

IBM System Storage Product Guide



Cost effective and reliable access to your information

People need access to information so they can make knowledgeable decisions that lead to growth and increased profitability. Your challenge is making sure that information is always available, when and where it is needed, to fuel the cycle of creative thinking that leads to innovation.

IBM System Storage™ solutions help you more successfully support your business by creating IT environments that:

- Protect information assets and enable data sharing and collaboration across your enterprise in real time
- More easily handle changing business requirements
- Manage information effectively by matching the value of your information to how it is stored and accessed at each point in its life cycle

Only IBM delivers the depth and breadth of intelligent storage solutions and expertise to help you reliably bring information to people in a cost-effective way.

Empower your people to innovate and make more informed business decisions

Innovate faster and help ensure that the information that fuels creative thinking and decision making is available in real time with IBM System Storage solutions.

- Automate and simplify IT operations with revolutionary IBM System Storage solutions—so you can focus on your business and spend less time managing your infrastructure
- Increase your return on people and create an environment for competitive advantage by capitalizing on data sharing and collaboration across the enterprise in real time with IBM System Storage offerings
- Fuel your innovation engine with complete solutions that leverage IBM's unmatched expertise, strong synergy between servers and storage, award-winning storage software and extensive partner network

Get the most value from your information

Protect and fully leverage your information assets by using intelligent management solutions from IBM—solutions that enable your IT staff to implement the most cost-effective storage options based on the value and service level of the information at each point in its lifecycle.

- Align your storage investment with the value of your information using comprehensive tiered storage, policy-based automation and intelligent information management solutions from IBM
- Confidently protect your strategic information assets and efficiently comply with regulatory and security requirements with the unrivaled breadth of storage solutions from IBM

Make your business more responsive with an information-centric IT environment

Manage and adapt to growing and changing business needs with an IT environment that makes critical information always available—without disruption.

- Keep your business running with continuous access to information through industry-leading business continuity solutions from IBM System Storage
- Rapidly adapt to evolving business needs by creating an open, flexible, on demand infrastructure that scales as you grow—without disrupting ongoing operations—using proven IBM System Storage solutions
- Optimize and protect your IT investment with marketplace-leading virtualization capabilities, superior multi-vendor interoperability and cost-effective storage solutions from IBM

Entry-level/Midrange Tape Products



	Entry-level Tape Drives			Entry-level Tape Libraries				Midrange Tape Drives		Midrange Tape Libraries	
	TS2230	3580	TS2340	TS3100	TS3100	TS3200	TS3200	TS1030	TS1040	TS3310	TS3500
Product Name	3580	3580	3580	3573 L2U	3573 L2 3573 L4U U featuring Ultrium 3 Half-High	3573 L4U	3573 L4U featuring Ultrium 3 Half-High	3588	3588	3576	3584
Machine Type model	H3L	3580 L33	L43 S43	3573 L2U and PNs 3573L3S, 3573F3S, 3573L4S, 3583F4S, 3583S4S	3573 PNs 3573L32, 3573S32	3573 L4U and PNs 3573L3H, 3573F3H, 3573L4H, 3573F4H, 3573S4H	3573 PNs 3573L34, 3573S34	3588 F3B	F4A	3576 L5U E9U	3584 L53 D53
Product strengths	Multiplatform support Half-high form factor Lower entry price	Multiplatform support Backward read capa- ble to LTO1 Max performance for LTO3	3 Gbit SAS attach- ment Encryption capable Multiplatform support High performance High capacity	multiplatform support high performance high capacity	multiplatform support, same capacity as full high at a lower price	multiplatform support high performance high capacity	multiplatform support, same capacity as full high at a lower price	multiplatform support high performance high capacity	multiplatform support high performance high capacity data protection	multiplatform support high performance high capacity	multiplatform support high performance high capacity
Number of drives	1	1	1	1	1 or 2 LTO Gen 3 half-high	1-2	1-4 LTO Gen 3 half- high	1	1	1-18	1-192
Max number of cartridges	1	1	1	24	24	48	48	NA	NA	396	6,887 ¹
WORM/ Encryption	yes/no	yes/no	yes/yes	yes/yes	yes/no	yes/yes	yes/no	yes/no	yes/yes	yes/yes	yes/yes
Native capacity	Gen 3: 400 GB	Gen 3: 400 GB	Gen 4: 800 GB	Gen 3: 9.6 TB Gen 4: 19.2 TB	up to 9.6 TB	Gen 3: 19.2 TB Gen 4: 38.4 TB	up to 19.2 TB	400 GB	800 GB	Gen 3: 158.4 TB Gen 4: 316.8 TB	up to 5.5 PB
Typical capacity²	Gen 3: 800 GB	Gen 3: 800 GB	Gen 4: 1600 GB	Up to 38.4 TB	up to 19.2 TB	Up to 76.8 TB	up to 38.4 TB	800 GB	1600 GB	up to 633.8 TB	up to 11 PB
Native performance	Gen 3: 60 MBps	Gen 3: 80 MBps	Gen 4: 120 MBps	120 MBps	up to 120 MBps	up to 240 MBps	up to 240 MBps	80 MBps	120 MBps	21.6 GBps	up to 23 TBps
Interface	160 Mbps SCSI	160 MBps SCSI	4 Gbps FC 3 Gbps SAS	4 Gbps FC 3 Gbps SAS LVD SCSI	3 Gbps SAS LVD SCSI	4 Gbps FC 3 Gbps SAS LVD SCS	3 Gbps SAS LVD SCSI	4 Gbps FC	4 Gbps FC	4 Gbps FC 3 Gbps SAS LVD SCSI	4 Gbps FC SCSI-LVD
Supported tape libraries	NA	NA	NA		NA	NA	NA	TS3500	TS3500	NA	NA
Platform support⁴	System p, System i, System x, System z, Microsoft Windows, HP UX, Sun Solaris, Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z, Microsoft Windows, HP UX, Sun Solaris, Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux
Application support⁵	A, B, C, D, E, F, G, H, J, L, M	A, B, C, D, E, F, G, H, J, L, M, N ⁷	A (others in plan)	A, B, C, D, E, F, G, H, J, L, M, N ⁷	B (others in plan)	A, B, C, D, E, F, G, H, J, L, N ⁷	B (others in plan)	A, B, C, D, E, F, G, H, J, L ⁷	A (others in plan)	A, B, C, D, E, F, G, H, J, L ⁷	A, B, C, D, E, F, G, H, J, L ⁷
Media	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8
Warranty period	3 years ⁶	3 years ⁶	3 years ⁶	3 years ⁶	3 years ⁶	3 years ⁶	3 years ⁶	1 year	1 year	1 year	1 year
Warranty type	CRU	CRU	CRU	CRU	CRU	CRU	CRU	Onsite Repair (24x7)	Onsite Repair (24x7)	Next Business Day (9x5)	Onsite Repair (24x7)

F/W = Fast/Wide, Diff = Differential, N/A = Not Applicable, FC = Fibre Channel, X = Extended length cartridge, IOE = IBM Onsite Exchange, CRU = Customer Replaceable Unit

NOTES 1: Max number of cartridges decreases as tape drives are added. 2: Typical compression for open system environments is 2:1 (user results may vary) 4: Also includes selected IBM xSeries®, Netfinity, IBM System i, IBM AS/400® and IBM System p servers. System z support for Linux only 5: Refer to ibm.com/storage/tape/compatibility for current application support 6: In most countries 7: The following vendors provide application support to the platforms defined above: A = IBM Tivoli® Storage Manager, B = Symantec VERITAS NetBackup, C = Symantec VERITAS Backup Exec, D = EMC Legato NetWorker, E = CA BrightStor ARCserve Backup, F = HP OpenView Storage Data Protector, G = CommVault Galaxy, H = BakBone NetVault, I = LSC, J = IBM BRMS, K = IBM OnDemand, L = Help/Systems Robot/Save, M = LXI Media Management, N = Dantz.

Enterprise Tape Products



	Tape Drive	Tape Controller	Tape Library		Tape Virtualization		
	3592	3592	3577	3584	Virtualization Engine		
Product Name	TS1120	TS1120	TS3400	TS3500	TS7510	TS7520	TS7740
Machine Type model	3592 E05	3592 C06	3577 L5U	3584 L23 D23	3954 CV5 (requires additional machine types and models)	3954 CV6 (requires additional machine types and models)	3957 V06 (requires additional machine types and models)
Product strengths	multiplatform support high performance high capacity data protection	System z attachment of TS1120 drives high performance	compact format operates in library or autoloader mode	multiplatform support advanced management scalable	reduces backup window reduces recovery time augments native tape	reduces backup window reduces recovery time high capacity	increases performance scalable reduces cost
Number of drives	1	1–12	1–2	1–192	up to 512 (1 node)* up to 1,024 (2 node)*	up to 1024 (1 node)* up to 4096 (4 node)*	up to 128* up to 768* (3 site GRID)
WORM/Encryption	yes/yes	yes/yes	yes/yes	yes/yes	no/yes**	no/yes	no/no
Number of cartridges	NA	NA	18	6260 ²	up to 4,096 (1 node)* up to 8,192 (2 node)*	up to 64,000 (1 node)* up to 256,000 (4 node)*	up to 1,000,000*
Native capacity	60/100 GB (JJ/JR media) 300/500 GB (JA/JW media) 700 GB (JB/JX media)	NA	up to 1.8 TB up to 9 TB up to 12.6 TB	up to 626 TB up to 3.1 PB up to 4.3 PB	up to 23 TB (1 node) up to 46 TB (2 node)	up to 884 TB EE ¹² up to 19.5 TB LE ¹²	up to 6 TB up to 18 TB (3 site GRID)
Typical capacity ¹	180/300 GB with JJ/JR 900/1500 GB with JA/JW 2.1 TB with JB/JX	NA	up to 5.4 TB up to 27 TB up to 37.8 TB	up to 1.87 PB up to 9.3 PB up to 13.1 PB	up to 46 TB (1 node) up to 92 TB (2 node)	up to 884 TB EE ¹² up to 1.76 PB	up to 18 TB up to 54 TB (3 site GRID)
Native performance	up to 104 MBps	Varies ⁹	up to 208 MBps	up to 104 MBps	up to 600 MBps	up to 4.8 GBps	up to 600 MBps
Interface	4 Gbps FC	4 Gbps FC	4 Gbps FC	4 Gbps FC	2 Gbps FC	4 Gbps FC	4 Gbps FC
Supported tape library	TS3400, TS3500, 3494***	TS3500, 3494***	NA	NA	TS3500, 3494***	TS3500, TS3310, TS3200, TS3100, 3494***	TS3500, 3494***
Platform support ⁵	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System x, System z ¹⁰ , System i ¹¹ ; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System x, System z ¹⁰ , System i ¹¹ ; Microsoft Windows; HP UX; Sun Solaris; Linux	System z
Application support ⁶	A B C D E F G H J L ⁷	A B C D E F G H J L ⁷	A B C D E J	See drive	A, B, D, E, F, H ⁷	A, B	E
Media	Refer to Tape Media, page 8	NA	Refer to Tape Media, page 8	Refer to Tape Media, page 8	NA	NA	NA
Warranty period	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)

* Virtual resource specification
** for data replication only
*** Product withdrawn from marketing

F/W = Fast/Wide, Diff = Differential, N/A = Not Applicable, FC = Fibre Channel, X = Extended length cartridge, IOE = IBM Onsite Exchange, CRU = Customer Replaceable Unit
 NOTES 1: Typical compression for mainframe environments is 3:1; 2.1 for open systems (user results may vary) 2: Max number of 3592 cartridges decreases as tape drives are added 3: IBM AIX® 4.1.5 or later. 4: Load and search only 5: Server platforms with SAN-ready attachability, model- and feature-dependent. 6: The latest ISV support can be found in the connectivity section at ibm.com/storage/tape/compatibility. 7: The following vendors provide application support to the platforms defined above: A = IBM Tivoli Storage Manager, B = Symantec VERITAS NetBackup, C = Symantec VERITAS Backup Exec, D = EMC Legato NetWorker, E = CA BrightStor ARCserve Backup, F = HP OpenView Storage Data Protector, G = CommVault Galaxy, H = BakBone NetVault, I = LSC, J = IBM BRMS, K = IBM OnDemand, L = Help/Systems Robot/Save, M = LXI Media Management. 8: Performance varies by environment 10: Applies to Linux on System z using FCP 11: Requires RPQ 12: EE=Enterprise Edition LE=Limited Edition

Other Backup Tape Products



	Tape Drives				Optical	
	7206-336	7206-VXA	7207	7212	7210	3996
Product Name	DAT72 Tape Drive	VXA-2 Tape Drive	SLR60 Tape Drive	Device Enclosure*	DVD option	Library
Machine Type	7206	7206	7207	7212	7210	3996
model	336-DDS Gen 5	VX2, VX3	330	103	030	32, 80, 174
Product strengths	Cost-effective streaming tape drive	Low-cost, high-capacity VXA-2 technology	Backward read/write compatible with System i internal	Rack-mountable 2-drive enclosure utilizes only 1U (1.75") of space	External deskside	Large scale optical
Number of drives	1	1	1	1-2	1	up to 4
Max number of cartridges	1	1	1	2	1	up to 174
Cartridge capacity native/ compressed	36/72 GB	VX2: 80/160 GB VX3: 160/320 GB	330: 30/60 GB	DVD: Variable (FC1103) VXA2: 80/160GB (FC 1104) DAT72:36/72GB (FC1105) SLR60:Variable (FC1107) SLR100:Variable (FC1108) HHLTO2:200/400GB (FC1109) XVA320 (FC1114)	4.9/9.4 GB	60 GB
Max drive data rate ¹ native/ compressed	336: 3/6 MBps	VX2: 6/12 MBps VX3: 12/24 MBps	330: 4/8 MBps	DDS/DAT72: 3/6 MBps VXA: 12/24 MBps	NA	12 MBps
Interface	SCSI-2 F/W SE, LVD/SE	SCSI-3 ULTRA, LVD/SE, 160/320	SCSI-2 SE, ULTRA, LVD/SE, 160/320	SCSI-3 ULTRA, LVS/SE, 160/320	SCSI-3 ULTRA, LVD-SE, 160/320	LVD SCSI, 160/320
Platform support ²	System p	System p, System i	System p, System i	System p, System i	System p, System i	System p, System i
Media	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8
Warranty period	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year CRU, Onsite Repair	1 year Onsite Repair (9x5)

* 7212-102 also offers DVD-ROM and DVD-RAM optical drives
For most current information, visit: ibm.com/servers/storage/tape/compatibility/index.html

F/W = Fast/Wide, Diff = Differential, N/A = Not Applicable, FC = Fibre Channel, X = Extended length cartridge, IOE = IBM Onsite Exchange, CRU = Customer Replaceable Unit
NOTES 1: Compressed data rates are estimates and are data-, application- and processor-dependent. User results may vary. **3:** Server platforms with SAN-ready attachability, model- and feature-dependent. **4:** Also includes selected System x, System i and System p. System z support for Linux only **5:** Refer to ibm.com/storage/tape/conntrix for current application support **6:** The following vendors provide application support to the platforms defined above: **A** = IBM Tivoli Storage Manager, **B** = Symantec VERITAS NetBackup, **C** = Symantec VERITAS Backup Exec, **D** = EMC Legato NetWorker, **E** = CA BrightStor ARCserve Backup, **F** = HP OpenView Storage Data Protector, **G** = CommVault Galaxy, **H** = BakBone NetVault, **I** = LSC, **J** = IBM BRMS, **K** = IBM OnDemand, **L** = Help/Systems Robot/Save, **M** = LXI Media Management, **N** = Dantz.

Selecting a Solution

	Solution	Native Performance	Native Capacity*	System z	System p	System i**	System x	Open Systems***
Entry tape products	3580 tape drive	120 MBps	1600 GB	Yes	Yes	Yes	Yes	Yes
	TS3100 tape library	120 MBps	up to 35.2 TB	Yes	Yes	Yes	Yes	Yes
	TS3100 tape library with HH drives	60 MBps	up to 19.2 TB	Yes	Yes	Yes	Yes	Yes
	TS3200 tape library	240 MBps	up to 70.4 TB	Yes	Yes	Yes	Yes	Yes
	TS3200 tape library with HH drives	120 MBps	up to 38.4 TB	Yes	Yes	Yes	Yes	Yes
Midrange tape products	TS1040 tape drive	120 MBps	1600 GB	Partial	Yes	Yes	Yes	Yes
	TS3310 tape library	up to 21.6 GBps	up to 633.6 TB	Partial	Yes	Yes	Yes	Yes
	TS3500 tape library	up to 23 TBps	up to 11 PB	Yes	Yes	Yes	Yes	Yes
Enterprise tape products	TS1120 tape drive	up to 104 MBps	2100 GB	Yes	Yes	Yes	Yes	Yes
	TS1120 tape controller	up to 230 MBps	NA	Yes	Yes	Yes	Yes	Yes
	TS3400 tape library	up to 208 MBps	up to 37.8 TB	Yes	Yes	Yes	Yes	Yes
	TS3500 tape library	up to 19.2 TBps	up to 13.1 PB	Yes	Yes	Yes	Yes	Yes
Tape Virtualization	TS7510**	up to 600 MBps	up to 92 TB	Partial	Yes	Yes	Yes	Yes
	TS7520**	up to 4.8 GBps	up to 1.76 PB	Partial	Yes	Yes	Yes	Yes
	TS7740	up to 600 MBps	up to 54 TB	Yes	Yes	Yes	Yes	Yes
Other backup products	3996	up to 12 MBps	10.4 TB	Yes	Yes	Yes	Yes	Yes
	7206-336	up to 3 MBps	72 GB	Yes	Yes	Yes	Yes	Yes
	7206-VX2	up to 6 MBps	60 GB	Yes	Yes	Yes	Yes	Yes
	7206-VX3	up to 24 MBps	160 GB	Yes	Yes	Yes	Yes	Yes
	7207-330	up to 4 MBps	60 GB	Yes	Yes	Yes	Yes	Yes
	7212-103	up to 12 MBps	320 GB	Yes	Yes	Yes	Yes	Yes

* Compressed; see ibm.com/storage for specific capacities.

** Available on System i through AIX/Linux partitioning

*** See ibm.com/storage for specific open systems connectivity.



IBM Systems

Customer demand for lightning-fast communication and transactions has driven the need for universal commitment to e-business. No matter what industry, or what size company, success today hinges on building a high-performance, responsive infrastructure that embraces open standards—exactly what you will find in the IBM Systems product portfolio. Investments in servers often result in demands on disk and tape storage systems. IBM has a family of storage offerings that complements the IBM Systems product portfolio. There is no better storage offering for IBM Systems than an IBM System Storage product. These offerings are tested and supported by IBM and are backed by outstanding IBM service and support.

IBM System Storage Proven Program Helps Simplify Interoperability

Overview

The IBM System Storage Proven™ program has been designed on a simple premise: give customers the ability to select the best combination of interoperable storage technologies to help minimize their investment risk, increase business efficiency and expedite their infrastructure implementation.

The IBM System Storage Proven program is all about leveraging IBM storage with business applications, ISV and Business Partner software, and market leading hardware components which together deliver solutions that address today's client needs.

Customer Benefits

Pre-qualified configurations

Customers will be better able to identify a variety of pre-qualified, interoperable storage elements. By taking pre-qualified applications and hardware and combining them with IBM storage technology a client can have an easier time identifying solutions that address their storage needs.

IBM Business Partner Benefits

Potential for reduced sales cycle and integration issues

For IBM Business Partners, the IBM System Storage Proven program is intended to help reduce the sales cycle and integration issues, allowing more time for higher margin customization. Another added value for IBM Business Partners is the interoperability qualification program where companies work together with IBM, which can help supports their ability to develop and deliver products or solutions that interoperate with the broad portfolio of IBM System Storage products.

Please visit the System Storage Proven Web site at ibm.com/storage/proven to view more than five hundred available products and solutions from over three hundred participating companies to meet your storage needs.

IBM Business Partner Innovations Centers (BPIC)

More than 140 worldwide IBM TotalStorage Solution Centers can deliver one-stop shopping for storage hardware, software and consulting services. The Solution Centers offer you both a local venue for hands-on testing of IBM storage solutions and a platform for proof-of-concept and benchmarking activities. These centers also work with the leading storage software providers to support a wide variety of choices for interoperability. IBM Business Partners will help you select and implement a solution to help your business succeed in today's dynamic marketplace. Visit: ibm.com/storage/tssc

IBM Tivoli Storage Manager

Function and Value

IBM Tivoli Storage Manager is designed to provide protection of your 24x7 applications and key data in the event of hardware, software or network failures. It offers move-and-store techniques and policy-based automation, which are designed to work together to help increase data and application protection, decrease disaster recovery time and lower storage administration costs. It manages inactive data, helping you match the value of the data to the most cost-effective storage management practices. Tivoli Storage Manager is designed to scale easily to protect hundreds of computers running a dozen operating systems ranging from laptops to mainframes and connected together via the Internet, WANs, LANs or SANs. Tivoli Storage Manager also offers open, easy-to-use APIs designed to enable ISVs to more easily adapt their solutions to IBM software, helping to allow joint customers to customize, better secure and extend the functionality of their storage environment.

Highlights

- Designed to protect valuable data in the most cost-effective manner
- Designed to archive inactive data to help reduce costs
- Designed to help ensure continuity and recovery

IBM Tivoli Storage Manager Extended Edition

IBM Tivoli Storage Manager Express

IBM TotalStorage Productivity Center

Product	Function and Value	Highlights
IBM TotalStorage Productivity Center for Disk	In a pooled or virtualized SAN environment, multiple devices work together to create a storage solution. IBM TotalStorage Productivity Center for Disk is designed to provide integrated administration, optimization and replication features for these environments.	<ul style="list-style-type: none"> • Designed to help reduce the complexity and cost of storage management while improving data availability • Offers centralized, open standards-based management of storage devices • Designed to help enhance storage administrator productivity • Offers proactive management of storage devices
IBM TotalStorage Productivity Center for Replication	TotalStorage Productivity Center For Replication is designed to simplify and automate the configuration of your replication environment allowing for more effective Metro Mirroring, Global Mirror and IBM FlashCopy management. It is also designed to monitor and automate copy operations across devices to support a replication environment.	<ul style="list-style-type: none"> • Automates the configuration of your IBM DS8000, DS6000™ and ESS advanced copy services features. • Monitors and manages the IBM DS8000 and SVC copy operations to ensure successful completion from your source volumes to your disaster recovery volumes

IBM TotalStorage Productivity Center

IBM TotalStorage Productivity Center for Replication Two Site Business Continuity	TPC for Replication Two Site and Three Site Business Continuity provides disaster recovery management through planned and unplanned failover and fallback automation for the IBM ESS Model 800, IBM DS6000 and IBM DS8000.	<ul style="list-style-type: none"> • TPC for Replication Two Site and Three Site Business Continuity helps you manage replication to a remote backup site(s) through Metro Mirror or Global Mirror. The software is designed to allow you to monitor the progress of the copy services so you can verify the amount of replication that has been done as well as the amount of time needed to complete the replication. Automated failover is designed to keep your critical data online and available to your users even if your primary site fails. When the primary site comes back on, the software manages fallback to the default configuration as well.
IBM TotalStorage Productivity Center for Data	IBM TotalStorage Productivity Center for Data is a Storage Resource Management (SRM) tool for storage environments that provide a set of policy-driven automated tools for managing storage capacity, availability, events, performance and assets, including DAS, NAS and SAN technologies.	<ul style="list-style-type: none"> • Designed to help leverage and optimize existing storage resources and perform storage management with a high level of control • Designed to help maximize storage utilization • Designed to be able to manage more storage with the same staff

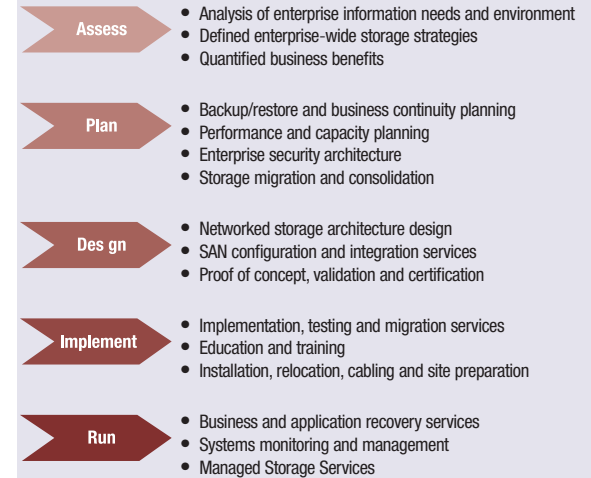
IBM TotalStorage Productivity Center

IBM TotalStorage Productivity Center for Fabric	IBM TotalStorage Productivity Center for Fabric is designed to help automate the management of heterogeneous storage networks and works with a broad range of devices, so businesses can leverage and better use existing technology investments. It is designed to provide comprehensive management of physical and logical configurations for multi-vendor SANs with automatic resource discovery, event monitoring and alerting, zone control and SAN error-prediction capabilities.	<ul style="list-style-type: none"> • Designed to help predict storage network failures before they happen, enabling preventative maintenance • Designed to help accelerate problem isolation when failures occur • Designed to create a single point of control, administration and security for the management of heterogeneous storage networks
IBM TotalStorage Productivity Center Standard Edition	Combines Disk, Data and Fabric components together as one orderable product.	<ul style="list-style-type: none"> • Having Disk, Data and Fabric allows higher levels of value—i.e. combined SAN and Disk performance reports or automated workflows to do provisioning (under the control of Tivoli Provisioning Manager)

IBM Global Services for System Storage and Storage Networking

Data Storage Services from IBM can help companies achieve their business objectives by creating cost-effective data storage solutions that address the requirements of key business applications. These solutions can support multiple platforms and product vendors, helping to provide enhanced protection for critical business data, increased asset utilization, availability and reliability levels with reduced management costs.

IBM Global Services, as the leading data storage services provider, brings best practices from its thousands of customer engagements to work with your employees to integrate new solutions and technology with your business and IT needs. IBM offers a comprehensive portfolio of data storage services including:



IBM Global Services has a track record in offering services for open and mainframe storage, data migration, installation and support services for IBM and non-IBM environments. Some examples are:

- IBM Storage Strategy Assessment assists with the vision and strategy, assessment, architecture and conceptual designs to help customers optimize their storage infrastructure to new architectures.
- IBM Planning Services for 3494 Automated Tape Library and Virtual Tape Server can help improve tape storage management and gain control of an often expanding library of tapes.
- IBM Operational Support Services for Tivoli Storage Manager assists customers in the planning and implementation of storage management software.
- IBM Managed Storage Services offer scalable, cost-effective storage capacity, management and backup/restore services on a usage basis.

More information about IBM storage services can be found at ibm.com/services/storage.

IBM Global Financing

IBM Global Financing offers competitive financing to credit-qualified customers and IBM Business Partners to assist them in acquiring IT solutions. Our offerings include financing for IT acquisition—including hardware, software and services, both from IBM and other manufacturers or vendors—as well as commercial financing (revolving lines of credit, term loans, acquisition facilities and inventory-financing credit lines) for IBM Business Partners. Offerings (for all customer segments: small, medium and large enterprise), rates, terms and availability may vary by country. Contact your local IBM Global Financing organization or visit the Web at ibm.com/financing.



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