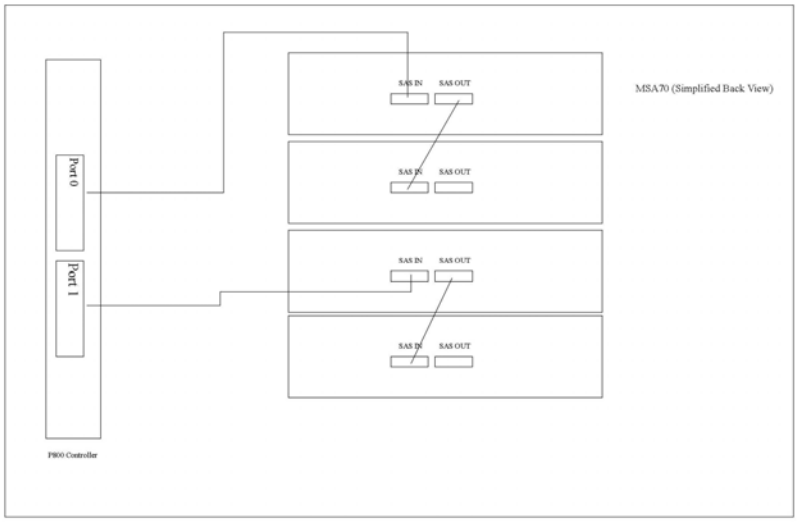
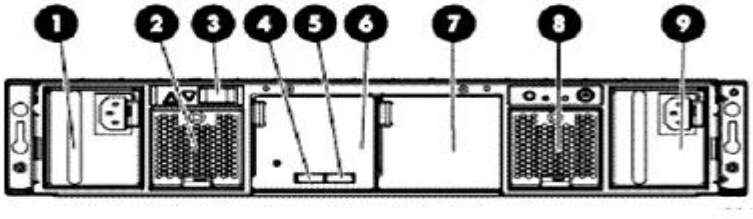
Configuration of Disk Arrays using HP Array Configuration Utility (ACU)

For HP SmartArray Raid Controllers

The P411 controllers each have 2 data ports. Each data port was connected to a single MSA70 Disk enclosure with 25 x 72GB 15K RPM SFF SAS disks. Each of the two enclosures was in in turn daisy chained to 1 more enclosure each, for a total of 4 enclosures perP411. This is shown in the next diagram:



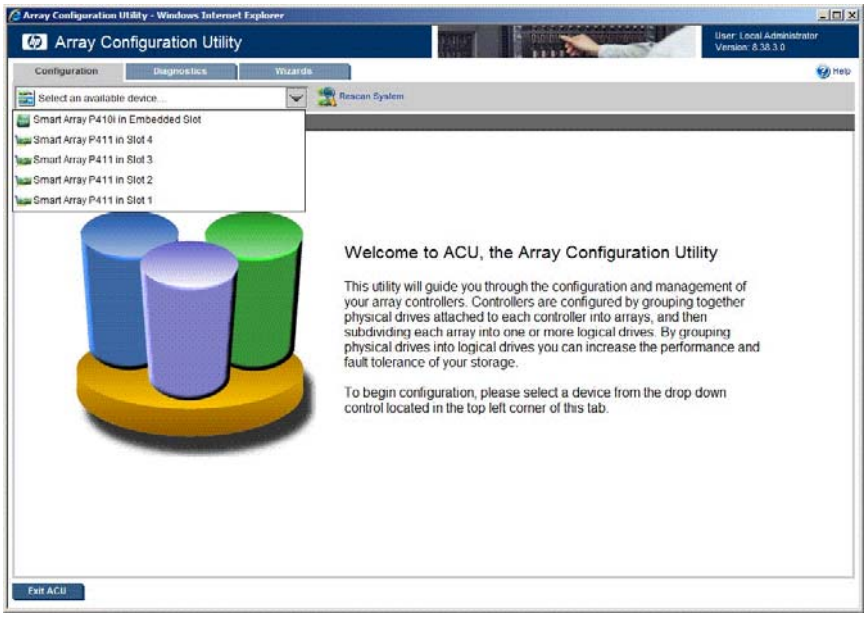
Here is a more complete diagram of the back of MSA70.



Rear Panel components

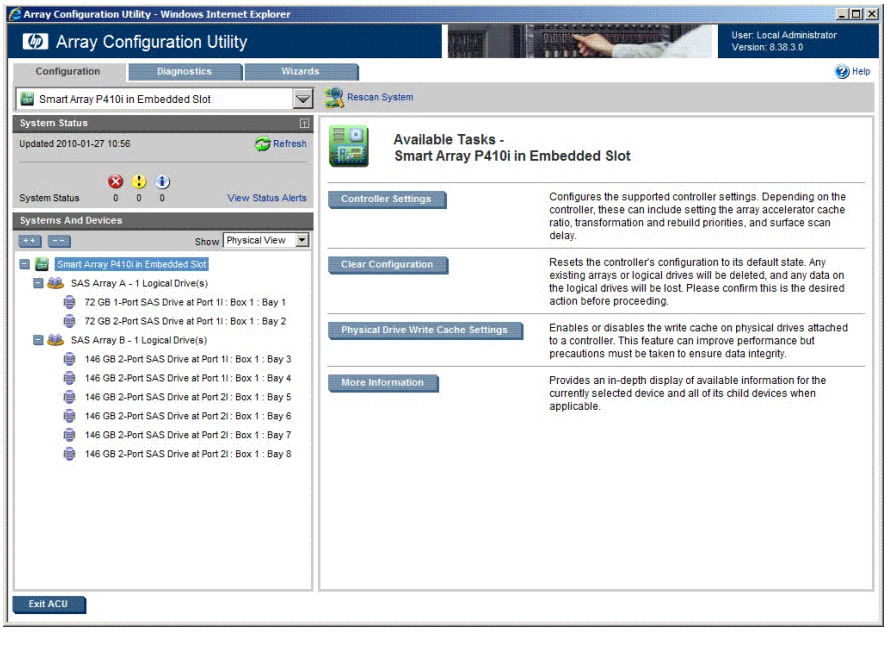
1. Power supply 1
2. Fan module 1
3. 7- segment display board
4. SAS in connector
5. SAS out connector
6. I/O module bay
7. I/O module bay
8. Fan module 2
9. Power supply 2

This configuration of 4 MSA70 per P411 was carried through for all 16 MSA70's. The



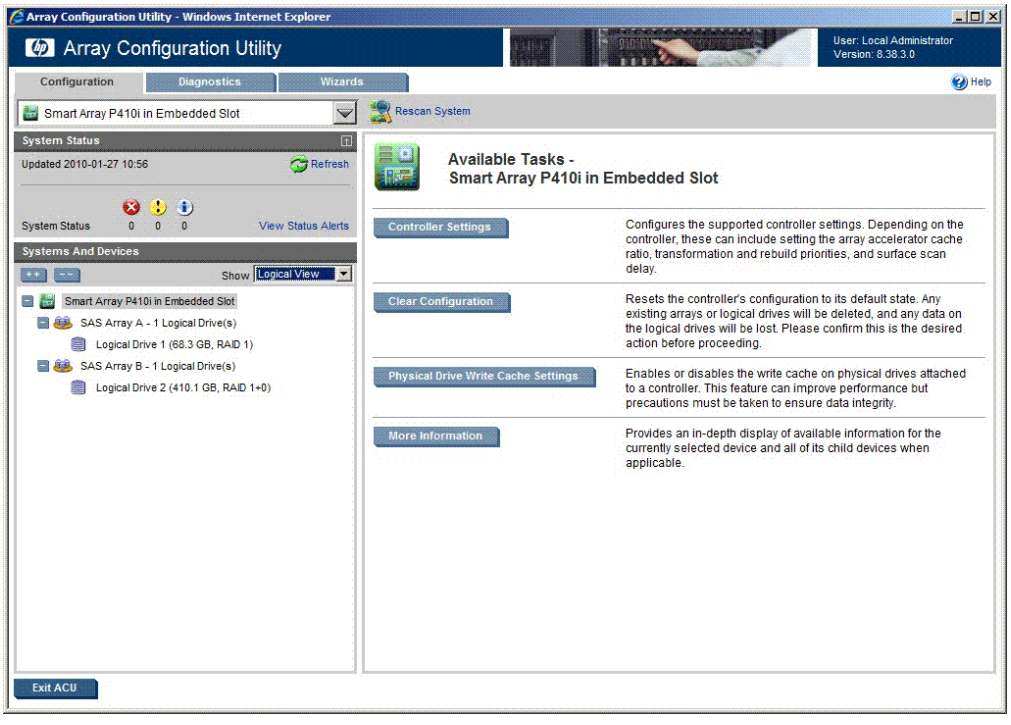
4 x 300 GB 15K SFF SAS log disks were on the internal bay slot 2 to 5 and connected to Port 0 of an HP P410i controller. The OS disks 2 x 72 GB 15K SFF SAS is also on the internal bay in slot 0 and 1.The Array Configuration Utility is then run to configure the RAID levels, disc arrays, etc.

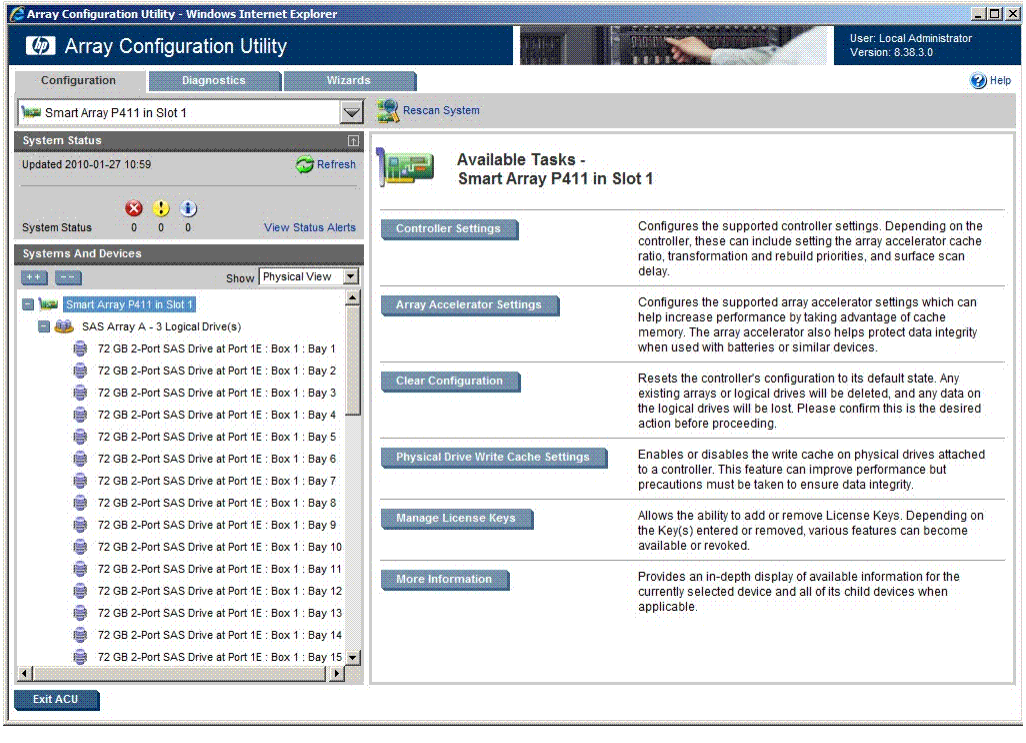
Select a controller from the left hand drop down list, click "Clear Configuration" from the right hand pane, the physical disks in the array will show. Click "save", then click "Create Array" Select the Array just created from the middle pane, then click "Create Logical Drive" in the right hand pane.

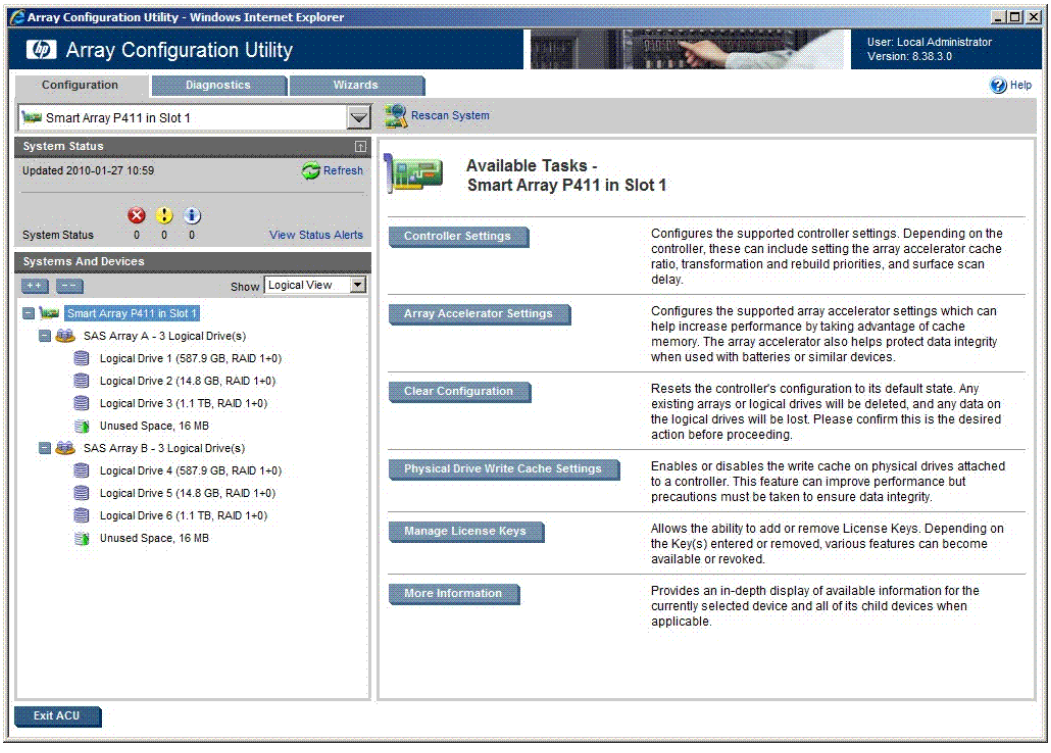
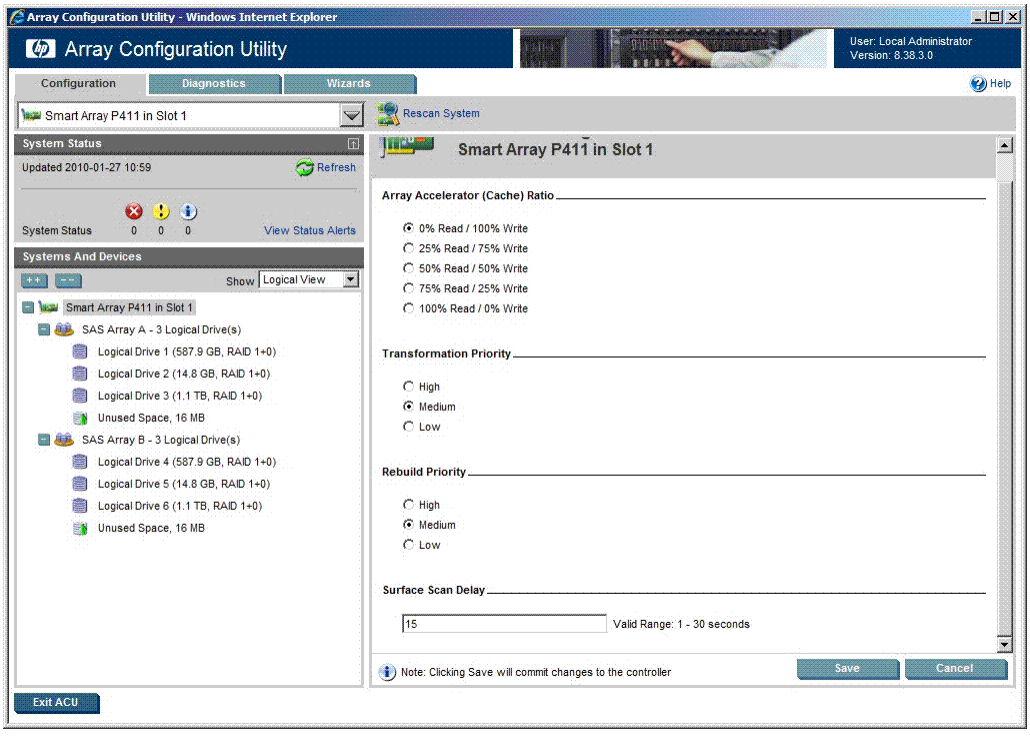


There are two options under Show window: Physical View and Logical View. The Physical View shows all drives with no logical information. The Logical View shows the logical drives information if there is one.

Some of the pictures shown here are meant to illustrate the how-to and not the exact size. For exact partition size, please refer to the FDR.


Array Configuration Utility - Windows Internet Explorer
Array Configuration Utility
User: Local Administrator
Version: 8.38.3.0
Configuration
Diagnostics
Wizards
Help
Smart Array P410i in Embedded Slot
Rescan System
System Status
Updated 2010-01-27 10:56
Refresh
System Status 0 0 0
View Status Alerts
Systems And Devices
Show Logical View
Smart Array P410i in Embedded Slot
SAS Array A - 1 Logical Drive(s)
Logical Drive 1 (68.3 GB, RAID 1)
SAS Array B - 1 Logical Drive(s)
Logical Drive 2 (410.1 GB, RAID 1+0)
Available Tasks -
Smart Array P410i in Embedded Slot
Controller Settings
Configures the supported controller settings. Depending on the controller, these can include setting the array accelerator cache ratio, transformation and rebuild priorities, and surface scan delay.
Clear Configuration
Resets the controller's configuration to its default state. Any existing arrays or logical drives will be deleted, and any data on the logical drives will be lost. Please confirm this is the desired action before proceeding.
Physical Drive Write Cache Settings
Enables or disables the write cache on physical drives attached to a controller. This feature can improve performance but precautions must be taken to ensure data integrity.
More Information
Provides an in-depth display of available information for the currently selected device and all of its child devices when applicable.
Exit ACU


Array Configuration Utility - Windows Internet Explorer
Array Configuration Utility
User: Local Administrator
Version: 8.38.3.0
Configuration
Diagnostics
Wizards
Help
Smart Array P411 in Slot 1
Rescan System
System Status
Updated 2010-01-27 10:59
Refresh
System Status 0 0 0
View Status Alerts
Systems And Devices
Show Physical View
Smart Array P411 in Slot 1
SAS Array A - 3 Logical Drive(s)
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 1
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 2
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 3
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 4
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 5
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 6
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 7
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 8
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 9
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 10
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 11
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 12
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 13
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 14
72 GB 2-Port SAS Drive at Port 1E : Box 1 : Bay 15
Available Tasks -
Smart Array P411 in Slot 1
Controller Settings
Configures the supported controller settings. Depending on the controller, these can include setting the array accelerator cache ratio, transformation and rebuild priorities, and surface scan delay.
Array Accelerator Settings
Configures the supported array accelerator settings which can help increase performance by taking advantage of cache memory. The array accelerator also helps protect data integrity when used with batteries or similar devices.
Clear Configuration
Resets the controller's configuration to its default state. Any existing arrays or logical drives will be deleted, and any data on the logical drives will be lost. Please confirm this is the desired action before proceeding.
Physical Drive Write Cache Settings
Enables or disables the write cache on physical drives attached to a controller. This feature can improve performance but precautions must be taken to ensure data integrity.
Manage License Keys
Allows the ability to add or remove License Keys. Depending on the Key(s) entered or removed, various features can become available or revoked.
More Information
Provides an in-depth display of available information for the currently selected device and all of its child devices when applicable.
Exit ACU



Click “Save” on right hand pane. Repeat the steps for the remaining disk controllers. For the log drive, configure as before for the DB Drives, except turn off the Logical Array Accelerator.