Local and Remote Replication with DS8870

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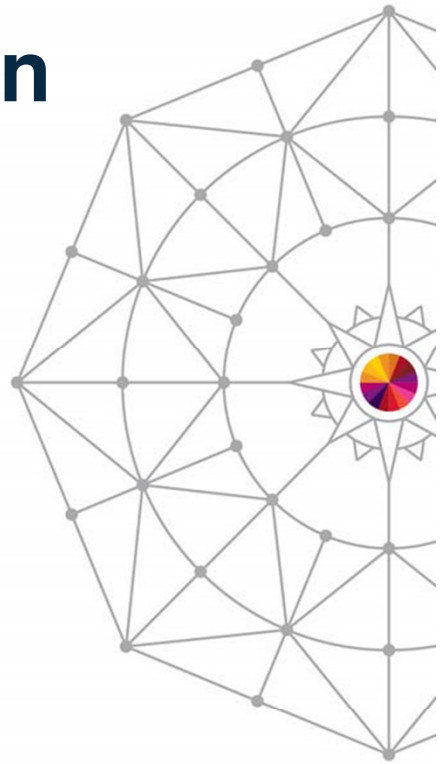

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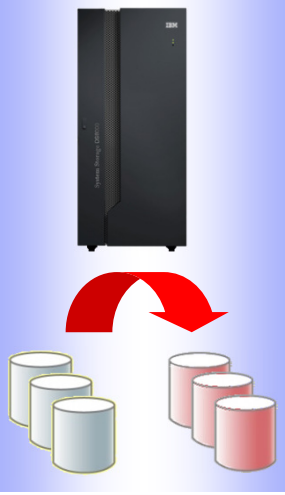
DS8000 replication technologies

FlashCopy
Point in time copy for datasets and volumes

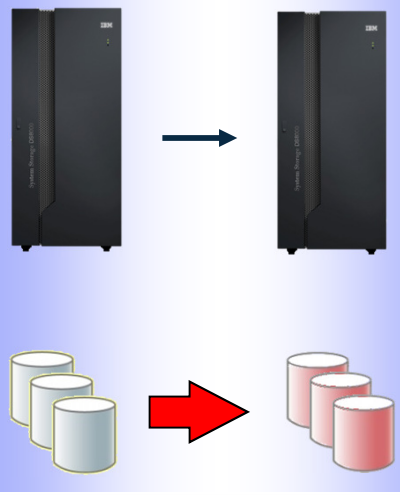
Within the same Storage System



Metro Mirror
Synchronous mirroring with HyperSwap

Primary Site A

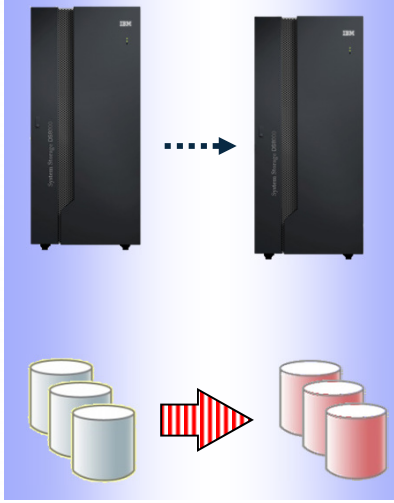
Metro distance Site B



Global Mirror
z/OS Global Mirror
Asynchronous mirroring

Primary Site A

Out of Region Site B



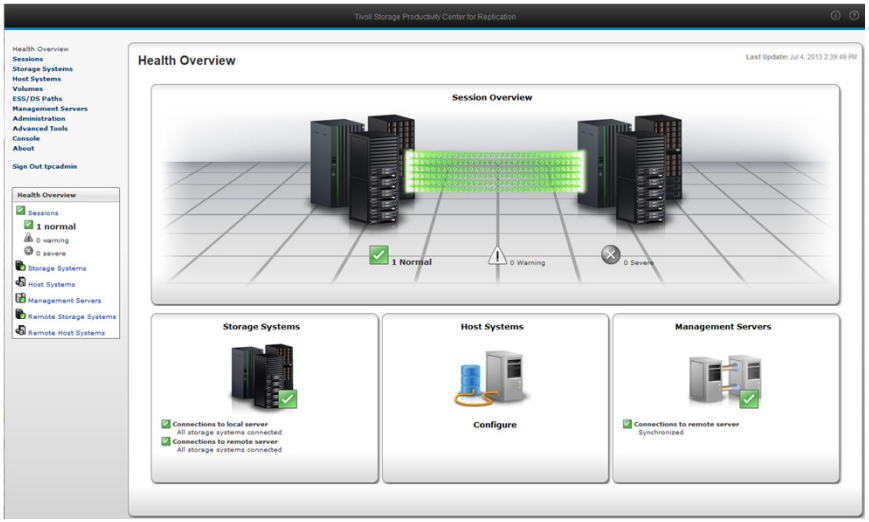
Metro / Global Mirror
Metro z/OS Global Mirror
Three site synchronous & asynchronous mirroring

Primary Site A

Out of Region Site C

Metro Site B

Replication Management

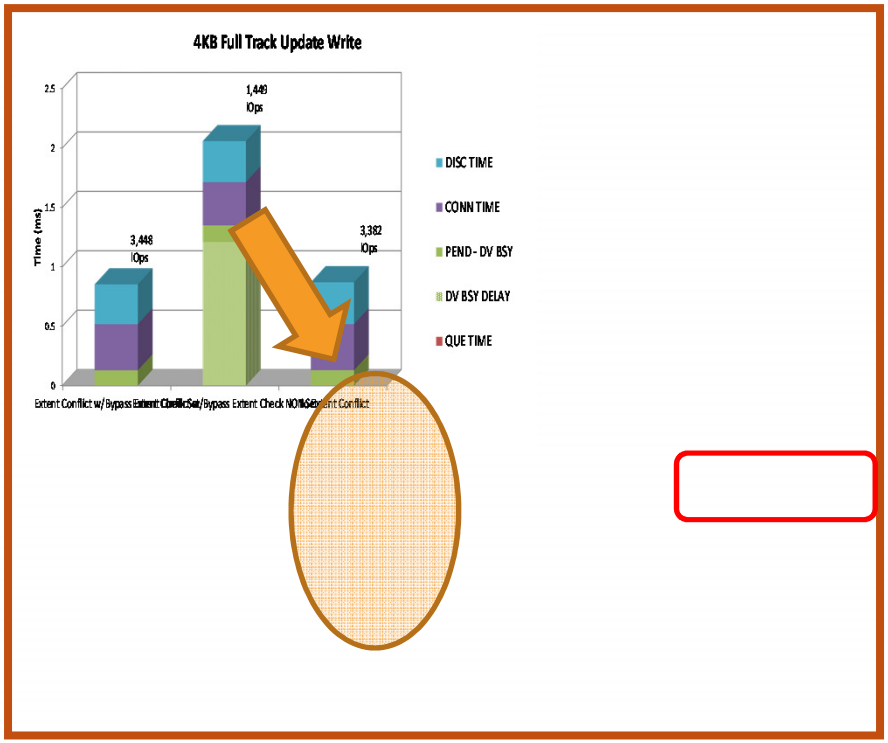


- TPC for Replication provides common replication management for multiple replication technologies
- Provides HyperSwap for z/OS for 2-site and 3-site replication

- GDPS provides end-to-end High Availability and Disaster Recovery Management
- Supports the full range of IBM replication technologies topologies

Metro Mirror performance improvements

- z/OS uses the define extent command to control serialization of access to a dataset.
- Certain applications such as JES and DB2 use the bypass extent blocking feature as they have their own serialization
- With R7.2 DS8870 will honor the bypass extent blocking option in Metro Mirror environments
- Applies to specific z/OS workloads



Accelerate throughput for some Metro Mirror environments by up to **100%**

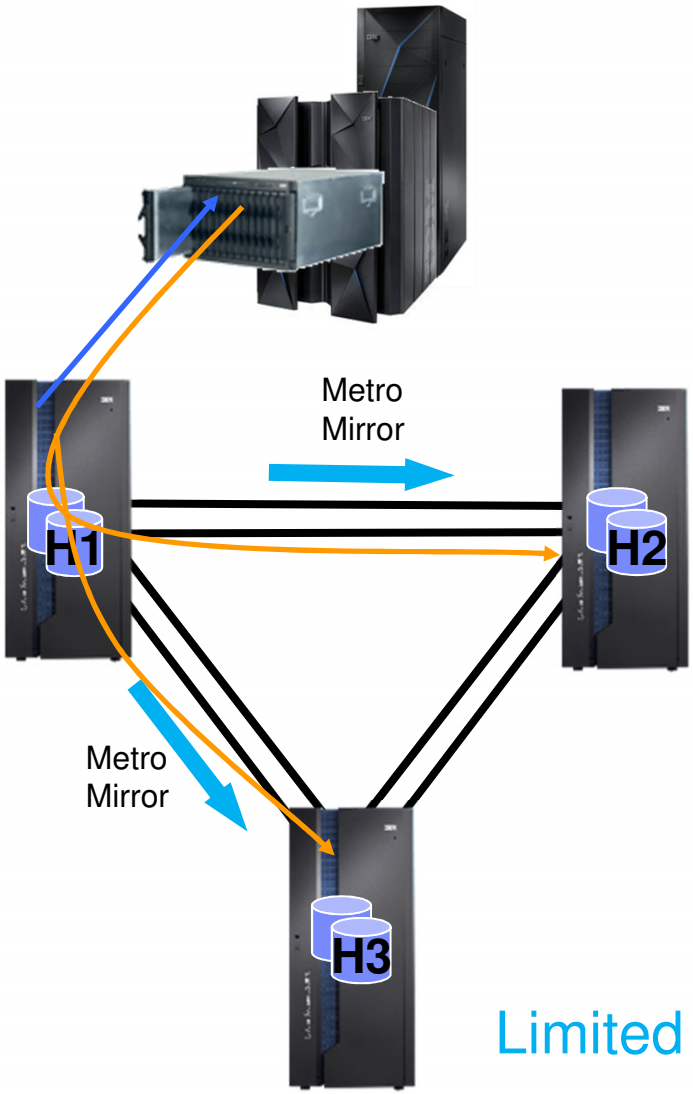
Performance based on measurements and projections using IBM benchmarks in a controlled environment.

HyperWrite for z/OS and DB2*

- New function for z/OS and DS8870 with GDPS or TPC-R HyperSwap
  - Initial exploitation designed to help accelerate DB2 Log Writes
    - Expected benefits:
      - Improved DB2 transactional latency
      - Log throughput improvement
      - Additional headroom for growth
      - Improved resilience for workload spikes
      - Potential cost savings from workload consolidation
  - Local response reduced up to 61% in prototype testing (final numbers TBD)
    - Less-than-local response benefit percentage varies with distance
    - Planned to require:
      - HyperWrite function in z/OS 2.1, with the PTF for APAR OA45662
      - DB2 10 and DB2 11
      - IBM DS8870 Storage Subsystem MCL
  - Planned for year end 2014

*** Statements regarding IBM future direction and intent are subject to change or withdrawal, and represent goals and objectives only.**

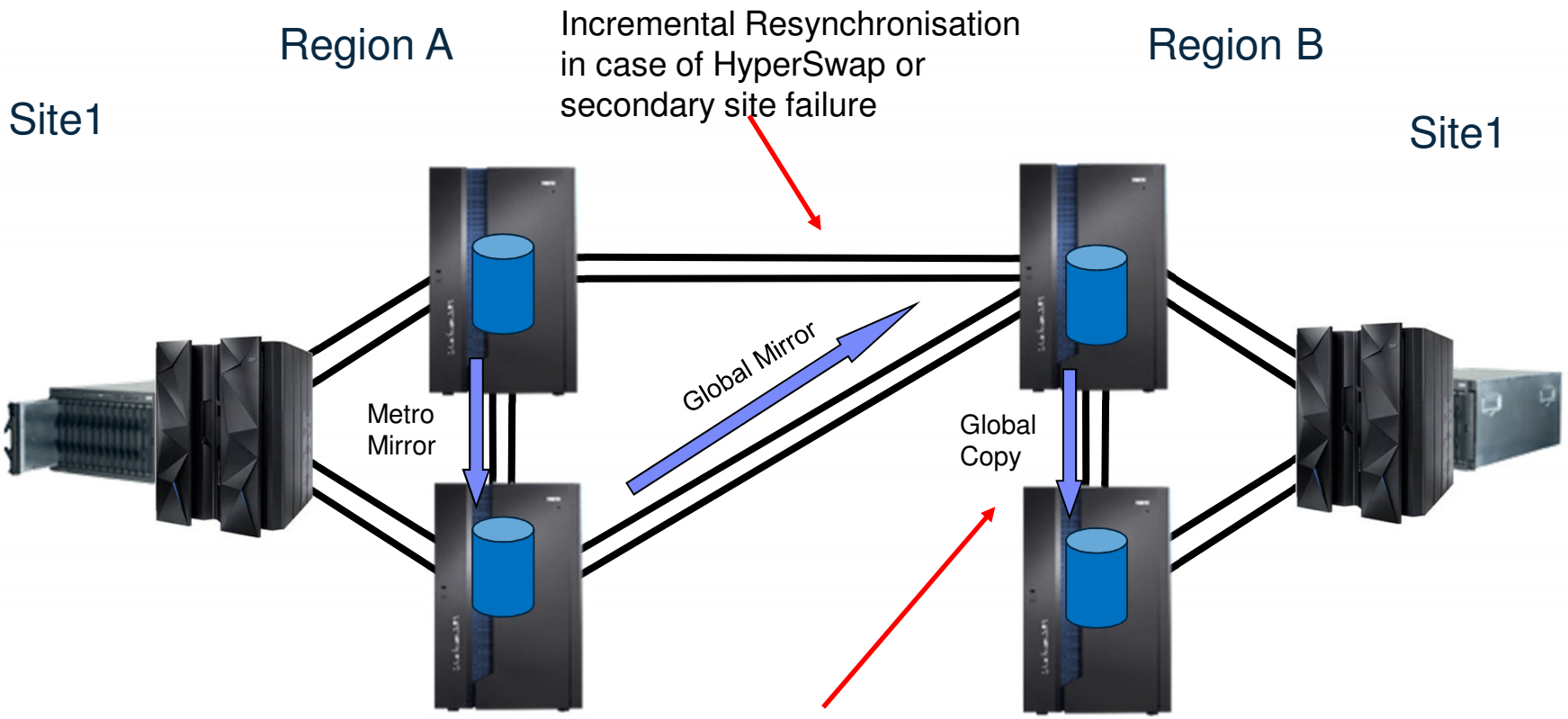
Multi-target Metro Mirror



- Allow a single volume to be the source for more than one PPRC relationship
- Initial support for two Metro Mirror and/or Global Copy relationships
- Statement of direction for Metro Global Mirror support in 2014
- Provides incremental resynchronisation functionality between target devices

Limited Availability with Release 7.2.7

4-site topology with Metro Global Mirror



GA in GDPS 3.11