

TS7760C R 4.2 Performance

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October 29, 2018



Agenda

- ❖ Hardware Configuration
- ❖ Tuning parameters
- ❖ Standalone TS7760C Performance
- ❖ Two-way TS7760C-TS7760T Performance
- ❖ Copy Performance.

Hardware Configuration

TS7700	Drawer Count (Cache Size TB)	Tape Lib	Tape Drive	Cloud	Grid Link (Gb)	IBM System Z™ Host	FICON Channel
TS7760C VEC-C 3956 CSA/XSA	10 (618 TB)	N/A	N/A	IBM COS 3403	2x10 or 4x10	z13	8x16Gb
TS7760T VEC-T 3956 CSA/XSA	10 (618 TB)	TS3500	12 TS1150	N/A	2x10 or 4x10	z13	8x16Gb

IBM COS 3403

Manager	Accessor	Slicestor	grid links/Accessor	grid links/Slicestor
M01	2 A00	9 S01	2x10Gb	2x10Gb

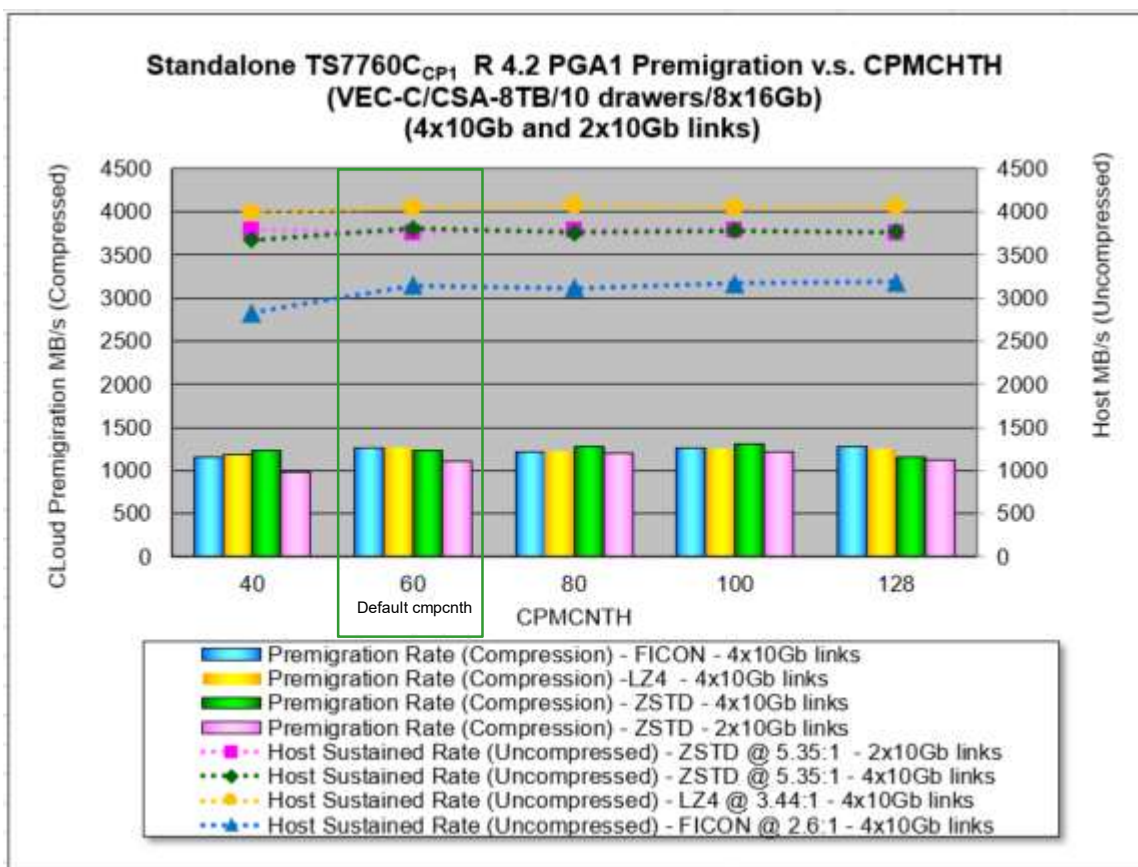
Settings on IBM COS 3403

Width: 9
Threshold: 5
Write Threshold: 7
Alert Level: 9
Segment Size: 4.19 MB
Retention: Disabled

Additional Features

SecureSlice Technology: Enabled
SecureSlice Algorithm: aont-rc4-128
Versioning: Disabled
Delete Restricted: No
Restrictive Access Control: Disabled
SSE-C: Disabled
Name Index: Enabled
Recovery Listing: Disabled

Standalone TS7760T_{cp1} Performance vs. CPMCNTH Values
(Using RECS4 Data Patterns)



TS770 Performance Workloads and Tuning Parameters

- ❖ Unless otherwise stated, all runs were made with 128 concurrent jobs. Each job wrote/read a volume (2GB after compression at the TS7700), using 32768 byte block size, QSAM BUFFNO=20, and eight 16Gb (or 8Gb) FICON channels from a z13 LPAR.
- ❖ Clusters and IBM COS server are located at zero or nearly zero distance to each other in laboratory setup.
- ❖ All runs were made using tuning values:
 - ❖ DCT=125, PMPIOR=3600, PMTHLVL=4000, ICOPYT=ENABLED, Reclaim=disabled, LINKSPEED=1000. Number of premigration drives per pool=10.
 - ❖ CPMCNTL=0, CPMCNTH=60, CDELCNT=16.

Notes: I installed only 4 FC5274 and set CLDPRIOR=3600 so that I will have reasonable peak period and sustained period in a 6-hour run.

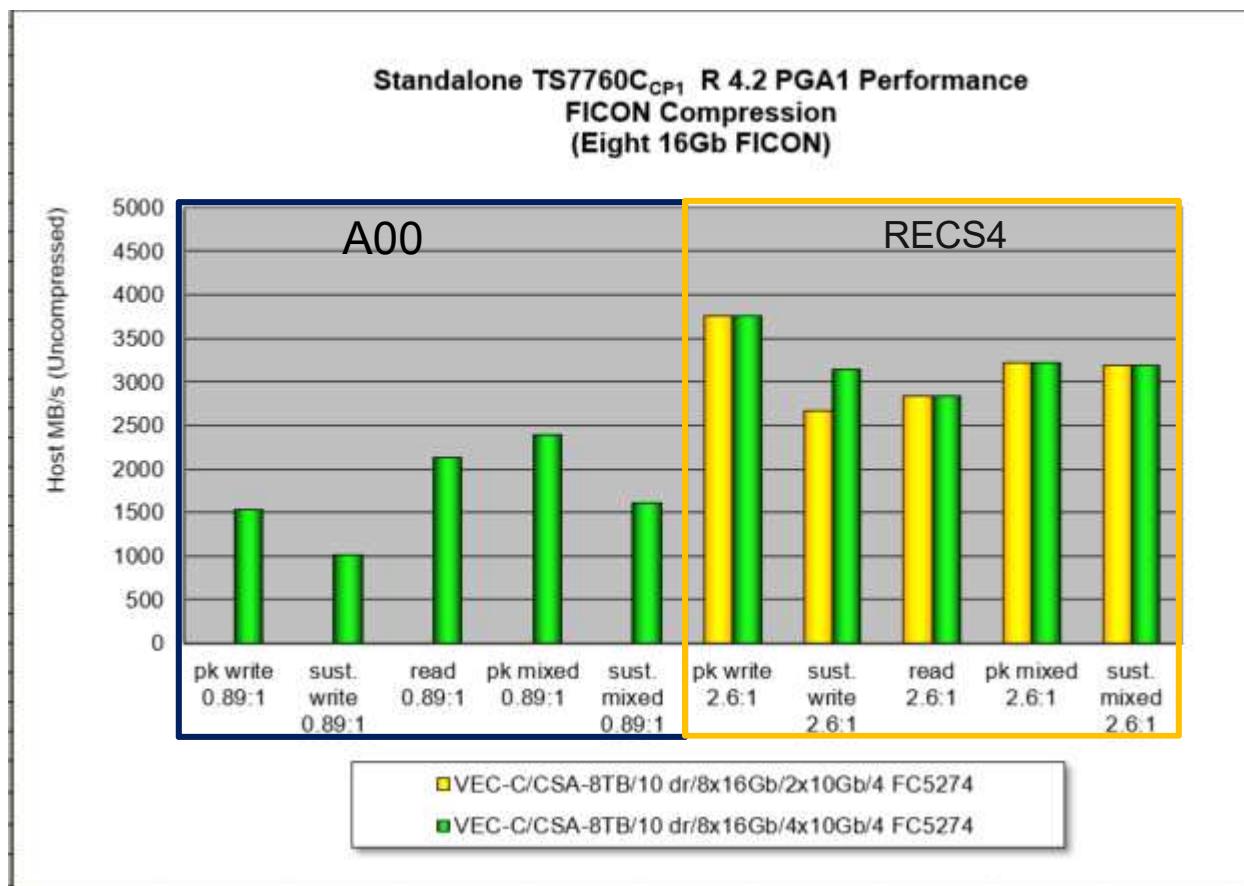
TS7700 Performance Workloads and Measurements

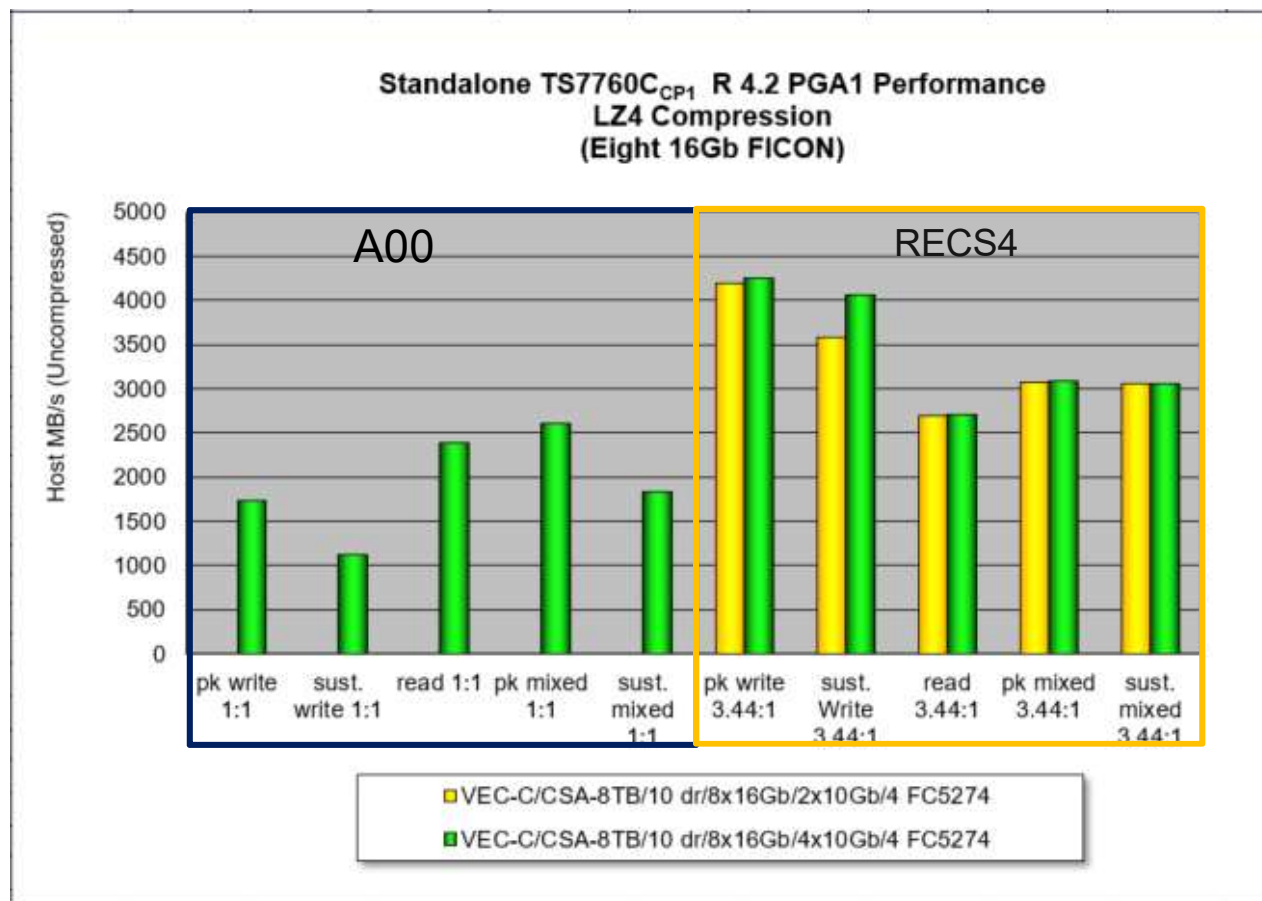
TS770 Performance Metrics

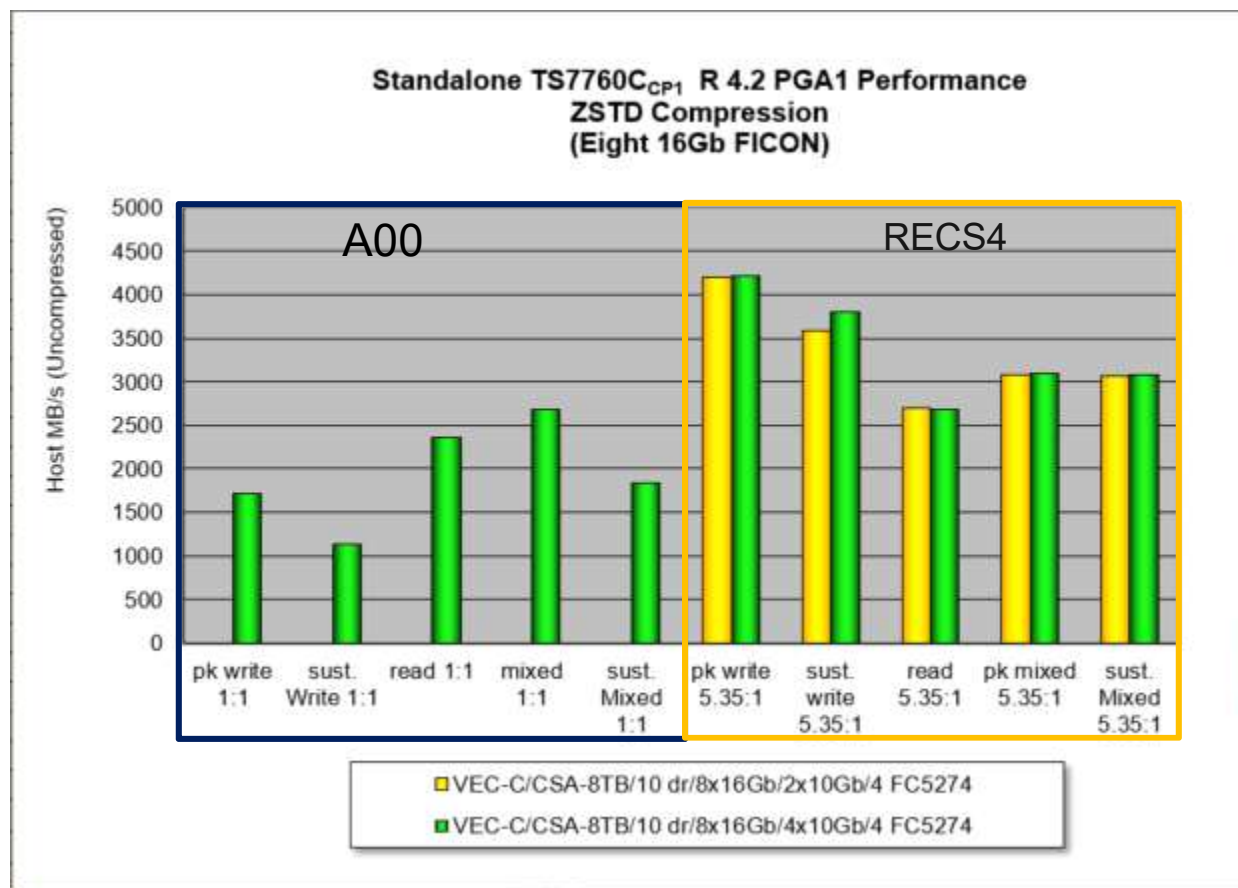
- ❖ **Peak Write Rate:** host rate at which data can be written into the DASD cache with no required physical tape drive activity.
- ❖ **Sustained Write Rate:** rate at which data can be written into the DASD cache with equivalent concurrent destaging to physical tape drives.
- ❖ **Read Hit Rate:** rate at which data can be read from the DASD cache.
- ❖ **Grid Deferred Copy Mode:** copy to other Hydra does not have to complete prior to job end (DD copy mode).
- ❖ **Grid Immediate Copy Mode:** copy to other Hydra must complete prior to job end (RR copy mode).
- ❖ **Grid Sync Copy Mode:** tape synchronization up to SYNC level granularity across two clusters within a grid (SS copy mode).
- ❖ **Grid Copy Rate:** rate at which data is copied to other Hydra.

Standalone TS7760C Performance

(Using A00 and RECS4 Data Patterns)

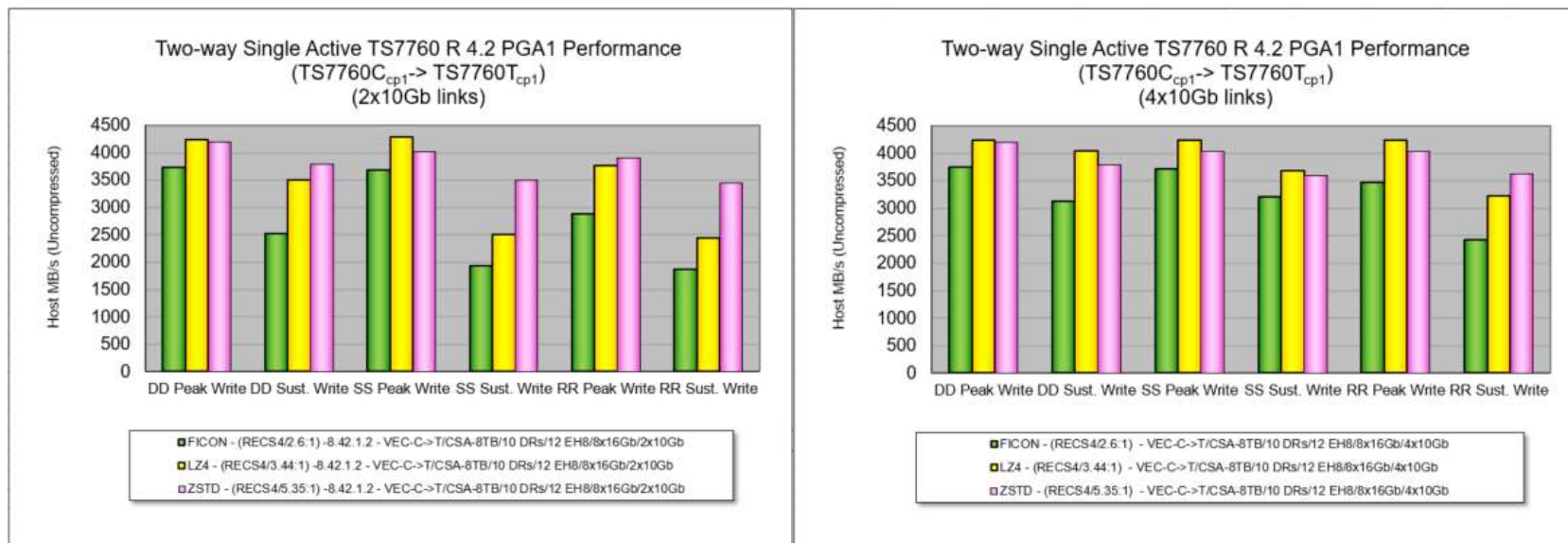




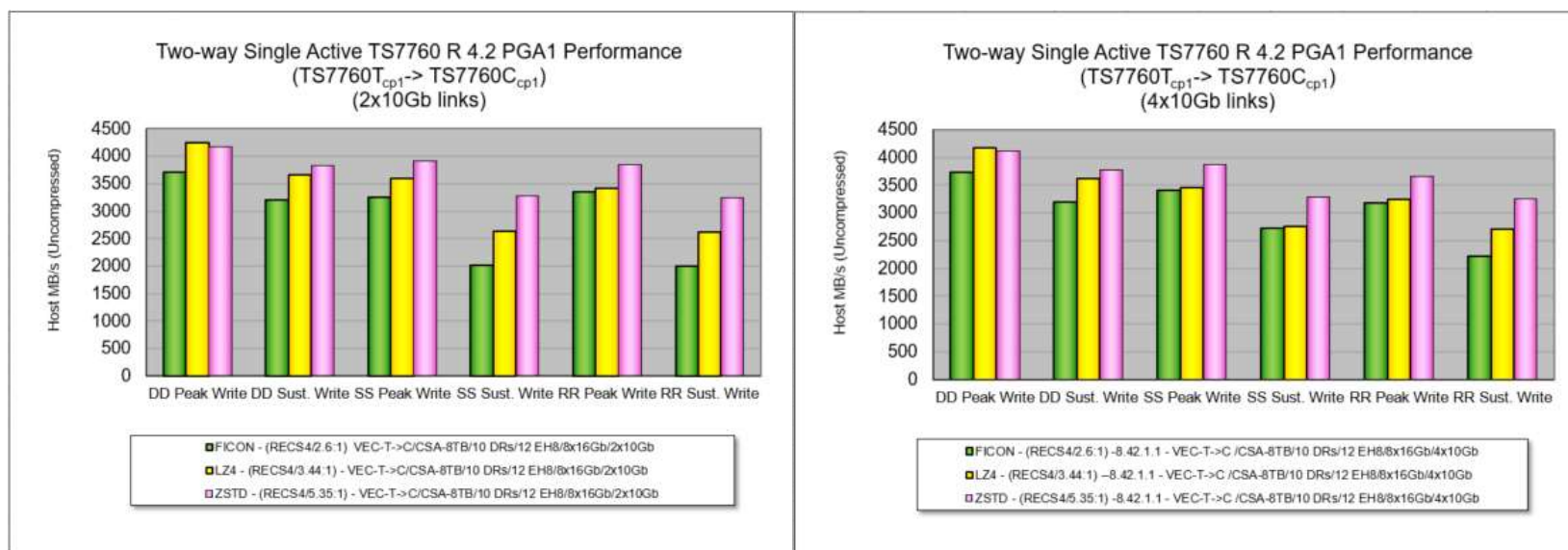


TS7760C-TS7760T Grid Performance (8 x 16Gb FICON) (Using RECS4 Data Patterns)

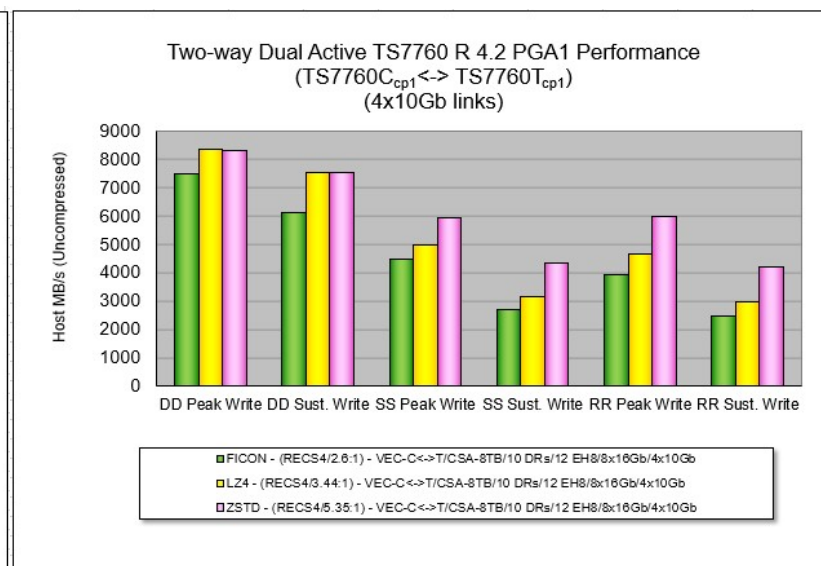
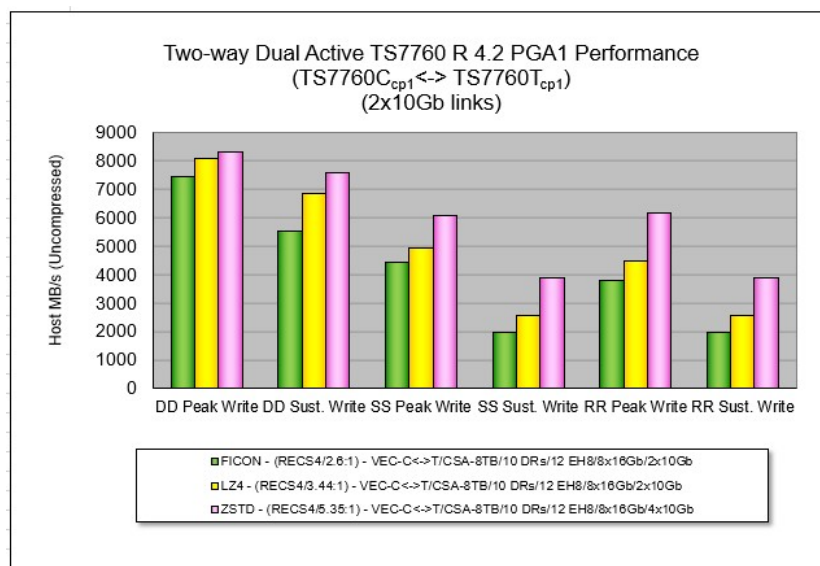
TS7760C->TS7760T Grid Performance



TS7760T->TS7760C Grid Performance

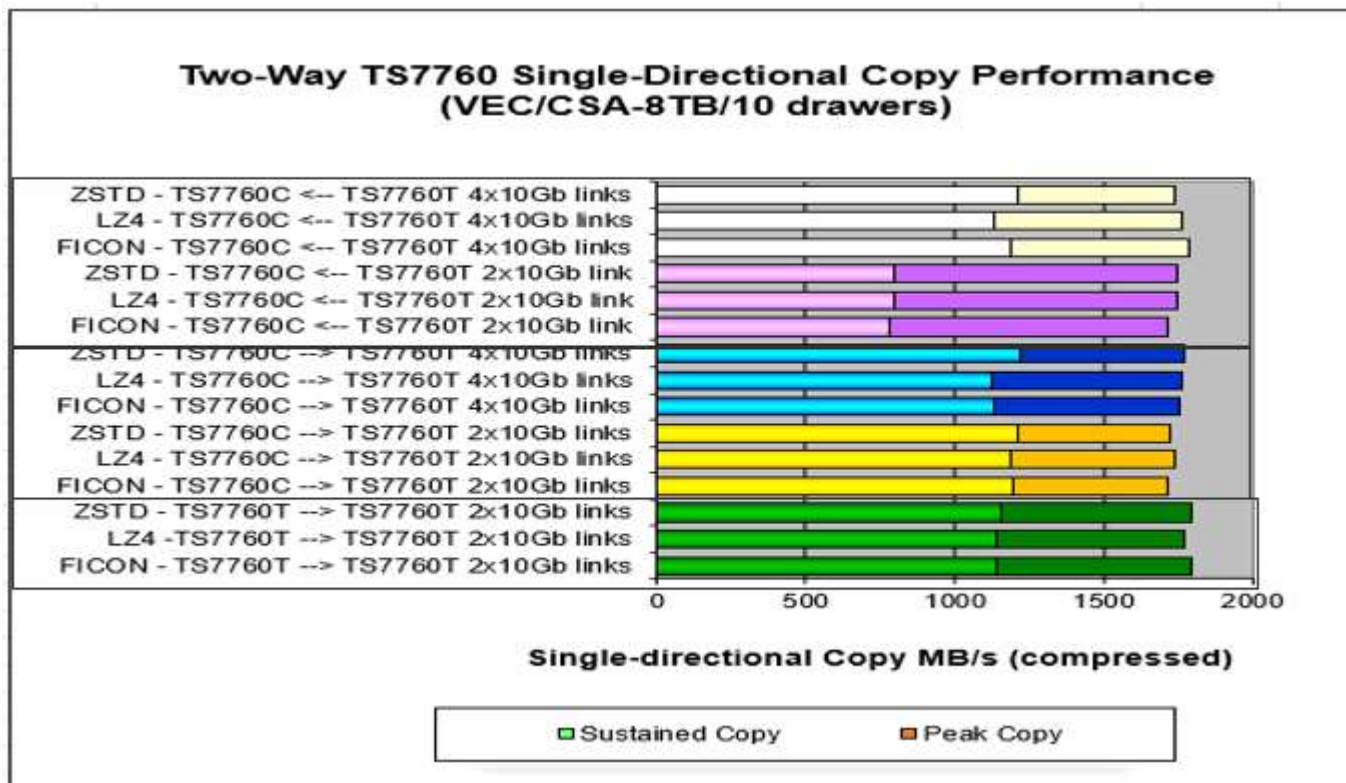


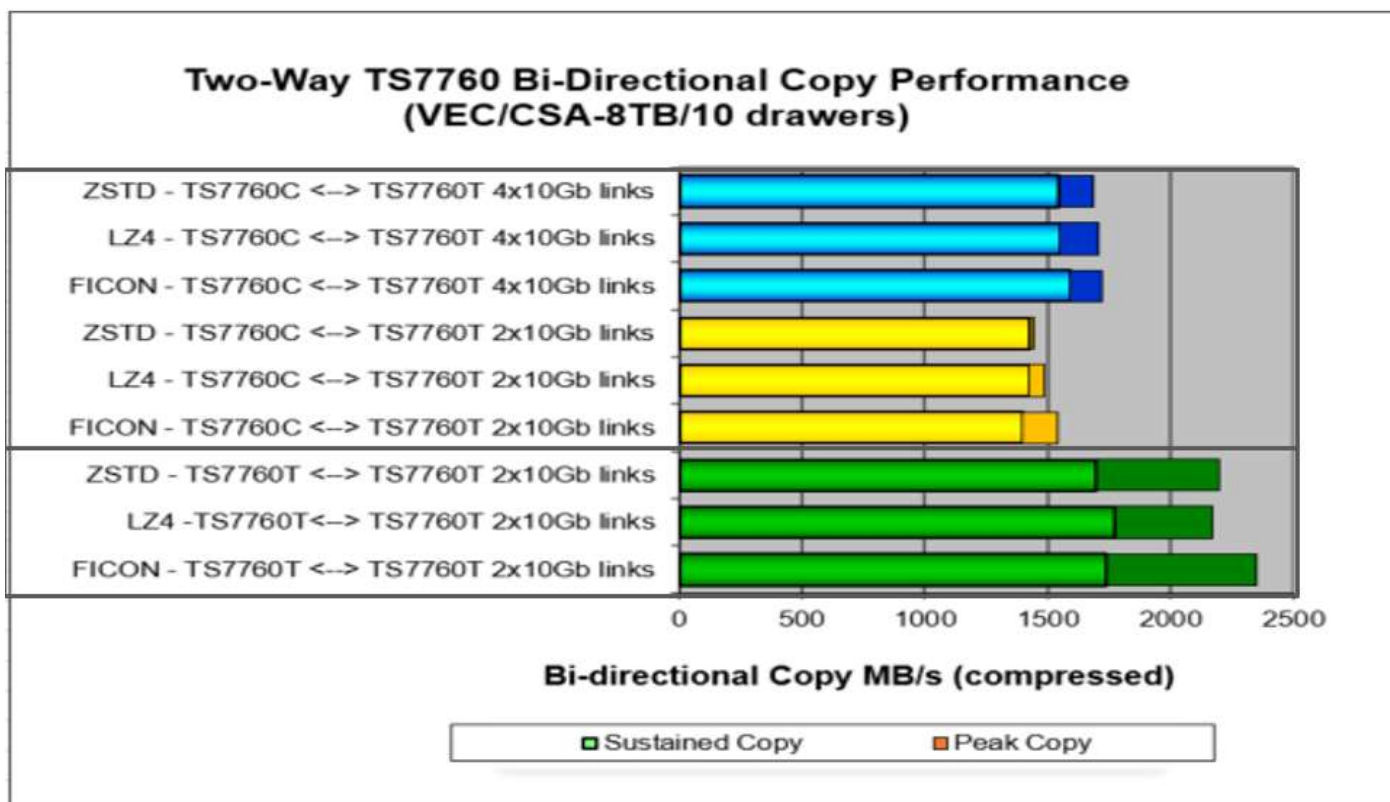
TS7760C<->TS7760T Grid Performance



TS7760T-TS7760C Copy Performance

(Using RECS4 Data Patterns)





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