

WSC 3494 and Virtual Tape Server Implementation Checklist

Version 1.1 11/18/99

- Using this checklist is likely to improve the quality of the implementation of the first IBM 3494 ATL or VTS in a Customer location.
- This is not meant to replace the SA review or the SA documentation..
- The activity list shows the basic installation tasks and should be updated for each installation..
- Common sense and the PISA Guide should be used to sort and execute the tasks in the correct order .
- Tasks are grouped by subject area..

References

- The following sources of information should be referenced:
- Be sure to obtain the most current copies of all manuals.

Ref Type	Reference	Doc ID	Obtained	Notes
IBM Books	Magstar 3494 Tape Library Operators Guide GA32-0280	TLOPER		1
	Magstar 3494 Introduction and Planning Guide GA32-0279	TLIPG		1
	OAM Planning, Installation & Storage Administration Guide(PISA) SC26-3051-	PISA		2
	DFSMS Storage Administration Reference SC26-4920-	SMSSAR		2
	Managing ICF Catalogs SC26-4914	MNGICF		2
Redbooks	IBM ATL Data Servers: A Practical Guide SG24-4632-00	ATLPG		
	IBM Magstar Virtual Tape Server: Implementation Guide SG24-2229	VTSIG		
	Guide to Sharing and Partitioning IBM Tape Library Dataserwer SG24-4409	GDSHARE		
WSC Pubs	Hardware Definitions for the Virtual Tape Sever (White Paper)	VTSHCD		3
	Virtual Tape Server Q Buckets	QBUCKETS		4
	IBM Magstar 3494 Virtual Tape Server Model B18 Performance White Paper	VTSPWP		3
	IBM 3494 VTS Storage Requirements	ZOE		3
	Understanding and Monitoring VTS B18 Performanc	VTSPERF		3
Websites	Matthias Werner site - Latest and Greatest in the world of Tape	ITSOMW		5
	Tape Tools Download Facility	TAPETOOLS		6
	RMSS Web Site	RMSS		7

Notes:

1. Very Important
2. Customer should have in DFSMS library
3. www.ibm.com/support/techdocs/
4. WWQA or RETAIN May be obtained from the IBM Support Center or from IBMLink
5. <http://wtscpok.itso.ibm.com:80/~wernerm/>
6. <ftp://index.storsys.ibm.com>
7. <http://w3.tucson.storage.ibm.com>

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3494 and VTS Hardware Installation

- All hardware installation tasks listed below should be completed as part of the normal systems assurance / installation process.
- This listing can be used to ensure all tasks have been completed prior to beginning 3484 SMS implementation tasks.

Hardware Planning

Task ID	Task	Owner	Start	Complete	Notes
B-1	Identify 3494 site modification requirements				
B-2	Identify delivery route and staging area				
B-3	Prepare physical layout diagram				
B-4	Determine cabling requirements				
B-5	Determine electrical requirements				
B-6	Determine UPS requirements				
B-7	Determine cooling requirements				
B-8	Determine fire repression requirements				
B-9	Determine 3494 modem and phone line requirements				
B-10	Determine remote console requirements				
B-11	Determine TSO console requirements				

Prepare Installation Site

Task ID	Task	Owner	Start	Complete	Notes
C-1	Prepare facility (electrical, mech, HVAC, fire suppression, UPS, phone, ...)				
C-2	Install ESCON connections				

Install and Test 3494 and VTS Hardware

Task ID	Task	Owner	Start	Complete	Notes
D-1	Unpack 3494 and VTS in staging area				
D-2	Install 3494				
D-3	Install VTS processor, DASD and Magstar				
D-4	Set up VTS using Library Manager				
D-5	Test VTS hardware				
D-6	Review maintenance procedures				
D-7	CE turns over the VTS				

Generating Names and Ordering Cartridges

Task ID	Task	Owner	Start	Complete	Notes
1-1	Determine LIBID to be used	Customer			1
1-2	Determine Library Name	Customer			2

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1-3	Determine VTS Physical Volsers and Range	Customer			3
1-4	Determine VTS Logical Volsers and Range	Customer			3

Generating Names and Ordering Cartridges (con't)

Task ID	Task	Owner	Start	Complete	Notes
1-5	Determine ATL Media Type (CST, ECCST, HCSST)	Customer			
1-6	Determine ATL Volume Range	Customer			3
1-7	Determine Cleaner Cartridge Requirements (be sure carts have unique volsers)	CE/ Customer			
1-8	Order VTS 3590 Physical Volumes, labeled and initialized	Rep			
1-9	Order ATL physical Volumes, labeled and initialized	Rep			
1-10	Order cleaner cartridges	Rep			
1-11	Determine SMS Construct Names	Customer			4

Notes:

1. You do not have to use frame serial numbers. Give a 5-digit number to the CE before Teach is performed. Make it a number that is meaningful to you. Someday you may move the data to another physical library.
2. Must not start with 'V'
3. Must be unique
4. You will need Dataclas, Storclas, Storgpr, and Mngtclas. For HSM, you need an esoteric name for the virtual drives.

VTS Implementation Consulting

- *For all 'First in Enterprise' IBM ATL or VTS Installs, the Customer should be aware that there is a service offering available from IBM at low cost to assist. Assistance with the remaining tasks in this document are part of the services offering. If you are not taking advantage of this service, then you should use this list to plan and execute these tasks.*

Task ID	Task	Owner	Start	Complete	Notes
2-1	VTS Overview and planning session				
2-2	Technical Consultation (System Prog & Operations)				
2-3	Onsite Meeting				
2-4	Software Planning				
	- List software levels				
2-5	Operational Education (Requires room, overhead, BARCO, and presentation material)				
	- Pgmr/Mgr Education				
	- Shift 1 Operator Education				1
	- Shift 2 Operator Education				
	- Shift 3 Operator Education				
2-6	Prepare operations procedures and				

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	documentation				
2-7	Discuss updates to any operational documentation				

Notes:

1. Training videos available for 3590 and 3494

Software Implementation

Task ID	Task	Owner	Start	Complete	Notes
3-1	Diagram current tape environment				
3-2	Diagram proposed Tape environment				
3-3	Review original VMA analysis				
	- Must tape list				
	- Vault tape list				
	- Data interchange list				
	- Inappropriate data list				
3-4	Determine project priorities				
	Automate manual operations				
	Move tape drives off the floor				
	Move stand alone library off the floor				
	Key dates				
	- x% of new allocations by				
	- x% of old tape data by				
3-5	Determine migration methodology				
	- New allocations				
	- Static data				
	- Old data (data that should be deleted)				
3-6	Determine migration tool for old data				
	- Rexx/IEBGENER				
	- COPYCAT				
	- TAPECOPY				1
	- Other				
3-7	Determine ACS logic criteria				
	- esoterics with exceptions				
	- Changing JCL to add dataclas				
	- Job, Program, and Data set filterlists				

Notes:

1. AN IBM Global Services offering is also available to provide software and hours to migrate any and all of the static data. Contact IBM Rep or Business Partner.

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Install MVS Software Requirements

Task ID	Task	Owner	Start	Complete	Notes
4-1	Research and Apply all Software Upgrades				
4-2	Research and Apply all Required Maintenance				
	- Obtain current copy of VTS Qbucket				
	- Obtain recommended technical documents and manuals shown above				
	- PSP bucket for 3490				
	- PSP bucket for 3494				
	- 3590 SPE				
	- Informational APARS				

Install MVS Software Requirements (con't)

Task ID	Task	Owner	Start	Complete	Notes
	- OW27369 SMF type 94 records				
	- OW25291 Device on-line after IPL				
	- Any TMS maintenance, CA, RMM, etc				
4-3	Research and Assess all Usermods				
4-4	Research and implement required RACF changes				
4-5	- RACF authority for OAM started task				

I/O Configuration

Task ID	Task	Owner	Start	Complete	Notes
5-1	Define I/O configuration using HCD, specify LIBRARY				1
5-2	Verify MIH values				2
5-3	Power-on reset and IPL (Library Manager must be online)				
5-4	VARY CHPIDS on-line				
5-5	VARY devices on-line				
5-6	VARY the Libraries On-line to SMS				

Notes:

1. PISA Guide
2. VTSHCD

Implementing Changes to TLMS

Task ID	Task	Owner	Start	Complete	Notes
6-1	Determine if TMS catalog needs extending				1
6-2	Define VTS Logical Volume Range to TMS				1
6-3	Install exits				
	- CBRUXENT and CBREJC (obtained from TMS supplier) DFSMSrmm also supplies the CBRUXCUA exit				2

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	- CBRUXVNL (optional)				
6-4	Implement changes to TMS software and procedures				3
	Sync process				
	Clean process				
6-5	Test TMS changes				

Notes:

1. Outage
2. PISA Guide, Protect with SMPE
3. Contact TMS supplier

OAM Planning

Task ID	Task	Owner	Start	Complete	Notes
7-1	Update PARMLIB				1
	SCHEDxx				2
	IGDSMSxx				2
	IEFSSNxx				2
	DEVSUPxx				3
	COMMNDxx				
	LOADxx				4
7-2	Update PROCLIB				
7-3	Create GRS Ring (GRS resource added for OAM)				5
7-4	Create catalog procedure for OAM address space				
7-5	Start the OAM Address Space				

Notes:

1. PISA Guide details Parmlib updates, Parmlib updates require IPL
2. OAM
3. Partitioning of Libraries
4. Changing HLQ of TCDB
5. Serializing Cartridge Entry

Implement SMS Tape for MVS

Task ID	Task	Owner	Start	Complete	Notes
8-1	Define Tape Configuration Data Base using AMS (TCDB)				1
	Define hlq.VOLCAT.VGENERAL				
	Define hlq.VOLCAT.Vx				
8-2	Connect VOLCATs to all sharing images				
8-3	Review SMS control data set sizes and placement				

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8-4	Review control data set backup and recovery procedures				
8-5	Define 3494 tape library using ISMF				2
	ISMF library definitions				
	- SCDS name				
	- Library name				
	- Library ID				
	- Default dataclas				
	- Scratch thresholds				

Notes:

1. PISA Guide and MNGICF
2. OAM must be active

ACS Planning

Task ID	Task	Owner	Start	Complete	Notes
9-1	Plan and design overall SMS Tape implementation				1
9-2	Define DC, SC, MC and tape SG using ISMF (constructs)				
9-3	Code DC, SC, MC and SG ACS routines including filters				
9-4	Translate/Validate the SMS configuration				
9-5	Test SMS tape implementation using ISMF				
9-6	Activate the SMS configuration				

Notes:

1. SMSSAR

3494 Library Manager Definitions

Task ID	Task	Owner	Start	Complete	Notes
10-1	VTS subsystem				1
	- Set fast ready categories				
	- Set recycle exclusion				
	- Set inventory policy				
	- Set cleaning schedule				
	- Set free storage threshold				
	- Define range(s) for 3590 cartridges (Stacked volumes)				
	- Insert minimum physical cartridges				
	- Insert virtual volume ranges				
	- Implement library manager password				
	- Enable inventory update if applicable				

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10-2	ATL Subsystem				
	- Set cleaning cycle				
	- Define the volume range (Native volumes)				
	- Insert minimum physical volumes				
	- Enable inventory update if applicable				

Notes:

1. Use ATLPG and TLOPER for all of this section

SMS Tape Test Planning

Task ID	Task	Owner	Start	Complete	Notes
11-1	Develop a detailed SMS tape test plan (below), schedule and document				
	- Out of 50 possible sample tests				
11-2	Load test cartridges into ATL (during define)				
11-3	Test basic cartridge entry, change use, VNL, bulk eject functions				
11-4	Test Tape Library Management functions				

SMS Tape Test Planning (con't)

11-5	Develop a SMS Tape fallback plan and document				
11-6	Activate SMS Configuration				
	- Test				
11-7	Test VTS Functions				
11-8	Test VTS target applications				
11-9	Review function test results and respond as necessary				
11-10	Test gathering and display of 3494 activity and performance information				

VTS Migration -New Allocations - Pilot Application

Task ID	Task	Owner	Start	Complete	Notes
12-1	Migration Planning (review migration tasks for completion)				
12-2	Change JCL If applicable				
12-3	ACS Modifications				
12-4	SMS configuration translation and verification				
12-5	ACS Testing				
12-6	DFSMS ACS Activation				
	- Review Installation for Proper Operation				

VTS Migration - New Allocations - VTS as the Default Media

Task ID	Task	Owner	Start	Complete	Notes
13-1	Migration Planning (review migration tasks for				

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	completion)				
13-2	Change JCL If applicable				
13-3	ACS Modifications				
13-4	ACS Testing				
13-5	SMS configuration translation and verification				
13-6	DFSMS ACS Activation				
	- Review Installation for Proper Operation				

VTS Migration - Static Data

Task ID	Task	Owner	Start	Complete	Notes
14-1	Migration Planning (review migration tasks for completion)				
14-2	Determine location of old (copied) volumes				
14-3	Determine most active static data (prioritize data to be copied)				
14-4	Determine old data to be deleted				
14-5	Customize/Test ACS Routines (as required)				
14-6	DFSMS ACS Activation and Review				
14-7	Test tape copy tool				

VTS Migration - Static Data (con't)

14-8	Review migration for proper operation				
14-9	Document volsers for operations				
14-10	Move static tape data				

Project Reports

Task ID	Task	Owner	Start	Complete	Notes
16-1	Measure success of VTS project				
16-2	Develop report on success of VTS project for management				
16-3	Report success of VTS project to management				
16-4	Biweekly performance measurements during implementation				1

Notes:

1. Use VTSPWP, ZOE, VTSPERF, TAPETOOLS