TS7700 Code, Hardware and Grid Join/Merge Interoperability

Document Authors: Joachim Müller, Ole Asmussen, Patrick Wolf, Thorsten Altmannsberger
Version: 6.1 | Document number: 6354801
Link: https://www.ibm.com/support/pages/ts7700-code-hardware-and-grid-interoperability
Date: 25.09.2025

Important note:
No responsibility is taken for the correctness of this document.
It is meant to be used for initial planning.
For detailed planning contact your local SSR.

TS7700 Code, Hardware and Grid Join/Merge Interoperability

September 2025 :
R6.1 TS7780 2nd Expansion Frame HDD (up to 7.860TB)
Client Rack Support (HDD/SDD “Base Frame” only)
Network Isolation Ports*
Z Tape Air-Gap option FC #5995
Multiple Cloud Bucket
TLS1.3 Support & Rsyslog Changes
VTD_EXEC Code Signing
REST(full) API Updates

December 2024: R6.0 TS7780 with new hardware; New F08 frame; 4U Power9+ server with internal NVMe storage; New cache subsystem with 20 TB HDD or 15 TB SSDs; 32 Gbps Ficon adapters; 32 Gbps cache and tape adapters; New Common Controller to support either HDD or SSD drives.

October 2023: LWORM Retention and 65 GB virtual volumes are the major new functions in R5.4. Minor but also important changes are Cloud Resiliency Improvements, LDAP Enhancements and RestAPI Enhancements to name a few. Not directly related to R5.4 but new in this document is the reference to mixed drive mode of TS1150 and TS1160 because of WFM TS1150 at 2022/12/31.

May 2023: R5.3 introduces Expert Care as a major change. This requires new machine type 3948, the old machine types 3956/7 continue to exist in the field and for MESs. Furthermore, the first release of RestAPI is introduced to allow for modern monitoring methods such as Grafana dashboards. In addition R5.3 introduces support for FC 5995 zTape Air-Gap, a cost-effecitve solution to replace native tape attachments.

December 2021: This release combines both releases of 2021, R5.2 Phase 1 and Phase 2 (R5.2.1, R5.2.2). Phase 1 introduced support for the first model of cache with flash SSDs. Phase 2 supports the new "DS8000 Advanced Object Store", replacing the existing one.

September 2020: Continuous cloud interface improvements are the predominant new elements in R5.1: TS7770C models are now grid aware, support multiple cloud pools, retain volumes in cloud in older versions for later restore and cloud export, testing and restore is now possible. DS8k offloads are now compressed and SDT-encrypted. DSS Full volume dumps are also supported now. Beside cloud improvements, Dual-control adds more security to sensitive MI panels.

October 2019: R5.0 introduces new hardware and new functions: for the first time server and cache are refreshed in the same release, to a POWER9 based server and a new disk cache system model CSB/XSB. Major functional enhancements are DS8000 object storage for HSM migration data on TS7700, secure data transfer meaning encrypted data-in-flight across gridlinks and remote coad load capability.

September 2018: Now, TS7760 virtual tape solutions leverage Transparent Cloud Tiering (TCT) to support private and public cloud environments as additional storage tiers to migrate and recall less frequently used virtual tape volumes. When integrated into TS7760 solutions, TCT enables an additional storage tier with very little capital investment. It offers massive storage capacity for backup and recovery purposes without requiring an additional server or gateway.

March 2018: R4.1.2 introduces software-based enhanced compression, 16 Gb/s FICON interfaces and SYSLOG offload capability. Moreover, new grid resiliency function allows automated handling of 'sick but not dead' cluster situations.

March 2017: R4.1.1 adds support for up to eight clusters in a single grid (RPQ/SCORE required) and a new LI REQ command DIAGDATA for grid diagnostics for better 'sick but not dead cluster' detection. R4.1.1 provides no changes in hardware interoperability compared to R4.0.

November 2016: R4.0 is the next major hardware refresh. It provides a new Power8-based controller model VEC, a new cache model CSA/XSA and new 16 Gb/s Fibre Channel Switches for the tape backend as well as TS4500 support. In addition, since July 31, 2016, IBM no longer provides code updates on TS7700 machine code levels up to and including release 2.0 (8.20.0.x). With R4.0 PGA1 Power7-based Controllers V07 and VEB can be upgraded to R4.0 under certain circumstances.

September 2015: From a hardware perspective R3.3 introduces TS1150 support. In order to support data migrations from previous media types a heterogenous drive support is provided, see details in the first table.

February 2015: with R3.2 a major new function - tape attachment for TS7720 - has been introduced. The code and hardware interoperability table has been rearranged to reflect the physical tape backend support for both models, TS7740 and TS7720T. Basically the TS7720T supports everything the TS7740 does in terms of backend tape, but requires R3.2 and some additional features. Additionally, the number of supported levels within a grid has been increased to three with R3.2 - if the cluster with the lowest level is at least at R2.1.

TS7700 Code and Hardware Interoperability - Controllers and Caches [1]							
Release		**R5.1** (2020 - today)	**R5.2.2** (2021/12/17 - 2Q2023)	**R5.3** (2022/09/15 - today)	**R5.4** (2022/10/30 - today)	**R6.0** 2024/12/06	**R6.1** 2025/09/12
TS7760(T/C)							
Controller model	3957-VEC [6]	y	y [3]	n	n	n	n
Cache model (base/exp)							
Gen 5 (DCS3700)	3956-CSA/XSA [6]	y	y	n	n	n	n
TS7770(T/C)							
Controller model	3957/3948-VED	y	y [4]	y [5]	y [5]	y [5]	y [5]
Cache model (base/exp)							
Gen 6 (V5030E)	3956/3948-CSB/XSB	y	y	y	y	y	y [8]
Gen 7 (V5030E	3956/3948-CFC/XFC	n	y	y	y	y	y [8]
TS7780	3948 VEF CFD/XFD/XSD	n	n	n	n	y [7]	y

[1] Recommended Code Levels: https://www.ibm.com/support/pages/node/6334607

3) Recommended with FC 3466 32 GB memory upgrade for some configurations (EXP frame, tape attachment, 496 virtual devices). Required for cloud attachment.

4) Recommended with FC 3479 64 GB memory upgrade.

5) R5.3 and above require 128GB of memory. Existing TS7770 (3957-VED) need to be upgraded to 128GB of memory (FC 3479, 64GB DDR 4 memory upgrade for P9 based VED), whereas TS7770 (3948-VED) offer 128GB memory as default.

6) End of Development (EoD) support was announced for TS7760, effective 31 December 2023, at which time no more code fixes will be provided.

7) TSSC microcode 9.6.x is required for 8.60.0.x level.
the TS7700 must be at a minimum microcode level of TBD 8.52.x.x or later to upgrade to 8.60.0.x.

8) The TS7700 must be at a minimum microcode level of 8.53.x.x or later to upgrade to 8.61.0.x.

Legend:

TS7700 Code and Hardware Interoperability - Tape Backend

Release				R5.1 (2020 - today)	R5.2.2 (2021/12/17 - 2Q2023)	R5.3 (2022/09/15 - today)	R5.4 (2023/10/30 - today)	R6.0 2024/12/06	R6.1 2025/09/12
Tape Library									
TS3500 / 3584				y	y	y	y	y	y
TS4500 [2] / 3584				y	y	y	y	y	y
Tape Drives [3]	**TS3500**	**TS4500**	**Media** [4]						
TS1130 (E06)	y	n	JA, JB	y	y	y	y	y	y
TS1140 (Ex7 [5])	y	y	JA, JB, JC	y	y	y	y	y	y
TS1150 (Ex8 [5])	y	y	JC, JD	y	y	y [7]	y [7]	y [7]	y [7]
TS1160 (60G/F	y	y	JC, JD, JE	n	y	y [7]	y [7]	y [7]	y [7]
FC-Switches									
			16 GB/s	y	y	y	y	y	y
			32 GB/s	n	n	n	n	y	y

1) Applies to 4.1.1 and 4.1.2.

2) Maximum number of TS7700s per TS4500 is eight (Max number of L25 + D25; requires FC 4880 backend switches in each frame; drive spread across two frames per TS7700 recommended.)

3) Heterogeneous drive support: can mix newer tape drives with one other group of previous generation for read only compatibility with previous media types -- 16 max and six min drives per cluster - at least two drives must be prior generation drive group and four must be newer

4) WORM is not supported. Economy formats are included: JA includes JJ; JC includes JK; JD includes JL; JE includes JM.

5) Applies to E07, E08 and 60G (supported in TS3500) and EH7, EH8 and 60F (supported in TS4500). Model conversions E07->EH7, E08->EH8 and 60G->60F are available and supported.

6) Requires R5.2.1 PGA1 (8.52.101.12) or higher.

7) TS1150 and TS1160 can be used in mixed mode since WFM of TS1150. Restrtictions apply: TS1150 two or more drives, read/only; TS1160 four or more drives, read/write (exception: JC in E07 format (4TB) read/only).

Legend: Supported, EOS 2023/12/31

TS7700 Code and Hardware Interoperability - Tape Attach Switch Support				
	TS3500 w/ 4 Gb/s or 8 Gb/s FC Switch	**TS3500 w/ 16 Gb/s FC Switch [1)]**	**TS4500 w/ 16 Gb/s FC Switch**	**TS4500 w/ 32 Gb/s FC Switch**
TS7740/20T VEB or V07 Running R4.0 or higher	All drive configurations as supported in R3.3 (except TS1160)	• TS7720 to TS7720T MES • All drive configurations as in R3.3 (except TS1160)	• Heterogeneous TS1150 + TS1140 • Homogenous TS1150 or TS1140	Not supported
TS7760T VEC Running R4.0 or higher or TS7770T VED Running R5.0 or	Not supported	• Heterogeneous TS1160 + TS11xx • Homogenous (all drive generations)	• Heterogeneous TS1160 / TS1150 / TS1140 (EOS) • Homogenous TS1160 or TS1150	Not supported
TS7780 VEF	Not supported	Not supported	• Heterogeneous TS1160 / TS1150 / TS1140 (EOS) • Homogenous TS1160 or TS1150	• Heterogeneous TS1160 / TS1150 / TS1140 (EOS) • Homogenous TS1160 or TS1150

1) Top Rack (3584-TR1) required or RPQ 8B3684 (3953-F05) to obtain switch HW. Can be combined with RPQ/SCORE to place switches in customer provided rack.

32 Gb Fibre Channel switches are required when connecting TS7780 Model VEF with a TS4500 tape library.
you can use 16 Gb switches in TS4500 if they was installed before on VEF

Legend:

Not supported	Supported	Supported, EOS 2020/04/30

TS7700 Code and Functions Interoperability (1 of 4)

Function	Models / Prereq	R4.2 (2018)	R5.0 (2019)	R5.1 (2020)	R5.2.2 (2021)	R5.3 (2022)	R5.4 (2023)	R6.0 (2024)	R6.1 2025
AOTM	all	y	y	y	y	y	y	y	y
Cache increments	TS7740	y	y	y	y	y	y	y	y
Tape encryption	all with tape	y	y	y	y	y	y	y	y
3-way grid	all	y	y	y	y	y	y	y	y
1 mio. lvols	all	y	y	y	y	y	y	y	y
Performance increments	all	y	y	y	y	y	y	y	y
HCR / LI REQ	all	y	y	y	y	y	y	y	y
1024 log. paths	all	y	y	y	y	y	y	y	y
Device Allocation Assist	all	y	y	y	y	y	y	y	y
4-way grid	all	y	y	y	y	y	y	y	y
Hybrid grid	all	y	y	y	y	y	y	y	y
LWORM	all	y	y	y	y	y	y	y	y
Cluster families	all	y	y	y	y	y	y	y	y
5&6-way grids	all	y	y	y	y	y	y	y	y
Scratch Allocation Assist	all	y	y	y	y	y	y	y	y
SDAC	all	y	y	y	y	y	y	y	y
6 GB lvols	all	y	y	y	y	y	y	y	y
2 mio. lvols	all	y	y	y	y	y	y	y	y
4x 1 Gb/s gridlinks	V07 / VEx	y	y	y	y	y	y	y	y
2x 10 Gb/s gridlinks	V07 / VEx	y	y	y	y	y	y	y	y
SYNC copy mode	all	y	y	y	y	y	y	y	y
Grid merge	all	y	y	y	y	y	y	y	y
Disk encryption (internally managed)	CC9 / CS9 / CSA / CSB / CFC	y	y	y	y	y	y	y	y
4 mio. Lvols	all	y	y	y	y	y	y	y	y
Unified GUI	all	y	y	y	y	y	y	y	y

1) RPQ/SCORE required.

2) VEF -> 4 mio. lvols by default

Legend: Supported

TS7700 Code and Functions Interoperability (2 of 4)

Function	Models / Prereq	R5.1 (2020)	R5.2.2 (2021)	R5.3 (2022)	R5.4 (2023)	R6.0 (2024)	R6.1 (2025)
FlashCopy for DR testing	VEB / VEC / VED/VEF	y	y	y	y	y	y
Time delayed replication	all	y	y	y	y	y	y
8 Gb/s FICON	V07 / VEB / VEC	y	y	y	y	y	y
4096 log. paths	8 Gb/s FICON	y	y	y	y	y	y
TS7720 Tape Attach	TS7720	y	y	y	y	y	y
25 GB lvols	R3.2	y	y	y	y	y	y
SYNC dual open on write	all	y	y	y	y	y	y
496 virtual devices	8 Gb/s FICON	y	y	y	y	y	y
Grid2Grid Migr. (GGM)	all	y	y	y	y	y	y
Ext. Managed Disk Encr.	CC9 / CS9 / CSA / CSB / CFC	y	y	y	y	y	y
TS1150 Support	V07 / VEx	y	y	y	y	y	y
FICON Dynamic Routing	all	y	y	y	y	y	y
Dynamic Disk Pooling	CSA / CSB	y	y	y	y	y	y
4x 10 Gb/s gridlinks	VEC / VED	y	y	y	y	y	y
7&8-way grids	all	y 2)	y 2)	y 2)	y 2)	y 2)	y 2)
LI REQ DIAGDATA	all	y	y	y	y	y	y
SW compression	VEC / VED /VEF	y	y	y	y	y	y
Grid resiliency	VEC / VED /VEF	y	y	y	y	y	y
CUIR	VEC / VED /VEF	y	y	y	y	y	y
SYSLOG offload	VEC / VED /VEF	y	y	y	y	y	y
16 Gb/s FICON	VEC / VED /VEF	y	y	y	y	y	y
Tier-to-Cloud	VEC / VED /VEF	y	y	y	y	y	y

1) Needs to be enabled by PFE. Starting with 4.1.2. FIDR is automatically enabled.

2) RPQ/SCORE required.

Legend:

TS7700 Code and Functions Interoperability (3 of 4)

Function	Models / Prereq	R5.1 (2020)	R5.2.2 (2021)	R5.3 (2022)	R5.4 (2023)	R 6.0 (2024)	R 6.1 (2025)
DS8000 Object Store (FC 5282)	VEC [1] / VED [2]	y	n	n	n	n	n
Secure Data Transfer (SDT)	VEC / VED / VEF	y	y	y	y	y	y
Remote Code Load (RCL)	all	y	y	y	y	y	y
Capacity on demand	VED / VEF	y	y	y	y	y	y
TS7700C: Grid Awareness	VEC / VED / VEF	y	y	y	y	y	y
TS7700C: Multiple Cloud Pools	VEC / VED / VEF	y	y	y	y	y	y
TS7700C: Volume Version Retention	VEC / VED / VEF	y	y	y	y	y	y
TS7700C: Cloud Export, Restore and Testing	VEC / VED / VEF	y	y	y	y	y	y
DS8k Object Store: Encryption w/ SDT to TS7700	VED /VEF	y	y	y	y	y	y
DS8k Object Store: DS8k-side Object Compression	VED / VEF	y	y	y	y	y	y
DS8k Object Store: DSS Full Volume Dump	VED / VEF	y	y	y	y	y	y
MI Dual Control	VEC / VED / VEF	y	y	y	y	y	y
Enhanced CUIR [3]		y	y	y	y	y	y
DS8000 Advanced Object Store (FC 5283)	VED [4] / VEF	n	y	y	y	y [6]	y [6]
SSD	VEF	n	n	n	n	y	y
Full AES256 Encryption	VEF	n	n	n	n	y [5]	y [5]

1) Support for FC 5282 for VEC withdrawn at 2020/12/01.

2) Support for FC5283 for VED no longer available as of 2022/01/28.

3) Requires APAR OA60929 (z/OS V2R3 and above).
4) Support with FC 5283 starting 2021/12/17.
5) Local and external key management support IBM Security Key Lifecycle Manager (SKLM) KMIP with Transport Layer Security protocol (TLS) 1.3 support (distributed SKLM
6) Reduction of host MIPs ; Elimination of DFSMShsm recycle processing

Legend:

TS7700 Code and Functions Interoperability (4 of 4)

Function	Models / Prereq	R5.0 (2019)	R5.1 (2020)	R5.2.2 (2021)	R5.3 (2022)	R5.4 (2023)	R 6.0 (2024)	R 6.1 (2025)
TS1160 Support	VEC / VED / VEF	n	n	n	y	y	y	y
FC 5995, zTape Air-Gap	VED / VEF	n	n	n	y	y	y	y
REST API	VED / VEF	n	n	n	y	y	y	y
LWORM Retention [2)]	VED / VEF	n	n	n	n	y	y	y
4 mio volumes	all / VEF	y	y	y	y	y	y	y
65 GB Volumes	VED / VEF	n	n	n	n	y	y	y
32Gbps FICON	VEF	n	n	n	n	n	y	y

1) Requires R5.2.1 PGA1 (8.52.101.12).

2) DC options can now be specified in the MI. Starting with R5.1 PGA1 LWORM Retention could be used, but required PFE engagement.

3) TS7780 (VEF) we ship with 4 mio lvols by default

Legend:

TS7700 Grid join rules

This table shows the join rules. E.g. which is the minimum level for existing clusters to be joined with a new member with newer code.
- A join is whenever an empty cluster joins an existing cluster or grid with existing data.
- Below R2.1 the *joining* cluster (new cluster initiating the join) must be *OFFLINE* , one of the existing cluster(s) must be *OFFLINE,* too.
- Starting with R2.1 the *joining* cluster (new cluster initiating the join) must be *OFFLINE* , the existing clusters must be *ONLINE* .
- In a grid with mixed code levels the *joining* cluster must be joined with a cluster with the highest level in the grid.

	R5.0 [2]	R5.1	R5.2.1	R5.2.2	R5.3 [3]	R5.4	R6.0	R6.1
R5.0 [2]	y	y	y	y	y	n	n	n
R5.1	n	y	y	y	y	y	n	n
R5.2.1	n	n	y	y	y	y	y	n
R5.2.2	n	n	n	y	y	y	y	n
R5.3	n	n	n	n	y	y	y	n
R5.4	n	n	n	n	n	y	y	y
R6.0	n	n	n	n	n	n	y	y
R6.1	n	n	n	n	n	n	n	y

2) Join of a cluster with Tier-to-Cloud feature was initially not supported at R4.2 GA level. For current restrictions refer to IBM TS7700 Docs: *Configuring - TS7700 configurations - TS7760C (Cloud) - TS7760C (Cloud) Restrictions and prerequisites.*

3) Starting with R5.3 new join rules apply:
- Up to three code releases are allowed within a grid, supported levels are R5.4, R5.3, R5.2.2, R5.2.1, R5.1 and R5.0
- Each PGA level is considered a unique release
- The joining cluster is equal to or higher than the highest existing code level

Legend: Supported

TS7700 Code upgrade interoperability - Single cluster

This table shows the interoperability between code levels on a single cluster (regardless if standalone or grid). E.g. which is the minimum code level for a cluster to be upgraded to a higher level. The general rule is that code updates from N-2 only are supported.

	R5.0	R5.1	R5.2 [2]	R5.3	R5.4	R6.0	R6.1
R5.0	n/a	y	y	y	y [3]	n	n
R5.1	n	n/a	y	y	y [3]	n	n
R5.2 [2]	n	n	n/a	y	y	n	n
R5.3	n	n	n	n/a	y	y	y
R5.4	n	n	n	n	n/a	y	y
R6.0	n	n	n	n	n	y	y
R6.1	n	n	n	n	n	y	y

2) Applies to 5.2.1 and 5.2.2.

Legend: Not applicable

TS7700 Code interoperability - Grid | Frame replacements [1)]

This table shows the interoperability of clusters on different code levels within a grid. Applies to existing grid code upgrade scenarios.

Frame replacement *(aka Frame roll)* **:** Procedure to replace VEC with VED controller and cache (disk-only models are replaced by joining a new cluster into the grid and not by replacing the frame in place).

	R5.0	R5.1	R5.2 [3)]	R5.3	R5.4	R6.0	R6.1
R5.0	y	y	y	y	y	n	n
R5.1	n	y	y	y	y	n	n
R5.2 [3)]	n	n	y	y	y	y	y
R5.3	n	n	n	y	y	y	y
R5.4	n	n	n	n	y	y	y
R6.0	n	n	n	n	n	y	y
R6.1	n	n	n	n	n	y	y

1) No more than three code levels can be active across all clusters of a grid at any time. Starting with R5.3 supported levels are R5.3, R5.22, R5.21, R5.1 and R5.0

3) Applies to 5.2.1 and 5.2.2.

Legend: Supported

TS7700 Grid merge rules

This table shows the merge rules. All merging clusters have to be at the exact same level
A ***cluster merge*** is whenever two single clusters both with existing data are merged:
- Below R2.0 the *merging* cluster (new cluster initiating the merge) must be *OFFLINE* , the existing cluster(s) must be *OFFLINE,* too.
- Starting with R2.0 the *merging* cluster (new cluster initiating the merge) must be *OFFLINE* , the existing cluster(s) must be *ONLINE* .
A ***grid merge*** is whenever two grids both with existing data are merged (or a single cluster into an existing grid both with existing data).:

- The *merging cluster(s)* (existing cluster(s) initiating the merge) must be *ONLINE* , all *to-be-merged* clusters must be *OFFLINE* .

	R5.0 [2]	R5.1	R5.2	R5.3	R5.4	R6.0	R6.1
R5.0 [2]	y	n	n	n	n	n	n
R5.1	n	y	n	n	n	n	n
R5.2	n	n	y	n	n	n	n
R5.3	n	n	n	y	n	n	n
R5.4	n	n	n	n	y	n	n
R6.0	n	n	n	n	n	y	n
R6.1	n	n	n	n	n	n	y

2) Merge of grids with Tier-to-Cloud enabled clusters was initially not supported at R4.2 GA level. For current restrictions refer to IBM TS7700 Docs: *Configuring - TS7700 configurations - TS7700C (Cloud) - TS7700C (Cloud) Requirements, restrictions and prerequisites.*

Legend: Supported

Changelog			
Version	**Date**	**Author**	**Description**
V3.0	12/07/2012	Th. Altmannsberger	Initial release along with TS7700 R3 release
V3.0a	01/03/2013	Th. Altmannsberger	Improved readability for matrix headings (top and side)
V3.0b	02/08/2013	Th. Altmannsberger	Added Techdocs Doc ID, removed VEA from R1.0-1.4, added Tape Library, R1.7->R3.0 via RPQ only, added Library Support (with LM, ELC, eRMM)
V3.1	12/10/2013	Th. Altmannsberger	Added tape drive and media support; added RPQ/SCORE to R1.7->R3.0 in Code interoperability - grid; added SCORE/RPQ requirement for R3.0 on VEAs/V06s; added 3.1 support
V3.1a	02/04/2014	Th. Altmannsberger	Correction: join is initiated from new not existing cluster, added RPQ support for join of R1.7 with R2.0, R3.0 and R3.1
V3.2	02/06/2015	Th. Altmannsberger	Added support for R3.2, introduced 3957-VEB TA for tape attach, rearranged table for TS7740/TS7720T tape backend support, increased allowed levels in grid from two to three starting with R3.2
V3.2a	08/14/2015	Th. Altmannsberger	Changed 'Code interoperability grid' that a) higher existing levels are not supported with lower go-to levels b) enhanced RPQ/SCORE comment with 'a few weeks': the request is more likely to be approved if the mixed code level period is short, e.g. a few weeks what it typically takes to COPYRFHS data off of a cluster and not many months.
V3.3	09/30/2015	Th. Altmannsberger	Added support for R3.3. Emphasized merge code sublevel requirement. Changed orientation to landscape.
V4.0	11/22/2016	Th. Altmannsberger	Added support for R4.0 GA and PGA1. Added functional table. Added tape backend switch matrix. Added 'end of code updates' for R1.7 and R2.0 after July 31st 2016.
V4.1.1	03/29/2017	Th. Altmannsberger	Added 4.1.1 support. Added GGM abbreviation for easier finding. Replaced E07 and E08 with E0/H7 and E0/H8 to reflect support in either TS3500 or TS4500. Added TS4500 support for up to eight TS7700s.
V4.1.2	02/26/2018	Th. Altmannsberger	Added 4.1.2 support. Removed references to R1.0-R1.6 to free up space; inserted library/drive compatibility in Tape Backend table; added RPQ 8B3684 reference for 16 Gb/s switches.
V4.2	09/17/2018	Th. Altmannsberger	Added 4.2 support. Added restrictions for join and merge with R4.2 Tier-to-cloud enabled clusters at GA level.
V5.0	11/05/2019	Th. Altmannsberger	Added 5.0 support. Added R4.0 as required minimum level for upgrades to 4.2. Removed references to R1.7 and R2.0.
V5.0a	11/28/2019	Th. Altmannsberger	Corrections: Functions (2): RCL applies to all models and all releases; Join rules: R3.3 is minimum level in the grid for clusters joining with R5.0. General: inserted errornously removed notation of 'Existing level' and 'Go-to level'.

Changelog			
Version	**Date**	**Author**	**Description**
V5.0b	01/20/2020	Th. Altmannsberger	Addition of disclaimer: 'No responsibility is taken for the correctness of this document. It is meant to be used for initial planning. For detailled planning contact your local SSR.'. Introduced different color coding for currency support, EOS and planned EOS.
V5.0c	03/04/2020	Th. Altmannsberger	Cleanup of 'Single Cluster' upgrade rules: generic N-2 note and footnotes for one or two step upgrade requirements. Added last release year for R3.0/1/2 in 'Contr. & Cache' and 'Tape Backend'. Enhanced footnote in 'Tape Backend' that JA is not supported in TS4500.
V5.1	06/22/2021	Th. Altmannsberger	Removed references of R2.1. Added FICON Dynamic Routing support in functions table. Withdrawal of FC 5282 for VEC. Added support for R5.1. Changed Techdocs ID to IBM Support Document number.
V5.2.2	05/05/2022	Th. Altmannsberger	Added support for 5.2.1 and 5.2.2. Removed references to R3, R4.0, TS7740, TS720, 3592-J1A and TS1120. Added support for TS1160.
V5.2.2a	05/11/2022	Th. Altmannsberger	Removed some more references to R3 and R4.0
V5.3	05/31/2023	Th. Altmannsberger	Added support for 5.3 and MTM 3948. Added new join rules. Re-phrased heterogenous drive support footnote to be more generic. Changed font to "IBM Plex Sans".
V5.4	02/21/2024	Joe Mueller	removed References of R2.1. Added FICON Dynamic Routing support in functions table. Withdrawal of FC 5282 for VEC. Added support for R5.1. Changed Techdocs ID to IBM Support Document number.
V6.0	12.06.2024	Joe Mueller	added support for R6.0 removed R5.2.1
V6.1	25.09.2025	Joe Mueller	added support for R6.1 removed R4.1 R4.2

Joachim-Mueller@de.ibm.com