

# Multiprotocol array choices

Vendor/ Products	Supported protocols	Target market	Redundancy options	Storage management options	Features
<b>EMC Corp.</b> Celerra NS20, NS40, NS80, NSX	CIFS, NFS (v2, v3, v4), iSCSI, Fibre Channel (FC)	VMware environments, all markets	Hardware redundancy; X-Blade failover; hot-swappable power and cooling	Celerra Manager (included), Navisphere, EMC ControlCenter Suite	<b>Replication:</b> Celerra IP Replicator (asynchronous), MirrorView (synchronous and asynchronous), SAN Copy <b>Snapshot:</b> SnapSure (NAS and iSCSI), SnapView (FC LUNs) <b>Thin provisioning:</b> Yes, for iSCSI, NFS and CIFS <b>Backup options:</b> NDMP (v1, v2, v3, v4) <b>Deduplication:</b> Only in combination with EMC DiskXtender or Centera
<b>Hewlett-Packard (HP) Co.</b> HP StorageWorks All-in-One (AiO) Storage System: AiO400, AiO600, AiO1200, AiOSB600c	CIFS, NFS, iSCSI	Small- and mid-sized business; unified storage for files and applications, Microsoft Exchange and SQL Server	RAID (all models), dual power supplies (except AiO400), redundant fans	Application Storage Manager (ASM); Windows Storage Server MMC management tools; HP Systems Insight Manager (optional); HP Storage Essentials NAS Manager (optional)	<b>Replication:</b> Windows DFS-R for files, HP StorageWorks Storage Mirroring for NAS and iSCSI <b>Snapshot:</b> Via Microsoft VSS <b>Thin provisioning:</b> No <b>Backup options:</b> Windows Server 2003-certified backup applications <b>Deduplication:</b> N/A
<b>Hitachi Data Systems (HDS)</b> TagmaStore Universal Storage Platform (USP) with NAS Blade	Extends block-based USP protocols with the following protocols: CIFS, NFS (v2, v3)	Any NAS app; typically, customer is using USP, NSC55, USP V or USP VM for SAN and desires SAN-based backup and remote replication	All blades sold in clusters with active-active failover from blade to blade	Ships with Hitachi NAS Manager software; integrated with Hitachi's HiCommand Storage Management Suite	<b>Replication:</b> File- and volume-based synchronous and asynchronous replication <b>Snapshot:</b> Yes, up to 8,000 per cluster <b>Thin provisioning:</b> Yes, on USP V and USP VM models <b>Backup options:</b> Hitachi NAS Backup Manager and NDMP <b>Deduplication:</b> N/A
<b>Microsoft Corp.</b> Microsoft Windows Storage Server 2003 R2; Microsoft Windows Unified Data Storage Server (WUDSS) 2003	CIFS, NFS, iSCSI	IT environments of all sizes	Clustering support for Microsoft Windows Unified Data Storage Server 2003 Enterprise Edition	Microsoft Management Console (MMC) management tools	<b>Replication:</b> Windows DFS-R for files <b>Snapshot:</b> Via Microsoft VSS <b>Thin provisioning:</b> No <b>Backup options:</b> Windows Server 2003-certified backup applications <b>Deduplication:</b> N/A
<b>Network Appliance (NetApp) Inc.</b> FAS6000, FAS3000 and FAS200 series	FC, iSCSI CIFS, NFS	FAS6000/FAS3000: Enterprise apps  FAS200: Workgroups, branch offices and SMB	Full hardware redundancy, cluster option	Integrated automatic RAID manager, telnet, email alerts, SSH, Maintenance Center, SnapManager for Exchange, Microsoft SQL Server and Oracle, CommandCentral Storage, Virtual File Manager (VFM), File Storage Resource Manager, SAN Manager, Operations Manager3, ApplianceWatch for HP OpenView, Appliance-Watch for Tivoli	<b>Replication:</b> Synchronous and asynchronous replication via SnapMirror <b>Snapshot:</b> Via NetApp Snapshot <b>Thin provisioning:</b> Yes (FlexVol, FlexClone) <b>Backup options:</b> NetApp SnapVault available; NDMP <b>Deduplication:</b> A-SIS deduplication
<b>Pillar Data Systems</b> Axiom 300, Axiom 500	FC, iSCSI, CIFS, NFS	Axiom 500: All tiers; Axiom 300: SMB, SME	All components of the Axiom are fully redundant	Axiom 1 management application	<b>Replication:</b> Synchronous and asynchronous <b>Snapshot:</b> Block and file <b>Thin provisioning:</b> Yes <b>Backup options:</b> CDP, snapshots, NDMP, VTL, D2D, etc. <b>Deduplication:</b> In VTL solution only