

NAME

pvscan – List all physical volumes

SYNOPSIS

pvscan *option_args*
 [*option_args*]
 [*position_args*]

DESCRIPTION

When called without the **—cache** option, **pvscan** lists PVs on the system, like **pvs(8)** or **pvdiskplay(8)**.

When the **—cache** and **—aay** options are used, **pvscan** records which PVs are available on the system, and activates LVs in completed VGs. A VG is complete when **pvscan** sees that the final PV in the VG has appeared. This is used by event-based system startup (**systemd**, **udev**) to activate LVs.

The four main variations of this are:

pvscan —cache device

If device is present, **lvm** adds a record that the PV on device is online. If device is not present, **lvm** removes the online record for the PV. In most cases, the **pvscan** will only read the named devices.

pvscan —cache —aay device...

This begins by performing the same steps as above. Afterward, if the VG for the specified PV is complete, then **pvscan** will activate LVs in the VG (the same as **vgchange —aay vname** would do.)

pvscan —cache

This first clears all existing PV online records, then scans all devices on the system, adding PV online records for any PVs that are found.

pvscan —cache —aay

This begins by performing the same steps as **pvscan —cache**. Afterward, it activates LVs in any complete VGs.

To prevent devices from being scanned by **pvscan —cache**, add them to **lvm.conf(5)** **devices/global_filter**. For more information, see:

lvmconfig —withcomments devices/global_filter

Auto-activation of VGs or LVs can be enabled/disabled using:

lvm.conf(5) **activation/auto_activation_volume_list**

For more information, see:

lvmconfig —withcomments activation/auto_activation_volume_list

To disable auto-activation, explicitly set this list to an empty list, i.e. **auto_activation_volume_list = []**.

When this setting is undefined (e.g. commented), then all LVs are auto-activated.

USAGE

Display PV information.

pvscan

 [**—e** | **—exported**]

```
[ -n|--novolumegroup ]
[ -s|--short ]
[ -u|--uuid ]
[ COMMON_OPTIONS ]
```

Autoactivate a VG when all PVs are online.

pvscan --cache

```
[ -a|--activate ay ]
[ -j|--major Number ]
[ --minor Number ]
[ --noudevsync ]
[ COMMON_OPTIONS ]
[ String|PV ... ]
```

Common options for command:

```
[ --ignorelockingfailure ]
[ --reportformat basic|json ]
```

Common options for lvm:

```
[ -d|--debug ]
[ -h|--help ]
[ -q|--quiet ]
[ -t|--test ]
[ -v|--verbose ]
[ -y|--yes ]
[ --commandprofile String ]
[ --config String ]
[ --driverloaded y|n ]
[ --lockopt String ]
[ --longhelp ]
[ --nolocking ]
[ --profile String ]
[ --version ]
```

OPTIONS

-a|--activate y|n|ay

Auto-activate LVs in a VG when the PVs scanned have completed the VG. (Only **ay** is applicable.)

--cache

Scan one or more devices and record that they are online.

--commandprofile *String*

The command profile to use for command configuration. See **lvm.conf(5)** for more information about profiles.

--config *String*

Config settings for the command. These override **lvm.conf** settings. The *String* arg uses the same format as **lvm.conf**, or may use section/field syntax. See **lvm.conf(5)** for more information about config.

-d|--debug ...

Set debug level. Repeat from 1 to 6 times to increase the detail of messages sent to the log file and/or syslog (if configured).

--driverloaded y|n

If set to no, the command will not attempt to use device-mapper. For testing and debugging.

- e|--exported**
Only show PVs belonging to exported VGs.
- h|--help**
Display help text.
- ignorelockingfailure**
Allows a command to continue with read-only metadata operations after locking failures.
- lockopt *String***
Used to pass options for special cases to lvmlockd. See **lvmlockd(8)** for more information.
- longhelp**
Display long help text.
- j|--major *Number***
The major number of a device.
- minor *Number***
The minor number of a device.
- nolocking**
Disable locking.
- noudevsync**
Disables udev synchronisation. The process will not wait for notification from udev. It will continue irrespective of any possible udev processing in the background. Only use this if udev is not running or has rules that ignore the devices LVM creates.
- n|--novolumegroup**
Only show PVs not belonging to any VG.
- profile *String***
An alias for **--commandprofile** or **--metadataprofile**, depending on the command.
- q|--quiet ...**
Suppress output and log messages. Overrides **--debug** and **--verbose**. Repeat once to also suppress any prompts with answer 'no'.
- reportformat *basic|json***
Overrides current output format for reports which is defined globally by the `report/output_format` setting in `lvm.conf`. **basic** is the original format with columns and rows. If there is more than one report per command, each report is prefixed with the report name for identification. **json** produces report output in JSON format. See **lvmreport(7)** for more information.
- s|--short**
Short listing format.
- t|--test**
Run in test mode. Commands will not update metadata. This is implemented by disabling all metadata writing but nevertheless returning success to the calling function. This may lead to unusual error messages in multi-stage operations if a tool relies on reading back metadata it believes has changed but hasn't.
- u|--uuid**
Show UUIDs in addition to device names.
- v|--verbose ...**
Set verbose level. Repeat from 1 to 4 times to increase the detail of messages sent to stdout and stderr.
- version**
Display version information.

-y|--yes

Do not prompt for confirmation interactively but always assume the answer yes. Use with extreme caution. (For automatic no, see **-qq**.)

VARIABLES

PV

Physical Volume name, a device path under /dev. For commands managing physical extents, a PV positional arg generally accepts a suffix indicating a range (or multiple ranges) of physical extents (PEs). When the first PE is omitted, it defaults to the start of the device, and when the last PE is omitted it defaults to end. Start and end range (inclusive): *PV[:PE-PE]*... Start and length range (counting from 0): *PV[:PE+PE]*...

String

See the option description for information about the string content.

Size[UNIT]

Size is an input number that accepts an optional unit. Input units are always treated as base two values, regardless of capitalization, e.g. 'k' and 'K' both refer to 1024. The default input unit is specified by letter, followed by |UNIT. UNIT represents other possible input units: **bBsSkKmMg-GtTpPeE**. b|B is bytes, s|S is sectors of 512 bytes, k|K is KiB, m|M is MiB, g|G is GiB, t|T is TiB, p|P is PiB, e|E is EiB. (This should not be confused with the output control **--units**, where capital letters mean multiple of 1000.)

ENVIRONMENT VARIABLES

See **lvm(8)** for information about environment variables used by lvm. For example, **LVM_VG_NAME** can generally be substituted for a required VG parameter.

SEE ALSO

lvm(8) **lvm.conf(5)** **lvmconfig(8)**

pvchange(8) **pvck(8)** **pvcreate(8)** **pvdisplay(8)** **pvmove(8)** **pvremove(8)** **pvresize(8)** **pvs(8)** **pvscan(8)**

vgcfgbackup(8) **vgcfgrestore(8)** **vgchange(8)** **vgck(8)** **vgcreate(8)** **vgconvert(8)** **vgdisplay(8)** **vgexport(8)** **vgextend(8)** **vgimport(8)** **vgimportclone(8)** **vgmerge(8)** **vgmknodes(8)** **vgreduce(8)** **vgremove(8)** **vgrename(8)** **vgs(8)** **vgscan(8)** **vgsplit(8)**

lvcreate(8) **lvchange(8)** **lvconvert(8)** **lvdisplay(8)** **lvextend(8)** **lvreduce(8)** **lvremove(8)** **lvrename(8)** **lvresize(8)** **lvs(8)** **lvscan(8)**

lvm-fullreport(8) **lvm-lvpoll(8)** **lvm2-activation-generator(8)** **blkdeactivate(8)** **lvmddump(8)**

dmeventd(8) **lvmpolld(8)** **lvmlockd(8)** **lvmlockctl(8)** **cmirrord(8)** **lvmdbusd(8)**

lvmsystemid(7) **lvmreport(7)** **lvmraid(7)** **lvmthin(7)** **lvmcache(7)**