

# smartctl

## Display SMART info

```
smartctl -d sat --all /dev/sda
```

## Show Power\_On\_Hours

```
smartctl -d sat --all /dev/sda|grep "Power_On_Hours"
```

## Sample output

```
root@LORDAERON:/mnt/disk3/Docs3/Doco# smartctl -A -d marvell /dev/sda
smartctl version 5.37 [arm-none-linux-gnueabi] Copyright (C) 2002-6 Bruce
Allen
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=== START OF READ SMART DATA SECTION ===
SMART Attributes Data Structure revision number: 16
Vendor Specific SMART Attributes with Thresholds:
ID# ATTRIBUTE_NAME          FLAG     VALUE WORST THRESH TYPE      UPDATED
WHEN_FAILED RAW_VALUE
  1 Raw_Read_Error_Rate     0x002f   200   200   051   Pre-fail Always
-       33
  3 Spin_Up_Time            0x0027   204   174   021   Pre-fail Always
-       4758
  4 Start_Stop_Count        0x0032   100   100   000   Old_age  Always
-       337
  5 Reallocated_Sector_Ct   0x0033   200   200   140   Pre-fail Always
-         0
  7 Seek_Error_Rate         0x002e   200   195   000   Old_age  Always
-         0
  9 Power_On_Hours          0x0032   017   017   000   Old_age  Always
-       60797
 10 Spin_Retry_Count        0x0032   100   100   000   Old_age  Always
-         0
 11 Calibration_Retry_Count 0x0032   100   100   000   Old_age  Always
-         0
 12 Power_Cycle_Count       0x0032   100   100   000   Old_age  Always
-       337
192 Power-Off_Retract_Count 0x0032   200   200   000   Old_age  Always
-       334
193 Load_Cycle_Count       0x0032   200   200   000   Old_age  Always
-         2
```

```

194 Temperature_Celsius      0x0022   105   098   000   Old_age  Always
-         45
196 Reallocated_Event_Count  0x0032   200   200   000   Old_age  Always
-         0
197 Current_Pending_Sector  0x0032   200   200   000   Old_age  Always
-         0
198 Offline_Uncorrectable   0x0030   100   253   000   Old_age  Offline
-         0
199 UDMA_CRC_Error_Count    0x0032   200   200   000   Old_age  Always
-         0
200 Multi_Zone_Error_Rate    0x0008   100   253   000   Old_age  Offline
-         0

```

```

root@LORDAERON:/mnt/disk3/Docs3/Doco# smartctl -A -d marvell /dev/sdb
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```

=== START OF READ SMART DATA SECTION ===

SMART Attributes Data Structure revision number: 16

Vendor Specific SMART Attributes with Thresholds:

ID#	ATTRIBUTE_NAME	FLAG	VALUE	WORST	THRESH	TYPE	UPDATED
WHEN_FAILED	RAW_VALUE						
1	Raw_Read_Error_Rate	0x002f	200	200	051	Pre-fail	Always
-	0						
3	Spin_Up_Time	0x0027	187	180	021	Pre-fail	Always
-	5633						
4	Start_Stop_Count	0x0032	100	100	000	Old_age	Always
-	316						
5	Reallocated_Sector_Ct	0x0033	200	200	140	Pre-fail	Always
-	0						
7	Seek_Error_Rate	0x002e	200	200	000	Old_age	Always
-	0						
9	Power_On_Hours	0x0032	024	024	000	Old_age	Always
-	56139						
10	Spin_Retry_Count	0x0032	100	100	000	Old_age	Always
-	0						
11	Calibration_Retry_Count	0x0032	100	100	000	Old_age	Always
-	0						
12	Power_Cycle_Count	0x0032	100	100	000	Old_age	Always
-	316						
192	Power-Off_Retract_Count	0x0032	200	200	000	Old_age	Always
-	315						
193	Load_Cycle_Count	0x0032	200	200	000	Old_age	Always
-	0						
194	Temperature_Celsius	0x0022	105	098	000	Old_age	Always
-	45						
196	Reallocated_Event_Count	0x0032	200	200	000	Old_age	Always
-	0						
197	Current_Pending_Sector	0x0032	200	200	000	Old_age	Always
-	0						

```

198 Offline_Uncorrectable 0x0030 100 253 000 0ld_age Offline
- 0
199 UDMA_CRC_Error_Count 0x0032 200 200 000 0ld_age Always
- 0
200 Multi_Zone_Error_Rate 0x0008 100 253 000 0ld_age Offline
- 0

```

```

root@LORDAERON:/mnt/disk3/Docs3/Doco# smartctl -A -d marvell /dev/sdc
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```

=== START OF READ SMART DATA SECTION ===

SMART Attributes Data Structure revision number: 16

Vendor Specific SMART Attributes with Thresholds:

ID#	ATTRIBUTE_NAME	FLAG	VALUE	WORST	THRESH	TYPE	UPDATED
1	Raw_Read_Error_Rate	0x002f	200	200	051	Pre-fail	Always
-	0						
3	Spin_Up_Time	0x0027	178	174	021	Pre-fail	Always
-	6083						
4	Start_Stop_Count	0x0032	100	100	000	0ld_age	Always
-	306						
5	Reallocated_Sector_Ct	0x0033	200	200	140	Pre-fail	Always
-	0						
7	Seek_Error_Rate	0x002e	200	200	000	0ld_age	Always
-	0						
9	Power_On_Hours	0x0032	040	040	000	0ld_age	Always
-	44500						
10	Spin_Retry_Count	0x0032	100	100	000	0ld_age	Always
-	0						
11	Calibration_Retry_Count	0x0032	100	100	000	0ld_age	Always
-	0						
12	Power_Cycle_Count	0x0032	100	100	000	0ld_age	Always
-	306						
192	Power-Off_Retract_Count	0x0032	200	200	000	0ld_age	Always
-	305						
193	Load_Cycle_Count	0x0032	200	200	000	0ld_age	Always
-	1						
194	Temperature_Celsius	0x0022	104	097	000	0ld_age	Always
-	46						
196	Reallocated_Event_Count	0x0032	200	200	000	0ld_age	Always
-	0						
197	Current_Pending_Sector	0x0032	200	200	000	0ld_age	Always
-	0						
198	Offline_Uncorrectable	0x0030	100	253	000	0ld_age	Offline
-	0						
199	UDMA_CRC_Error_Count	0x0032	200	200	000	0ld_age	Always
-	0						
200	Multi_Zone_Error_Rate	0x0008	100	253	000	0ld_age	Offline
-	0						

```

root@LORDAERON:/mnt/disk3/Docs3/Doco# smartctl -A -d marvell /dev/sdd
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```

```

=== START OF READ SMART DATA SECTION ===
SMART Attributes Data Structure revision number: 16
Vendor Specific SMART Attributes with Thresholds:
ID# ATTRIBUTE_NAME          FLAG     VALUE WORST THRESH TYPE      UPDATED
WHEN_FAILED RAW_VALUE
  1 Raw_Read_Error_Rate     0x002f   200   200   051   Pre-fail Always
-         0
  3 Spin_Up_Time            0x0027   179   178   021   Pre-fail Always
-         6025
  4 Start_Stop_Count        0x0032   100   100   000   Old_age  Always
-         303
  5 Reallocated_Sector_Ct   0x0033   200   200   140   Pre-fail Always
-         0
  7 Seek_Error_Rate         0x002e   200   200   000   Old_age  Always
-         0
  9 Power_On_Hours          0x0032   029   029   000   Old_age  Always
-         52033
 10 Spin_Retry_Count        0x0032   100   100   000   Old_age  Always
-         0
 11 Calibration_Retry_Count 0x0032   100   100   000   Old_age  Always
-         0
 12 Power_Cycle_Count       0x0032   100   100   000   Old_age  Always
-         303
192 Power-Off_Retract_Count 0x0032   200   200   000   Old_age  Always
-         302
193 Load_Cycle_Count        0x0032   200   200   000   Old_age  Always
-         1
194 Temperature_Celsius     0x0022   106   100   000   Old_age  Always
-         44
196 Reallocated_Event_Count 0x0032   200   200   000   Old_age  Always
-         0
197 Current_Pending_Sector  0x0032   200   200   000   Old_age  Always
-         0
198 Offline_Uncorrectable    0x0030   100   253   000   Old_age  Offline
-         0
199 UDMA_CRC_Error_Count     0x0032   200   200   000   Old_age  Always
-         0
200 Multi_Zone_Error_Rate    0x0008   100   253   000   Old_age  Offline
-         0

```

### References

Hard Drive Temperature Monitoring using Smartctl and RRDTOOL on Buffalo Linkstation Quad Pro NAS - <https://josephlo.wordpress.com/2011/04/26/installing-rrdtool-on-buffalo-quad-pro/>

[LinkStation, QNAP, commands]

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