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## What are the ONTAP maintenance mode commands

[https://kb-stage.netapp.com/on-prem/ontap/Ontap\\_OS/OS-KBs/What\\_are\\_the\\_ONTAP\\_maintenance\\_...](https://kb-stage.netapp.com/on-prem/ontap/Ontap_OS/OS-KBs/What_are_the_ONTAP_maintenance_...)

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### Applies to

- ONTAP 9
- Maintenance Mode

### Answer

The ONTAP maintenance mode is used for low level commands where there is only a rudimentary kernel loaded and no disk I/O is active.

There are (2) ways to boot into the ONTAP Maintenance mode.

- First, on boot, you can hit the Ctrl-C key sequence:

```
All rights reserved.
*****
* Press Ctrl-C for Boot Menu. *
*****
.
.
^CBoot Menu will be available.
```

then select Option 5 from the Boot Menu

```
(5) Maintenance mode boot.
```

- The second is to boot directly into maintenance mode with

```
LOADER> boot_ontap maint
```

The complete list of commands available, current as of ONTAP 9.16.1:

```
You have selected the maintenance boot option:
the system has booted in maintenance mode allowing the following
operations to be performed:
```

```

?                acorn
acpadmin          aggr
batch_snap       bootargs
cdpd              cna_flash
coredump_save    coredump_show
coredump_zero    disk
disk_list        disk_shelf
diskcopy         disktest
dumpblock        environment
fctest           fru_led
ha-config        halt
help             ifconfig
iftp             led_off
led_on           lldp
nicadmin          nv8
psmadmin         raid_config
sasadmin         sasstat
scsi              sldiag
storage          stsb
sysconfig        systemshell
ucadmin          version
vlist            vmdisk_object_store
vmsservices      vol
vol_db
```

```
Type "help <command>" for more details.  
*>
```

For some of the more commonly used commands, their details are as follows:

```
*> aggr
```

```
The following commands are available; for more information  
type "aggr help <command>"
```

```
clear_rpbits          options          rename  
snaprestore_cancel  
destroy              quota_off          restrict          status  
offline              read_fsid          rewrite_fsid      undestroy  
online                rebuildtree
```

```
*> disk
```

```
usage: disk <options>
```

```
Options are:
```

```
    assign {<disk_name> | all | [-T <storage type> | -shelf <shelf  
name>] [-n <count>] | auto} [-p <pool>] {[ -o <ownername>] [-s <sysid>] |  
[-copy-ownership-from <disk-name>]} [-c block|advanced_zoned] [-P storage-  
pod-uuid] [-f] - assign a disk to a filer or all unowned disks by  
specifying "all" or <count> number of unowned disks
```

```
    ddr_label {repair | print | delete | dumpraw | rm_qualtable |  
modify [-c] -o <offset> -v <value> | start_scan | pause_scan | resume_scan  
| error_scan | rediscover | reinit } [-f] [-d all | <disk_list>]
```

```
    dumpevents { sanown | config_checker | raid } - Dumps the  
sanown/config-checker/raid event queue since boot
```

```
    encrypt { destroy | display | lock | rekey | rekey_fips |  
revert_original | sanitize | show | show_fips | show_standards } - perform  
tasks specific to self-encrypting disks
```

```
    partition { { -n { 2 | 3 } [-u <pool_uuid>] } | { -n  
<num_parts> -u <pool_uuid> } } [-i <part_idx> -b <raw_blks>].. <disk_name>  
- partition a disk
```

```
    power_cycle [ -f ] { [-d <disk_list>] | [ -c  
<channel_name> [ -s <shelf_number> ] ] } - power-cycle one or more disks
```

```
    reassign {-s <old_sysid>} [-d <new_sysid>] [-p  
<partner_sysid>] [-r <dr-partner-sysid> ] - reassign disks from old filer
```

```
        remove_ownership [<disk_name> | all | -s <sysid>] [-f] -
revert/remove disk ownership
        sanitize { start | abort | status | release } - sanitize one or
more disks (9.5+)
        sanown_stats {start| stop| show }- collect sanown event stats
        show [-o <ownername> | -s <sysid> | -n | -v | -a | -m | -p | -w |
-S <disk_serialno> | -c <cluster_disk_name> ] - lists disks and owners
        unfail [-s] <disk_name>      - unfail a disk (-s not valid in
maintenance mode)
        unpartition {<disk_name> | all} - unpartition a partitioned disk
or unpartition all the partitioned disks
        visible_all - Make disks visible for assimilation
```

```
*> diskcopy
```

usage:

```
diskcopy -s <source-disk-name> -d <destination-disk-name>
```

```
diskcopy -i -s <source-disk-name> -d <destination-disk-name> to invoke
skip mode immediately
```

```
use -n <sectors> option to use a default size different than 4096 sectors
```

```
use -o to do no retries of I/O's at the SCSI layer (USE WITH CAUTION!)
```

```
use -r <MB>, greater than 2MB to tune report size instead of using default
progress report for every 100MB
```

```
use -e <sector> specifies the ending sector for the copy. Defaults to the
last sector of the drive.
```

```
use -b <sector> specifies the starting sector for the copy. Defaults to
sector 0.
```

```
*> ha-config
```

Usage:

```
    ha-config modify { controller | chassis } { ha | non-ha | mcc | mcc-2n
|mcc-ip| default }
```

```
    ha-config show
```

```
*> storage
```

usage: storage <subcommand>

subcommands are:

```
    disable adapter <name>
```

```
    enable adapter <name>
```

```

    help <sub_command>
    nvmeof discovery add [ -s <source address> ] [ -p <target port> ]
[ -z <scope_id> ] <subsystem address>
    trace info { adapter [<adapter_name>] | device [<device_name>] |
ses_drv | disk_shelf [<disk_shelf_name>] | ses_proc | all }
    trace dump { adapter [<adapter_name>] | device [<device_name>] |
ses_drv | disk_shelf [<disk_shelf_name>] | ses_proc | all } -f <out_file>

rename switch <oldname> <newname>
release disks [ -f ]
release { mc | tape } <name>
shelf identify <shelf-name> { on | off }
show adapter [ -a ] [ <name> ]
show disk [ -a | -x | -p | -T ] [ <name> ]
show expander [ -a ] [ <expander-name> ]
show bridge [ -v ] [ <bridge-name> ]
show fabric
show fault [ -a ] [ -v ] [ <shelf-name> ]
show hub [ -a ] [ -e ] [ <hub-name> ]
show initiators [-a]
show mc [ <name> ]
show port [ <name> ]
show shelf [ -a ] [ -e ] [ <shelf-name> ]
show switch [ <name> ]
show tape [ <name> ]
show tape supported [ -v ]
show acp [ -a ]
show psm [ -a ] [ <psm-name> ]
stats tape <name>
stats tape zero <name>

power_cycle shelf -h
power_cycle shelf start [-f] -c <channel_name> [-s <shelf_id>]
power_cycle shelf complete

bridge log

storage port { show | modify -p <target port> -m { storage |
network } [ -f ] }

```

```
*>ucadmin modify -m <fc | cna> -t <initiator | target> -f <adapter_name>
```

Note that the -t parameter is only required for fc mode.

## Additional Information

- The system can boot into maintenance mode as long as the boot media has not failed or become corrupt.
- [What are the commands available from the LOADER prompt](#)