



Smart Storage Administrator (SSA) – Quick Guide to Determine SSD Power on Hours

HPE provides SSA applications for offline use and for online use in several OS distributions.

To access and launch HPE SSA in an offline environment, use one of the following methods:

- Launch HPE SSA with Intelligent Provisioning
- Launch HPE SSA during POST
- Launch HPE SSA from an ISO image (all generations) – iLO virtual media, CD/DVD, USB, PXE
- To access the HPE SSA CLI or HPE SSA Scripting in an offline environment, HPE SSA must be launched from an ISO image.
 - The Diagnostics Report (ADU) is generated using HPE SSA.
 - Note that a Diagnostics report should be collected for **ALL** drive related cases with failed drives still in the system.

Offline HPE Smart Storage Administrator is available for download on [HPESC](#).

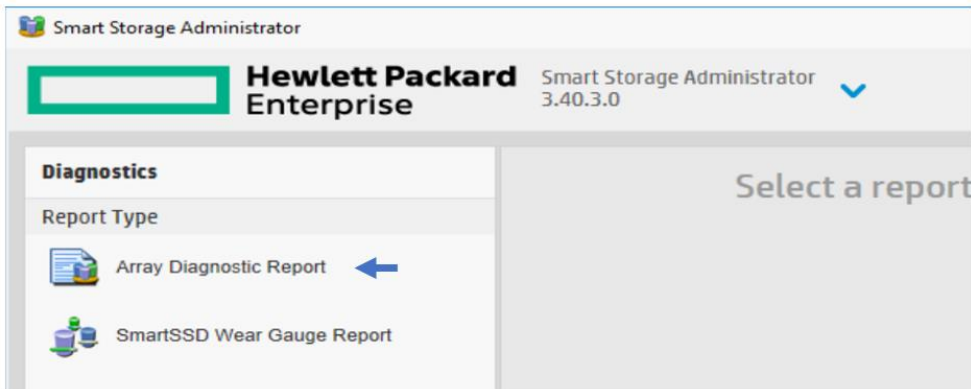
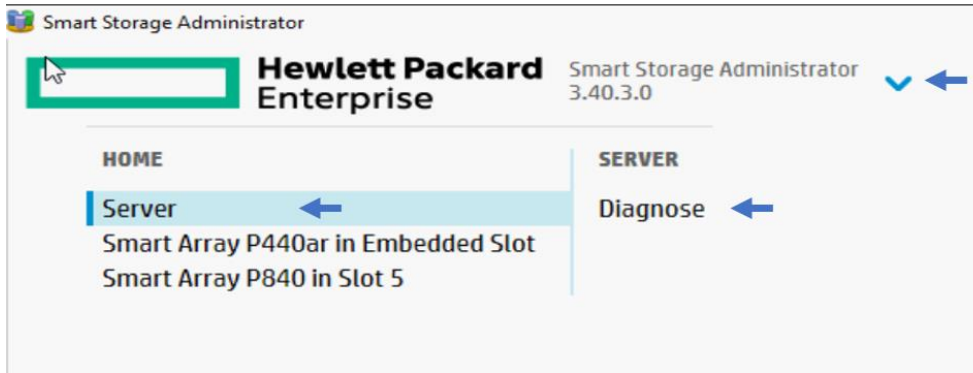
Smart Storage Administrator GUI allows to see the Power On Hours. In the SSA GUI, select the drive and review the Physical Drive details -> Power On Hours:

The screenshot displays the Smart Storage Administrator (SSA) interface. On the left, a sidebar lists 'Available Devices(s)' including a Server, Smart Array Controllers (P440ar, P441, P840), and Other Devices (Solid State Devices). The main area shows 'SSDs' for a Smart Array P840 (HBA Mode) with three 480 GB SAS 512e SSDs (100% Life Remaining) and one 960 GB SATA SSD (99.78% Life Remaining). A 'Physical Drive Details' panel is open for the selected 480 GB SAS 512e SSD (Port 11: Box 3: Bay 1). The 'Power On Hours' field is highlighted in yellow, showing a value of 32279. Other details include Status: OK, Exposed To OS: Yes, Size: 447.13 GiB (480.10 GB), Logical / Physical Block Size: 512e / 4096 Bytes, Drive Type: SAS SSD, Model: HP V00480JFDGT, Serial Number: S284NCAGA00098, Firmware Version: HPD3, Transfer Speed: PHY 1: 12 Gbps, PHY 2: Unknown, Temperature: Current: 21°C, Maximum: 24°C, SSD Wear Status: OK, SSD Utilization: 0.00%, Disk Name: \\.\PhysicalDrive3 (Disk3), and Disk Partition Information.

Field	Value
Status	OK
Exposed To OS	Yes
Size	447.13 GiB (480.10 GB)
Logical / Physical Block Size	512e / 4096 Bytes
Drive Type	SAS SSD
Model	HP V00480JFDGT
Serial Number	S284NCAGA00098
Firmware Version	HPD3
Transfer Speed	PHY 1: 12 Gbps, PHY 2: Unknown
Temperature	Current: 21°C, Maximum: 24°C
SSD Wear Status	OK
Power On Hours	32279
SSD Utilization	0.00%
Disk Name	\\.\PhysicalDrive3 (Disk3)
Disk Partition Information	Partition Number: 1, Size: 512 MiB, Partition Number: 3, Size: 160.0 GiB, Partition Number: 4, Size: 10.0 GiB, Partition Number: 5, Size: 250.0 GiB, Partition Number: 6, Size: 26.4 GiB,
WWID	50000F0A75A00792
Sanitize Erase Supported	Yes

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The SSA GUI interface also allows for easy log ADU log capture, which contains the Power On Hours data:



[Top] → [Smart Array P244br in Embedded Slot] → [Internal Drive Cage at Port 11 : Box 1] → [Physical Drive (480 GB SAS 512e SSD) 11:1:2] → Workload Information

Industry Standard SSD Utilization	0
Industry Standard Power On Hours	32275.766667
Power-on Hours	32275
Total LBA Read	108356731235
Total LBA Written	58569553283
Workload Rating (TB/Yr)	None Available
Month(s) of Operation	44.212329
Total Bytes Read (TB)	55.478646
Total Bytes Written (TB)	29.987611
Total Combined Read/Write Bytes (TB)	85.466258
Workload Rate (TB/Month)	1.933087
Projected Rate (TB/Year)	23.197038
SSD Usage Remaining (%)	100.00

Power On Hours can also be seen on the SSD Wear Gauge section for each drive in the ADU report:



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```
Smart Array P840 in slot 1 : Internal Drive Cage at Port 1I : Box 1 : Physical Drive (400 GB SAS 512e SSD) 1I:1:5 : SSD Wear Gauge
Status OK
Supported TRUE
Log Full FALSE
Utilization 0.180000
Power On Hours 5809
Has Smart Trip SSD Wearout FALSE
Remaining Days Until Wearout 134225
Has 56 Day Warning FALSE
Has Utilization Warning NONE
```

SSA also enables the option to capture logs through the command line:

In Linux and Windows, use the 'SSA' command to generate ADU reports:

- Use 'ssa -diag -f <filename>' to generate a full Diagnostics Report .
- Run as Administrator/root

For VMware from a local host, execute the following commands to show detailed physical disk information:

- ESXi 5.5 -> /opt/hp/hpssacli/bin/hpssacli ctrl slot=0 pd all show detail
- ESXi 6.5 -> /opt/smartstorageadmin/ssacli/bin/ssacli ctrl slot=0 pd all show detail

To capture ADU in VMware, SSA CLI must be installed on a vSphere client:

- Use the 'ssaduesxi' command from the client to generate wear gauge and ADU reports.
- Must specify sever to capture data from, user, password etc.
- From a client with vSphere CLI 6.5 and HPE SSA 3.10.3.0, execute the following command to collect the ADU report:
 - ssaduesxi --server=<host IP> --user=<user name> --password=<password> --thumbprint=<host thumbprint> --file=<ADUreport-name>.zip

For more details on installation, offline usage, configuration and more, consult the [HPE Smart Storage Administrator User Guide](#).