



# **ActiveAdmin CLI**

## **Reference Guide**

**Revision 0.8**

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## **Document Revision History**

<b>Revision</b>	<b>Date</b>	<b>Description</b>
1.0	January 2013	Initial release

## **Typographic Conventions**

The following typographic conventions are used in this document.

<b>courier bold text</b>	Indicates commands and keywords that you enter exactly as shown.
<b>&lt;xxx&gt;</b>	Angle brackets denote a descriptor that you must specify (without the angle brackets)
<b>[xxx]</b>	Square brackets enclose an optional item.
<b> </b>	A vertical bar indicates a choice within an optional or required set of items.
<b>&lt;xxx   yyy&gt;</b>	Angle brackets enclosing items separated by a vertical bar indicate a required choice.
<b>[xxx   yyy]</b>	Square brackets enclosing items separated by a vertical bar indicate an optional choice.
<b>[...]</b>	Square brackets with ellipsis indicate additional optional choices.

## Introduction

**activeadmin** is a command-line utility used to interact with an ActiveRAID or mRAID storage system. It allows you to display the status of system elements, change parameters, or update the configuration of the ActiveRAID or mRAID system.

The **activeadmin** utility can have one of several commands specified to display information from the ActiveRAID or mRAID system or to change the configuration of the ActiveRAID or mRAID system. The command might have additional options or actions, and the output of each command varies and is described below.

If a command is not specified, an interactive shell is entered, which allows several commands to be entered in a single session. While in the interactive shell, all commands are available.

## Usage

- a) From the Terminal prompt on Mac OS-X:  
`activeadmin [global-options] <command> [action] [...]`
- b) From within the Active Admin interactive shell:  
`<command> [action] [...]`

## Global Options

There are several options that may be provided as part of the command line. These options are as follows:

**-d | --device <address>**

Send commands to the ActiveRAID or mRAID system specified by <address>. The placeholder address "." will reuse the last ActiveRAID or mRAID system specified. The placeholder address "-" will interactively browse for an ActiveRAID or mRAID system.

**-f | --force**

Perform destructive actions without prompting for confirmation.

**-h | --help**

Display a verbose help message listing commands and options.

**-m | --monitor**

Use the monitoring account. By default, the administration account is used to access the ActiveRAID or mRAID system. For actions that return information and do not modify the configuration of the system, the monitoring account may be used.

**--password <password>**

Specify the account authentication <password> when accessing the ActiveRAID or mRAID system. The default behavior is to interactively acquire the password with a secure prompt.

## Available Commands

The following commands are supported by the **activeadmin** utility.

To get help on a specific command, enter: `activeadmin help <command>`

<a href="#">about</a>	<a href="#">drive</a>	<a href="#">host</a>	<a href="#">password</a>	<a href="#">stats</a>
<a href="#">array</a>	<a href="#">event</a>	<a href="#">identify</a>	<a href="#">peerpower</a>	<a href="#">time</a>
<a href="#">battery</a>	<a href="#">fc</a>	<a href="#">info</a>	<a href="#">quit</a>	<a href="#">ups</a>
<a href="#">beeper</a>	<a href="#">fwupdate</a>	<a href="#">ip</a>	<a href="#">shutdown</a>	
<a href="#">config</a>	<a href="#">group</a>	<a href="#">lun</a>	<a href="#">smtp</a>	
<a href="#">diag</a>	<a href="#">help</a>	<a href="#">multipath</a>	<a href="#">snmp</a>	

Table 1 – List of Available Commands

All of these commands are described in detail on the following pages. Click on the link for any command to jump directly to the description of that command.

## about

---

**Usage:** about

**Purpose:** To display the version and copyright information for the `activeadmin` utility, such as:

```
activeadmin, version 1.4 (154), Copyright © 2011-2012 Active Storage, Inc. All rights reserved.
```

**Available Actions:**

None.

**Available Parameters:**

None.

**Example:**

```
about
```

---

---

## array

---

---

**Usage:** array <action> [...]

**Purpose:** To display or manipulate array configurations.

### Available Actions:

**assign** <name> <controller>

Reassign the array named <name> to <controller>. Reassignment may not be possible when controller state is degraded. The array named <name> must already exist.

**create** <name> <drive> [-c | --controller <controller>]

Create a single-drive volume with the name <name> from <drive>. The single-drive volume can be assigned to a specific controller with the --controller option. The default assignment will be to the controller performing the creation. The volume named <name> must not already exist.

**create** <name> <size> <group> [-c | --controller <controller>] [--no-init] [--stripe-size <size>]

Create a volume with the name <name> and <size> on the named <group>. The volume can be assigned to a specific controller with the --controller option. The default assignment will be to the controller performing the creation. For volumes with a RAID level requiring initialization, background is the default. The --no-init option can be used to suppress background initialization. For volumes with a RAID level requiring stripes, the --stripe-size option can be used to adjust the default size. The array named <name> must not already exist.

**delete** <name>

Delete the array named <name>, along with any associated LUNs. The array named <name> must already exist.

**list** [<name>]

Display the array named <name>, or all configured arrays if no <name> is specified.

**name** <old-name> <new-name>

Rename the array named <old-name> to <new-name>. The array named <old-name> must already exist, and the array named <new-name> must not already exist.

### Available Parameters:

**<name>**

An array name representing a volume (case-sensitive).

**<controller>**

An ActiveRAID or mRAID controller. Valid controllers are "A" or "B".

**<drive>**

A drive specified by index. Valid drive indexes are the numbers in the range 1 - 16 representing drives in column order from top to bottom, left to right. Additionally, an enclosure index may be prepended to indicate a drive is relative to either the primary or expansion enclosure. The fully qualified drive index "4" would be "1:4" for the primary enclosure and "2:4" for the expansion enclosure. Multiple drives may be specified with lists "1,2,3", ranges "1-3" or combinations of both "1-2,4,5-6".

**<group>**

The name of the disk group in which to create the new volume.

**<size>**

The size of an array. Common suffixes may be used to specify a size in bytes, such as "512MB", "250GB", "1TB", etc. Additionally, some actions such as create, allow sizes to be expressed as percentages relative to their group size, such as "50%", "100%", etc.

**Examples:**

```
array assign my_array A
array assign "My Array" 100% DG0
array create my_array 2TB DG0 -c A --stripesize 250MB
array delete my_array
array delete "My Array"
array list
array list my_array
array name my_array new_array
```

## battery

---

**Usage:** battery <action> [...]

**Purpose:** To enable, disable, or display the Battery Backup Module information for a specific controller or for all available controllers.

### **Available Actions:**

**disable**

Disables the battery backup module support.

**enable**

Enables the battery backup module support.

**list** [<controller>]

Displays the battery backup module information for a specific <controller>, or all controllers if no <controller> is specified.

### **Available Parameters:**

<controller>

An ActiveRAID or mRAID controller. Valid controllers are "A" or "B".

### **Examples:**

```
battery disable
```

```
battery enable
```

```
battery
```

```
battery list
```

```
battery list A
```

```
battery list B
```

## beeper

---

**Usage:** `beeper <action>`

**Purpose:** To enable, disable, temporarily mute, or display the current state of the ActiveRAID or mRAID system beeper.

**Available Actions:**

**disable**

Disables the system beeper.

**enable**

Enables the system beeper.

**list**

Displays the system beeper state (enabled or disabled).

**mute**

Temporarily disables the beeper until the next restart.

**Available Parameters:**

None

**Examples:**

```
beeper disable
```

```
beeper enable
```

```
beeper
```

```
beeper list
```

```
beeper mute
```



## config

---

**Usage:** config <action> [...]

**Purpose:** To display or manipulate the ActiveRAID or mRAID system configuration. The following actions are supported by the config command.

### **Available Actions:**

#### **destroy**

Removes the current configuration. This will delete all configured JBODs, groups, arrays and LUNs.

#### **load <profile>**

Removes the current configuration, then load a new configuration from the file specified by <profile>.

#### **merge <profile> [--modify]**

Merges a new configuration from the file <profile> with the existing configuration. This action is non-destructive; the merge will not proceed if a resource conflict is found. The **--modify** option can be used to automatically remap drives, group names, array names and LUN mappings to avoid resource conflicts.

#### **save <profile> [--default] [--description <description>] [--name <name>] [--specific]**

Writes the current configuration to the file named <profile>. The placeholder file name "-" will redirect output to stdout. Items whose values are unchanged from their default values are suppressed by default. The **--default** option can be used to include items regardless of their value. Generated profiles will not contain a human readable description unless one is provided with the **--description** option. The human readable name will default to the base file name. The **--name** option can be used to provide a custom human readable name. Item values are represented generically by default. The **--specific** option will represent items with their specific values.

The generic representation for groups will use a simple count of drives and spares, whereas the specific representation will generate a list of drive and spare indexes. The generic representation for volumes will use a percentage based size relative to the group, whereas the specific representation will generate a byte size.

### **Available Parameters:**

#### **<description>**

A human-readable description of a profile that is generated when using the **save** action.

#### **<name>**

A human-readable name of a profile that is generated when using the **save** action.

### **Examples:**

```
config destroy
config load my_profile_name
config merge my_profile_name
config merge my_profile_name --modify
config save my_profile_name
config save my_profile_name --default
config save my_profile_name --description my_description
config save my_profile_name --name my_name
config save my_profile_name --specific
```

## diag

---

**Usage:** `diag <action>`

**Purpose:** To collect system diagnostic information for Active Storage support personnel.

**Available Actions:**

`download`

Download diagnostic information and save it to your local disk as a file named: "**diagnostics.bin**".

**Available Parameters:**

None

**Example:**

`diag download`

## drive

---

**Usage:** `drive <action> [...]`

**Purpose:** To display or manipulate drive configurations.

### **Available Actions:**

`destroy <drive>`

Destroy group membership information for <drive> and reset it to an unused state.

`list [<drive>]`

Display the <drive> information. If the <drive> is not specified, information for all drives is displayed.

`spare create <drive>`

Designate the <drive> as a global spare. The <drive> must be an unused drive.

`spare delete <drive>`

Remove the designated spare status of <drive>, whether local or global, and reset the drive to an unused state.

### **Available Parameters:**

`<drive>`

A drive specified by index. Valid drive indexes are the numbers in the range 1 - 16 representing drives in column order from top to bottom, left to right. Additionally, an enclosure index may be prepended to indicate a drive is relative to either the primary or expansion enclosure. The fully qualified drive index "4" would be "1:4" for the primary enclosure and "2:4" for the expansion enclosure. Multiple drives may be specified with lists "1,2,3", ranges "1-3" or combinations of both "1-2,4,5-6".

### **Examples:**

```
drive destroy 1
```

```
drive destroy all
```

```
drive list
```

```
drive list 1:4
```

```
drive spare create 16
```

```
drive spare delete 16
```

## event

---

**Usage:** `event <action> [...]`

**Purpose:** To display or clear the contents of the event log, configure which events are entered into the event log, or generate test entries in the event log.

### Available Actions:

**clear**

Erase the contents of the event log.

**list <severity>**

Display the event log. All events will be displayed if **<severity>** is not specified, otherwise the events at or above the **<severity>** level will be displayed.

**test <severity>**

Generate a test event with the **<severity>** level.

**threshold <severity>**

Set the event log threshold to **<severity>**, defining the level at or above which events will be logged. If **<severity>** is not specified, the current event log threshold will be displayed.

### Available Parameters:

**<severity>**

An event severity level. Valid severity levels are "info", "notice", "warning", "error", and "fatal".

### Examples:

```
event clear
event list
event list error
event list fatal
event test info
event threshold
event threshold error
```

**Usage:** `fc <action> [...]`

**Purpose:** To display or modify the configuration of the Fibre Channel data ports.

**Available Actions:**

`list [<port>]`

Display the Fibre Channel information for `<port>`, or all available ports if `<port>` is not specified.

`loopid <port> <id>`

Set the hard loop `<id>` for a Fibre Channel `<port>`. Valid loop IDs are "0" - "125" or the placeholder loop ID "auto", which will automatically determine the loop ID. Changes to this setting will not take effect until after the system is restarted.

`mode <port> <mode>`

Set the connection `<mode>` for a Fibre Channel `<port>`. Valid modes are "loop" (arbitrated loop), "fabric" or the placeholder mode "auto", which will automatically negotiate the connection mode. Changes to this setting will not take effect until after the system is restarted.

`rate <port> <rate>`

Set the preferred data `<rate>` for a Fibre Channel `<port>`. Valid data rates are "1", "2", "4", "8" (Gbps) or the placeholder rate "auto", which will automatically negotiate the data rate. Changes to this setting will not take effect until after the system is restarted.

`scan [<port>]`

Scan the Fibre Channel network on `<port>`, or all available ports if `<port>` is not specified, and display the WWNNs and WWPNS for any detected hosts.

`wwnn <strategy>`

Set the Fibre Channel World Wide Node Name `<strategy>`. Valid strategies are "distinct" or "identical". Changes to this setting will not take effect until after the system is restarted.

**Available Parameters:**

`<port>`

A Fibre Channel port. Valid Fibre Channel ports are "A1", "A2", "A3" or "A4" on controller A, and "B1", "B2", "B3" or "B4" on controller B, depending on the number of physical ports on the controller. Multiple ports may be specified with lists "A1,A2", ranges "A1-B4" or combinations of both "A1-A3,B1".

**Examples:**

```
fc list
fc list A1
fc list A1-A2
fc loopid A1 3
fc loopid A2 auto
fc mode A1 fabric
fc rate A1 4
fc scan
fc scan A1
fc wwn distinct
fc wwn identical
```

## fwupdate

---

**Usage:** `fwupdate <firmware-bundle> [--bootrom] [--controller] [--jbod] [--online] [--overwrite] [--restore-defaults]`

**Purpose:** To update the boot ROM, RAID controller and JBOD expansion enclosure firmware from `<firmware-bundle>`. Firmware updates will not take effect until after the system is restarted. All available updates in the firmware bundle are applied by default if they are newer. For systems with dual RAID controllers, both controllers are updated simultaneously. Firmware bundles ending in **SC** are to be used with single-controller products only (such as: AC16SFC01**SC**-ActiveRAIDUpdate.1.40.firmwarebundle).

### **Available Parameters:**

#### **<firmware-bundle>**

A package of various firmware elements that can be applied to your Active Storage system. The firmware bundle can be downloaded from Active Storage's Support Portal at <http://support.activestorage.com>

#### **--bootrom**

Used to selectively update the Boot ROM only.

#### **--controller**

Used to selectively update the RAID Controller firmware only.

#### **--jbod**

Used to selectively update the Expansion Enclosure firmware only.

#### **--overwrite**

Used to explicitly force a downgrade to an older version (to be used only if so directed by an Active Storage support specialist).

#### **--online**

Used to update controllers sequentially so that one always remains online and active. This takes more time but prevents service from being interrupted. Online updates are not possible when updating the boot ROM or a JBOD expansion enclosure.

#### **--restore-defaults**

Used to reset the saved configuration in non-volatile RAM back to factory defaults as part of a firmware update. Online updates are not possible when restoring defaults. This will reset all passwords, IP address configuration, etc., but will not affect drives, groups, arrays, etc., so no data will be lost.

### **Examples:**

```
fwupdate AC48FCS04-mraid.update
fwupdate AC48FCS04-mraid.update --bootrom
fwupdate AC48FCS04-mraid.update --controller
fwupdate AC48FCS04-mraid.update --controller --online
fwupdate AC48FCS04-mraid.update --restore-defaults
fwupdate AC48FCS04-mraid.update --overwrite
```

---

---

## group

**Usage:** `group <action> [...]`

**Purpose:** To display or manipulate disk group configurations.

### Available Actions:

**create** `<group-name> <RAID-level> <drives> [<spares>]`

Create a disk group named `<group-name>` with the drives specified by `<drives>` and `<RAID-level>`. Spare drives local to the disk group may also be specified with `<spares>`, however they are not recommended in favor of global spares.

**delete** `<group-name>`

Delete the disk group named `<group-name>`, along with any associated arrays and LUNs.

**list** [`<group-name>`]

Display the disk group named `<group-name>`, or all configured disk groups if no `<group-name>` is specified.

**name** `<old-name> <new-name>`

Rename the disk group named `<old-name>` to `<new-name>`.

**priority** `<group-name> <priority>`

**priority** `<group-name> [--init <priority>] [--rebuild <priority>]`

Set the task priority for the disk group named `<group-name>` to `<priority>`. The `--init` and `--rebuild` options can be used to select which task types to re-prioritize, otherwise all task types will be re-prioritized.

**recover** [`<group-name>`]

Recover disassociated drives from the disk group named `<group-name>`, or all configured groups if no `<group-name>` is specified.

### Available Parameters:

`<drives>`, `<spares>`

A drive specified by index. Valid drive indexes are the numbers in the range 1 - 16 representing drives in column order from top to bottom, left to right. Additionally, an enclosure index may be prepended to indicate a drive is relative to either the primary or expansion enclosure. The fully qualified drive index "4" would be "1:4" for the primary enclosure and "2:4" for the first expansion enclosure. Multiple drives may be specified with lists "1,2,3", ranges "1-3" or combinations of both "1-2,4,5-6".

`<priority>`

A task priority level. Valid task priorities are "low", "medium", "high" and "realtime".

`<RAID-level>`

The RAID level specifies how disks are to be used by the group. RAID 0 requires 2 or more drives and stripes data across them, increasing speed at the cost of reliability. RAID 1 requires 2 or more drives and mirrors data across them, increasing reliability with each additional drive. RAID 5 requires 3 or more drives and stripes data across them with parity, increasing reliability and protecting against the loss of any single drive. RAID 6 requires 4 or more drives and stripes data across them with double parity, increasing reliability and protecting against the loss of any two drives. A RAID level may be specified as "RAID 0", "RAID-0", "R0" or just "0". Valid RAID levels are 0, 1, 5 and 6. If another RAID level is required, please contact Active Storage support for custom configuration instructions.

### Examples:

```
group list
group create my_raid 1 1-2
group create "My RAID" 5 1-16
group delete all
group name my_raid my_new_raid
```

## help

---

**Usage:** `help <action | command>`

**Purpose:** To display a brief description of the `activeadmin` utility usage, or of the `<command>` if specified.

### **Available Actions:**

`command`

Any of the available commands listed in Table 1.

`manpage [--install]`

Display a comprehensive help document in the manual page format.

### **Available Parameters:**

`--install`

The `--install` option can be used to install or update the "`activeadmin.1`" manual page, which can be viewed with the built-in "`man`" command line utility. Installation requires administrative privileges equivalent to those provided by the "`sudo`" command line utility.

### **Examples:**

```
help manpage
```

```
help manpage --install
```

```
help array
```



## host

---

**Usage:** `host <action> [...]`

**Purpose:** To display or manipulate host name mappings.

### **Available Actions:**

`create <host> <wwpn>`

Create a host name mapping named `<host>` for the World Wide Port Name `<wwpn>`. Host name mappings are optional.

`delete <host>|<wwpn>`

Delete the host name mapping named `<host>` or containing `<wwpn>`.

`list [<host>|<wwpn>]`

Display the host name mapping named `<host>` or containing `<wwpn>`, or all configured host name mappings if `<host>` or `<wwpn>` are not specified.

### **Available Parameters:**

`<host>`

The name of the host name mapping.

`<wwpn>`

A World Wide Port Name, or WWPN, is a 64-bit value assigned to a Fibre Channel port. WWPNs are specified with eight groups of two hexadecimal digits separated by colons (:), e.g. "10:00:00:06:2B:1A:87:38".

### **Examples:**

```
host create my_host_name 10:00:00:06:2B:1A:87:38
host delete my_host_name
host delete 10:00:00:06:2B:1A:87:38
host list
host list my_host_name
host list 10:00:00:06:2B:1A:87:38
```

## **identify**

---

**Usage: identify**

**Purpose:** To uniquely identify an ActiveRAID or mRAID system by causing all the LEDs on its front and back to blink. To stop the enclosure identification, issue the “**identify**” command again.

**Available Actions:**

None.

**Available Parameters:**

None.

**Example:**

**identify**

## info

---

### Usage: info

**Purpose:** To display detailed information about the RAID controllers and the host hardware and operating system, such as:

```
Controller A
Model Name: AC48SFC04
Serial Number: 0013100203500023100
Firmware Version: 02.01.04
BootROM Version: 0.5

Controller B
Model Name: AC48SFC04
Serial Number: 0014700203500023100
Firmware Version: 02.01.04
BootROM Version: 0.5

Host
OS Version: Mac OS X 10.7.5 (Build 11G56)
```

### Available Actions:

None.

### Available Parameters:

None.

### Example:

```
info
```

## ip

---

**Usage:** ip <action> [...]

**Purpose:** To display or manipulate the network (IP) configuration of the Management Port.

### **Available Actions:**

**list** [<port>]

Display the ethernet <port> IP configuration, or all IP configurations if no <port> is specified.

**set** <port> dhcp [<dns-server-addr>]

Acquire the IP configuration for <port> from a DHCP server.

**set** <port> static <ip-addr> <subnet-mask> <router-addr> [<dns-server-addr>]

Manually assign the IP configuration for <port>.

### **Available Parameters:**

**<port>**

An Ethernet port. Valid Ethernet ports are "A1" on controller A, and "B1" on controller B. Multiple ports may be specified with a list "A1,B1" or range "A1-B1".

**dhcp**

Specify that DHCP (Dynamic Host Configuration Protocol) should be used to automatically obtain the IP address.

**static**

Specify that a static IP address should be set manually.

**<ip-addr>**

An IPv4 Ethernet Address in the form of "xx.xx.xx.xx"

**<subnet-mask>**

An IPv4 Subnet Mask in the form of "xx.xx.xx.xx"

**<router-addr>**

An IPv4 address of the network gateway or router, in the form of "xx.xx.xx.xx"

**<dns-server-addr>**

An IPv4 address of the Domain Name Server, in the form of "xx.xx.xx.xx"

### **Examples:**

```
ip list
```

```
ip list A1
```

```
ip set A1 dhcp 192.168.1.15
```

```
ip set A1 static 192.168.10.99 255.255.255.0 192.168.10.1 192.168.1.15
```

# lun

---

**Usage:** `lun <action> [...]`

**Purpose:** To display or manipulate the LUN mappings.

## **Available Actions:**

`list [<port>]`

Display the ethernet <port> IP configuration, or all IP configurations if no <port> is specified.

`create <lun> <array> <port> [<host>|<wwpn>, ...]`

`create --lun <lun> --array <array> --port <port> [--host <host>|<wwpn>, ...]`

Create a LUN mapping with the logical unit number <lun> and named <array> on the Fibre Channel <port>(s). The placeholder logical unit number "." will select the first available logical unit number.

Mappings are unmasked by default and are available to all hosts. Masked mappings, available only to specific hosts, are created by specifying a list of named <hosts> or <wwpns>.

`delete [--lun <lun>] [--array <array>] [--port <port>] [--host <host>|<wwpn>]`

Delete a LUN mapping or set of LUN mappings. Mappings are selected by filtering against the specified <lun>, <array>, <port> and masking <host> or <wwpn> criteria. All LUN mappings will be deleted if there is no criteria specified.

`list [--lun <lun>] [--array <array>] [--port <port>] [--host <host>|<wwpn>]`

Display a LUN mapping or set of LUN mappings. Mappings are selected by filtering against the specified <lun>, <array>, <port> and masking <host> or <wwpn> criteria. All LUN mappings will be displayed if no criteria are specified.

## **Available Parameters:**

**<array>**

An array name representing a single-drive or a volume.

**<host>**

A host name mapping for a <wwpn>.

**<lun>**

A logical unit number, or LUN. Valid LUNs are numbers in the range 0 - 127.

**<port>**

A Fibre Channel port. Valid Fibre Channel ports are "A1" and "A2" on controller A, and "B1" and "B2" on controller B. Multiple ports may be specified with lists "A1,A2", ranges "A1-B2" or combinations of both "A1-A2,B1" or A\* for all the ports in controller A and B\* for all the ports in controller B. For mRAID systems, there are additional FC ports A3 and A4 on controller A, and B3 and B4 on controller B

**<wwpn>**

A World Wide Port Name, or WWPN, is a 64-bit value assigned to a Fibre Channel port. WWPNs are specified with eight groups of two hexadecimal digits separated by colons (:), e.g. "10:00:00:06:2B:1A:87:38".

## **Examples:**

```
lun list
lun create 1 my_array A1
lun create "My Array" A1,A2
lun delete -lun 1
```

## multipath

---

**Usage:** `multipath <action> [...]`

**Purpose:** To display or manipulate the Multipath configuration.

### **Available Actions:**

`list [<port>]`

Display the IO multipath configuration.

`set <strategy> [--fcmode <mode>] [--fcwwnn <WWNN-strategy>]`

Change the IO multipathing <strategy> and associated Fibre Channel parameters. Valid strategies are "device" or "lun".

### **Available Parameters:**

`<mode>`

The Fibre Channel connection mode of either "**fabric**" or "**loop**"

`<port>`

A Fibre Channel port. Valid Fibre Channel ports are "**A1**", "**A2**", "**A3**" or "**A4**" on controller A, and "**B1**", "**B2**", "**B3**" or "**B4**" on controller B, depending on the number of physical ports on the controller. Multiple ports may be specified with lists "**A1,A2**", ranges "**A1-B4**" or combinations of both "**A1-A3,B1**".

`<strategy>`

Device level multipathing uses a Fibre Channel World Wide Node Name strategy of "**identical**", a Fibre Channel connection mode of "**fabric**" and a per-controller LUN affinity. Device level multipathing is required by Mac OS X 10.6 (and earlier).

LUN level multipathing uses a Fibre Channel World Wide Node Name strategy of "**distinct**", a Fibre Channel connection mode of "**fabric**" and requires symmetric LUN mappings.

An alternate Fibre Channel connection mode can be specified with the `--fcmode` option. Valid modes are as described by the '**fc mode**' command or the placeholder mode "**current**", which will reuse the current setting if possible.

An alternate Fibre Channel World Wide Node Name strategy can be specified with the `--fcwwnn` option. Valid WWNN strategies are as described by the '**fc wwnn**' command, or the placeholder strategy of "**current**", which will reuse the current setting if possible.

### **Examples:**

```
multipath list
```

```
multipath list A1
```

```
multipath list A1-B4
```

```
multipath set distinct --fcmode fabric
```

## password

---

**Usage:** `password <--monitor|--reset>`

**Purpose:** To change the password for the ActiveRAID or mRAID administrative or monitoring accounts.

**Available Actions:**

**--monitor**

Used to change the password for the monitoring account. The administrative account password is required to change the password for either account.

**--reset**

Used to reset a forgotten password. Resetting the password for the monitoring account requires the administration account password. The administration account password can only be reset to the factory default value and requires confirmation of the controller's Ethernet MAC address, which is visible on the rear panel of the Active Storage RAID controller module.

**Available Parameters:**

None.

**Examples:**

```
password --monitor
```

```
password --reset
```

```
password --monitor --reset
```

## peerpower

---

**Usage:** peerpower <action>

**Purpose:** Power off, power on or power reset the peer controller of an ActiveRAID or mRAID.

**Available Actions:**

**off**

Turn off the power to the peer controller.

**on**

Turn on the power to the peer controller.

**reset**

Turn off the peer controller, wait thirty (30) seconds, then turn the peer controller back on.

**Available Parameters:**

None.

**Examples:**

```
peerpower off
```

```
peerpower on
```

```
peerpower reset
```



## `quit`

---

**Usage:** `quit`

**Purpose:** To exit from the interactive shell of the `activeadmin` utility.

**Available Actions:**

None.

**Available Parameters:**

None.

**Example:**

`quit`

## shutdown

---

**Usage:** `shutdown [-c | --controller <controller>] [-r | --restart]`

**Purpose:** To shutdown and optionally restart the entire ActiveRAID or mRAID system, or to shutdown a specific controller.

**Available Actions:**

`-c | --controller <controller>`  
Shutdown a specific controller.

`-r | --restart`  
Restart the system after performing a shutdown.

**Available Parameters:**

`<controller>`  
An ActiveRAID or mRAID controller. Valid controllers are "A" or "B".

**Note:**

If no options are specified, both controllers will be shutdown by default.

**Examples:**

```
shutdown
shutdown -c A
shutdown --controller A
shutdown -r
shutdown --restart
```

---

---

## smtp

---

---

**Usage:** `smtp <action> [...]`

**Purpose:** Display, manipulate or test SMTP server configurations and notifications.

### **Available Actions:**

`notify create <email-address> [--severity <severity>]`

Create an SMTP event notifier with the recipient `<email-address>`. The optional e-mail notification threshold is specified by `<severity>`.

`notify delete <index>`

Delete the SMTP event notifier `<index>`.

`notify list [<index>]`

Display the SMTP event notifier `<index>`, or all notifiers if no `<index>` is specified.

`server create <SMTP-ID> <server> <email-account> [-p|--password <password>]  
[--port <port>] [--ssl]`

Create an SMTP server configuration for `<SMTP-ID>` with the host name `<server>` and sender account email address `<email-account>`. The sender address must be of the form `user@host`, without any additional or descriptive text. If authentication is required, a password can be specified with the `--password` option. The placeholder password "-" can be used to interactively acquire the password with a secure prompt. The port used to send email can be overridden with the `--port` option. The default port number is 587. SSL is enabled by the `--ssl` option. Enabling SSL changes the default port number to 485.

`server delete <SMTP-ID>`

Delete the SMTP server configuration `<SMTP-ID>`.

`server list [<SMTP-ID>]`

Display the SMTP server configuration `<SMTP-ID>`, or all configurations if no `<SMTP-ID>` is specified.

`server test <SMTP-ID> <email-address>`

Send a test email using the configuration `<SMTP-ID>` to the recipient `<email-address>`.

### **Available Parameters:**

`<email-address>`

The recipient's e-mail address in the format of "`xxx@xxxxxx.xxx`", with exactly one "@" character and at least one "." character after the "@" character.

`<index>`

The index of the SMTP event notifier (an integer number, such as 0, 1, 2, 3, etc.)

`<server>`

The host name of the SMTP server.

`<severity>`

An event at or above this severity level will send an email notification. Valid severity levels are "`notice`", "`warning`", "`error`", and "`fatal`". The default severity level is "`notice`". If not specified, the default severity level is "`notice`".

`<SMTP-ID>`

An SMTP server configuration identifier. Valid configuration identifiers are "1" or "primary", and "2" or "secondary".

**Examples:**

```
smtp notify create name@domain.com --severity error
smtp notify delete 0
smtp notify list
smtp server create 1 192.168.1.100 name@domain.com --password my_password
--port 587 --ssl
smtp server delete 1
smtp server list
smtp server list 1
smtp server test 1 name@domain.com --port 587
```

## snmp

---

**Usage:** `snmp <action> [...]`

**Purpose:** To display, manipulate or test SNMP trap notifications and the agent configuration.

### **Available Actions:**

**agent enable** [**<community>**] [--**port** **<port>**]

Enable the SNMP agent. The community the agent responds to may be specified as **<community>**. The default community is "**public**". The port the agent will listen on can be overridden with the **--port** option.

**agent disable**

Disable the SNMP agent.

**agent list**

Display the SNMP agent configuration and status. If no parameter for the **agent** action is specified, **list** is assumed.

**trap create** **<server>** [**<community>**] [--**severity** **<severity>**] [--**port** **<port>**] [--**version** **<version>**]

Create an SNMP trap notifier with the host name **<server>**. The trap community may be specified as **<community>**. The default community is "**public**".

The trap notification threshold can be specified with the **--severity** option. An event at or above this severity level will send a trap message. Valid severity levels are "**notice**", "**warning**", "**error**", and "**fatal**". The default severity level is "**notice**". The port used to send the trap message can be overridden with the **--port** option. The trap message version can be specified with the **--version** option.

**trap delete** **<index>**

Delete the SNMP trap notifier **<index>**.

**trap list** [**<index>**]

Display the SNMP trap notifier **<index>**, or display all notifiers if no **<index>** is specified.

**trap test** **<index>**

Send a test SNMP trap message using the notifier **<index>**.

### **Available Parameters:**

**<community>**

The name of the trap community. If not specified, the default community name is "**public**".

**<index>**

The index of the SNMP trap definition (an integer number, such as 0, 1, 2, 3, etc.)

**<port>**

The port number used to send the trap message. The default port number is 162.

**<server>**

The host name of the SNMP server.

**<severity>**

An event at or above this severity level will send an SNMP trap message. Valid severity levels are "**notice**", "**warning**", "**error**", and "**fatal**". The default severity level is "**notice**". If not specified, the default severity level is "**notice**".

**<version>**

The SNMP trap message version number. Valid version numbers are "**1**" or "**2c**". If not specified, the default version is "**2c**".

**Examples:**

```
snmp agent enable [<community>] [--port <port>]
snmp agent disable
snmp agent
snmp agent list
snmp trap create my_snmp_server
snmp trap create my_snmp_server public
snmp trap create my_snmp_server public --severity error
snmp trap create my_snmp_server public --severity error --port 161
snmp trap create my_snmp_server public --severity error --version 2c
snmp trap delete 2
snmp trap list
snmp trap list 2
snmp trap test 2
```

## stats

---

**Usage:** stats <action> [...]

**Purpose:** Configure or display the collection of operational statistics.

### **Available Actions:**

**enable** [<area>]

Enable the collection of operational statistics for <area>. If no <area> is specified, then all areas are enabled.

**disable** [<area>]

Disable the collection of operational statistics for <area>. If no <area> is specified, then all areas are disabled.

**list** [<area>]

Display operational statistics for <area>. If no <area> is specified, then all areas are listed.

**reset** [<area>]

Reset the collected operational statistics for <area>. If no <area> is specified, then all areas are reset.

**status**

Report the collection state of operational statistics for all areas.

### **Available Parameters:**

<area>

The portion of the system upon which to perform the statistics operation. Valid areas are "cache", "drive", "lun" and "port". Multiple areas may be specified by using a list, such as "lun,port". The placeholder area "all" can be used to denote all available areas. If an area is not specified, the default is to assume all areas.

### **Examples:**

```
stats enable
stats enable drive
stats enable all
stats disable
stats disable drive
stats disable all
stats list
stats list drive
stats list all
stats reset
stats reset drive
stats reset all
stats status
```

## time

---

**Usage:** `time <action> [...]`

**Purpose:** To display or set the date and time.

### **Available Actions:**

**list**

Display the current date and time. If action is specified, **list** is assumed.

**set [<time>] [--ntp <NTP-server>] [--zone <time-zone>]**

Set the date and time. The date and time can be set manually with a natural language string **<time>**. The placeholder string "**now**" will use the current date and time of the host. An NTP server can be configured to automatically update the date and time with the **--ntp** option. The time zone can be set manually with the **--zone** option. The default behavior will infer a time zone from either the **<time>** string or the host.

### **Available Parameters:**

**<time>**

A text string that represents the current date and time (such as "**Mon, Dec 31, 2012 12:33:00 GMT-0800**")

**<NTP-server>**

An IP address or hostname (such as "**time-a.nist.gov**") of a third-party NTP server.

**<time-zone>**

A text string that represents a time zone (such as "**America/Los\_Angeles**")

### **Examples:**

```
time
time list
time set "Dec 31, 2012 12:33:00"
time set 12:33:00
time set Monday
time set --ntp time-a.nist.gov
time set --zone America/Los_Angeles
```



## ups

---

**Usage:** `ups <action> [...]`

**Purpose:** To display or manipulate a directly attached UPS device configuration.

### **Available Actions:**

**enable**

Enable a UPS device that is directly attached to the ActiveRAID or mRAID system.

**disable**

Disable support for a directly attached UPS device.

**list**

Display the UPS device properties and status. A UPS device must be directly attached and enabled to display device properties. If no action is specified, **list** is assumed.

**set <property>**

Set the value of a configurable UPS device property. A UPS device must be directly attached and enabled to configure device properties.

### **Available Parameters:**

**<property>**

One of the following keywords and parameter values:

- **battery-changed** [**<date>**]  
The date the battery was last changed, in the format of “**yyyy/mm/dd**”. The current date will be used if **<date>** is not specified.
- **low-threshold** **<sec>**  
The lowest time remaining threshold after which the system will shutdown to prevent data loss.
- **power-off-delay** **<sec>**  
The amount of time the UPS will delay its power off after a shutdown has been initiated.
- **power-on-delay** **<sec>**  
The amount of time the UPS will delay its power on after the battery restart charge threshold has been reached.
- **restart-charge** **<%>**  
The percentage of battery charge required to power on and resume operation.

### **Examples:**

```
ups
ups enable
ups disable
ups list
ups set battery-changed
ups set battery-changed 2012/12/31
ups set low-threshold 180
ups set power-off-delay 120
ups set power-on-delay 300
ups set restart-charge 90
```