COMVERSE UNIVERSITY

Storage Data Point – EMC Storage Operation

Lesson Objectives

By the end of this lesson you will be able to:

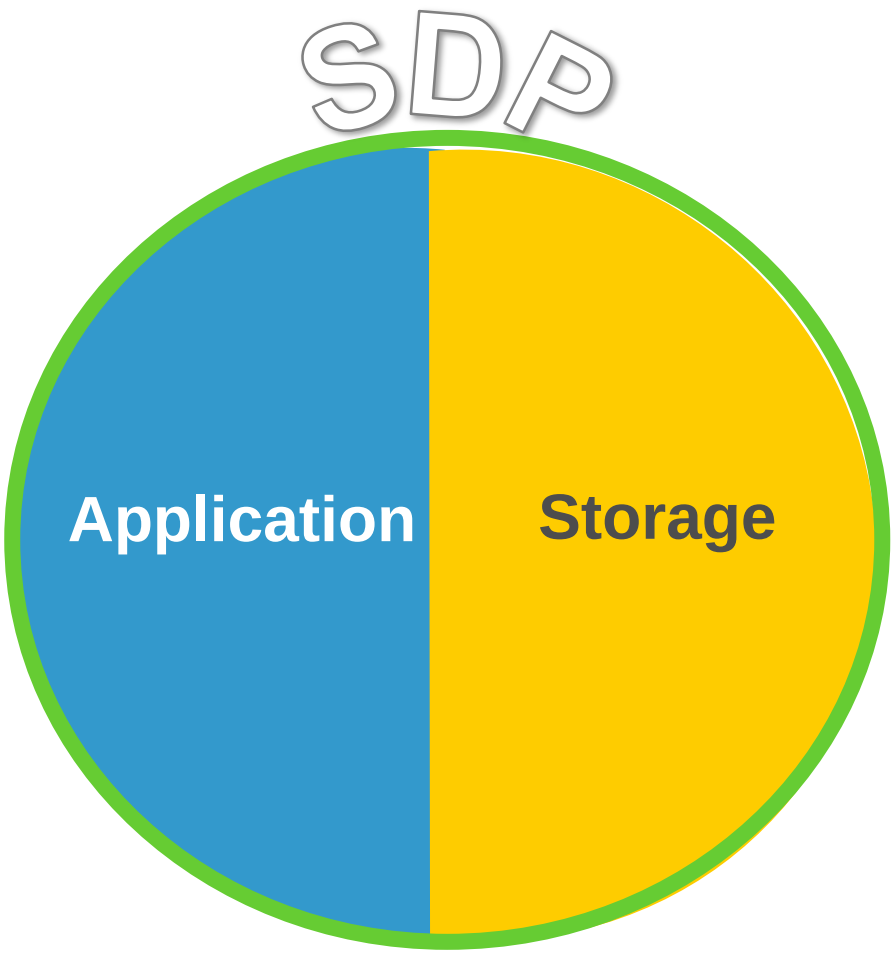
- Explain how SDP storage volume is utilized by the EMC
- Make use of basic EMC Storage operational commands

Agenda

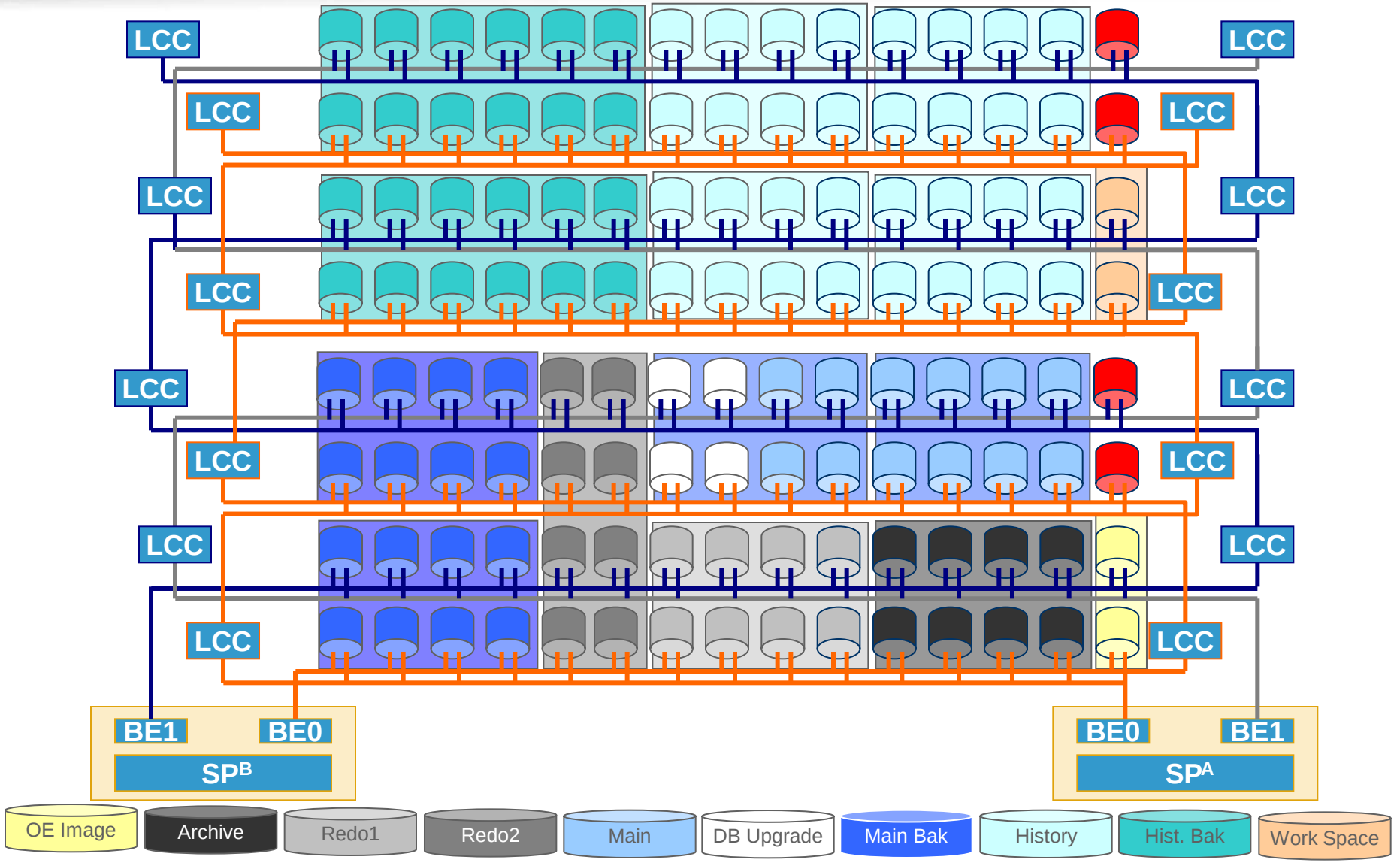
EMC Storage Design

Storage Operational Commands

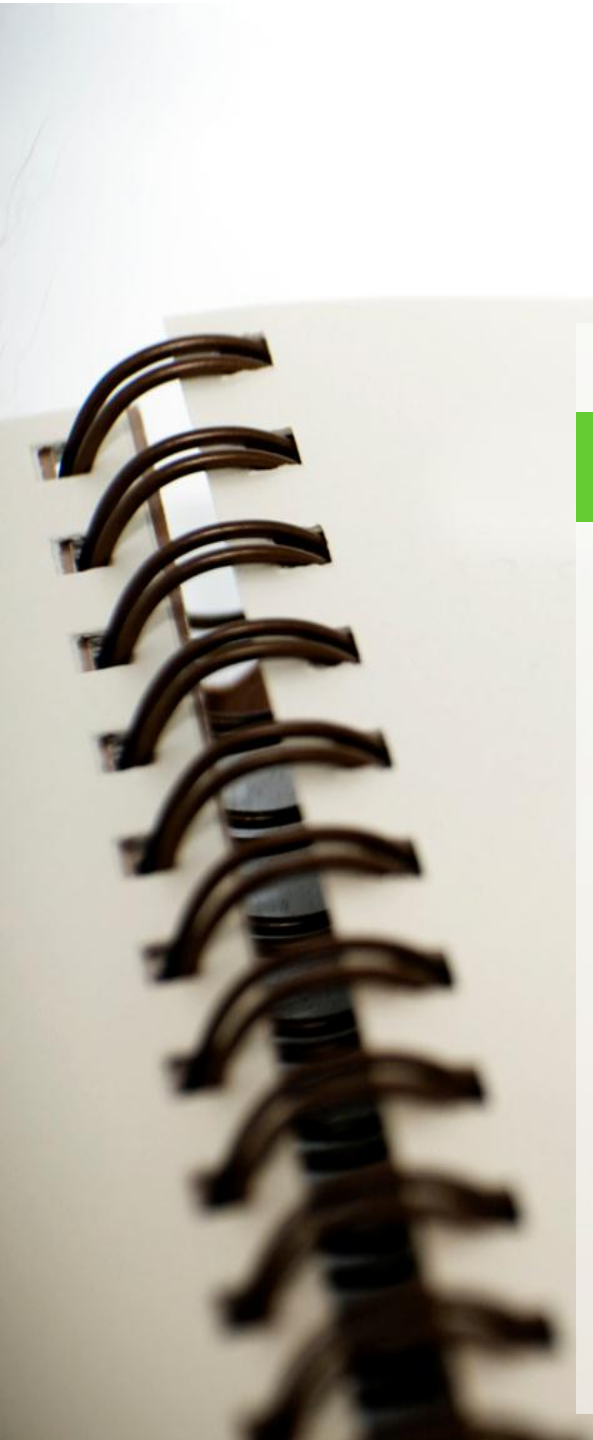
SDP Structure



Example of EMC Storage Layout



Agenda



EMC Storage Design

Storage Operational Commands

Step 1 – Volume Groups

- Command: **lsvg**

  Lists all Volume Groups known to the system

```
Rating_sdp1:/# lsvg
rootvg
Hbkpvg
arcvg
bkpvg
datavg
logvg
oravg
workvg
Rating_sdp1:/#
```

MAIN DB

Step 2 – Physical Volumes

- Command: **lspv**

  Maps volume groups to physical volumes

```
Rating_sdp1:/# lspv
hdisk0          none                                None
hdisk1          none                                None
hdiskpower0     000e297ab83c9c9d                    rootvg          active
hdisk2          none                                None
hdisk3          none                                None
hdisk4          none                                None
hdisk5          none                                None
hdisk6          none                                None
hdisk7          none                                None
hdisk8          none                                None
hdisk9          none                                None
hdisk10         none                                No
hdisk11         none                                ne
hdisk12         none                                None
hdisk13         none                                None
hdisk14         none                                None
hdisk15         none                                None
hdiskpower1     000e297ad156[illegible]a26          logvg           concurrent
hdiskpower2     000e297[illegible]d15fbec4          workvg          concurrent
hdiskpower3     000e297ad15b145d                    oravg           concurrent
hdiskpower4     000e297ad156d2a4                    arcvg           concurrent
hdiskpower5     000e297ad1510e9f                    datavg          concurrent
hdiskpower6     000e297ad15b99fc                    bkpvg           concurrent
hdiskpower7     000e297ad152fead                    Hbkpvg          concurrent
```

Main DB is on hdiskpower5

Step 3 – hdiskpower

- Command: **powermt display dev=hdiskpower5**

  Maps hdiskpower to LUN.

```
Rating_sdp1:/# powermt display dev=hdiskpower5
Pseudo name=hdiskpower5
CLARiiON ID=CKM00091000115 [CKGVM-ENV1-RATING]
Logical device ID=600601604986240003E2531B02E1E011 [LUN 113]
state=alive; policy=CLAROpt; priority=0; queued-IOs=0
Owner: default=SP B, current=SP B       Array failover mode: 3
==============================================================================
---------------- Host ---------------   - Stor -   -- I/O Path -  -- Stats ---
###  HW Path                I/O Path     Interf.   Mode    State  Q-IOs Errors
==============================================================================
   0 fscsi0                 hdisk11    SP B0     active  alive      0      0
   0 fscsi0                 hdisk4     SP A0     active  alive      0      0
```

Main DB is on LUN 113

Step 4 – Physical Disks on EMC

- Command: **navicli -h emc1 getlun 113**

  displays the drives on EMC that belong to the LUN and errors

```
Bus 0 Enclosure 3  Disk 14  Hard Read Errors:          0
Bus 0 Enclosure 3  Disk 13  Hard Read Errors:          0
Bus 0 Enclosure 3  Disk 12  Hard Read Errors:          0
Bus 0 Enclosure 3  Disk 11  Hard Read Errors:          0
Bus 0 Enclosure 3  Disk 10  Hard Read Errors:          0
Bus 0 Enclosure 3  Disk 9  Hard Read Errors:          0
```

Main DB is on these disks

Basic NAVICLI Commands

- **getall**: returns an extensive list of storage-system information
- **storagegroup**: lets you create and manage shared storage systems
- **getlun**: returns information about a LUN
- **getrg**: returns information about the specified RAID Group
- **networkadmin** -get: lists network name and address information

Summary

This lesson has covered:

- SDP storage concept overview
- Operational commands

COMVERSE UNIVERSITY