



**IBM System Storage**  
**TS7650 / TS7650G / TS7610 ProtecTIER Deduplication**  
**Appliance / Gateway / Appliance Express**  
**Backup Application ISV**  
**Support Matrix**

**ProtecTIER Release V2.5.x**

**Created Date:**

12/6/2010

**NOTE**

The following information is to be used as a guide. Please reference the SSIC website for release information.

[http://www-03.ibm.com/systems/support/storage/config/ssic/displayesssearchwithoutjs.wss?start\\_over=yes](http://www-03.ibm.com/systems/support/storage/config/ssic/displayesssearchwithoutjs.wss?start_over=yes)

**DISCLAIMER**

Firmware levels in this matrix were qualified by IBM and are the minimum supported levels. All advanced levels are supported by default, however consult the vendors for any known problems/restrictions with advanced levels.

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TS7600 Backup Application ISV (VTL Support)	commvault Hitachi Data Protection Suite			EMC <sup>2</sup> where information lives NetWorker			hp HP Data Protector			IBM Tivoli Storage Manager			symantec. Veritas NetBackup			
	P3000 with DL7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DL7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DL7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DL7000	P3000 with LTO2	TS3500 with LTO3	DTC VTL with DL7000	DTC VTL with LTO2	V-TS3500 with LTO3	
NOTES	1, 2, 3			1, 4, 5			6, 7, 8, 9			8, 10, 11, 12			8, 13, 14, 16, 17			
AIX 5.2									6.1	5.4	5.4			5.1	6.0	6.5
AIX 5.3	7.0 8.0	7.0 8.0	7.0 8.0 9.0						6.1	5.4 5.5	5.4 6.1	5.4 6.1		5.1 6.0	6.5 7.0	6.5 7.1
AIX 6.1	7.0 8.0	7.0 8.0	7.0 8.0 9.0								5.5 6.1 6.2	5.5.2 6.1 6.2				6.5 7.0 7.1
HP-UX 11v1 & 11v2	7.0 8.0	7.0 8.0	7.0 8.0 9.0				6.0	6.0	6.1			5.5.2 6.1 6.2	6.5 7.0	6.5 7.0		6.5 7.0 7.1
HP-UX 11v3	7.0 8.0	7.0 8.0	7.0 8.0 9.0				6.1	6.1	6.1			5.5.2 6.1 6.2	6.5 7.0	6.5 7.0		6.5 7.0 7.1
RedHat 4.7																
RedHat ES4.0							6.1	6.1	6.1			5.5 6.1 6.2		5.1 6.0 6.5 7.0		
RedHat R5	7.0 8.0	7.0 8.0	7.0 8.0 9.0				6.1	6.1	6.1			5.5 6.1 6.2		6.5 7.0		6.5 7.0 7.1
SLES10	7.0 8.0	7.0 8.0	7.0 8.0 9.0						6.1	5.5.2 6.1 6.2	5.5.2 6.1 6.2	5.5.2 6.1 6.2		6.5 7.0		6.5 7.0 7.1
Solaris 10							5.5	5.5	6.1							
Solaris 10 (SPARC & x64)														5.1 6.0 6.5 7.0		6.5 7.0 7.1
Solaris 10 SPARC	7.0 8.0	7.0 8.0	7.0 8.0 9.0							5.4 5.5	5.4 5.5 6.1	5.5.2 6.1 6.2				
Solaris 10 x86												5.5.2 6.1 6.2				
Solaris 10 x86_64	7.0 8.0	7.0 8.0	7.0 8.0 9.0													
Solaris 8														5.1 6.0 6.5 7.0		
Solaris 8 SPARC																
Solaris 9														5.1 6.0 6.5 7.0		6.5 7.0 7.1
Solaris 9 SPARC										5.4 5.5	5.4 5.5	5.5.2				
V5R4																
V5R4/V5																
V6R1																
Windows 2003 (x86 / 32 bit / 64 bit)	7.0 8.0	7.0 8.0	7.0 8.0 9.0						6.1	5.4 5.5 6.1	5.4 5.5 6.1 6.2	5.4 5.5 6.1 6.2		5.1 6.0 6.5 7.0		6.5 7.0 7.1
Windows 2008 (32 bit / 64 bit)	7.0 8.0	7.0 8.0	7.0 8.0 9.0						6.1	5.5.2 6.1	5.5.2 6.1	5.5.2 6.1 6.2		6.5 7.0		6.5 7.0 7.1
zLinux/SUSE10										5.5.2	5.5.2	5.5.2 6.1 6.2				



TS7600 Backup Application ISV						
	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3
NOTES				24		
AIX 5.2						
AIX 5.3						
AIX 6.1				8.0	8.0	8.0
HP-UX 11v1 & 11v2						
HP-UX 11v3				8.0	8.0	8.0
RedHat 4.7						
RedHat ES4.0						
RedHat R5				8.0	8.0	8.0
SLES10						
Solaris 10				8.0	8.0	8.0
Solaris 10 (SPARC & x64)						
Solaris 10 SPARC						
Solaris 10 x86						
Solaris 10 x86_64						
Solaris 8						
Solaris 8 SPARC						
Solaris 9						
Solaris 9 SPARC						
V5R4						
V5R4/V5						
V6R1						
Windows 2003 (x86 / 32 bit / 64 bit)	V3.1.1			8.0	8.0	8.0
Windows 2008 (32 bit / 64 bit)				8.0	8.0	8.0
zLinux/SUSE10						







## NOTES

- (1) TS3500 libraries use SCSI pass-through driver on all OS except for:
- Windows - use IBM tape device driver from <ftp://ftp.software.ibm.com/storage/devdrv>
- (2) LTO2/LTO3 drives: use SCSI pass-through driver on all OS except for:
- Windows - use IBM tape device driver from <ftp://ftp.software.ibm.com/storage/devdrv>
- (3) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is supported on Windows
- (4) LTO2/LTO3 drives:
- Windows - use IBM tape driver from <ftp://ftp.software.ibm.com/storage/devdrv>
- Windows - use IBM's IBMTape device driver only  
AIX - use IBM's Atape device driver only  
Linux - use the native "st" driver only
- Solaris - use either the IBMTape driver or the native st driver
- HP-UX - use the native stape device drive
- (5) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. DPF is supported on Windows, AIX and Solaris.
- (6) TS3500 libraries use native OS device driver for medium changer with the following exceptions:
- Windows 2003 - disable the class driver in Windows Hardware Manager  
AIX - use the driver for the OS used for robotic control  
Solaris - use sst
- (7) LTO2/LTO3 drives: use the native OS device driver for the tape drive with the following exceptions:
- (8) General Note: IBM tape device drivers can be downloaded from <ftp://ftp.software.ibm.com/storage/devdrv>
- (9) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. DPF is supported on AIX
- (10) TS3500 libraries use the IBM device driver
- (11) LTO2/LTO3 drives use the IBM device driver
- (12) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is supported on OS
- (13) TS3500 libraries use native device driver on all OS except for the following:
- AIX - install and configure the Symantec ovpass driver
- (14) LTO2/LTO3 drives use the native OS tape device driver
- (15) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is NOT supported.
- (16) General Note: V-TS3500 Library is supported by Symantec (not TS3500)
- (17) General Note: Check Symantec Hardware Compatibility Lists located on the Symantec support website for the latest tested IBM driver levels.
- (18) General Note: Support requires minimum ProtecTIER V2.2.3 code
- (19) General Note: Minimum operating system level is 5100-09
- (20) General Note: Minimum operating system level is 5100-10
- (21) General Note: Official HP Enterprise Backup Solution Certification. Include HP Superdome & mid-range support.
- (22) General Note: Single Instance Storage (SIS) not supported
- (23) Minimum Firmware level of 2.2.3.16 is required
- (24) Minimum Firmware level of 2.3.3.1 is required
- (25) only one medium changer should be presented to the CA backup application.
- (26) Considerations/restrictions for IOP-less usage:
- 1- If a ProtecTIER drive is going to be used for an alternate IPL device (D-mode), there can only be one drive visible on the adapter as the alternate restart device. ProtecTIER LUN masking may be used to satisfy this requirement.
  2. If any VIOS partition is connected to the ProtecTIER on the SAN, the ProtecTIER must be removed from the zone prior to initiating a reboot of the ProtecTIER
- Failure to follow this restriction will cause errors to occur on other devices attached to the same NPIV port that may be disruptive.
- (TBD) Software support is pending.

<b>TS7600 Backup Application ISV (OpenStorage Technology (OST) Support)</b>	
<b>NOTES</b>	<b>1</b>
AIX 6.1	6.5.6 7.0.0
AIX 5.3	6.5.6 7.0.0
HP-UX 11v3	
RedHat R5	
Solaris 10	
Windows 2003 (x86 / 32 bit / 64 bit)	6.5.6 7.0.0
Windows 2008 (64 bit)	6.5.6 7.0.0











**Notes:**



- 1) IBM ProtecTIER V2.5 Plug-in is required.






TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
Windows 2003		LP90xx	5-5.01a0-1 5-2.4.a3 5.20a9 2.30.a2	3.82a1
				3.90a7
				3.91a3
				3.92a2
				3.92a3
				3.93a0
				3.82a1
		LP98xx	5.2.23a6	1.90a4
		LP10000	5.22a8	1.90a4
			5-2.23a6	
			5-2.4.a2	1.91a1
			5-2.4.a3	
			5.30a2	1.91a5
	LP952	2.30a2	3.93a0	
	LP1105-BC	5-1.30A9	2.10A10	
	LP1050	5.30a2	1.90a4	
	LP1100x	5-2.41a1	2.10a10	
		1.20.a7 2.00a12	2.70.a5 2.72a2	
	LPe1100x /LPe1150	2.00a12	2.72a2	
		QLA23xx	9.0.2.17	3.0.3.13
9.1.0.16			3.0.3.16	
QLA24xx		9.1.4.15	3.03.21	
		9.1.2.19	4.00.23	
QLE2562		9.1.4.15	4.00.26	
QLE2462	9.1.4.15	4.00.26		
Windows 2008		LPe11002	2.10a7	2.50a6
		QLE2562	9.1.4.15	4.00.26
		QLE2462	9.1.4.15	4.00.26
Solaris 8		LP90xx	5.02c	3.90a7
			6.01c	3.92a2
			6.01f	
			4.21e	3.91a3
		LP94xx	5.02x	
			6.01c	1.81a1
		LP1000x	4.08	3.02.14
			4.13	3.02.15
	6.01c		6.01c	
		QLA23xx	3.14	
		QLA246x	5.03	


TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
Solaris 9	EMULEX	LP90xx	5.01e-1 6.02g	3.82a1 3.90a7 3.91a3 3.92a2 3.93a0
			5.02c	3.82a1 3.91a3 3.92a2 3.93a0
		LP98xx	5.01e-1	1.81a1 1.90a4
			6.01	1.81a1
		LP1000x	5.01e-1	1.81a1
		LP1100x		1.92a1
		LPe1100x		2.72a2
	QLOGIC	QLA23xx	SFS 4.4.6 4.13.01	1.14.09 3.2.15 IP
		QLA246x	5.03	
		QLE246x		
Solaris 10	EMULEX	LP10xxx	6.10g	1.91a5
			11.10 (SUN Driver)	
			6.11c	
	LP1100x	6.10g	2.70a5 2.72a2	
	LPe1100x		2.72a2	
	EMULEX Sun microsystems OEM	SUN SG- XPC11FC-EM2	OS default	OS default
		QLOGIC	QLA23xx	SFS 4.4.6 4.13.01
	XPCIE2FC-QF4 Qlogic SUN OEM		OS default	
	QLA246x		OS default	
	QLE246x		5.03	
HP-UX 11.x	EMULEX	A8003A (Emulex LPe11002 )	2.50a6	LPFC B.05.32.03 Light Pulse Adapter Driver
	Tachyon	A5158A	Built-in	
		A9782		
		AB379		
		AD194		
		AB378		
		AD355		
		AD300A		
A6795A				






TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
AIX 5.2		LP90xx IBM6228	Built-in	3.82a1 3.90a7 3.91a3
		LP98xx IBM6239		1.81a1
		LP10000 IBM5716		1.81a1 1.90a4
		IBM 5758/9 (LP11k)		2.10a10
AIX 5.3		IBM 5716 (LP10K)	Built-in	1.90a4 1.91a5 1.9x13
		IBM 5758/9 (LP11k)		2.10a10 2.71x4
		IBM 5773		Built-in
		IBM 5704		
		IBM 5774		
		IBM 6239		
		LP9002		
AIX 6.1		IBM5716	Built-in	Built-in
		IBM5759		
		IBM5773		
		IBM5774		
		IBM5735		
		IBM5758		
		QLA2462	OS default	
		QLA 23xx		
		LP10000	8.0.16.32	1.46
				
Linux 5		QLE2462	OS default	
		QLE2422	OS default	
		LPe1205	8.2.0.63	1.11A8
		LPE11002	2.00a12	2.72a2
IBM i5/OS V5R4		IBM2765 IBM5761 IBM5704	Native via if/OS	
IBM i5/OS V5R4M5		IBM2765 IBM5761 IBM5704	Native via i5/OS	
IBM i 6.1		IBM2765 IBM5761 IBM5704	Native via IBM I	
IBM i6.1.1		IBM2765 IBM5761 IBM5704 IBM5749 IBM5774 IBM5735	Native via IBM I *IBM5749, IBM 5774, and IBM 5735 require MF49234	
IBM i7.1		IBM2765 IBM5761 IBM5704 IBM5749 IBM5774 IBM5735 IBM5273 IBM5276	Native via IBM I *IBM5749, IBM 5774, and IBM 5735 require MF49235	


TS7600 NDMP Compatibility	Network Data Management Protocol (NDMP) Compatibility	
	Software Release	NDMP Compatible
	Data ONTAP 7.x (does not include 7G)	yes
	Celerra NSX DART 5.4	yes


<b>Qualified Switches &amp; Directors</b>					
<b>TS7600 Front-end Switch Support</b>	<b>Switches</b>	<b>OEM Equivalents</b>			<b>Firmware</b>
		<b>EMC Connectrix</b>	<b>IBM</b>	<b>HP StorageWorks</b>	
 <b>BROCADE</b>	SilkWorm 2xxx	DS-16B			2.2.1a a2.3.0 3.2.1C
	SilkWorm 3800		2109 F16		4.4.0e 5.0.3a 5.1.0a
	SilkWorm 41xx	DS-4100B	SAN32B-2	SAN Switch 4/32	4.4.0e 5.0.3a 5.1.0a
	SilkWorm 48xxx	ED-48000B	2109-M48	SAN Director 4/256	4.4.0e 5.0.3a 5.1.0a
	DCX Director		SAN768B		v6.2.0e
	SilkWorm 12000		SAN384B		4.3.1.x
	SilkWorm 51xx/53xx		SAN80B-4 SAN24B-4		6.1D
 <b>McDATA</b>	6064		2027-256		09.08.03.2
	6140				09.08.03.2
	Sphereon 4xxx Series	DS-4400M DS24-M2 DS-4700M	SAN16M-2 SAN32B-2	Edge Switch 2/24	v08.01.01 4/9.03.00 1
 <b>CISCO</b>	MDS 9000 Series				4.1.3a
	MDS 9506				m9100-s2ek9-mz.3.2.2
 <b>QLOGIC</b>	SANbox 5200				v5.0.1.10.0
	SANbox 5600				
 <b>INRANGE</b>	FC9000				4.3.0.2








TS7600 Front-end HBA & Firmware Options	HBA	Firmware
	LPe11002	2.70a5 2.72A2
	LP11002	
	LP110002-s (SG-XPCI2FC-EM4)	
	LPe110002-s (SG-XPCIE2FC)	

TS7600 Back-end HBA	Back-end HBA	
	HBA	Driver
	QLE2462	Default Linux OS Driver

<b>TS7600 OEM ONLY Cluster MGT Ethernet Switches</b>	<p style="text-align: center;"><b>Ethernet Switch</b></p>
	<p style="text-align: center;">DGS-1016D</p>
	<p style="text-align: center;">Catalyst Express 500G</p>

<b>TS7600 OEM ONLY Cluster MGT Fencing Switches</b>	<p style="text-align: center;"><b>Fencing Switch</b></p>
	<p style="text-align: center;">IPS-800E-D20</p>

<b>TS7600 ProtectTIER Manager Platforms</b>	<b>ProtectTIER Manager Platforms</b>
	<b>Host Operating Systems</b>
Windows	2003
	2008
	WIN 7
	XP
 redhat.	ES/AS 4 x86_64
	ES/AS 5 x86_64
<b>Linux MCP 32 bit</b>	TSSC only

TS7600 Qualified Back-end Disk	Qualified Back-end Disk Arrays & Minimum Firmware	
	Disk Array	Minimum Firmware
	Storwize V7000	6.1.0.0
	DS3400	07.35.41.02
	DS4300	06.60.22.00
	DS3500	07.70.16.01 *Minimum PT FW 2.4.2
	DS4500	06.60.22.00
	DS4200	07.60.28.00
	DS4700	
	DS4800	
	DS5020	07.60.28.00
	DS5100	07.60.28.00
	DS5300	07.60.28.00
	DS8100	64.25.9.0
	DS8300	63.1.46.2
	DS8700	75.0.177.0
	DCS9900	6.04
	XIV, Gen1	9.2
	XIV, Gen2	10.0.0.b
	SVC	4.3.1
	CX300	2.19.300.5.xx
	CX600	2.19.600.5.xx
	DMX3	5771 PL111
	CX4-120	04.29.000.5.001
	CX700	2.24.700.5.xx
	AMS1000	0770/G-H
	AMS2500	0850/C-M
	AMS2300	0850/C-M
	AMS2100	0850/C-M
	USP-V	60-04-04
	EVA 8100	SR1142xcsp-6200
	EVA 8400	9501100
	7900	07.50.14.00
	FAS3070	Data ONTAP 7.2.6.1 Data ONTAP 7.3.1.1
	N7600	Data ONTAP 7.2.6.1 Data ONTAP 7.3.1.1
	N7700	
	N7800	
	N7900	
	N6040	
	N6060	
	N5300	
	N5600	
N6070		





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TS7600 Backup Application ISV															
	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	DTC VTL with DLT7000	DTC VTL with LTO2	V-TS3500 with LTO3
NOTES	1, 2, 3			1, 4, 5			6, 7, 8, 9			8, 10, 11, 12			8, 13, 14, 16, 17		
AIX 5.2									6.1	5.4	5.4			5.1 6.0 6.5	
AIX 5.3	7.0 8.0	7.0 8.0	7.0 8.0			7.4 7.5 7.6			6.1	5.4 5.5	5.4 5.5 6.1	5.4 5.5 6.1		5.1 6.0 6.5 7.0	6.5 7.0 7.1
AIX 6.1	7.0 8.0	7.0 8.0	7.0 8.0			7.4 7.5 7.6					5.5 6.1 6.2	5.5.2 6.1 6.2			6.5 7.0 7.1
HP-UX 11v1 & 11v2	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6	6.0	6.0	6.1			5.5.2 6.1 6.2	6.5 7.0	6.5 7.0 7.1	6.5 7.0 7.1
HP-UX 11v3	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6	6.1	6.1	6.1			5.5.2 6.1 6.2	6.5 7.0	6.5 7.0 7.1	6.5 7.0 7.1
RedHat 4.7															
RedHat ES4.0							6.1	6.1	6.1			5.5 6.1 6.2		5.1 6.0 6.5 7.0	
RedHat R5	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6	6.1	6.1	6.1			5.5 6.1 6.2		6.5 7.0	6.5 7.0 7.1
SLES10	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6			6.1	5.5.2 6.1 6.2	5.5.2 6.1 6.2	5.5.2 6.1 6.2		6.5 7.0 7.1	6.5 7.0 7.1
Solaris 10				7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6	5.5	5.5	6.1						
Solaris 10 (SPARC & x64)														5.1 6.0 6.5 7.0	6.5 7.0 7.1
Solaris 10 SPARC	7.0 8.0	7.0 8.0	7.0 8.0							5.4 5.5	5.4 5.5 6.1	5.5.2 6.1 6.2			
Solaris 10 x86												5.5.2 6.1 6.2			
Solaris 10 x86_64	7.0 8.0	7.0 8.0	7.0 8.0												
Solaris 8														5.1 6.0 6.5 7.0	
Solaris 8 SPARC															
Solaris 9														5.1 6.0 6.5 7.0	6.5 7.0 7.1
Solaris 9 SPARC										5.4 5.5	5.4 5.5	5.5.2			
V5R4															
V5R4/V5															
V6R1															
Windows 2003 (x86 / 32 bit / 64 bit)	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6			6.1	5.4 5.5 6.1	5.4 5.5 6.1	5.4 5.5 6.1 6.2		5.1 6.0 6.5 7.0	6.5 7.0 7.1
Windows 2008 (32 bit / 64 bit)	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6			6.1	5.5.2 6.1	5.5.2 6.1	5.5.2 6.1 6.2		6.5 7.0	6.5 7.0 7.1
zLinux/SUSE10										5.5.2	5.5.2	5.5.2 6.1 6.2			



TS7600 Backup Application ISV						
	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3
NOTES				24		
AIX 5.2						
AIX 5.3						
AIX 6.1				8.0	8.0	8.0
HP-UX 11v1 & 11v2						
HP-UX 11v3				8.0	8.0	8.0
RedHat 4.7						
RedHat ES4.0						
RedHat R5				8.0	8.0	8.0
SLES10						
Solaris 10				8.0	8.0	8.0
Solaris 10 (SPARC & x64)						
Solaris 10 SPARC						
Solaris 10 x86						
Solaris 10 x86_64						
Solaris 8						
Solaris 8 SPARC						
Solaris 9						
Solaris 9 SPARC						
V5R4						
V5R4/V5						
V6R1						
Windows 2003 (x86 / 32 bit / 64 bit)	V3.1.1			8.0	8.0	8.0
Windows 2008 (32 bit / 64 bit)				8.0	8.0	8.0
zLinux/SUSE10						

## **NOTES**

- (1) TS3500 libraries use SCSI pass-through driver on all OS except for:

Windows - use IBM tape device driver from <ftp://ftp.software.ibm.com/storage/devdrv>

- (2) LTO2/LTO3 drives: use SCSI pass-through driver on all OS except for:

Windows - use IBM tape device driver from <ftp://ftp.software.ibm.com/storage/devdrv>

- (3) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is supported on Windows

- (4) LTO2/LTO3 drives:

Windows - use IBM tape driver from <ftp://ftp.software.ibm.com/storage/devdrv>

Windows - use IBM's IBMTape device driver only

AIX - use IBM's Atape device driver only

Linux - use the native "st" driver only

Solaris - use either the IBMTape driver or the native st driver

HP-UX - use the native stape device drive

- (5) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. DPF is supported on Windows, AIX and Solaris.

- (6) TS3500 libraries use native OS device driver for medium changer with the following exceptions:

Windows 2003 - disable the class driver in Windows Hardware Manager

AIX - use the driver for the OS used for robotic control

Solaris - use sst

- (7) LTO2/LTO3 drives: use the native OS device driver for the tape drive with the following exceptions:

- (8) General Note: IBM tape device drivers can be downloaded from <ftp://ftp.software.ibm.com/storage/devdrv>

- (9) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. DPF is supported on AIX

- (10) TS3500 libraries use the IBM device driver

- (11) LTO2/LTO3 drives use the IBM device driver

- (12) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is supported on OS

- (13) TS3500 libraries use native device driver on all OS except for the following:

AIX - install and configure the Symantec ovpass driver

- (14) LTO2/LTO3 drives use the native OS tape device driver

- (15) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is NOT supported.

- (16) General Note: V-TS3500 Library is supported by Symantec (not TS3500)

- (17) General Note: Check Symantec Hardware Compatibility Lists located on the Symantec support website for the latest tested IBM driver levels.

- (18) General Note: Support requires minimum ProtecTIER V2.2.3 code

- (19) General Note: Minimum operating system level is 5100-09

- (20) General Note: Minimum operating system level is 5100-10

- (21) General Note: Official HP Enterprise Backup Solution Certification. Include HP Superdome & mid-range support.

- (22) General Note: Single Instance Storage (SIS) not supported

- (23) Minimum Firmware level of 2.2.3.16 is required

- (24) Minimum Firmware level of 2.3.3.1 is required

- (25) only one medium changer should be presented to the CA backup application.

- (26) Considerations/restrictions for IOP-less usage:

1- If a ProtecTIER drive is going to be used for an alternate IPL device (D-mode), there can only be one drive visible on the adapter as the alternate restart device.

ProtecTIER LUN masking may be used to satisfy this requirement.









2. If any VIOS partition is connected to the ProtecTIER on the SAN, the ProtecTIER must be removed from the zone prior to initiating a reboot of the ProtecTIER

Failure to follow this restriction will cause errors to occur on other devices attached to the same NPIV port that may be disruptive.



(TBD) Software support is pending.






TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
Windows 2003	EMULEX	LP90xx	5-5.01a0-1 5-2.4.a3 5.20a9 2.30.a2	3.82a1
				3.90a7
		3.91a3		
		3.92a2		
		3.92a3		
		3.93a0		
		3.82a1		
		1.90a4		
		1.90a4		
		5-2.23a6		
		5-2.4.a2		
		5-2.4.a3	1.91a1	
		5.30a2	1.91a5	
	1.30a6			
	2.41a1			
	LP952	2.30a2	3.93a0	
	LP1105-BC	5-1.30A9	2.10A10	
	LP1050	5.30a2	1.90a4	
	LP1100x	5-2.41a1	2.10a10	
		1.20.a7 2.00a12	2.70.a5 2.72a2	
LPe1100x /LPe1150	2.00a12	2.72a2		
QLOGIC	QLA23xx	9.0.2.17	3.0.3.13	
		9.1.0.16	3.0.3.16	
	QLA24xx	9.1.4.15	3.03.21	
		9.1.2.19	4.00.23	
	QLE2562	9.1.4.15	4.00.26	
QLE2462	9.1.4.15	4.00.26		
Windows 2008	EMULEX	LPe11002	2.10a7	2.50a6
	QLOGIC	QLE2562	9.1.4.15	4.00.26
QLE2462		9.1.4.15	4.00.26	
Solaris 8	EMULEX	LP90xx	5.02c	3.90a7
			6.01c	3.92a2
			6.01f	
		LP94xx	4.21e	3.91a3
			5.02x	
		LP1000x	6.01c	1.81a1
			4.08	3.02.14
	4.13		3.02.15	
	QLOGIC	QLA23xx	6.01c	6.01c
			3.14	
QLA246x		5.03		


TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
Solaris 9	EMULEX	LP90xx	5.01e-1 6.02g	3.82a1 3.90a7 3.91a3 3.92a2 3.93a0
			5.02c	3.82a1 3.91a3 3.92a2 3.93a0
		LP98xx	5.01e-1	1.81a1 1.90a4
			6.01	1.81a1
		LP1000x	5.01e-1	1.81a1
		LP1100x		1.92a1
		LPe1100x		2.72a2
	QLOGIC	QLA23xx	SFS 4.4.6 4.13.01	1.14.09 3.2.15 IP
		QLA246x	5.03	
		QLE246x		
Solaris 10	EMULEX	LP10xxx	6.10g	1.91a5
			11.10 (SUN Driver)	
			6.11c	
	LP1100x	6.10g	2.70a5 2.72a2	
	LPe1100x		2.72a2	
	EMULEX Sun microsystems OEM	SUN SG- XPC11FC-EM2	OS default	OS default
		QLOGIC	QLA23xx	SFS 4.4.6 4.13.01
	XPCIE2FC-QF4 Qlogic SUN OEM		OS default	
	QLA246x		OS default	
	QLE246x		5.03	
HP-UX 11.x	EMULEX	A8003A (Emulex LPe11002 )	2.50a6	LPFC B.05.32.03 Light Pulse Adapter Driver
	Tachyon	A5158A	Built-in	
		A9782		
		AB379		
		AD194		
		AB378		
		AD355		
		AD300A		
	A6795A			


TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
AIX 5.2		LP90xx IBM6228	Built-in	3.82a1 3.90a7 3.91a3
		LP98xx IBM6239		1.81a1
		LP10000 IBM5716		1.81a1 1.90a4
		IBM 5758/9 (LP11k)		2.10a10
AIX 5.3		IBM 5716 (LP10K)	Built-in	1.90a4 1.91a5 1.9x13
		IBM 5758/9 (LP11k)		2.10a10 2.71x4
		IBM 5773		Built-in
		IBM 5704		
		IBM 5774		
		IBM 6239		1.91x4
		LP9002		3.93a0
AIX 6.1		IBM5716	Built-in	Built-in
		IBM5759		
		IBM5773		
		IBM5774		
		IBM5735		
		IBM5758		
		QLA2462	OS default	
		QLA 23xx		
		QLA2462	OS default	
		QLA2422	OS default	
		LPe1205	8.2.0.63	1.11A8
		LPE11002	2.00a12	2.72a2
IBM i5/OS V5R4		IBM2765 IBM5761 IBM5704	Native via if/OS	
IBM i5/OS V5R4M5		IBM2765 IBM5761 IBM5704	Native via i5/OS	
IBM i 6.1		IBM2765 IBM5761 IBM5704	Native via IBM I	
IBM i6.1.1		IBM2765 IBM5761 IBM5704 IBM5749 IBM5774 IBM5735	Native via IBM I *IBM5749, IBM 5774, and IBM 5735 require MF49234	
IBM i7.1		IBM2765 IBM5761 IBM5704 IBM5749 IBM5774 IBM5735 IBM5273 IBM5276	Native via IBM I *IBM5749, IBM 5774, and IBM 5735 require MF49235	






TS7600 NDMP Compatibility	Network Data Management Protocol (NDMP) Compatibility	
	Software Release	NDMP Compatible
	Data ONTAP 7.x (does not include 7G)	yes
	Celerra NSX DART 5.4	yes


<b>Qualified Switches &amp; Directors</b>					
<b>TS7600 Front-end Switch Support</b>	<b>Switches</b>	<b>OEM Equivalents</b>			<b>Firmware</b>
		<b>EMC Connectrix</b>	<b>IBM</b>	<b>HP StorageWorks</b>	
	SilkWorm 2xxx	DS-16B			2.2.1a a2.3.0 3.2.1C
	SilkWorm 3800		2109 F16		4.4.0e 5.0.3a 5.1.0a
	SilkWorm 41xx	DS-4100B	SAN32B-2	SAN Switch 4/32	4.4.0e 5.0.3a 5.1.0a
	SilkWorm 48xxx	ED-48000B	2109-M48	SAN Director 4/256	4.4.0e 5.0.3a 5.1.0a
	DCX Director		SAN768B		v6.2.0e
	SilkWorm 12000		SAN384B		4.3.1.x
	SilkWorm 51xx/53xx		SAN80B-4 SAN24B-4		6.1D
	6064		2027-256		09.08.03.2
	6140				09.08.03.2
	Sphereon 4xxx Series	DS-4400M DS24-M2 DS-4700M	SAN16M-2 SAN32B-2	Edge Switch 2/24	v08.01.01 4/9.03.00 1
	MDS 9000 Series				4.1.3a
	MDS 9506				m9100-s2ek9-mz.3.2.2
	SANbox 5200				v5.0.1.10.0
	SANbox 5600				
	FC9000				4.3.0.2







TS7600 Front-end HBA & Firmware Options	HBA	Firmware
	LPe11002	2.70a5 2.72A2
	LP11002	
	LP110002-s (SG-XPCI2FC-EM4)	
	LPe110002-s (SG-XPCIE2FC)	

TS7600 Back-end HBA	Back-end HBA	
	HBA	Driver
	QLE2462	Default Linux OS Driver

<b>TS7600 OEM ONLY Cluster MGT Ethernet Switches</b>	<p style="text-align: center;"><b>Ethernet Switch</b></p>
	<p style="text-align: center;">DGS-1016D</p>
	<p style="text-align: center;">Catalyst Express 500G</p>

<b>TS7600 OEM ONLY Cluster MGT Fencing Switches</b>	<p style="text-align: center;"><b>Fencing Switch</b></p>
	<p style="text-align: center;">IPS-800E-D20</p>

<b>TS7600 ProtectTIER Manager Platforms</b>	<b>ProtectTIER Manager Platforms</b>
	<b>Host Operating Systems</b>
Windows	2003
	2008
	WIN 7
	XP
 redhat.	ES/AS 4 x86_64
	ES/AS 5 x86_64
<b>Linux MCP 32 bit</b>	TSSC only

TS7600 Qualified Back-end Disk	Qualified Back-end Disk Arrays & Minimum Firmware	
	Disk Array	Minimum Firmware
	DS3400	07.35.41.02
	DS4300	06.60.22.00
	DS3500	07.70.16.01 *Minimum PT FW 2.4.2
	DS4500	06.60.22.00
	DS4200	07.60.28.00
	DS4700	
	DS4800	
	DS5020	07.60.28.00
	DS5100	07.60.28.00
	DS5300	07.60.28.00
	DS8100	64.25.9.0
	DS8300	63.1.46.2
	DS8700	75.0.177.0
	DCS9900	6.04
	XIV, Gen1	9.2
	XIV, Gen2	10.0.0.b
	SVC	4.3.1
	CX300	2.19.300.5.xx
	CX600	2.19.600.5.xx
	DMX3	5771 PL111
	CX4-120	04.29.000.5.001
	CX700	2.24.700.5.xx
	AMS1000	0770/G-H
	AMS2500	0850/C-M
	AMS2300	0850/C-M
	AMS2100	0850/C-M
	USP-V	60-04-04
	EVA 8100	SR1142xcsp-6200
	EVA 8400	9501100
	7900	07.50.14.00
	N7600	Data ONTAP 7.2.6.1 Data ONTAP 7.3.1.1
	N7700	
	N7800	
	N7900	
	N6040	
	N6060	
	N5300	
	N5600	
N6070		



**IBM System Storage**  
**TS7650 / TS7650G ProtecTIER Deduplication Appliance /**  
**Gateway**  
**Backup Application ISV**  
**Support Matrix**

**ProtecTIER Release V2.3.x**

**Created Date:**

4/27/2010

**NOTE**

The following information is to be used as a guide. Please reference the SSIC website for release information.

[http://www-03.ibm.com/systems/support/storage/config/ssic/displayesssearchwithoutjs.wss?start\\_over=yes](http://www-03.ibm.com/systems/support/storage/config/ssic/displayesssearchwithoutjs.wss?start_over=yes)

**DISCLAIMER**

Firmware levels in this matrix were qualified by IBM and are the minimum supported levels. All advanced levels are supported by default, however consult the vendors for any known problems/restrictions with advanced levels.

**Engineers:**






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TS7600 Backup Application ISV															
	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	DTC VTL with DLT7000	DTC VTL with LTO2	V-TS3500 with LTO3
NOTES	1, 2, 3			1, 4, 5			6, 7, 8, 9			8, 10, 11, 12			8, 13, 14, 15, 16, 17		
AIX 5.2									6.1	5.4	5.4			5.1 6.0 6.5	
AIX 5.3	7.0 8.0	7.0 8.0	7.0 8.0			7.4 7.5 7.6			6.1	5.4 5.5	5.4 6.1	5.4 6.1		5.1 6.0 6.5 7.0	6.5 7.0
AIX 6.1						7.4 7.5 7.6					5.5 6.1 6.2	5.5.2 6.1 6.2			6.5 7.0
HP-UX 11v1 & 11v2	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6	5.5 6.0	6.0	5.5 6.1			5.5.2 6.1 6.2	6.5 7.0	6.5 7.0	6.5
HP-UX 11v3				7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6	6.1	6.1	6.1				6.5 7.0	6.5 7.0	6.5 7.0
RedHat 4.7	7.0 8.0	7.0 8.0	7.0 8.0												
RedHat ES4.0							6.1	6.1	6.1			5.5 6.1 6.2		5.1 6.0 6.5 7.0	
RedHat R5	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6			6.1			5.5 6.1 6.2		6.5 7.0	6.5 7.0
SLES10	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6			6.1	5.5.2 6.1 6.2	5.5.2 6.1 6.2	5.5.2 6.1 6.2		6.5 7.0	6.5 7.0
Solaris 10				7.4 7.5 7.6	7.4 7.5 7.6	7.4 7.5 7.6	5.5	5.5	6.1						
Solaris 10 (SPARC & x64)									6.1					5.1 6.0 6.5 7.0	6.5 7.0
Solaris 10 SPARC	7.0 8.0	7.0 8.0	7.0 8.0						6.1	5.4 5.5	5.4 6.1	5.5.2 6.1 6.2			
Solaris 10 x86									6.1			5.5.2 6.1 6.2			
Solaris 10 x86_64	7.0 8.0	7.0 8.0	7.0 8.0						6.1						
Solaris 8														5.1 6.0 6.5 7.0	
Solaris 8 SPARC															
Solaris 9														5.1 6.0 6.5 7.0	6.5 7.0
Solaris 9 SPARC										5.4 5.5	5.4 5.5	5.5.2			
V5R4															
V5R4/V5															
V6R1															
Windows 2003 (x86 / 32 bit / 64 bit)	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5	7.4 7.5	7.4 7.5 7.6			6.1	5.4 6.1	5.4 6.1	5.4 5.5 6.1 6.2		5.1 6.0 6.5 7.0	6.5 7.0
Windows 2008 (32 bit / 64 bit)	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5	7.4 7.5	7.4 7.5 7.6	6.0 6.1	6.0 6.1	6.0 6.1	5.5.2 6.1	5.5.2 6.1	6.1 6.2		6.5 7.0	6.5 7.0
zLinux/SUSE10										5.5.2	5.5.2	5.5.2 6.1 6.2			



TS7600 Backup Application ISV						
	P3000 with DLT7000	P3000 with LTO2	V-TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3
<b>NOTES</b>				24		
AIX 5.2						
AIX 5.3						
AIX 6.1						
HP-UX 11v1 & 11v2						
HP-UX 11v3						
RedHat 4.7						
RedHat ES4.0						
RedHat R5						
SLES10						
Solaris 10						
Solaris 10 (SPARC & x64)						
Solaris 10 SPARC						
Solaris 10 x86						
Solaris 10 x86_64						
Solaris 8						
Solaris 8 SPARC						
Solaris 9						
Solaris 9 SPARC						
V5R4						
V5R4/V5						
V6R1						
Windows 2003 (x86 / 32 bit / 64 bit)	V3.1.1			8.5	8.5	8.5
Windows 2008 (32 bit / 64 bit)						
zLinux/SUSE10						

## NOTES

- (1) TS3500 libraries use SCSI pass-through driver on all OS except for:

Windows - use IBM tape device driver from <ftp://ftp.software.ibm.com/storage/devdrv>

- (2) LTO2/LTO3 drives: use SCSI pass-through driver on all OS except for:

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- (3) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is supported on Windows

- (4) LTO2/LTO3 drives:

Windows - use IBM tape driver from <ftp://ftp.software.ibm.com/storage/devdrv>

Windows - use IBM's IBMtape device driver only

AIX - use IBM's Atape device driver only

Linux - use the native "st" driver only

Solaris - use either the IBMtape driver or the native st driver

HP-UX - use the native stape device drive

- (5) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. DPF is supported on Windows, AIX and Solaris.

- (6) TS3500 libraries use native OS device driver for medium changer with the following exceptions:

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AIX - use the driver for the OS used for robotic control

Solaris - use sst

- (7) LTO2/LTO3 drives: use the native OS device driver for the tape drive with the following exceptions:

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- (10) TS3500 libraries use the IBM device driver

- (11) LTO2/LTO3 drives use the IBM device driver

- (12) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is supported on OS

- (13) TS3500 libraries use native device driver on all OS except for the following:

AIX - install and configure the Symantec ovpass driver

- (14) LTO2/LTO3 drives use the native OS tape device driver

- (15) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is NOT supported.

- (16) General Note: V-TS3500 Library is supported by Symantec (not TS3500)

- (17) General Note: Check Symantec Hardware Compatibility Lists located on the Symantec support website for the latest tested IBM driver levels.

- (18) General Note: Support requires minimum ProtecTIER V2.2.3 code

- (19) General Note: Minimum operating system level is 5100-09

- (20) General Note: Minimum operating system level is 5100-10

- (21) General Note: Official HP Enterprise Backup Solution Certification. Include HP Superdome & mid-range support.







- (22) General Note: Single Instance Storage (SIS) not supported

- (23) Minimum Firmware level of 2.2.3.16 is required









- (24) Minimum Firmware level of 2.3.3.1 is required



- (25) only one medium changer should be presented to the CA backup application.

(TBD) Software support is pending.






TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
Windows 2003		LP90xx	5-5.01a0-1 5-2.4.a3 5.20a9 2.30.a2	3.82a1
				3.90a7
		3.91a3		
		3.92a2		
		3.92a3		
		3.93a0		
		3.82a1		
		LP98xx	5.2.23a6	1.90a4
		LP10000	5.22a8	1.90a4
			5-2.23a6	
			5-2.4.a2	1.91a1
			5-2.4.a3	
			5.30a2	1.91a5
			1.30a6	
	2.41a1			
	LP952	2.30a2	3.93a0	
	LP1050	5.30a2	1.90a4	
LP1100x	5-2.41a1	2.10a10		
	1.20.a7	2.70.a5		
	2.00a12	2.72a2		
LPe1100x /LPe1150	2.00a12	2.72a2		
	QLA23xx	9.0.2.17	3.0.3.13	
		9.1.0.16	3.0.3.16	
	QLA24xx	9.1.4.15	3.03.21	
		9.1.2.19	4.00.23	
	QLE2562	9.1.4.15	4.00.26	
QLE2462	9.1.4.15	4.00.26		
Windows 2008		LPe11002	2.10a7	2.50a6
		QLE2562	9.1.4.15	4.00.26
		QLE2462	9.1.4.15	4.00.26
Solaris 8		LP90xx	5.02c	3.90a7
			6.01c	3.92a2
			6.01f	
			4.21e	3.91a3
		LP94xx	5.02x	
			6.01c	1.81a1
		LP1000x	4.08	3.02.14
			4.13	3.02.15
			6.01c	6.01c
			QLA23xx	3.14
	QLA246x		5.03	


TS7600 Host, Driver, & Topology	Host, Drivers, & Topology				
	HBA Brand	HBA Family	Driver	Firmware	
Solaris 9	EMULEX	LP90xx	5.01e-1 6.02g	3.82a1 3.90a7 3.91a3 3.92a2 3.93a0	
			5.02c	3.82a1 3.91a3 3.92a2 3.93a0	
		LP98xx	5.01e-1	1.81a1 1.90a4	
			6.01	1.81a1	
		LP1000x	5.01e-1	1.81a1	
		LP1100x		1.92a1	
	LPe1100x		2.72a2		
	QLOGIC	QLA23xx	SFS 4.4.6 4.13.01	1.14.09 3.2.15 IP	
			5.03		
		QLA246x QLE246x			
Solaris 10	EMULEX	LP10xxx	6.10g 11.10 (SUN Driver) 6.11c	1.91a5	
			LP1100x	6.10g	2.70a5 2.72a2
			LPe1100x		2.72a2
	EMULEX Sun microsystems OEM	SUN SG- XPC11FC-EM2	OS default	OS default	
	QLOGIC	QLA23xx	SFS 4.4.6 4.13.01	1.14.09 3.2.15 IP	
		XPCIE2FC-QF4 Qlogic SUN OEM	OS default		
		QLA246x QLE246x	OS default 5.03		
HP-UX 11.x	EMULEX	A8003A (Emulex LPe11002 )	2.50a6	LPFC B.05.32.03 Light Pulse Adapter Driver	
	Tachyon	A5158A	Built-in		
		A9782			
		AB379			
		AD194			
		AB378			
		AD355			
		AD300A			
A6795A					


TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
AIX 5.2		LP90xx IBM6228	Built-in	3.82a1 3.90a7 3.91a3
		LP98xx IBM6239		1.81a1
		LP10000 IBM5716		1.81a1 1.90a4
		IBM 5758/9 (LP11k)		2.10a10
AIX 5.3		IBM 5716 (LP10K)	Built-in	1.90a4 1.91a5 1.9x13
		IBM 5758/9 (LP11k)		2.10a10 2.71x4
		IBM 5773		Built-in
		IBM 5704		
		IBM 5774		
		IBM 6239		1.91x4
		LP9002		3.93a0
AIX 6.1		IBM5716	Built-in	Built-in
		IBM5759		
		IBM5773		
		IBM5774		
		IBM5735		
		IBM5758		
		QLA2462	OS default	
		QLA 23xx		
		QLE2462	OS default	
		QLE2422	OS default	
		LPe1205	8.2.0.63	1.11A8
		LPE11002	2.00a12	2.72a2
IBM i5/OS V5R4		IBM2765 IBM5761 IBM5704	Native via OS/400	
IBM i5/OS V5R4M5		IBM2765 IBM5761 IBM5704	Native via OS/400	
IBM i6/OS V6R1 /V6R1M1		IBM2765 IBM5761 IBM5704	Native via OS/400	



TS7600 NDMP Compatibility	Network Data Management Protocol (NDMP) Compatibility	
	Software Release	NDMP Compatible
	Data ONTAP 7.x (does not include 7G)	yes
	Celerra NSX DART 5.4	yes





TS7600 Front-end Switch Support	Qualified Switches & Directors				
	Switches	OEM Equivalents			Firmware
		EMC Connectrix	IBM	HP StorageWorks	
 <b>BROCADE</b>	SilkWorm 2xxx	DS-16B			2.2.1a a2.3.0
	SilkWorm 3800		2109 F16		3.2.1C
	SilkWorm 41xx	DS-4100B	SAN32B-2	SAN Switch 4/32	4.4.0e 5.0.3a 5.1.0a
	SilkWorm 48xxx	ED-48000B	2109-M48	SAN Director 4/256	4.4.0e 5.0.3a 5.1.0a
	DCX Director		SAN768B		v6.2.0e
	SilkWorm 12000		SAN384B		4.3.1.x
	SilkWorm 51xx/53xx		SAN80B-4 SAN24B-4		6.1D
 <b>McDATA</b>	6064		2027-256		09.08.03.2
	6140				09.08.03.2
	Sphereon 4xxx Series	DS-4400M DS24-M2 DS-4700M	SAN16M-2 SAN32B-2	Edge Switch 2/24	v08.01.01 4/9.03.00 1
 <b>CISCO</b>	MDS 9000 Series				4.1.3a
	MDS 9506				m9100-s2ek9-mz.3.2.2
 <b>QLOGIC</b>	SANbox 5200				v5.0.1.10.0
	SANbox 5600				
 <b>INRANGE</b>	FC9000				4.3.0.2






TS7600 Front-end HBA & Firmware Options	HBA	Firmware
	LPe11002	2.70a5 2.72A2
	LP11002	
	LP110002-s (SG-XPCI2FC-EM4)	
	LPe110002-s (SG-XPCIE2FC)	

TS7600 Back-end HBA	Back-end HBA	
	HBA	Driver
	QLE2462	Default Linux OS Driver

<b>TS7600 OEM ONLY Cluster MGT Ethernet Switches</b>	<p style="text-align: center;"><b>Ethernet Switch</b></p>
	<p style="text-align: center;">DGS-1016D</p>
	<p style="text-align: center;">Catalyst Express 500G</p>

<b>TS7600 OEM ONLY Cluster MGT Fencing Switches</b>	<p style="text-align: center;"><b>Fencing Switch</b></p>
	<p style="text-align: center;">IPS-800E-D20</p>

<b>TS7600 ProtectTIER Manager Platforms</b>	<b>ProtectTIER Manager Platforms</b>
	<b>Host Operating Systems</b>
Windows	2003
	XP
 redhat.	ES/AS 4 x86_64
	ES/AS 5 x86_64
<b>Linux MCP 32 bit</b>	TSSC only

TS7600 Qualified Back-end Disk	Qualified Back-end Disk Arrays & Minimum Firmware	
	Disk Array	Minimum Firmware
	DS3400	07.35.41.02
	DS4300	06.60.22.00
	DS4200	07.60.28.00
	DS4700	
	DS4800	
	DS5020	07.60.28.00
	DS5100	07.60.28.00
	DS5300	07.60.28.00
	DS8100	64.25.9.0
	DS8300	63.1.46.2
	DS8700	75.0.177.0
	DCS9900	6.04
	XIV, Gen1	9.2
	XIV, Gen2	10.0.0.b
	SVC	4.3.1
	CX300	2.19.300.5.xx
	CX600	2.19.600.5.xx
	DMX3	5771 PL111
	CX4-120	04.29.000.5.001
	CX700	2.24.700.5.xx
	AMS1000	0770/G-H
	AMS2500	0850/C-M
	AMS2300	0850/C-M
	AMS2100	0850/C-M
	USP-V	60-04-04
	EVA 8100	SR1142xcsp-6200
	EVA 8400	9501100
	N7600	Data ONTAP 7.2.6.1 Data ONTAP 7.3.1.1
	N7700	
	N7800	
	N7900	
	N6040	
	N6060	
	N5300	
	N5600	
	N6070	



**IBM System Storage  
TS7650 / TS7650G ProtecTIER Deduplication  
Appliance / Gateway  
Backup Application ISV  
Support Matrix**

**ProtecTIER Release V2.2.0**

**CREATED DATE:**

8/18/2009

**NOTE**

The following information is to be used as a guide. Please reference the SSIC and ISV websites for release information.

SSIC website:

[http://www-03.ibm.com/systems/support/storage/config/ssic/displaysssearchwithoutjs.wss?start\\_over=yes](http://www-03.ibm.com/systems/support/storage/config/ssic/displaysssearchwithoutjs.wss?start_over=yes)

ISV website:

<http://www-03.ibm.com/systems/storage/tape/library.html#interoperability>

**DISCLAIMER**

Firmware levels in this matrix were qualified by IBM and are the minimum supported levels. All advanced levels are supported by default, however consult the vendors for any known problems/restrictions with advanced levels.


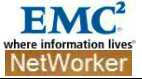



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TS7600 Backup Application ISV																
	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	P3000 with DLT7000	P3000 with LTO2	TS3500 with LTO3	DTC VTL with DLT7000	DTC VTL with LTO2	V-TS3500 with LTO3	
NOTES	1, 2, 3			1, 4, 5			6, 7, 8, 9			8, 10, 11, 12			8, 13, 14, 15, 16, 17			
AIX 5.2										5.4	5.4			5.1 6.0 6.5		
AIX 5.3	7.0 8.0	7.0 8.0	7.0 8.0			7.4 7.5						5.4 5.5	5.4 6.1	5.4 5.5 6.1	5.1 6.0 6.5	6.5
AIX 6.1						7.4 7.5							5.5 6.1	5.5 6.1		
HP-UX 11v1 & 11v2	7.0 8.0	7.0 8.0	7.0 8.0					5.5 6.0		6.0	5.5			5.5 6.1		
HP-UX 11v3								6.1	6.1							6.5
RedHat 4.7	7.0 8.0	7.0 8.0	7.0 8.0													
RedHat ES4.0								6.1	6.1	6.1				5.5 6.1	5.1 6.0 6.5	
RedHat R5	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5										5.5 6.1	6.6	6.5
SLES10	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5		7.4 7.5						5.5 6.1	5.5 6.1	5.5 6.1	6.6	6.5
Solaris 10				7.4 7.5				5.5	5.5							
Solaris 10 (SPARC & x64)															5.1 6.0 6.5	6.5
Solaris 10 SPARC	7.0 8.0	7.0 8.0	7.0 8.0									5.4 5.5	5.4 6.1	5.5 6.1		
Solaris 10 x86														5.5 6.1		
Solaris 10 x86_64	7.0 8.0	7.0 8.0	7.0 8.0													
Solaris 8															5.1 6.0 6.5	
Solaris 8 SPARC																
Solaris 9															5.1 6.0 6.5	6.5
Solaris 9 SPARC												5.4 5.5	5.4 5.5	5.5		
V5R4																
V5R4/V5																
V6R1																
Windows 2003 (x86 / 32 bit / 64 bit)	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5		7.4 7.5						5.4 5.5 6.1	5.4 5.5 6.1	5.4 5.5 6.1	5.1 6.0 6.5	6.5
Windows 2008 (32 bit / 64 bit)	7.0 8.0	7.0 8.0	7.0 8.0	7.4 7.5	7.4 7.5			6.0 6.1	6.0 6.1	6.0 6.1		5.5 6.1	5.5 6.1	5.5 6.1	6.5	6.5
zLinux/SUSE10												5.5 5.5	5.5	5.5		


















## NOTES



- (1) TS3500 libraries use SCSI pass-through driver on all OS except for:
    - Windows - use IBM tape device driver from <ftp://ftp.software.ibm.com/storage/devdrv>
  - (2) LTO2/LTO3 drives: use SCSI pass-through driver on all OS except for:
    - Windows - use IBM tape device driver from <ftp://ftp.software.ibm.com/storage/devdrv>
  - (3) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is supported on Windows
  - (4) LTO2/LTO3 drives:
    - Windows - use IBM's IBMtape device driver only
    - AIX - use IBM's Atape device driver only
    - Linux - use the native "st" driver only
    - Solaris - use either the IBMtape driver or the native st driver
    - HP-UX - use the native stape device driver
    - IBM tape device drivers are available at <ftp://ftp.software.ibm.com/storage/devdrv>
  - (5) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. DPF is supported on Windows, AIX and Solaris.
  - (6) TS3500 libraries use native OS device driver for medium changer with the following exceptions:
    - Windows 2003 - disable the class driver in Windows Hardware Manager
    - AIX - use the driver for the OS used for robotic control
    - Solaris - use sst
  - (7) LTO2/LTO3 drives: use the native OS device driver for the tape drive with the following exceptions:
    - Windows 2003 - disable the class driver in Windows Hardware Manager
    - AIX - use the IBM Atape device driver
  - (8) General Note: IBM tape device drivers can be downloaded from <ftp://ftp.software.ibm.com/storage/devdrv>
  - (9) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. DPF is supported on AIX
  - (10) TS3500 libraries use the IBM device driver
  - (11) LTO2/LTO3 drives use the IBM device driver
  - (12) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is supported on OS
  - (13) TS3500 libraries use native device driver on all OS except for the following:
    - AIX - install and configure the Symantec ovpass driver
  - (14) LTO2/LTO3 drives use the native OS tape device driver
  - (15) General Note: IBM Path Failover (CPF and DPF) feature require IBM tape device drivers. CPF/DPF is NOT supported.
  - (16) General Note: V-TS3500 Library is supported by Symantec (not TS3500)
  - (17) General Note: Check Symantec Hardware Compatibility Lists located on the Symantec support website for the latest tested IBM driver levels.
  - (18) General Note: Support requires minimum ProtecTIER V2.2.3 code
- (TBD) Software support is pending.


TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
Windows 2003		LP90xx	5-5.01a0-1	3.82a1
			5-2.4.a3	3.90a7
			5.20a9	3.91a3
			2.30.a2	3.92a2
				3.92a3
				3.93a0
		LP98xx	5.2.23a6	1.90a4
		LP10000	5.22a8	1.90a4
			5-2.23a6	
			5-2.4.a2	1.91a1
			5-2.4.a3	
			5.30a2	1.91a5
			1.30a6	
		LP1050	5.30a2	1.90a4
	LP1100x	5-2.41a1	2.10a10	
		1.20.a7	2.70.a5	
		2.00a12	2.72a2	
	QLA23xx	9.0.2.17	3.0.3.13	
		9.1.0.16	3.0.3.16	
	QLA24xx	9.1.4.15	3.03.21	
		9.1.2.19	4.00.23	
Windows 2008		LPe11002	2.10a7	2.50a6
Solaris 8		LP90xx	5.02c	3.90a7
			6.01c	3.92a2
			6.01f	
		LP94xx	4.21e	3.91a3
			5.02x	
			6.01c	1.81a1
		LP1000x	4.08	3.02.14
			4.13	3.02.15
			6.01c	6.01c
	QLA23xx	3.14		
	QLA246x	5.03		

TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
Solaris 9	EMULEX	LP90xx	5.01e-1 6.02g	3.82a1 3.90a7 3.91a3 3.92a2 3.93a0
			5.02c	3.82a1 3.91a3 3.92a2 3.93a0
		LP98xx	5.01e-1	1.81a1 1.90a4
			6.01	1.81a1
		LP1000x	5.01e-1	1.81a1
		LP1100x		1.92a1
	LPe1100x		2.72a2	
	QLOGIC	QLA23xx	SFS 4.4.6 4.13.01	1.14.09 3.2.15 IP
		QLA246x	5.03	
		QLE246x		
Solaris 10	EMULEX	LP10xxx	6.10g 11.10 (SUN Driver) 6.11c	1.91a5
			LP1100x	6.10g
		LPe1100x		2.72a2
	Sun microsystems EMULEX OEM	SUN SG- XPC11FC-EM2	OS default	OS default
		QLOGIC	XPCIE2FC-QF4 (Qlogic SUN OEM)	OS default
	QLA246x		OS default	
	QLE246x		5.03	
HP-UX 11.x	EMULEX QLOGIC	A8003A (Emulex LPe11002 )	2.50a6	LPFC B.05.32.03 Light Pulse
		Tachyon	A5158A	Built-in
	A6795A			


TS7600 Host, Driver, & Topology	Host, Drivers, & Topology			
	HBA Brand	HBA Family	Driver	Firmware
AIX 5.2		LP90xx IBM6228	Built-in	3.82a1 3.90a7 3.91a3
		LP98xx IBM6239		1.81a1
		LP10000 IBM5716		1.81a1 1.90a4
		IBM 5758/9 (LP11k)		2.10a10
AIX 5.3		IBM 5716 (LP10K)	Built-in	1.90a4 1.91a5 1.9x13
		IBM 5758/9 (LP11k)		2.10a10 2.71x4
		IBM 5773		Built-in
		IBM 5704		
		IBM 5774		
		IBM 6239		1.91x4
		LP9002		3.93a0
AIX 6.1		IBM5716	Built-in	Built-in
		IBM5759		
		IBM5773		
		IBM5774		
		IBM5735		
		IBM5758		
		QLA2462	OS default	
		QLA 23xx		
		LP10000	8.0.16.32	1.46
			QLE2462	OS default
IBM i5/OS V5R4		IBM2765	Native via OS/400	
IBM i5/OS V5R4M5		IBM5704	Native via OS/400	
IBM i6/OS V6R1		IBM5761	Native via OS/400	


TS7600 Front-end Switch Support	Qualified Switches & Directors				
	Switches	OEM Equivalents			Firmware
		EMC Connectrix	IBM	HP StorageWorks	
 <b>BROCADE</b>	SilkWorm 2xxx	DS-16B			2.2.1a a2.3.0
	SilkWorm 41xx	DS-4100B	SAN32B-2	SAN Switch 4/32	4.4.0e 5.0.3a 5.1.0a
	SilkWorm 48xxx	ED-48000B	2109-M48	SAN Director 4/256	4.4.0e 5.0.3a 5.1.0a
	DCX Director		SAN768B		v6.2.0e
	SilkWorm 51xx/53xx		SAN80B-4 SAN24B-4		6.1D
 <b>McDATA</b>	6064				09.08.03.2
	6140				09.08.03.2
	Sphereon 4xxx Series	DS-4400M DS24-M2 DS-4700M	SAN16M-2 SAN32B-2	Edge Switch 2/24	v08.01.01 4/9.03.00 1
 <b>CISCO</b>	MDS 9000 Series				
	MDS 9506				m9100-s2ek9- mz.3.2.2
 <b>QLOGIC</b>	SANbox 5200				v5.0.1.10.0
	SANbox 5600				
 <b>INRANGE</b>	FC9000				4.3.0.2






TS7600 NDMP Compatibility	Network Data Management Protocol (NDMP) Compatibility	
	Software Release	NDMP Compatible
	Data ONTAP 7.x (does not include 7G)	yes
	Cellera NSX DART 5.4	yes

TS7600 Front-end HBA & Firmware Options	HBA	Firmware
	LPe11002	2.70a5 2.72A2
	LP11002	
	LP110002-s (SG-XPCI2FC-EM4)	
	LPe110002-s (SG-XPCIE2FC)	



TS7600 Back-end HBA	Back-end HBA	
	HBA	Driver
	QLE2462	Default Linux OS Driver

<b>TS7600 ProtectTIER Manager Platforms</b>	<b>ProtectTIER Manager Platforms</b>
	<b>Host Operating Systems</b>
Windows	2003
	XP
 redhat.	ES/AS 4 x86_64
	ES/AS 5 x86_64
<b>Linux MCP 32 bit</b>	TSSC only

TS7600 Qualified Back-end Disk	Qualified Back-end Disk Arrays & Minimum Firmware	
	Disk Array	Minimum Firmware
	DS3400	07.35.41.02
	DS4200	07.15.10.06
	DS4300	
	DS4700	
	DS4800	
	DS5100	07.15.10.01
	DS5300	07.15.10.01
	DS8100	64.25.9.0
	DS8300	63.1.46.2
	XIV, Gen1	9.2
	XIV, Gen2	10.0.0.b
	SVC	4.3.1
	 where information lives <sup>SM</sup>	CX300
CX600		2.19.600.5.xx
CX700		2.24.700.5.xx
	AMS1000	0770/G-H
	AMS2300	0850/C-M
	EVA 8100	SR1142xcsp-6200
	EVA 8400	9501100
	N7600	Data ONTAP 7.2.6.1 Data ONTAP 7.3.1.1
	N7700	
	N7800	
	N7900	
	N6040	
	N6060	
	N6070	