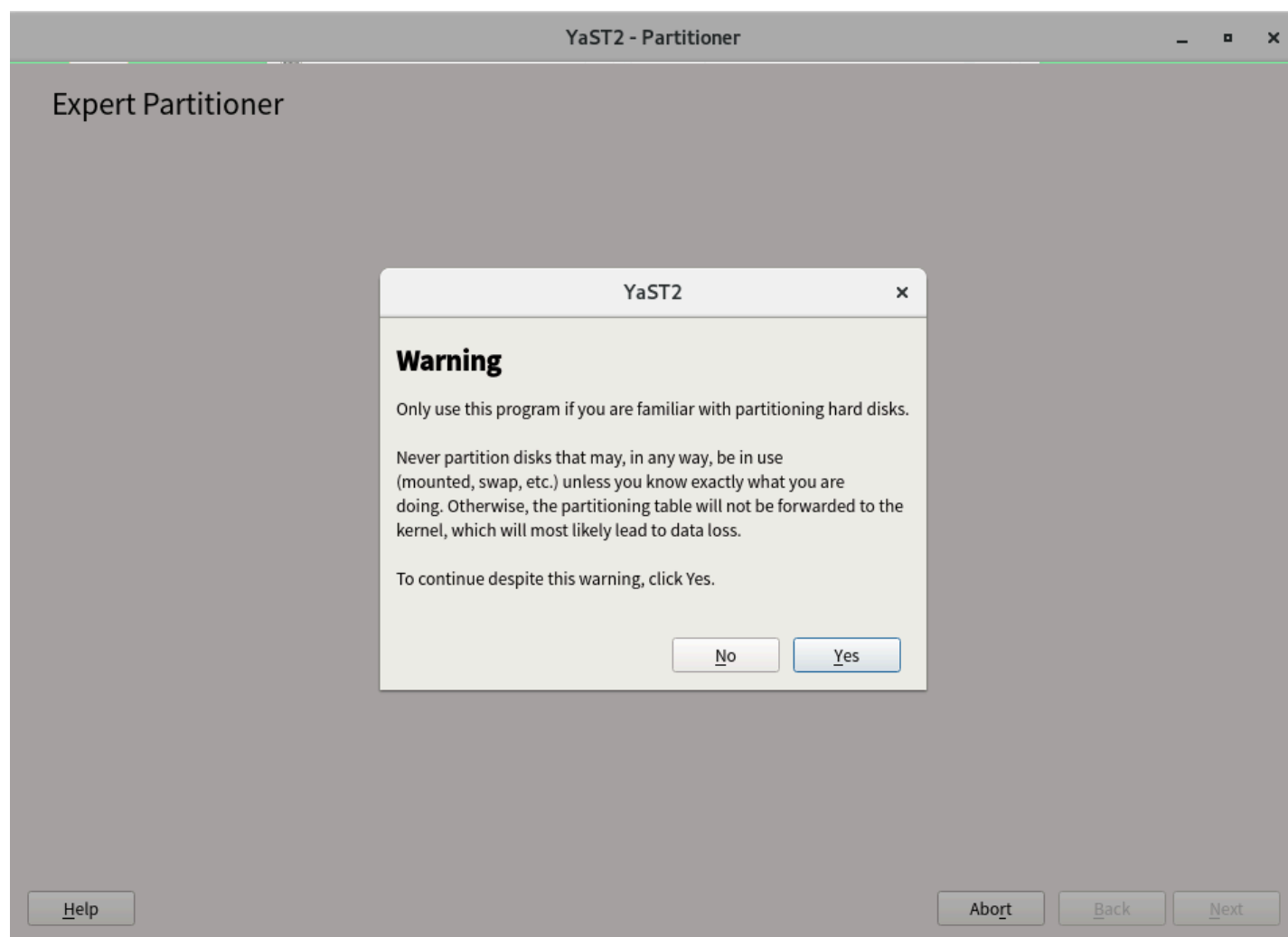


Optional LAB: 用 Command Line 的方式建立 LVM

- 使用 **Yast2 Disk** 模組來建立三個大小為 **200 MB**，系統 ID 為 **0x8E Linux LVM** 的分割區

請點選 『 yes 』



請點選左邊列表中的『 Hard Disks 』，並展開它，再點選左邊列表中的『 sda 』，再點選『 Add 』

YaST2

Expert Partitioner

System View

linux-za1i

Hard Disks

sda

RAID

Volume Management

Crypt Files

Device Mapper

NFS

Btrfs

tmpfs

Unused Devices

Installation Summary

Settings

Hard Disk: /dev/sda

Overview

Partitions

sda2

20.00 GiB

Unpartitioned

4.41 GiB

Device	Size	F	Enc	Type	FS Type	Label	Mount Point	Start	End
/dev/sda1	2.01 GiB			Linux swap	Swap	swap		0	261
/dev/sda2	20.00 GiB			Linux native	Btrfs	/		261	2872
/dev/sda3	1.99 GiB			Linux native	XFS	/home		2872	3133
/dev/sda4	6.00 GiB			Extended				3133	3915
/dev/sda5	1.00 GiB			Linux native	Ext3	/data1		3134	3264
/dev/sda6	203.00 MiB			Linux RAID				3264	3290
/dev/sda7	195.00 MiB			Linux RAID				3290	3315
/dev/sda8	195.00 MiB			Linux RAID				3315	3340

Add...

Edit...

Move...

Resize...

Delete...

Expert...

Help

Abort

Finish

請建立 200 MB，點選『Next』

YaST2

Add Partition on /dev/sda

New Partition Size

☐ Maximum Size (4.40 GiB)

☒ Custom Size

Size

200 MB

☐ Custom Region

Start Cylinder

3341

End Cylinder

3914

Help

Abort

Back

Next

請點選『Next』

YaST2

Add Partition on /dev/sda

Role

☐ Operating System

☒ Data and ISV Applications

☐ Swap

☐ Raw Volume (unformatted)

Help

Abort

Back

Next

請點選『Do not format partition』→點選 File System ID 的下拉選單，點選『0x8E Linux LVM』→點選『Next』

YaST2

Add Partition on /dev/sda

Formatting Options

☐ Format partition

File System

XFS

Options...

☒ Do not format partition

File system ID:

0x8E Linux LVM

☐ Encrypt Device

Mounting Options

☐ Mount partition

Mount Point

Fstab Options...

☒ Do not mount partition

Help

Abort

Back

Finish

上述建立分割區步驟請再重複二次，確認有看到三個 200 MB 的分割區

YaST2

Expert Partitioner

System View

linux-za1i

Hard Disks

sda

RAID

Volume Management

Crypt Files

Device Mapper

NFS

Btrfs

tmpfs

Unused Devices

Installation Summary

Settings

Hard Disk: /dev/sda

Overview

Partitions

sda2

20.00 GiB

Unpartitioned

3.84 GiB

Device	Size	F	Enc	Type	FS Type	Label	Mount Point	Start	End
/dev/sda1	2.01 GiB			Linux swap	Swap	swap		0	261
/dev/sda2	20.00 GiB			Linux native	Btrfs	/		261	2872
/dev/sda3	1.99 GiB			Linux native	XFS	/home		2872	3133
/dev/sda4	6.00 GiB			Extended				3133	3915
/dev/sda5	1.00 GiB			Linux native	Ext3	/data1		3134	3264
/dev/sda6	203.00 MiB			Linux RAID				3264	3290
/dev/sda7	195.00 MiB			Linux RAID				3290	3315
/dev/sda8	195.00 MiB			Linux RAID				3315	3340
/dev/sda9	196.11 MiB			Linux LVM				3341	3365
/dev/sda10	196.11 MiB			Linux LVM				3366	3390
/dev/sda11	196.11 MiB			Linux LVM				3391	3415

Add...

Edit...

Move...

Resize...

Delete...

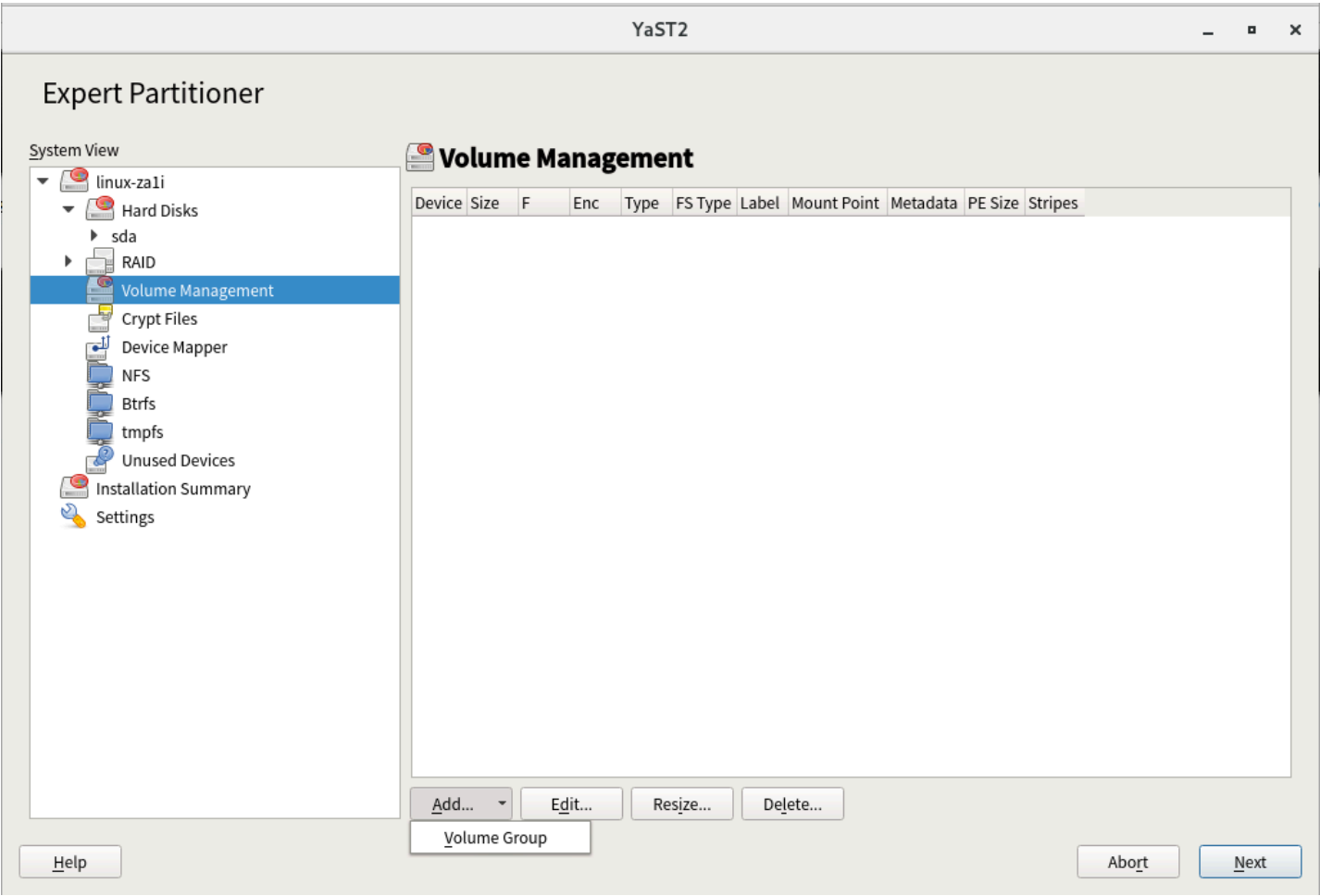
Expert...

Help

Abort

Next

請點選『Volume Management』→點選『Add』→點選『Volume Group』



請在 Volume Group Name 的欄位中輸入『lab』→點選『Add All』→點選『Finish』

YaST2

Add Volume Group

Volume Group Name

lab

Physical Extent Size

4 MiB

Available Physical Volumes:

Device	Size	Enc	Type
--------	------	-----	------

Add →

Add All →

← Remove

← Remove All

Selected Physical Volumes:

Device	Size	Enc	Type
/dev/sda9	203.00 MiB		Linux LVM
/dev/sda10	195.00 MiB		Linux LVM
/dev/sda11	195.00 MiB		Linux LVM

Total size: 0 B

Resulting size: 593.00 MiB

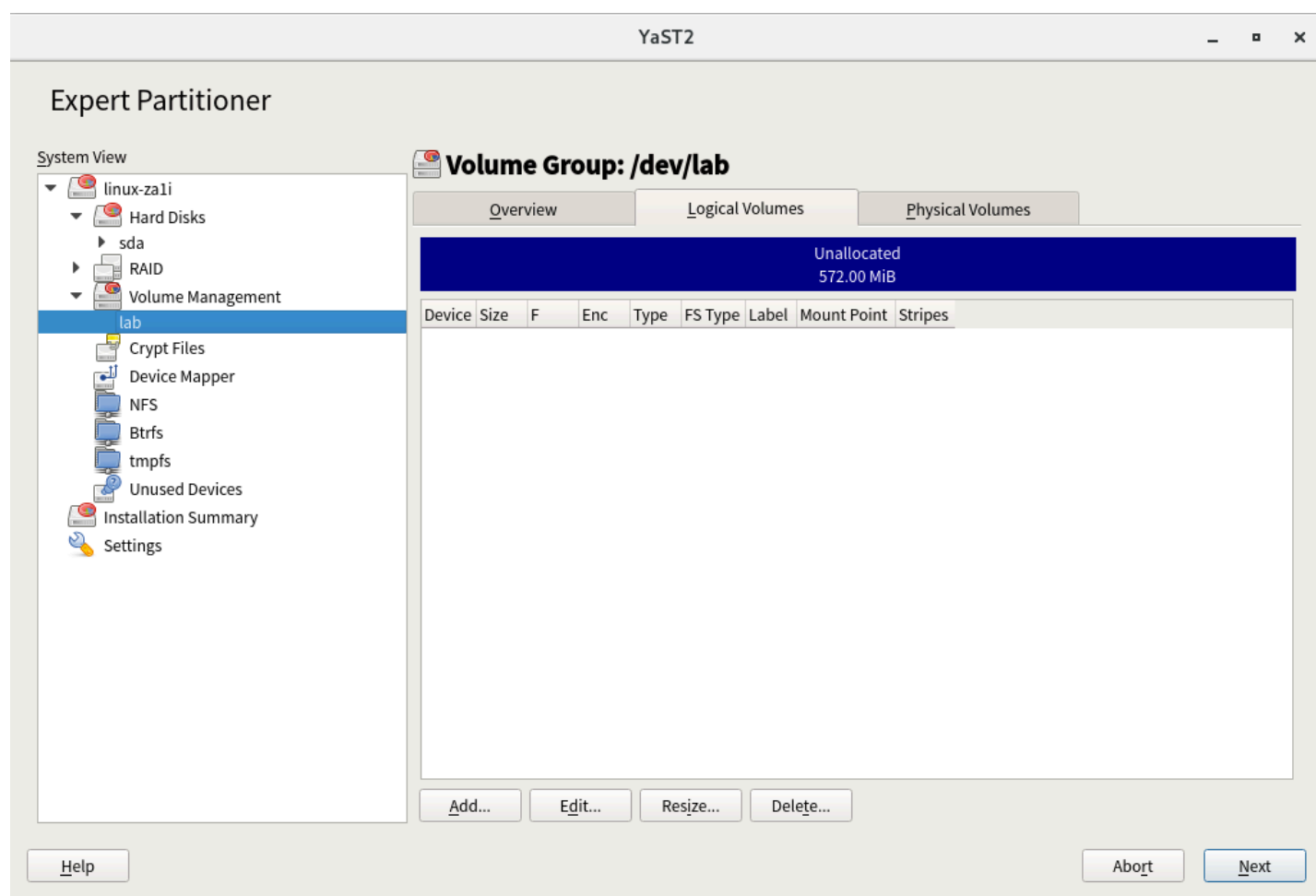
Help

Abort

Back

Finish

請點開『Volume Management』→點選『lab』→『Add』



請輸入『pilot』 → 點選『Next』

YaST2

Add Logical Volume on /dev/lab

Name

Logical Volume

pilot

Type

☒ Normal Volume

☐ Thin Pool

☐ Thin Volume

Used Pool

Help

Abort

Back

Next

請點選『 Custom Size 』 → 輸入『 50 MiB 』 → 點選『 Next 』

YaST2

Add Logical volume pilot on /dev/lab

Size

☐ Maximum Size (572.00 MiB)

☒ Custom Size

Size

50 MiB

Stripes

Number

1

Size

64 KiB

Help

Abort

Back

Next

請點選『Next』

YaST2

Add Logical volume pilot on /dev/lab

Role

☐ Operating System

☒ Data and ISV Applications

☐ Swap

☐ Raw Volume (unformatted)

Help

Abort

Back

Next

請點選『Mount partition』→請輸入『/mnt/pilot』→請點選『Finish』

YaST2

Add Logical volume pilot on /dev/lab

Formatting Options

Format partition

File System

XFS

Options...

Do not format partition

Encrypt Device

Mounting Options

Mount partition

Mount Point

/mnt/pilot

Fstab Options...

Do not mount partition

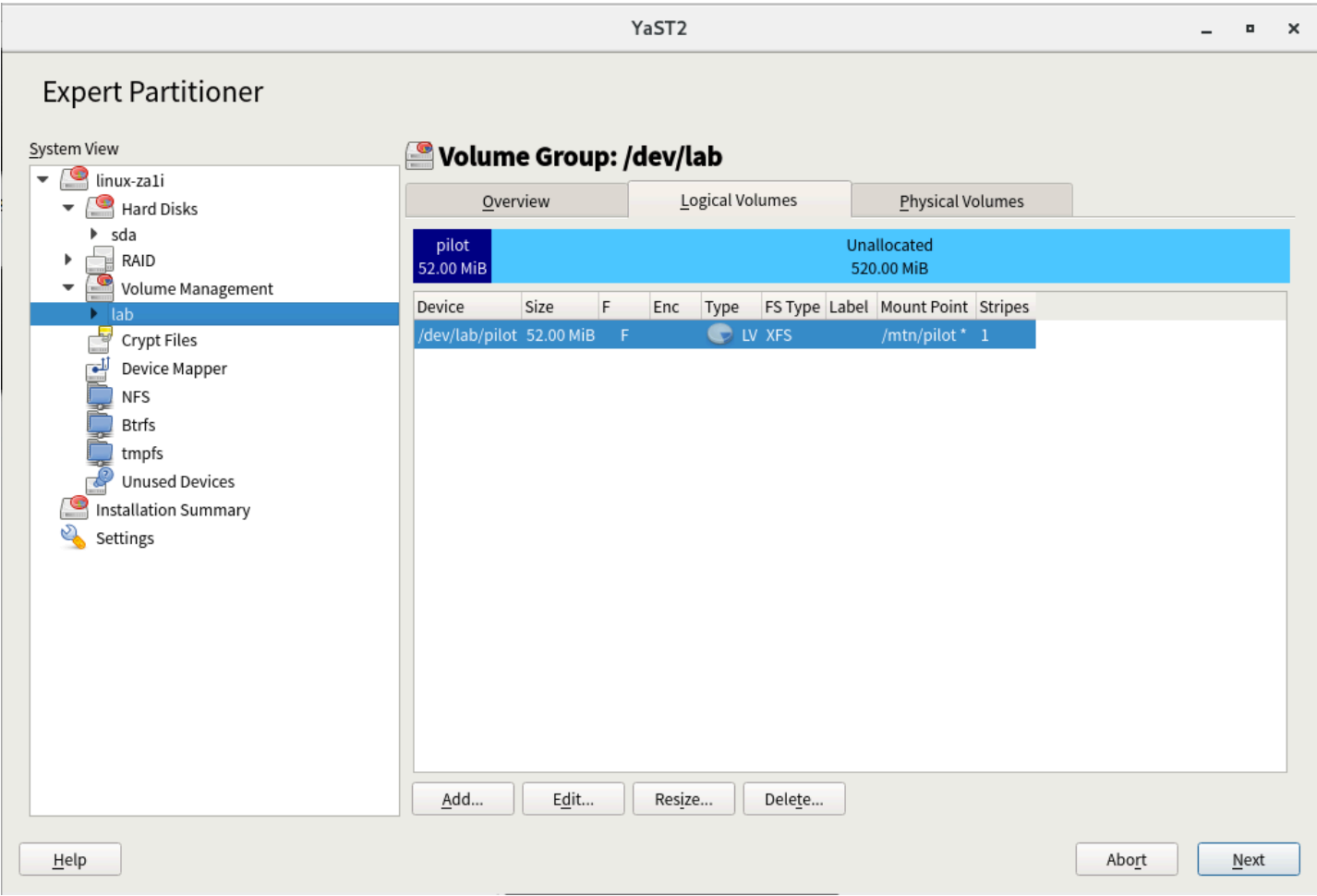
Help

Abort

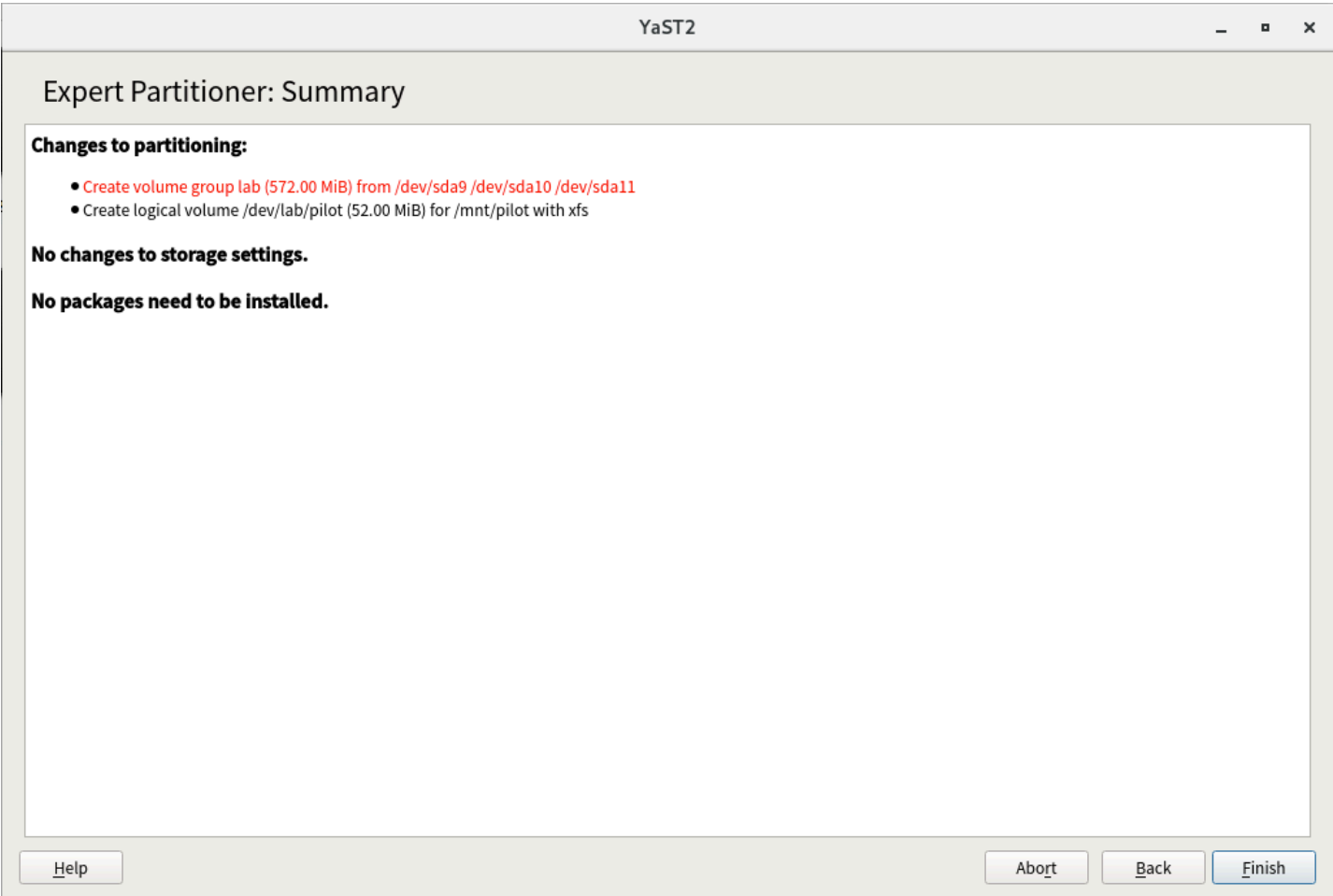
Back

Finish

這樣就可以看到新建立好的 LogicVolume ，並掛載至 `/mnt/pilot` ，請點選『Next』



請點選『Finish』



- 請觀察資訊

```
linux-zali:/mnt # df -h /mnt/pilot/
檔案系統          容量  已用  可用  已用% 掛載點
/dev/mapper/lab-pilot  49M   2.8M   46M    6% /mnt/pilot
```

- 請使用 `pvs` 觀察資訊

```
linux-zali:/mnt # pvs
PV          VG  Fmt Attr PSize  PFree
/dev/sda10 lab  lvm2 a--  192.00m 192.00m
/dev/sda11 lab  lvm2 a--  192.00m 192.00m
/dev/sda9   lab  lvm2 a--  200.00m 148.00m
```

- 請使用 `vgs` 觀察資訊

```
linux-zali:/mnt # vgs
VG  #PV #LV #SN Attr   VSize  VFree
lab   3   1   0 wz--n- 584.00m 532.00m
```

