IBM TotalStorage

IBM TotalStorage SAN Volume Controller

SVC Demonstration

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SVC Value Proposition

SVC decouples the relationship between servers and storage system showing servers only VIRTUAL disks.

- Storage infrastructure simplification,
- Storage optimization

IBM TotalStorage

SAN Volume Controller 8F2 Hardware

- ✓ Clustered System up to 8 nodes
- ✓ Based on xSeries x336
- ✓ Dual 3 GHz Pentium
- ✓ 8 GB cache / 4 FC ports per nodes

- Applications availability
  - Deliver new level of automation to improve app. availability
  - Allowing non-disruptive configuration changes and data migration
  - Enabling interoperable, flexible SAN wide Copy Services

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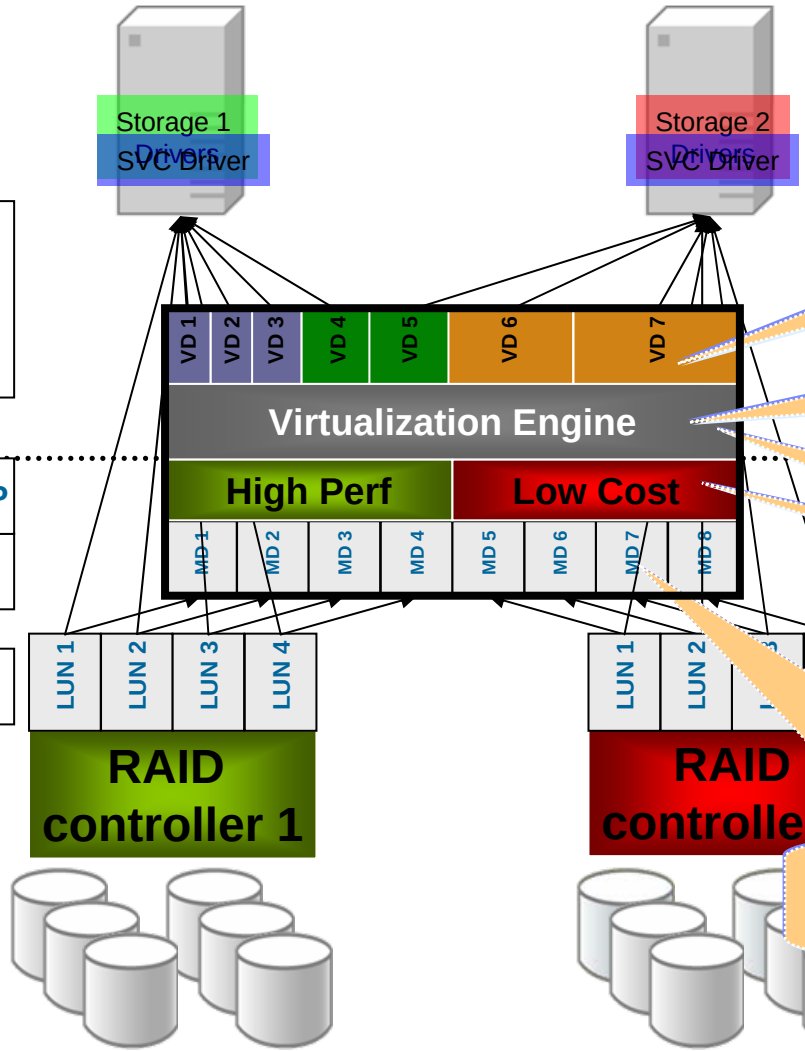
Disk virtualization concepts



Virtual disks
Type = 2145
2 modes:
- mode *Managed*
- mode *Image*

Managed disksGRP

Managed disks

SCSI LUNs

Virtual disks are mapped to the hosts

SAN Volume Controller isolate Hosts from any storage modification

SVC manage relation between: Virtual disks and Managed disks

Managed Disks are classified in Managed Disks Group depending on their characteristics – Storage Pools

Storage subsystem SCSI LUNs are directly mapped to SVC box

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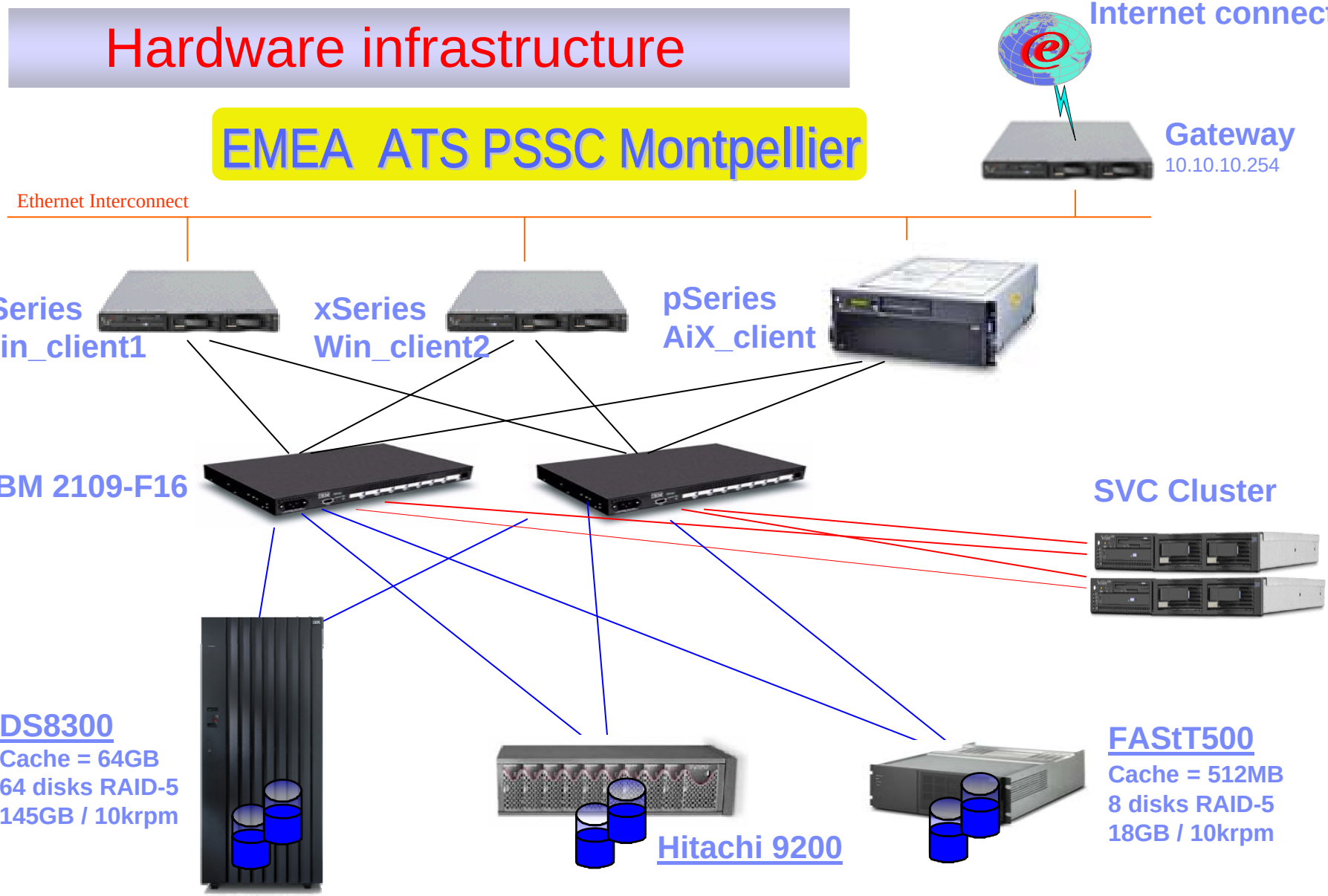
Hardware infrastructure

EMEA ATS PSSC Montpellier



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Demonstration scenarios

- **Demo-1 : SVC integration in an existing infrastructure**
  - Import existing AiX volumes in an SVC environment

  → Smoothly integrated

  → IT Simplification

- **Demo-2 : Dynamic migration in AiX environment**
  - Data migration from IBM FAStT500 to IBM DS8300
- **Demo-3 : Dynamic migration in Windows environment**
  - Data migration from HDS-9200 vers DS8300

  → Application availability

- **Demo-4 : Flashcopy « out-side » the box**
  - Source = IBM DS8300, ….. Target = HDS-9200

  → Storage Optimization

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Demo-1

- **Demo-1 : SVC integration in existing infrastructure**
  - Import existing AiX volumes in SVC environment

1- Production ru
2- Production st
3- Unconfigure A
4- FAStT LUN As
5- FAStT LUNs c
6- VDISKs creati
7- VDISKs assig
8- Restore AiX c
9- Restart produ

>> Performar

-GUI SVC Console
-Script *production.sh*
-Script *move2svc.sh*
-Script *import_svcconfig.sh*

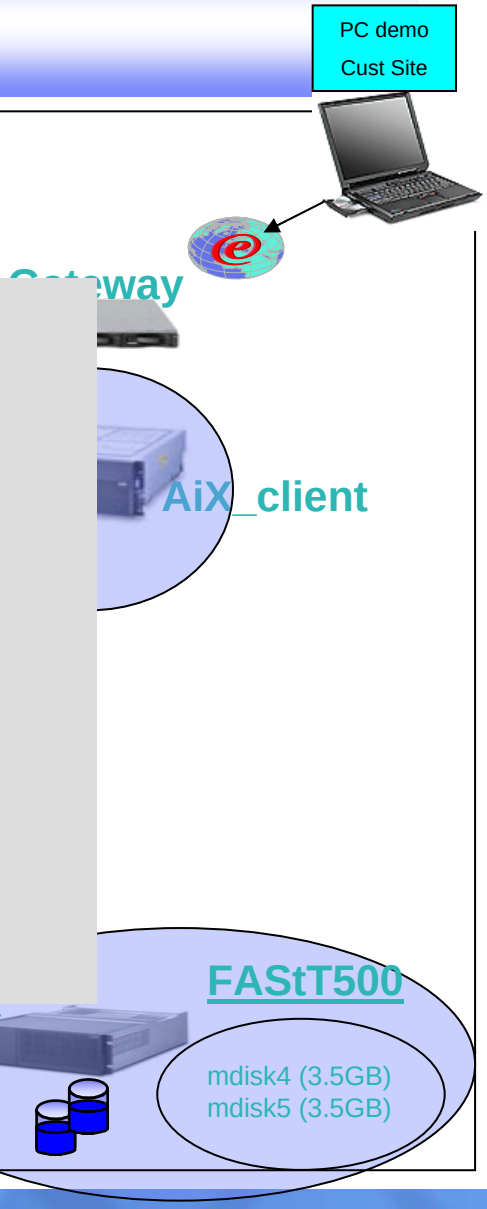
Key points

=> Low impact on production

- Steps 2 to 8 can be scripted

=> Performance improvement

- Leverage old technologies



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Demo-2

- **Demo-2 : Dynamic Migration in AiX environment**
  - **Data migration from IBM FAStT500 to IBM DS8300**

1- Production runi

2- Starting migrati

2-1 Workload i

3- End of migratio

-GUI SVC Console

-Script *production.sh*

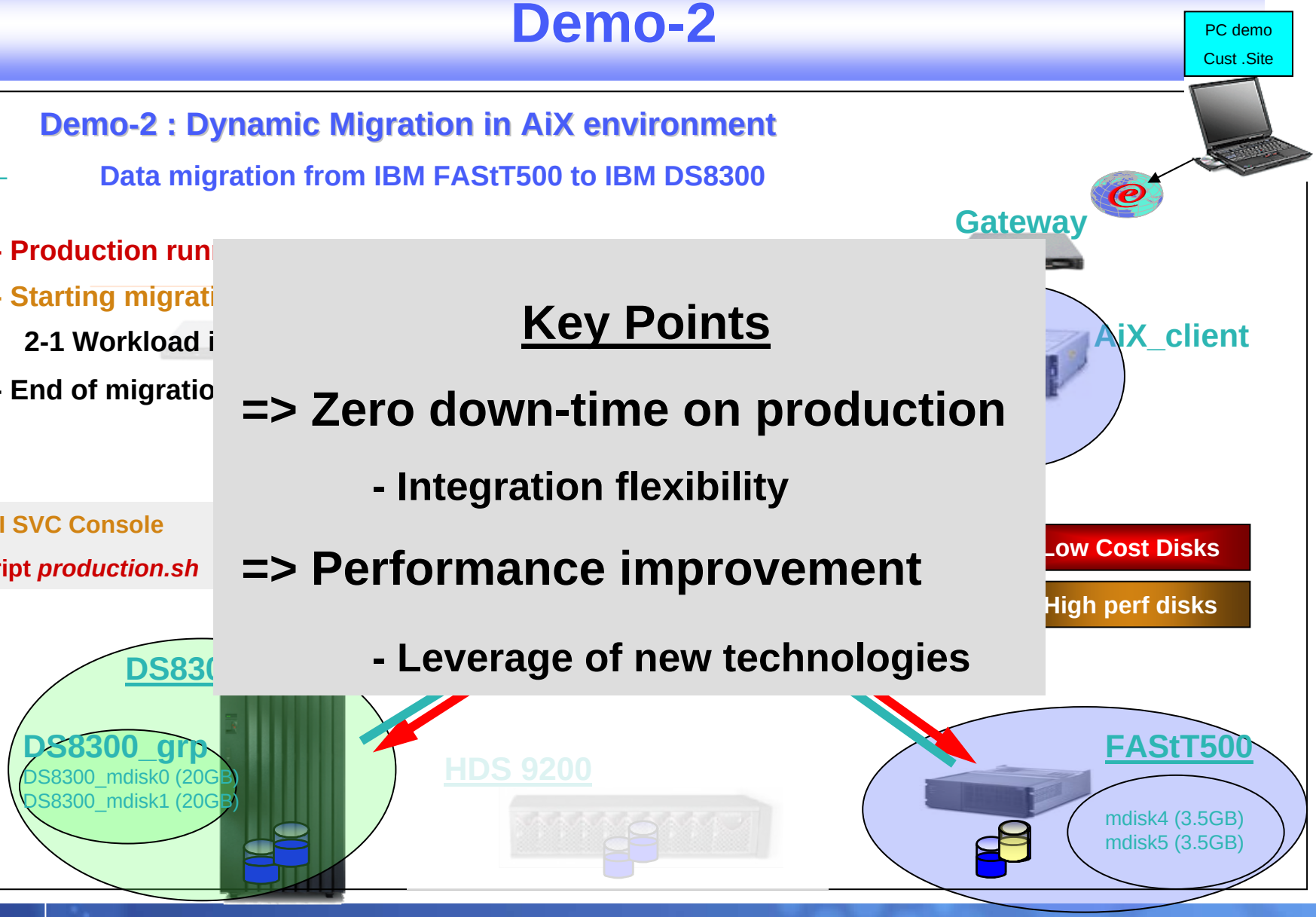
Key Points

=> Zero down-time on production

- Integration flexibility

=> Performance improvement

- Leverage of new technologies



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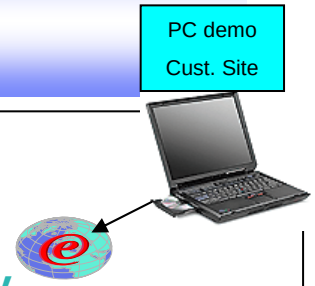
Demo-3

- **Demo-3 : Dynamic migration in Windows environment**
  - **Data migration from HDS 9200 to IBM DS8300**



Key Points

=> Same as demo-2

- **Zero down-time on production**
- **Performance improvement**
- **Windows environment**

=> IBM and non-IBM Storage

Low Cost Disks

High perf disks

DS8300_grp
DS8300_mdisk0 (20GB)
DS8300_mdisk1 (20GB)

HDS 9200
HDS_grp
HDS_mdisk0 (20GB)
HDS_mdisk1 (20GB)

FAStT500
mdisk4 (3.5GB)
mdisk5 (3.5GB)

AiX_client

SVC Console

ramme *IOMETER*

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Demo-4

- Demo-4 : Flashcopy out-side the box
  - Sourc

eway

Win

AiX_client

running / IOMeter
sh Copy relation
DS-9200
t FC LUN
nt2 server
Copy

SVC Console

Low Cost Disks

High perf disks

Key Points

=> Optimization / Storage classes

Efficient use of storage resources.

DS8

DS8300_grp
DS8300_mdisk0 (20GB)
DS8300_mdisk1 (20GB)

HDS 9200

HDS_grp
HDS_mdisk0 (20GB)
HDS_mdisk1 (20GB)

FAStT500

mdisk4 (3.5GB)
mdisk5 (3.5GB)

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Demonstration scenarios

- **Demonstration SVC value :**
  - SVC is integrated **smoothly** in an existing environment
    - Limited impact on customer production
  - SVC provides **zero down-time**
    - Non-disruptive configuration changes
    - Flexibility in data management
  - SVC **optimizes** asset investments
    - Efficient use of storage resources
    - Leverage low-cost technologies

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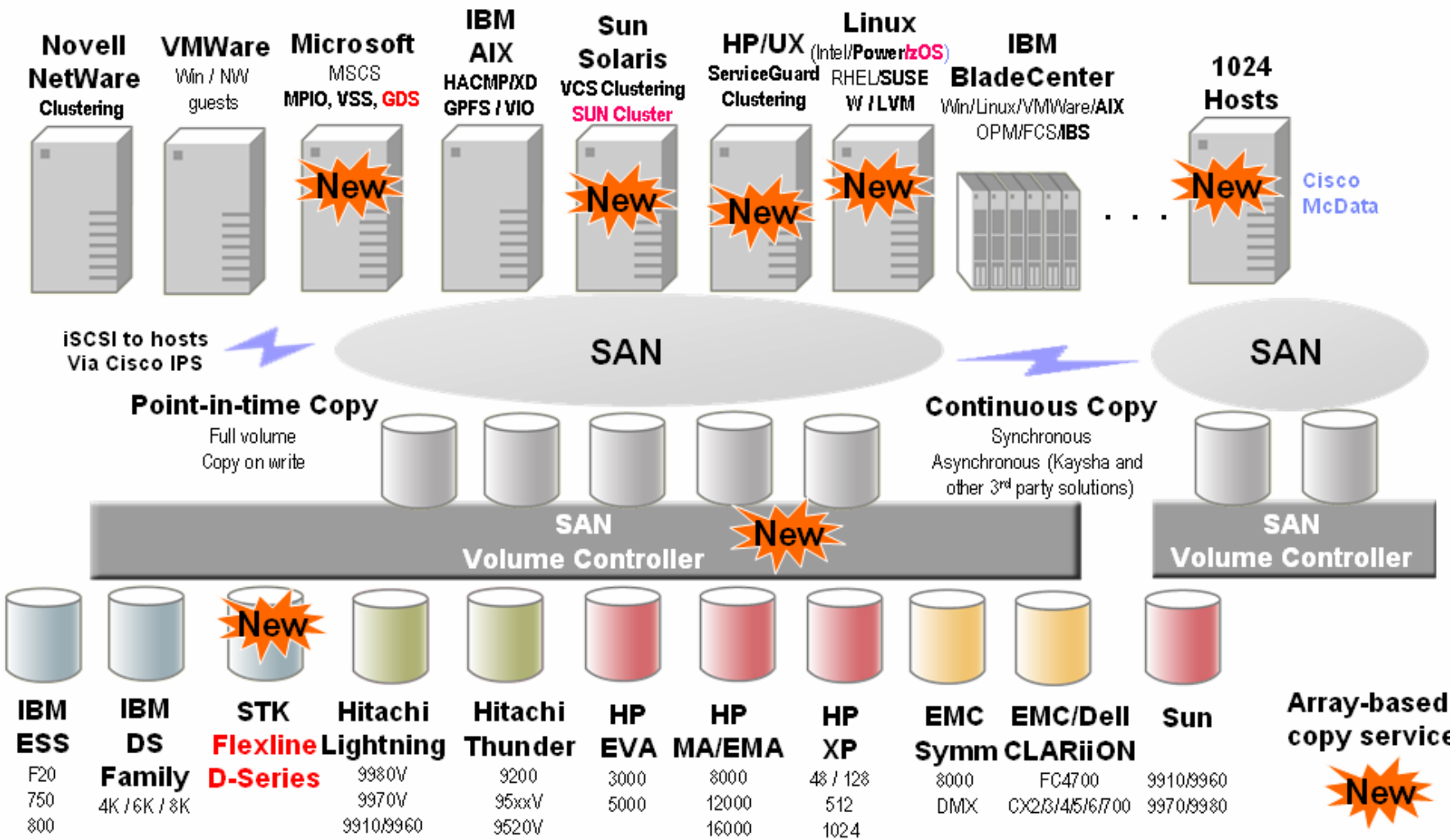
SAN Volume Controller

Supported Environments – V3.1



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Thank You

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