

Detailed about Symmetrix Architecture | Discuss about Symmetrix DMX Architecture

Architecture

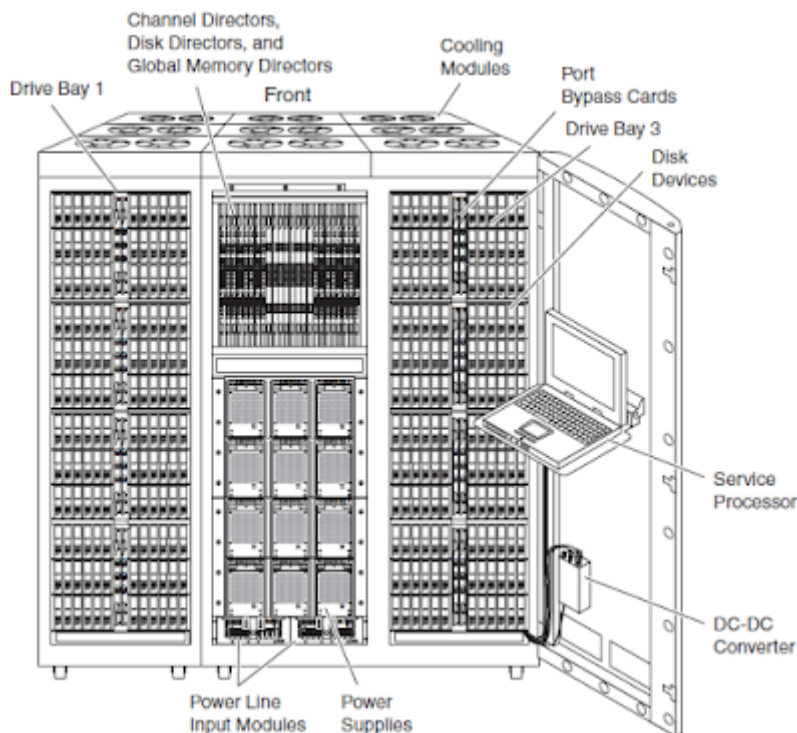
Hello All,

Today we will discuss about the EMC Symmetrix Architecture and about it's components. To have a look on the core elements of the Data Center (<http://www.sanadmin.net/2016/02/Information-Storage-Management.html>) click on the below link.

<http://www.sanadmin.net/2016/02/Information-Storage-Management.html>

(<http://www.sanadmin.net/2016/02/Information-Storage-Management.html>)

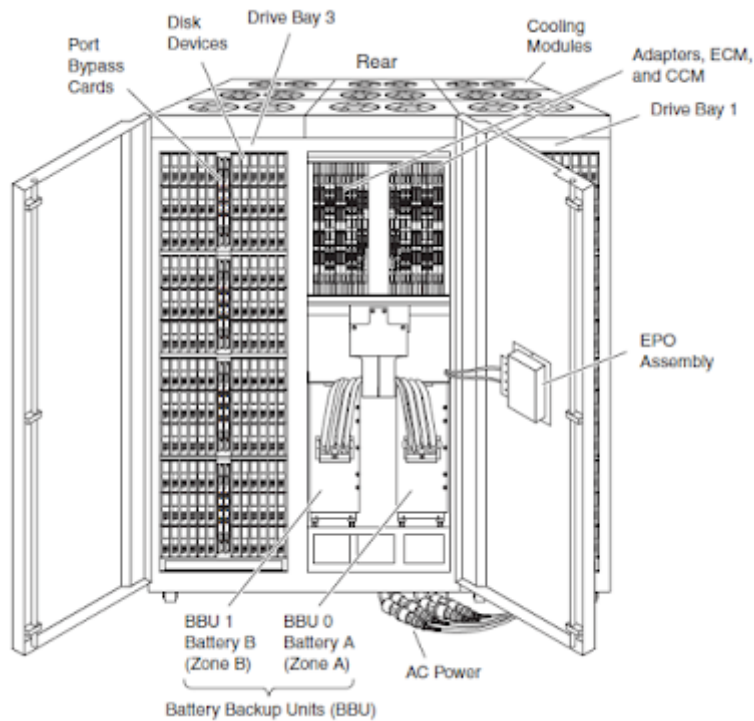
Components



(<https://1.bp.blogspot.com/->

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Symmetrix DMX



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Rear view of Symmetrix DMX

Description

- It is a high-end storage array.
- It is an active-active architecture.
- It has 24 directories. 8 - FA directories, 8 - DA directories and 8 - global directories.
- It will support up to 128 point-to-point serial connections.

System Bay (Front)

Fans
Card Cage
System Midplane
Air Intake
(8) 1800W Power Supplies
KVM
UPS
Server
(4) SPS trays (8) SPS



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Front View of System Bay

System Bay (Rear)

(16) 8-Port Adapters
(2) XCM Boards
(8) Power Supply Cords
(UPS) Uninterruptible Power Supply
(2) (PDP) Power Distribution Panel
(2) (PDU) Power Distribution Unit
(8) (SPS) Standby Power Supplies

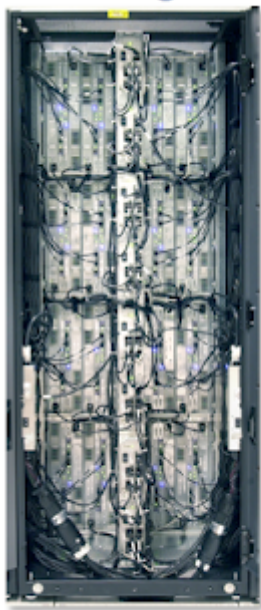


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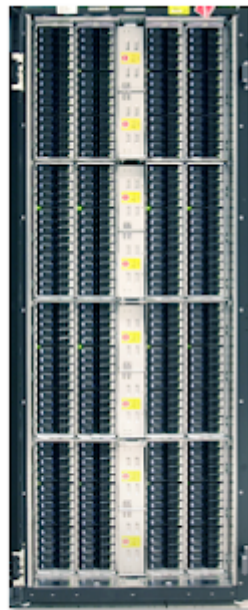
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Rear view of System Bay

- FA's are used for host i/o requests.
- DA's are used to communicate with the back-end disks.
- The DA's are connected through Link Control Cards (LCC).
- Each FA has 4 processors named as A, B, C and D and each processor has 2 ports named as 0 and 1.



Rear View



Front View

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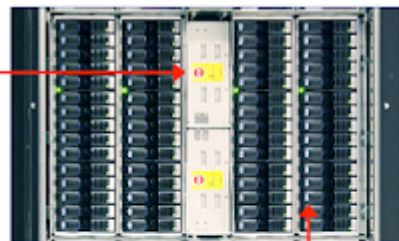
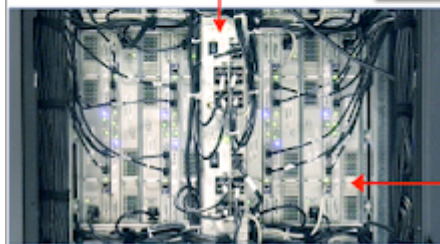
Image of DMX Array

Mohawk Storage Bay Pod

Front View

2 (SPS) Standby Power Supplies

Rear View

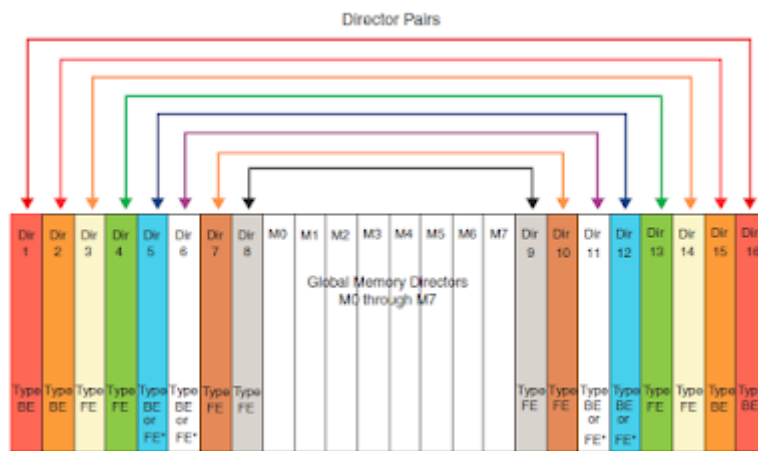


4 (DAE) Disk Array Enclosure

(<https://1.bp.blogspot.com/-14TrLX5rsoM/Vw5fKbccfMI/AAAAAAAAAB7o/1b5IKn7LROkkzU3CzN4zH9RjHIULzBgQg/s1600/205.PNG>)

Image of DAE & SPS

- The speed of the FA directories is 4 Gbps and the speed of the DA directories is 2 Gbps.
- The FA's directories are paired using rule 17 for redundancy.



(https://3.bp.blogspot.com/-75IF1KRkj_w/Vw5e73uNo4I/AAAAAAAAAB7g/mcs3VT8RkFwPuNp8TCe2bg6CvHqNTijng/s1600/2)

Rule 17

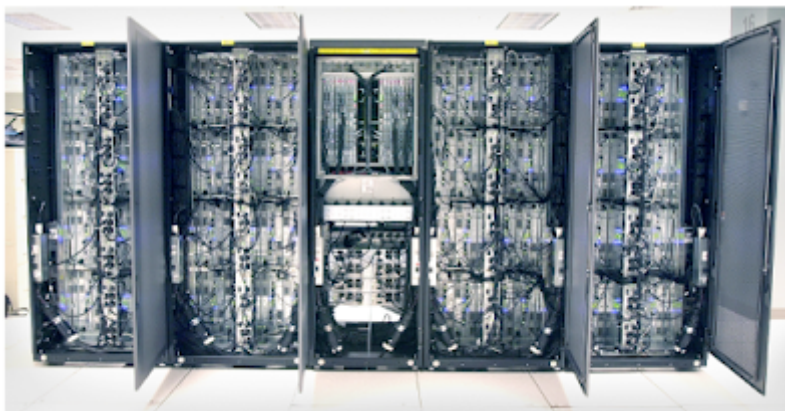
- There are 2XCM modules which are connected to service processors, it will send a message to EMC in case of hardware failures.



(<https://2.bp.blogspot.com/->

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A full view of Symmertix DMX Array



(<https://3.bp.blogspot.com/->

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To know about the history of EMC Symmetrix array, refer the link below.

<http://www.sanadmin.net/2016/04/symmetrix-models.html>

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