

HP tape automation solutions

Choose the right tape device and media for your needs.



HP ProLiant servers can be supported with tape libraries via LAN or SAN-based backup infrastructure depending on backup storage capacity requirement.

To determine if the device meets your backup window requirements, calculate the backup window using the formula below:

$$\text{backup window} = \frac{\text{capacity}}{\text{backup performance}}$$

 Supports LAN or SAN-based backup

 Supports LAN-based backup

* All tape device capacities listed are maximum native capacity. All devices support any environment to the left and down from their position in the graph.

Note: All drives are SCSI unless otherwise indicated as "FC" (Fibre Channel).

| Backup performance | Backup capacity* | Backup capacity* | | | | | | | |
|----------------------|------------------|--|--|--|----------|---|---|---|---|
| | | < 1 TB | 1-5 TB | 5-10 TB | 10-25 TB | 25-50 TB | 50-100 TB | 100-200 TB | 200-300 TB |
| Enterprise libraries | > 6.4 (TB/hr) | | | | | | | | ESL 712e: Ultrium 960 FC (284.8 TB; 6.91 TB/hr) |
| | | | | | | | | ESL 630e: SDLT 600 (189 TB; 3.1 TB/hr) ESL 322e: Ultrium 960 FC (128.8 TB; 6.91 TB/hr) | |
| | | | | | | | | ESL 712e: Ultrium 460 (142.4 TB; 2.59 TB/hr) ESL 712e: Ultrium 460 FC (142.4 TB; 2.76 TB/hr) | |
| | 1.6-6.4 (TB/hr) | | | | | EML 245e: Ultrium 960 FC (98 TB; 2.3 TB/hr) | | | |
| | | | | | | | ESL 322e: Ultrium 460 (64.4 TB; 2.59 TB/hr) ESL 322e: Ultrium 460 FC (64.4 TB; 2.76 TB/hr) | | |
| | 0.4-1.6 (TB/hr) | | | | | EML 245e: Ultrium 460 FC (49 TB; 0.9 TB/hr) | | | |
| | | | | | | | EML 103e: Ultrium 960 FC (41.2 TB; 1.1 TB/hr) | | |
| | | | | | | | EML 103e: Ultrium 460 FC (20.6 TB; 0.4 TB/hr) | | |
| Mid-range libraries | 400-900 (GB/hr) | | | MSL6060: Ultrium 960 (24 TB; 864 GB/hr) | | | | | |
| | | | | MSL6052: SDLT 600 (15.6 TB; 518.4 GB/hr) | | | | | |
| | | | | MSL6030: Ultrium 960 (12 TB; 432 GB/hr) | | | | | |
| | | | | MSL6060: Ultrium 460 (12 TB; 432 GB/hr) | | | | | |
| | 200-400 (GB/hr) | | MSL5052: SDLT 320 (8.32 TB; 230.4 GB/hr) | | | | | | |
| | | | MSL6026: SDLT 600 (7.8 TB; 259.2 GB/hr) | | | | | | |
| | | | MSL6030: Ultrium 460 (6 TB; 216 GB/hr) | | | | | | |
| | 100-200 (GB/hr) | MSL5026: SDLT 320 (4.16 TB; 115.2 GB/hr) | | | | | | | |
| | | SSL1016: Ultrium 460 (3.2 TB; 108 GB/hr) | | | | | | | |
| | | 1/8 Tape Autoloader: Ultrium 460 (1.6 TB; 108 GB/hr) | | | | | | | |
| Autoloaders | < 100 (GB/hr) | SSL1016: SDLT 320 (2.56 TB; 57.6 GB/hr) | | | | | | | |
| | | 1/8 Tape Autoloader: SDLT 320 (1.28 TB; 57.6 GB/hr) | | | | | | | |
| | | 1/8 Tape Autoloader: Ultrium 230 (800 GB; 54 GB/hr) | | | | | | | |
| | | 1/8 Tape Autoloader: DLT VS80 (320 GB; 10.8 GB/hr) | | | | | | | |
| | | DAT 72x6 (external): (216 GB; 10.8 GB/hr) | | | | | | | |

How to recommend a suitable tape library

LAN or SAN backup?



Step 1: Identify storage capacity needs.



Step 2: Determine appropriate tape library and compatibility.



Step 3: Generate a bill of materials and pricing.

Calculate online storage capacity.

Add storage capacity of servers and external storage boxes.



Calculate backup capacity and performance requirements.

Use backup sizer tool.

Determine tape library model and SKUs.

Add drives and options.

Use EBS Compatibility Matrix to determine compatibility with server, ISV, OS, and HBA.

Add SCSI HBA and cables for LAN backup.

Add FC controller, FC HBA, FC cables and FC SAN switch for SAN backup.

Add media and cleaning tape.

Add installation and warranty services.

Use SBW.



Tape automation solutions

Order the right tape device and media.

| HP StorageWorks tape autoloaders ¹ | | Max. number of slots | Max. capacity (native) | Max. number of drives | Max. performance (per hour) | External | Rack-mount kit | 8-slot magazine kit | 22U rack cabinet |
|--|---|-----------------------------------|------------------------|-----------------------|-----------------------------|---|---|--|---|
| Autoloaders | DAT 72x6 Autoloader (external) | 6 | 216 GB | 1 | 10.8 GB/hr | Q1567A | 274338-B21 ⁵ | — | 245163-B22 |
| | 1/8 Autoloader: DLT VS80 ³ | 8 | 320 GB | 1 | 10.8 GB/hr | C9264CB | C9268R | — | 245163-B22 |
| | 1/8 Autoloader: Ultrium 230 ³ | 8 | 800 GB | 1 | 54 GB/hr | C9572CB | C9268R | — | 245163-B22 |
| | 1/8 Autoloader: Ultrium 460 ³ | 8 | 1.6 TB | 1 | 108 GB/hr | AA927A | C9268R | — | 245163-B22 |
| | 1/8 Autoloader: SDLT 320 | 8 | 1.28 TB | 1 | 57.6 GB/hr | AA926A | C9268R | — | 245163-B22 |
| | SSL1016: SDLT 320 ³ | 16 | 2.56 TB | 1 | 57.6 GB/hr | 330816-B21 | — | 245163-B22 | 245163-B22 |
| SSL1016: Ultrium 460 ³ | 16 | 3.2 TB | 1 | 108 GB/hr | 330821-B21 | — | 330823-B21 | 245163-B22 | |
| HP StorageWorks MSL tape libraries ¹ | | Max. number of slots | Max. capacity (native) | Max. number of drives | Max. performance (per hour) | 1-drive rack-mount library ² | 2-drive rack-mount library ² | 2-drive rack-mount library with embedded FC ³ | Drive upgrade ⁴ |
| Mid-range libraries | MSL6030: Ultrium 960 | 30 | 12 TB | 2 | 576 GB/hr | AD606A | AD607A | AD609A | AD612A |
| | MSL6060: Ultrium 960 | 60 | 24 TB | 4 | 1,152 GB/hr | — | AD610A | AD611A | AD612A |
| | MSL6030: Ultrium 460 | 30 | 6 TB | 2 | 216 GB/hr | AD598A | AD599A | AD601A | AD605A |
| | MSL6060: Ultrium 460 | 60 | 12 TB | 4 | 432 GB/hr | — | AD603A | AD604A | AD605A |
| | MSL6026: SDLT 600 | 26 | 7.8 TB | 2 | 259 GB/hr | AD582A | AD583A | AD585A | AD589A |
| | MSL6052: SDLT 600 | 52 | 15.6 TB | 4 | 518 GB/hr | — | AD587A | AD588A | AD589A |
| | MSL5026: SDLT 320 | 26 | 4.16 TB | 2 | 115.2 GB/hr | 293472-B22 | 293472-B23 | 293472-B25 | 293475-B21 |
| | MSL5052: SDLT 320 | 52 | 8.32 TB | 4 | 230.4 GB/hr | 255102-B21 ⁷ | 293474-B21 | 293474-B24 | 293475-B21 |
| HP StorageWorks EML tape libraries ¹ | | Max. number of slots | Max. capacity (native) | Max. number of drives | Max. performance (per hour) | Base unit (0 drive) | Tape drives (1 to 16) | Interface controller (1 per 4 drives) | Command View EML (1 per library) ⁴ |
| Enterprise libraries | EML 103e: Ultrium 960 FC | 103 | 41.2 TB | 16 | 1.1 TB/hr | AD560A | AD568A | AD567A | T3663A |
| | EML 103e: Ultrium 460 FC | 103 | 20.6 TB | 16 | 0.4 TB/hr | — | AD562A | AD567A | T3663A |
| | EML 245e: Ultrium 960 FC | 245 | 98.0 TB | 16 | 2.3 TB/hr | AD561A | AD568A | AD567A | T3663A |
| | EML 245e: Ultrium 460 FC | 245 | 49.0 TB | 16 | 0.9 TB/hr | — | AD562A | AD567A | T3663A |
| | EML 103e: Ultrium 460 FC (4-drive bundle) | 103 | 20.6 TB | 16 | 0.4 TB/hr | AD578A | — | — | — |
| HP StorageWorks ESL E-Series tape libraries ¹ | | Max. number of slots ² | Max. capacity (native) | Max. number of drives | Max. performance (per hour) | Base unit (0 drive) | Tape drives (1 to 24) | Interface controller (1 per 4 drives) | Command View ESL (1 per library) ⁴ |
| Enterprise libraries | ESL 286e: SDLT 600 | 286 | 85.8 TB | 24 | 3.1 TB/hr | AA940B | AA946A | AA960A | 343374-B21 |
| | ESL 630e: SDLT 600 | 630 | 189 TB | 24 | 3.1 TB/hr | AA935B | AA946A | AA960A | 343374-B21 |
| | ESL 322e: Ultrium 960 FC | 322 | 128.8 TB | 24 | 6.91 TB/hr | AA939B | AD595A | AA928A | 343374-B21 |
| | ESL 712e: Ultrium 960 FC | 712 | 284.8 TB | 24 | 6.91 TB/hr | AA934B | AD595A | AA928A | 343374-B21 |
| | ESL 322e: Ultrium 460 FC | 322 | 64.4 TB | 24 | 2.76 TB/hr | AA939B | AA941A | AA928A | 343374-B21 |
| | ESL 712e: Ultrium 460 FC | 712 | 142.4 TB | 24 | 2.76 TB/hr | AA934B | AA941A | AA928A | 343374-B21 |
| | ESL 322e: Ultrium 460 | 322 | 64.4 TB | 24 | 2.59 TB/hr | AA939B | AA937A | AA960A | 343374-B21 |
| | ESL 712e: Ultrium 460 | 712 | 142.4 TB | 24 | 2.59 TB/hr | AA934B | AA937A | AA960A | 343374-B21 |
| HP StorageWorks tape drives | | Media capacity ⁶ | Data cartridge | Cleaning cartridge | Barcode labels (100 pack) | Prelabeled cartridges (20 pack) | | | |
| Media | DAT 72 | 72 GB | C8010A | C5709A | — | — | | | |
| | Ultrium 215 | 200 GB | C7971A | C7978A | Q2001A | C7971AL | | | |
| | Ultrium 230 | 200 GB | C7971A | C7978A | Q2001A | C7971AL | | | |
| | Ultrium 460 | 400 GB | C7972A | C7978A | Q2002A | C7972AL | | | |
| | Ultrium 960 | 800 GB | C7973A | C7978A | Q2007A | C7973AL | | | |
| | Ultrium 960 WORM | 800 GB | C7973W | C7978A | Q2008A | C7973WL | | | |
| | SDLT 600 | 600 GB | Q2020A | C7982A | Q2006A | — | | | |
| | SDLT 320 | 320 GB | C7980A | C7982A | Q2003A | C7980AL | | | |
| | DLT VS80 | 80 GB | C5141F | C7998A | Q2004A | C5141FL | | | |

¹ All drives are SCSI unless otherwise indicated as "FC" (Fibre Channel).

² Number of available slots is dependent on number of drives—see product QuickSpec for details.

³ Additional configurations available—see product QuickSpec for details.

⁴ Additional options available—see product QuickSpec for details.

⁵ 3U rack-mount enclosure holds up to 4 internal drives.

⁶ All tape capacities quoted use a 2:1 compression ratio—this may vary since compression is data dependent.

⁷ This is a 0 drive rack-mount unit.

⁸ See product QuickSpec to order required power cord.

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