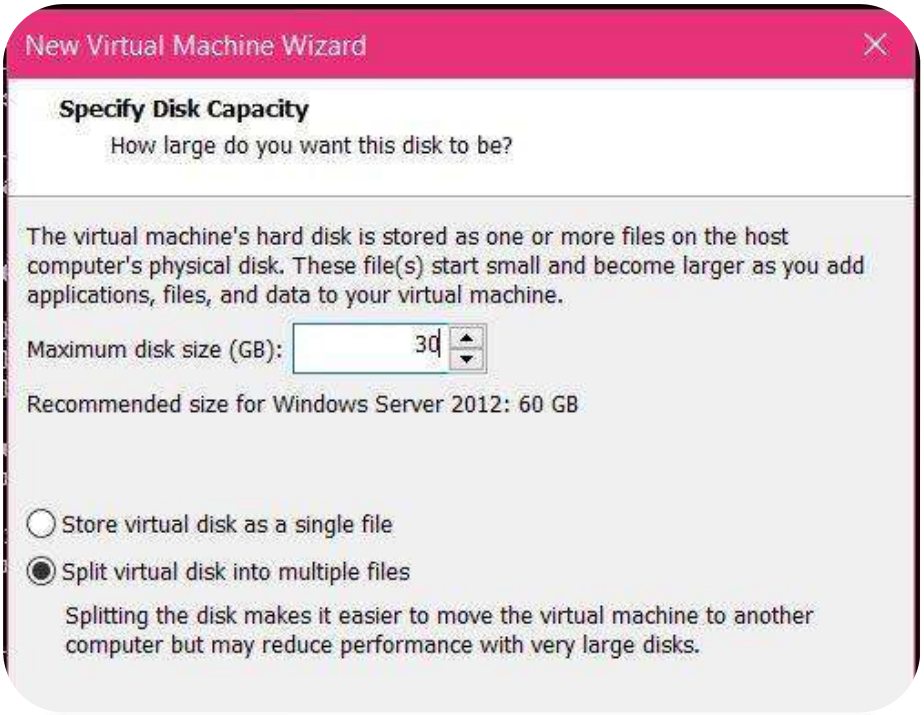
Tarefa Complementar

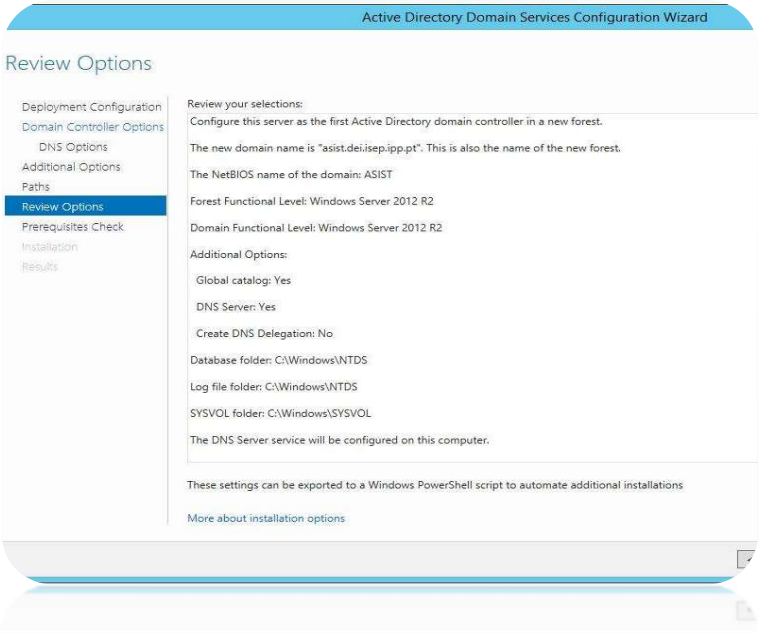
Implementação de SAN utilizando iSCSI

iSCSI *Initiator* do Windows aceder ao *target* na VM Linux

1. **Configurar Máquina Windows Server:**



2. Configurar Server



3. Na VM Linux instala-se o pacote do iSCSI:

```
asist@AsistServer:~$ sudo apt-get install iscsitarget
Reading package lists... Done
Building dependency tree
Reading state information... Done
iscsitarget is already the newest version (1.4.20.3+svn502-2ubuntu4.5).
0 upgraded, 0 newly installed, 0 to remove and 4 not upgraded.
asist@AsistServer:~$
```

4. Ativar ligação automática:

```
ISCSITARGET_ENABLE=true
ISCSITARGET_MAX_SLEEP=3


# ietd options
# See ietd(8) for details
ISCSITARGET_OPTIONS=""
```

5. Criar ficheiro da pasta partilhada:

```
asist@AsistServer:/home/storage$ sudo dd if=/dev/zero of=/home/storage/lun0.bin count=0 obs=1 seek=1
G
0+0 records in
0+0 records out
0 bytes copied, 0.000567148 s, 0.0 kB/s
asist@AsistServer:/home/storage$
```

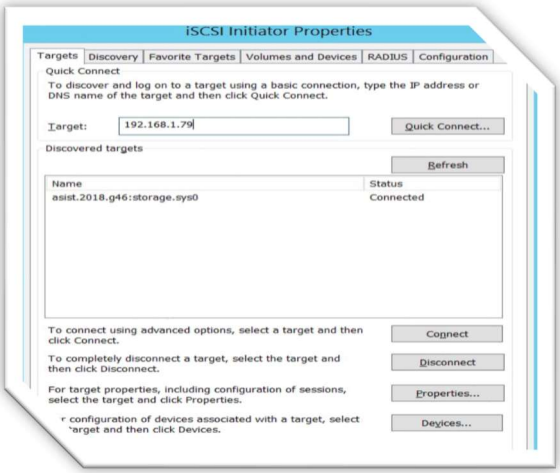
6. Identificar *target* no ficheiro de *config*:

```
                                        # this target - 0 = unlimited
        #NOPInterval            0       # Send a NOP-In ping each after
                                        # that many seconds if the conn
                                        # is otherwise idle - 0 = off
        #NOPTimeout             0       # Wait that many seconds for a
                                        # response on a NOP-In ping
                                        # If 0 or > NOPInterval, NOPInterval
                                        # is used!
        #
        # Various target parameters
        #
        #Wthreads               8       # Number of IO threads
        #QueuedCommands         32      # Number of queued commands

Target asist.2018.g46:storage.sys0
Lun 0 Path=/home/storage/lun0.bin,Type=fileio,ScsiId=lun0,ScsiSn=lun0
                                                                114,1         Bot
```

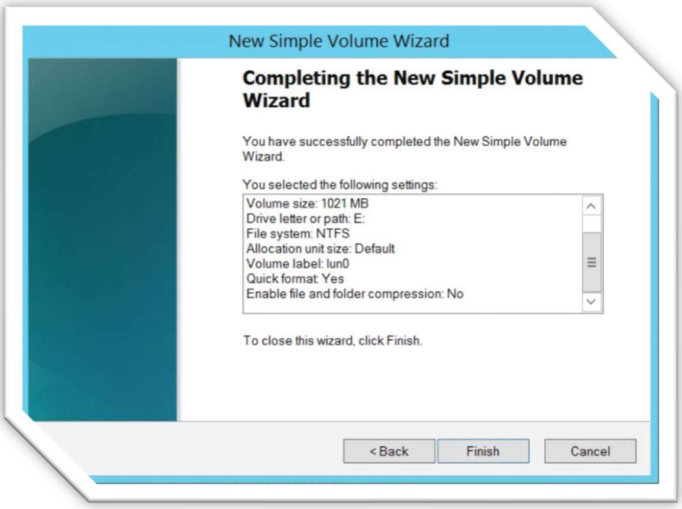
7. Reiniciar o serviço:

```
asist@AsistServer:/home/storage$ sudo service iscsitarget restart
asist@AsistServer:/home/storage$
```

8. Na máquina de Windows usar *initiator* para fazer a ligação:



9. **Configurar novo disco:**



iSCSI *initiator* aceder ao *target* na VM Windows Server

10. **Na máquina Linux instalar iSCSI:**

```
asist@AsistServer:/home/storage$ sudo apt install open-iscsi
Reading package lists... Done
Building dependency tree
Reading state information... Done
open-iscsi is already the newest version (2.0.873+git0.3b4b4500-14ubuntu3.6).
0 upgraded, 0 newly installed, 0 to remove and 4 not upgraded.
asist@AsistServer:/home/storage$
```

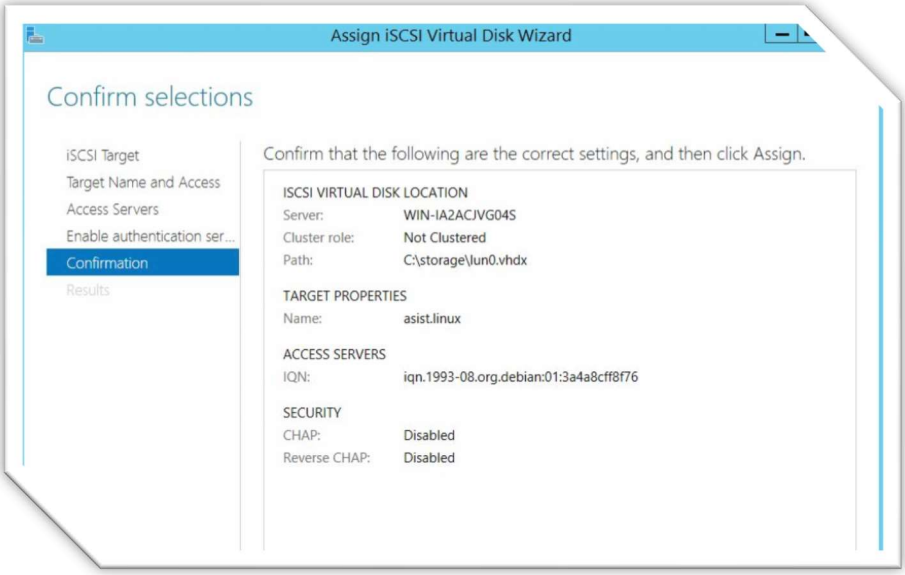
11. **Ligação automática do iSCSI:**

```
#*****************
# Startup settings
#*****************

# To request that the iscsi initd scripts startup a session set to "automatic".
# node.startup = automatic
#
# To manually startup the session set to "manual". The default is manual.
node.startup = automatic
```

12. Verificar nome do *initiator*:

```
asist@AsistServer:/home/storage$ sudo cat /etc/iscsi/initiatorname.iscsi
## DO NOT EDIT OR REMOVE THIS FILE!
## If you remove this file, the iSCSI daemon will not start.
## If you change the InitiatorName, existing access control lists
## may reject this initiator.  The InitiatorName must be unique
## for each iSCSI initiator.  Do NOT duplicate iSCSI InitiatorNames.
InitiatorName=iqn.1993-08.org.debian:01:3a4a8cff8f76
asist@AsistServer:/home/storage$ _
```

13. Configurar *target*:



14. Verificar *targets* disponíveis:

```
asist@AsistServer:/home/storage$ sudo iscsiadm -m discovery -t st -p 192.168.1.80
192.168.1.80:3260,1 iqn.1991-05.com.microsoft:win-ia2acjvg04s-asist.linux-target
asist@AsistServer:/home/storage$
```

15. Fazer *login* no *target*:

```
asist@AsistServer:/home/storage$ sudo iscsiadm -m node --login
Logging in to [iface: default, target: iqn.1991-05.com.microsoft:win-ia2acjvg04s-asist.linux-target,
 portal: 192.168.1.80,3260] (multiple)
Login to [iface: default, target: iqn.1991-05.com.microsoft:win-ia2acjvg04s-asist.linux-target, port
al: 192.168.1.80,3260] successful.
```

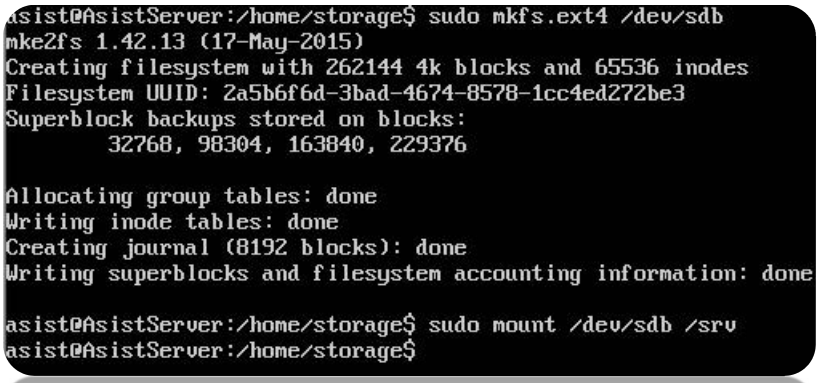
16. Criar partição:

```
asist@AsistServer:/home/storage$ sudo fdisk /dev/sdb

Welcome to fdisk (util-linux 2.27.1).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new DOS disklabel with disk identifier 0x80440d3c.

Command (m for help): n
Partition type
   p   primary (0 primary, 0 extended, 4 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-2097151, default 2048): w
Value out of range.
First sector (2048-2097151, default 2048):
Last sector, +sectors or +size{K,M,G,T,P} (2048-2097151, default 2097151):

Created a new partition 1 of type 'Linux' and of size 1023 MiB.

Command (m for help):
```

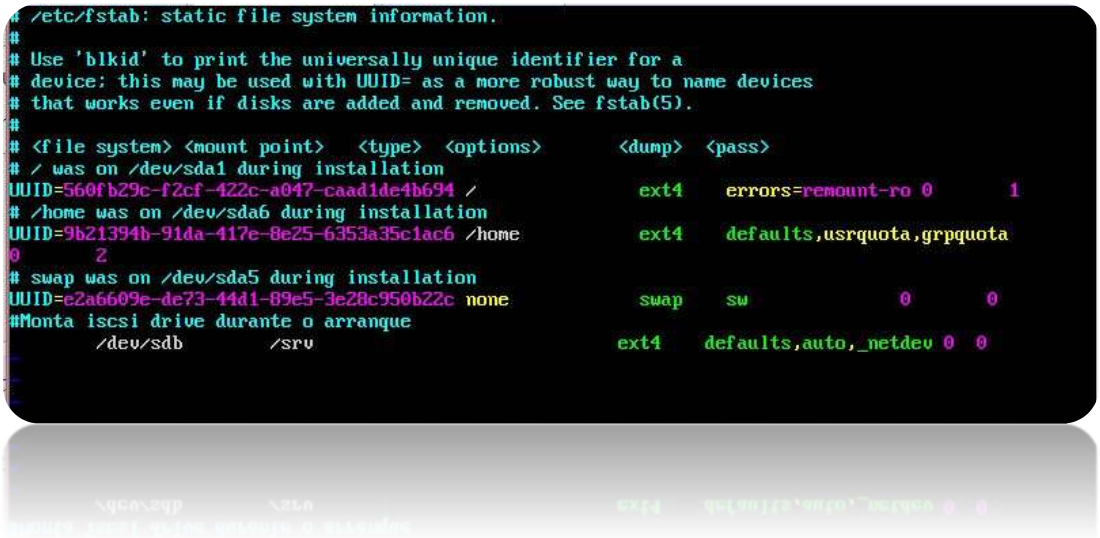
17. Lista de partições:

```
sist@AsistServer:/home/storage$ sudo fdisk -l
Disk /dev/sda: 10 GiB, 10737418240 bytes, 20971520 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xf209188f

Device     Boot    Start      End  Sectors  Size Id Type
/dev/sda1  *        2048 11718655 11716608  5.6G 83 Linux
/dev/sda2       11720702 20969471  9248770  4.4G  5 Extended
/dev/sda5       19924992 20969471  1044480  510M 82 Linux swap / Solaris
/dev/sda6       11720704 19924991  8204288  3.9G 83 Linux

Partition table entries are not in disk order.



Disk /dev/sdb: 1 GiB, 1073741824 bytes, 2097152 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes
```

18. Formatar e montar partição:



19. Ficheiro iSCSI que será preparado durante o arranque:



Bibliografia

iSCSI *Initiator* do Windows aceder ao *target* na VM Linux:

- **https://tinyurl.com/ycrumxgg - Documentação Ubuntu de configuração do iSCSI - 28 nov. 18.**
- **https://tinyurl.com/ybucyxfm - Tutorial de configuração para o Ubuntu servir de iSCSI *target* – 28 nov. 18.**

iSCSI *initiator* do Linux aceder ao *target* na VM Windows Server:

- **https://tinyurl.com/ybqavn2k - Tutorial de configuração para o Windows Server servir de iSCSI *target* – 28 nov. 18.**