

# Storage system-based asynchronous replication\*

Vendor/Asynchronous replication software	Optional license req.	Asynch replication method	PROTOCOLS SUPPORTED			ASYNCH REPLICATION OPTIONS			Distinctive features
			Ethernet	FC	Other	M:1	1:M	M:M	
<b>3PAR Inc.</b> InServ Storage Server Remote Copy	✓	Delta changes copied on replication intervals	✓			✓			<ul style="list-style-type: none"> <li>Any-to-any replication with any InServ Storage Server</li> <li>Asynch replication software included with base license</li> <li>Synchronous replication option</li> <li>Uses trunking to balance data across available network links</li> </ul>
<b>Compellent</b> Storage Center Data Instant Replay	✓	Delta changes copied on replication intervals	✓	✓		✓	✓	✓	<ul style="list-style-type: none"> <li>Prioritizes order in which source volumes replicated</li> <li>Simulates bandwidth needs prior to asynch implementation</li> <li>Snapshots at source and target are read-write</li> <li>Synchronous replication option</li> </ul>
<b>EMC Corp.</b> Clariion CX series MirrorView/A	✓	Delta changes copied on replication intervals	✓	✓		✓			<ul style="list-style-type: none"> <li>Customizable restart point (minutes, hours or days)</li> <li>Maintains restartable, consistent copy at all times</li> <li>SnapView license not required to use MirrorView/A</li> <li>Synchronous replication option: MirrorView/S</li> </ul>
<b>EMC</b> Clariion CX series SAN Copy	✓	Incremental and full LUN copies	✓	✓		✓			<ul style="list-style-type: none"> <li>Full and incremental replication of LUNs</li> <li>Supports replication of volumes on qualified storage systems</li> <li>Target volume must be same size or larger than source volume</li> <li>Volumes must be offline during replication</li> </ul>
<b>EMC</b> Symmetrix SRDF/A	✓	Write-order fidelity	✓	✓	ESCON, FICON	✓	✓	✓	<ul style="list-style-type: none"> <li>Dynamically switch between synch and asynch replication</li> <li>Dynamically switch between source and target volumes</li> <li>Consistent, restartable copies are always available</li> <li>Uses cache-based architecture for replication</li> </ul>
<b>EqualLogic Inc.</b> PS Series Auto Replication		Delta changes copied on replication intervals	✓			✓	✓	✓	<ul style="list-style-type: none"> <li>Asynch replication software included with base license</li> <li>May be used with traditional or thin-provisioned volumes</li> <li>Only available for Ethernet (iSCSI) SANs</li> <li>Replication continues during firmware upgrades</li> <li>Synchronous replication option</li> </ul>
<b>Hewlett-Packard (HP) Co.</b> StorageWorks Continuous Access Enterprise Virtual Array (EVA)	✓	Delta changes copied on replication intervals	✓	✓		✓			<ul style="list-style-type: none"> <li>Any-to-any replication to any EVA storage system</li> <li>Support for Fibre Channel (FC) over IP and FC over SONET</li> <li>Supports FATA instead of SATA disk drives</li> <li>Synchronous replication option</li> </ul>
<b>Hitachi Data Systems (HDS) Corp.</b> Universal Replicator	✓	Write-order fidelity		✓	ESCON, FICON	✓	✓	✓	<ul style="list-style-type: none"> <li>Can create up to 16 consistency groups (called journal groups)</li> <li>Each journal group can support up to 15,000 IOPS</li> <li>Target systems can "pull" journaled data from source system</li> <li>Synchronous replication option: TrueCopy</li> </ul>
<b>IBM Corp.</b> System Storage DS Series Global Copy and Global Mirror	✓	Write-order fidelity		✓		✓	✓		<ul style="list-style-type: none"> <li>Only backward-compatible with ESS Models 750, 800 and 800T</li> <li>Separate replication option for z/OS mainframe operating system</li> <li>Supports only FC disk</li> <li>Synchronous replication option: Metro Mirror</li> </ul>
<b>Network Appliance (NetApp) Inc.</b> FAS series SnapMirror	✓	Delta changes copied on replication intervals	✓	✓		✓	✓		<ul style="list-style-type: none"> <li>Any-to-any replication with any NetApp FAS storage system</li> <li>Snapshots of target volumes are read-only</li> <li>Transfers changed data in 4K blocks to target site</li> <li>Two replication options: block-based and file-based</li> </ul>
<b>Sun Microsystems Inc.</b> StorageTek 6540 Array Data Replicator	✓	Write-order fidelity		✓					<ul style="list-style-type: none"> <li>Maintains write-order consistency groups</li> <li>Synchronous replication option</li> </ul>
<b>Xiotech Corp.</b> Magnitude 3D 3000 DataScale Geo-Replication software	✓	Write-order fidelity	✓	✓		✓			<ul style="list-style-type: none"> <li>Any-to-any replication with any Magnitude system</li> <li>Dynamically swap between volumes on any Magnitude 3D system</li> </ul>

\*Storage systems must support block-based replication