



(AIX MPIO without PowerVM) Discovering and configuring LUNs with AIX

ONTAP SAN Host

NetApp
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When you are using AIX without PowerVM, you use the `cfgmgr` command to get the host to discover the LUNs. You do not need to reboot the host to discover the LUNs. To confirm that the host discovered the LUNS, you can use the `sanlun` utility.



The steps that follow do not apply to a host that is running a PowerVM environment.

Steps

1. Log in as root on the host.
2. On the AIX host, enter the following command to discover the newly created LUNs:

```
cfgmgr
```

The `cfgmgr` command helps with the following:

- The initiators to log in to the fabric.
 - The system to check for new devices.
 - The system to create new device entries.
3. To display all AIX disks, including the NetApp LUNs, enter the following command:

```
lsdev -Cc disk
```

The LUNs appear on the host as disks. You can use these disks the same way you use local disks on the host. The host settings ODM file that is installed as part of the Host Utilities causes the LUNs to be displayed as NetApp FCP disks.

Write down the `hdisk` instance numbers. You use them when you perform the path configuration.

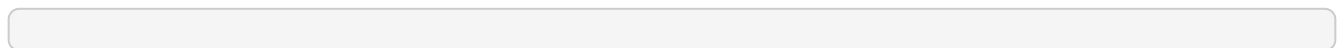
The following is the type of output the `lsdev -Cc disk` command produces in an environment using FC.

```
# lsdev -Cc disk
hdisk0 Available 08-08-00-5,0 16 Bit LVD SCSI Disk Drive
hdisk1 Available 08-08-00-8,0 16 Bit LVD SCSI Disk Drive
hdisk2 Available 04-08-02 MPIO NetApp FCP Default PCM Disk
hdisk3 Available 04-08-02 MPIO NetApp FCP Default PCM Disk
hdisk4 Available 04-08-02 MPIO NetApp FCP Default PCM Disk
hdisk5 Available 04-08-02 MPIO NetApp FCP Default PCM Disk
```

4. Enter the following command to get information about your setup:

```
lsattr -El hdisk_name
```

This command produces the following output.



```

# lsattr -El hdisk65
PCM    PCM/friend/NetApp    PCM Path Control Module    False
PR_key_value    none    Persistant Reserve Key
Value    True
algorithm    round_robin    Algorithm
True
clr_q    no    Device CLEARS its Queue
on error    True
dist_err_pcmt    0    Distributed Error
Sample Time    True
dist_tw_width    50    Distributed Error
Sample Time    True
hcheck_cmd    inquiry    Health Check Command
True
hcheck_interval    30    Health Check Interval
True
hcheck_mode    nonactive    Health Check Mode
True
location    Location Label
True
lun_id    0x20000000000000    Logical Unit Number ID
False
lun_reset_spt    yes    LUN Level Reset
True
max_transfer    0x100000    Maximum TRANSFER Size
True
node_name    0x500a0980894ae0e0    FC Node Name
False
pvid    00067fbad453a1da00000000000000000    Physical volume
identifier    False
q_err    yes    Use QERR bit
True
q_type    simple    Queuing TYPE
True
qfull_dly    2    Delay in seconds for
SCSI TASK SET FULL True
queue_depth    64    Queue DEPTH
True
reassign_to    120    REASSIGN time out value
True
reserve_policy    no_reserve    Reserve Policy
True
rw_timeout    30    READ/WRITE time out
value    True
scsi_id    0xd10001    SCSI ID
False

```

```

start_timeout    60                START unit time out
value            True
ww_name          0x500a0984994ae0e0  FC World Wide Name
False

```

5. If your configuration supports ALUA, you can use it to set path priority. Verify that ALUA is enabled:

```
lun igroup show -instance igroup_name
```

- a. If ALUA is not enabled, enable it:

```
igroup set igroup_name alua yes
```

6. If your configuration does not support ALUA, you must execute the dotpaths utility to set the path priorities. The dotpaths utility is installed when you install the Host Utilities. Do not use the dotpaths utility if ALUA is enabled.

- a. To set the priority for all Data ONTAP LUNs enter:

```
dotpaths
```

- b. To set priority for a specific set of disk enter:

```
dotpaths [-hqv] [hdiskN ...]
```

Use the `-v` option to enable verbose mode and display all the priorities. Use the `-q` option to query all or individual disk priorities.

7. To verify that the host has discovered the LUNs, enter the following command:

```
# sanlun lun show
```

Example

This example shows typical output of the `sanlun lun show` command in an MPIO multipathing environment.

```

sanlun lun show -p

                ONTAP Path: fas3170-
aix03:/vol/ibmbc_aix01b14_fcp_vol8/ibmbc-aix01b14_fcp_lun0
                LUN: 8
                LUN Size: 3g
Controller CF State: Cluster Enabled
Controller Partner: fas3170-aix04
                Host Device: hdisk9
                Mode: 7
                Multipath Provider: AIX Native
Multipathing Algorithm: round_robin
-----
-----

```

```

host      controller  AIX      controller
AIX MPIO
path      path          MPIO    host      target
path
state     type          path    adapter  port
priority
-----
up        secondary    path0   fcs0     3b
1
up        primary      path1   fcs0     3a
1
up        secondary    path2   fcs0     3a
1
up        primary      path3   fcs0     3b
1
up        secondary    path4   fcs0     4b
1
up        secondary    path5   fcs0     4a
1
up        primary      path6   fcs0     4b
1
up        primary      path7   fcs0     4a
1
up        secondary    path8   fcs1     3b
1
up        primary      path9   fcs1     3a
1
up        secondary    path10  fcs1     3a
1
up        primary      path11  fcs1     3b
1
up        secondary    path12  fcs1     4b
1
up        secondary    path13  fcs1     4a
1
up        primary      path14  fcs1     4b
1
up        primary      path15  fcs1     4a
1

```

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