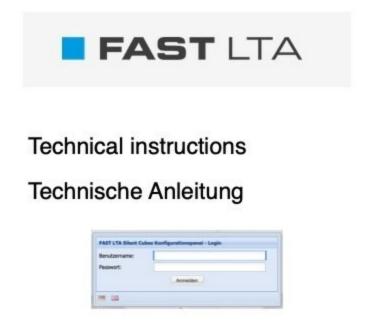


SVHT - Silent Cube Volume Types

Written By: Thomas Kunath

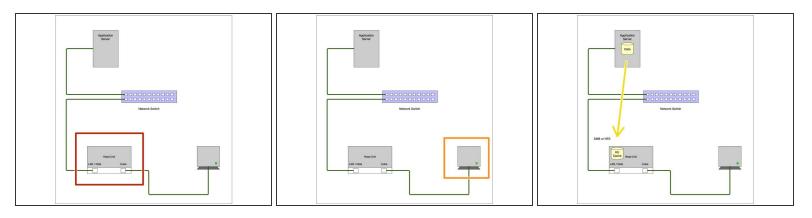


Step 1 — General Terms

(i) Here are some terms used in the manual

- WORM is a special type of data storage. Write Once Read Many means that once data has been written, it can no longer be changed, but can be read at will.
- **Reteniton Time** is the time, a file is protected from deletion or modification by the Worm File System. If the retention time has expired, the file can be deleted or changed.
- Archive Data in an archive do not change. As a rule, archives only grow, as no deletion of data takes place.
- **Backup** In a backup, the data is rewritten at cyclical intervals. The amount of data changes only slightly
- **Volumes** A volume is a reservation of storage space. In the volume, the type of worm memory, the retention time and other mechanisms can be set.
 - In general, it makes sense to create a separate volume for each application on the Silent Cube.
- Share A volume is the basis for a share. The data written to the share is archived according to the settings of the volume. The data of an external system can be transferred to the Silent Cube system via a share.

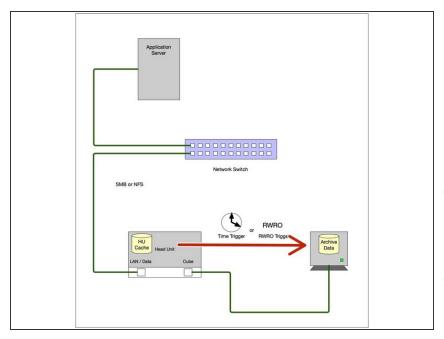
Step 2 — System structure and archiving scheme



Silent Cube systems are pure archive systems and not suitable for backup. The systems use a hardware worm controller to store the data permanently and securely.

- In general, Silent Cube systems are always structured in two stages. There is always a head unit, which is the bridge to the customer network.
- In addition, there are a number of Silent Cube storage units in which the data is archived.
- During archiving, the application writes to a share in the cache area of the head unit via SMB or NFS.

Step 3 — System structure and archiving scheme



- This share is assigned to a volume that has certain archiving properties. When certain events occur, e.g. when the minimum age is reached, the data is archived from the head unit to the silent cube storage units.
- (i) Once archived, data can only be deleted once it has reached the retention time.
- (i) A volume can only be deleted when all data in the volume has been deleted.

Step 4 — General settings for all volume types.

Name:	Quota [MB]: Autoextend [Mb	sj: I nresnola [%]:	Name:	Quota [MB]:	utoextend [MB	B]: Threshold [%
	10000 1000	100		10000	1000	100
Volume type:			Volume type:		Days:	
WORM with retention	▼ 0 ÷ 1 ÷		WORM with retention	~ 0	÷ 1 ÷	
WORM			WORM			
WORM with versioning			WORM with versioning			
WORM with retention			WORM with retention			
WORM with retention and versioning			WORM with retention and versioning			
WORM with retention (RWRO triggered)	y of week:	Day:	WORM with retention (RWRO triggered)	y of we	ek:	Day:
WORM with retention and versioning (RWRO triggered)	inday 👻	1 ~	WORM with retention and versioning (RWRO triggered)	inday	~	1
WORM with retention (RWRO triggered, autosave)			WORM with retention (RWRO triggered, autosave)			
Minimum age before archiving [s]:			Minimum age before archiving [s]:			
60			60			
Mark archived files read only			Mark archived files read only			
Random access in files			Random access in files			
Use data compression			Use data compression			
☑ Delete files after ingest from cache			Delete files after ingest from cache			
✓ Notify if not yet archived files are older than:			Notify if not yet archived files are older than:			
1 🗘 Days 0 🗘 Hours 0 🗘 Minutes			1 🗘 Days 0 🗘 Hours 0 🗘 Minutes			
Save	Abort		Save	Abort		

- The volume sizes can be managed in the same way for all volume types. There are 3 setting options for this
- Quota is the size of the volume in MB. No memory is reserved here, but an entry is made in the Silent Cube database as to how large the volume may be.
 - This value can be made larger or smaller at any time, during operation without disturbance, but not smaller than the amount of data contained.

If the quota is reached and no other settings have been made, the unit sends a warning message and stops archiving. The data then remain in the cache.

Step 5 — General settings for all volume types.

ame: Quota	[MB]: Autoextend [MB]:	Threshold [%]:	Name: Q	uota [MB]: Autoextend	[MB]: nreshold [%]:
10000	1000	100	1	10000 1000	00
olume type:	Years: Days:		Volume type:	Years. Days.	
ORM with retention	0 🗘 1 🗘		WORM with retention	▼ 0 ÷ 1	~
/ORM			WORM		
ORM with versioning			WORM with versioning		
/ORM with retention			WORM with retention		
/ORM with retention and versioning			WORM with retention and versioning		
ORM with retention (RWRO triggered)	y of week: Da	ay:	WORM with retention (RWRO triggered)	y of week:	Day:
/ORM with retention and versioning (RWRO triggered)	inday 💙 1	*	WORM with retention and versioning (RWRO triggered)	inday	1 *
ORM with retention (RWRO triggered, autosave)			WORM with retention (RWRO triggered, autosave)		
Minimum age before archiving [s]:			Minimum age before archiving [s]:		
60			60		
Mark archived files read only			Mark archived files read only		
Random access in files			Random access in files		
Use data compression			Use data compression		
Delete files after ingest from cache			Delete files after ingest from cache		
Notify if not yet archived files are older than:			Notify if not yet archived files are older than:		
1 🗘 Days 0 🗘 Hours 0 🗘 Minutes			1 🗘 Days 0 🗘 Hours 0 🗘 Minutes		
Save At	port		Save	Abort	

- The system offers the possibility to expand the volumes automatically. This is also a great advantage when expanding the system with more storage units. The volume then continues to grow without further action.
 - With Treshold, you can set the level at which the volume is expanded.
 - We recommend 95 98%, depending on the volume size. This way, the volume is automatically expanded before it really fills up. Applications that check the free space, before writing simply continue to run.
- With Autoextend you set the size to be expanded. Here it makes sense to set about 10% of the volume size.
- (i) When the volume is expanded, the system sends an information message.

Step 6 — Silent Cube Volume Types

Create a new volume		×							Create a new volume		
Name: Quota	[MB]: Autoextend [MB]:	Threshold [%]:							Name: Qi	ota [MB]: Autoextend [MB]:	Threshold [%]:
1000	0 1000	100	Configuration papel (C2-TestSyst	em – admin) 2 to 25 K111 Konplana-Arthonics Option	Samiltonities	ted until: 06/18/2030			1	1000 1000	100
Volume type:	Years: Days:			Hanage volumes					Volume type:	Years: Days:	
WORM with retention	✓ 0 ♀ 1 ♀		Coolig pages	Add volume Deley And volume					WORM with retention	✓ 0 ♀ 1 ♀	
WORM			Milcome	Name - 1. WORM	Quota	Used Free Usage		rchived Pending Triggered	WORM		
			El Management	2.WORM_with_Ver_ ang	700.00 TB 70.00 TB	0 Bytes 700,00 TB	10%	0 0 0			
WORM with versioning			Solution Manager	3, WORM, with , Resentor	20.00 TB	0 Byles 20.00 TB	0%	0 0	WORM with versioning		
WORM with retention			Management	4_WORM_with_Relation_Versioning	10,00-08	0 Bytes 10,00 G8	ON	0 0	WORM with retention		
WORM with retention and versioning			A Castings	5,WORM_with_Retention_RWR0 6 WORM_with_Retention_Intercention_RETRO	10,00-60	7 Bytes 10,00 GB	0%	1 0	WORM with retention and versioning		
			3 User	6_BORM_with_Relation_thesioning_RERO 7_BORM_with_Relation_thesioning_RERO_autosave	12,00-08	0 Bytes 10,00 GB	100	* 0		-	
VORM with retention (RWRO triggered)	y of week: Day		IT Notifications	Rechang	12,00-08	378.16 KB 10,00 GB	ON ON	5 0	WORM with retention (RWRO triggered)	of week: De	
VORM with retention and versioning (RWRO triggered)	inday 👻 1	~	E some	WORMBriefs	12,00-58	55,76 KB 10,00 GB		4 0	WORM with retention and versioning (RWRO triggered)	nday 👻 1	~
(ORM with retention (RWRO triggered, autosave)	11001		Active Directory	womdobby INDAMarg	10,00-68	0 Bytes 10,00 GB	0%	0 0	WORM with retention (RWRO triggered, autosave)	iouy A	
			E Miscelaneous	WORMest	12,00-08	60,14 K8 10,00 G8	0%				
Minimum age before archiving [s]:			E Sentre E Licenses & Activation	Cube cases(by in use: 565.56 MB of 8.00 TB		105			r minimum age before areaning [5].		
60			4 🔄 System state			144			60		
			E General Information	Hanage shares							
Mark archived files read only			Logo	ANT SME share ANT APS share ANT SCP of					Mark archived files read only		
			Halp	Volume/path = 1 WORM	Type Sharenam	e Options provisable ladmint	NFS path		-		
Random access in files			Volumes & Shares	2 WORM with Versioning	410 2	public, browteable			Random access in files		
				3, WORM, with , Retention'	smb 3	public, browseable					
Use data compression			Manage volumes: Create volumes to partition the	4_WORM_with_Resentor_Versioning/	amb 4	public, browseable			Use data compression		
			Create volumes to partition the connected Silent Cubes.	5_WORM_with_Retention_RWRO/ 6_WORM_with_Retention_Versioning_R00RO/	amb 5	public, browseable public, browseable					
Delete files after ingest from cache			The Silent Cubes are WORM drives.	6_NORM_with_Relation_Versioning_RIPPO 7_WORM_with_Relation_Versioning_RIPPO_autosave/	980 6 980 7	public, browseable public, browseable			Delete files after ingest from cache		
			Created and once used volumes can't be deleted.	Rechange	smb Rachnung	browseable [cfz.Bunath.uwe.marlag	rinn)				
Notify if not yet archived files are older than:				WORMBriefer	ano Briefe	browseable (ankatrin, Kunath)			Notify if not yet archived files are older than:		
				worndobby/	amb wormdobb	y public, browseable					
1 🗘 Days 0 🗘 Hours 0 🗘 Minutes			Manage shares: Create charac to make unor universe	WORMand	sno WORDnes	d browseable (araven, Skanath)			1 🗘 Days 0 🗘 Hours 0 🗘 Minutes		
Save A	Nort								Save	Abort	

(i) Depending on the desired connection, the Silent Cube offers several volume types.

- To be able to use all volume types, a Compliance Option is mandatory. Otherwise, only the "Worm" type can be used.
- (i) Basically there are 2 different volume types
 - Time-controlled volume types with Min Age
 - RWRO controlled volume types

Step 7 — Time-controlled volume types with Min Age

ame:	Quota [MB]:	Autoextend [MB]:	Threshold [%]:	Name:	Quota [MB]: Autoextend [MB]:	Threshold [%]
	10000	1000	100		10000	1000	100
lume type:	Yea	ars: Days:		Volume type:		Years: Days:	
ORM with retention	¥ 0			WORM with retention	~	0 🗘 1 🗘	
ORM				WORM			
ORM with versioning				WORM with versioning	-		
/ORM with retention				WORM with retention			
VORM with retention and versioning				WORM with retention and versioning			
VORM with retention (RWRO triggered)	y of we	eek: Day	:	WORM with retention (RWRO triggered)	y	of week: Da	iy:
NORM with retention and versioning (RWRO triggered)	inday	▼ 1	~	WORM with retention and versioning (RWRO to		day 💙 1	*
WORM with retention (RWRO triggered, autosave)				WORM with rotantian (PM/PO triagonal autosi	ave)		
Minimum age before archiving [s]:				Minimum age before archiving [s]:			
60				60			
Mark archived files read only				Mark archived files read only			
Random access in files				Random access in files			
Use data compression				Use data compression			
-							
Delete files after ingest from cache				Delete files after ingest from cache			
Notify if not yet archived files are older than:				Notify if not yet archived files are older that	an:		
1 🗘 Days 0 🗘 Hours 0 🗘 Minutes				1 🗘 Days 0 🗘 Hours 0 🗘	Minutes		
					- maxaa		
Save	Abort				Save Abort		

- Archiving in the Silent Cube systems is done by transferring the data from the data source to a share in the head unit.
- The data is cached in this share. Archiving is then started depending on the volume type and the settings of this type.
- With the time-controlled volume types, the data in the cache of the head unit is transferred from the head unit to the silent cube storage units after an adjustable time (min-age).

 \bigwedge There are a few things to consider when setting the Min Age:

- As long as the Min-Age has not expired, the data is only in the Head Unit cache. This means that the data is not yet archived in a revisionary way and can still be deleted or changed.
- The min age should not be set for too long, otherwise the head unit cache may be written to full if the data flow is high.
- The min age should not be set too short, as some applications still change attributes of the files stored in the cache.
- We recommend a Min Age duration of 60 seconds. Depending on the software provider, up to one hour can be set here. Larger values are usually not useful.

Step 8 — Worm

ame:	Quota [MB]:	Autoextend [MB]:	Threshold [%]:	Name:		Quota [MB]:	Autoextend [M	1B]: Threshold [%]:
_WORM	70000000	1000	95	1_WORM		70000000	1000	95
nume opper	Yea			Volume type:		Ye	ars: Days:	
VORM	~	÷		WORM			A V	* ·
Archiving Safe files Miscellaneous				Archiving Safe files M	liscellaneous			
Method:				Method:				
Immediate 👻				Immediate	*			
Interval: Time:	Day of we			Interval:	Time:	Day of w		Day:
Daily ¥ 23:55	Sunday	▼ 1	~	Daily	¥ 23:55	Sunday	~	1 ~
Minimum age before archiving [s]:				Minimum age before archivi	na [s]:			
60				60				
Mark archived files read only				a Mark archived files read	only			
Random access in files				Random access in files				
Use data compression				Use data compression				
Delete files after ingest from cache				Delete files after ingest f	from cache			
Notify if not yet archived files are older than:				Notify if not yet archived	files are older than:			
1 🗘 Days 0 🗘 Hours 0 🗘 Minutes				- 1 🗘 Days 0 🗘	Hours 0 🗘 Minutes			

- The volume type Worm is always available in the system, even if no Complinace is installed.
- With the Worm type, the data is stored forever. There are no retention times.
- If for legal reasons an expiry time must be observed for the data, e.g. for personnel data, the Worm volume type is not suitable.

Step 9 — Worm with versioning

Name:	Quota [MB]: Autoextend	I [MB]: Threshold [%]:	Name: Quota [MB]: Autoextend [MB]: Th	hreshold [
2_WORM_with_Versioning	7000000 1000	100	2_WORM_with_Versioning 70000000 1000 10	100
Volume type:	Years: Days	:	Volume type: Years: Days:	
WORM with versioning	× A	×	WORM with versioning	
Archiving Safe files Miscellaneous			Archiving Safe files Miscellaneous	
Method:			Method:	
Immediate 👻			Immediate 👻	
Interval: Time:	Day of week:	Day:	Interval: Time: Day of week: Day:	
Daily 23:55	Sunday	• 1 •	Daily 23:55 Sunday 1	~
Minimum age before archiving [s]: 60 Random access in files			Minimum age before archiving [s]: 60 Random access in files	
Use data compression			Use data compression	
Delete files after ingest from cache			☑ Delete files after ingest from cache	
Notify if not yet archived files are older than:			F Votify if not yet archived files are older than:	
1 Days 0 Days 0 Days Minutes			F 1 2 Days 0 2 Hours 0 2 Minutes	
Save	Abort		Save Abort	

- In the case of worm with versioning, the data stored in the archive can be changed.
 - Here the older version of the file is stored invisibly by the system in the file system. (Versioning)
 - Only the current, changed version is visible. If necessary, however, previous versions can be brought up.
- Retention times cannot be set for worms with versioning.

Step 10 — Worm with retention

WORM with retention Image: Constraint of the sead only Archiving Safe files Miscellaneous Archiving Method: Immediate Inmediate Immediate Interval: Time: Daily 23:55 Sunday Immediate Minimum age before archiving [s]: Go Go Immediate Mark archived files read only Immediate	2000000 1000000 99 Years: Days: 0 Day of week: Day: Sunday 1
NORM with retention Archiving Safe files Method: Inmediate Interval: Time: Day of week: Day: Interval: Inte	Day of week: Day:
Archiving Safe files Miscellaneous Method: Immediate Immediate Interval: Time: Daily 23:55 Sunday 1 Minimum age before archiving [s]: 60 Mark archived files read only Immediate	Day of week: Day:
Method: Immediate Im	
Inmediate Inmediate Inmediate Inmediate Interval: Time: Day of week: Day; Interval: Interval: Daily 23:55 Sunday I Image before archiving [s]: 60 60 Mark archived files read only Image before archiving [s]: 60 Image before archiving [s]: 60	
Interval: Time: Day of week: Day: Interval: Time: Daily 23:55 Sunday 1 23:55 Daily 23:55 Minimum age before archiving [s]: 60 60 60 60 60 Mark archived files read only Users Interval: 1 1 1	
Daily 23:55 Sunday 1 23:55 Minimum age before archiving [s]: 60 60 Mark archived files read only Minimum age before archiving [s]: 60	
Minimum age before archiving [s]: Minimum age before archiving [s]: 60 60 Mark archived files read only Mark archived files read only	Sunday ¥ 1 ¥
60 60 60 Go	
Use data compression Use data compression ☑ Delete files after ingest from cache ☑ Delete files after ingest from cache ☑ Notify if not yet archived files are older than: ☑ Notify if not yet archived files are older than: 1 ② Days 0 ④ Hours 0 ④ Minutes	

- With the Worm with Retention, the stored data can be given an expiry date (retention time).
 - After this time, the data can be changed or deleted.
- The LAST ACCESS DATE of the file is used as the time stamp. If a file is stored here in the system and a retention time of 10 years is set. The LAST ACCESS DATE of the file is set to the current date + 10 years.
- If files are deleted after the expiry date of the retention period, no space is released on the system here! This is due to the linear Worm File System.
- (i) According to DSGVO, deleting the link is enough.

Step 11 — Worm with retention and versioning

ame:			Quota [MB]:	Autoextend [MB	: Threshold [%]:	Name:			Quota [MB]:	: Autoexten	[MB]:	Threshold [%]:
_WORM_with_Reten	tion_Versioning		10000	1000	100	4_WORM_with_Retention	n_Versioning		10000	1000		100
aluma tuma.			Year	rs: Days:		Volume type:			_	Years: Days	:	
WORM with retention	and versioning		~ 0	÷ 1 ÷		WORM with retention a	d versioning		~	0 🗘 1	Ŷ	
Archiving Safe fil	es Miscellaneous					Archiving Safe files	Miscellaneous					
Method:						Method:						
Immediate	~					Immediate	*					
Interval:		Time:	Day of wee	ek:	Day:	Interval:		Time:	Day of	f week:	Day:	
Daily	~	23:55	Sunday	*	1 ~	Daily	~	23:55	Sunda	ay	✓ 1	~
Random access i Use data compre Delete files after Notify if not yet a Development	ssion ingest from cache					Random access in I Use data compress Delete files after in Notify if not yet ar 1 Days	on gest from cache hived files are old	ler than:				
		Save	Abort				v	Save	Abort			

- This type of worm is a hybrid of the previous two.
- Here the file can be versioned and a retention time can be set.

Step 12 — Additional settings with time-controlled volumes

Create a new volume	Create a new volume X	Create a new volume ×
Name: Quota [MB]: Autoextend [MB]: Threshold [%6]: 10000 1000 100	Name: Quota (MB): Autoextend (MB): Threshold (%): 10000 1000 100 100	Name: Quota [MB]: Autoextend [MB]: Threshold [%6]: 100000 10000 1000 1000
Volume type: Van: Day: VOCM with reforming Sofe files Macathemour Method: Immediate V Internat: Time: Day of week: Day: Day V 2000 Sanday V 1 V	Wolame type: Years: Days: WORH with referetion V 0 1 Archabelog Safe files Mecatamons Metadot Immediate Days: Interval: Time: Days of week: Days: Daily 20:00 Sundary 1	Vedame type: Vedame type: VCRM with retention VCRM with retention Vedame type: VCRM with retention Vedame type: Vedame ty
Minimum age before archiving [s]; 60 Mexic archived files read only Mexic and an archived files read only Called a compression Called a compression C	Minimum age before archiving (s): 6 Mark, archived files read only 6 Random access in files 6 Delete files after ingest from cache 7 Notify if not yet archived files are officer than: 1 © logy: 0 © Hours 0 © Moutes Bere Abort	Minimum age before archiving [s]: 60 Herk archived files mad only C Random access in files C Delete files after ingest from cache C Modity If not yet archived files are older than: 1 D Day: D Die Moors D D Minutes Save Acce

- With the setting "Mark archived files read only" you can ensure that all archived files are set as RO. This can be used, for example, as a receipt for archiving.
- Random access in files ensures that, for example, in the case of large file containers, only the required part of the file is transferred back from the cube to the head unit, which increases the reading speed.
- Use data compression enables a loss-free compression of the data. It must be in mind, that many
 archive data are already available in a compressed format and a compressed file is no longer the
 original file, so that there is sometimes a need for argumentation.

Step 13 — Additional settings with time-controlled volumes

lame:	Quota [MB]:	Autoextend [MB]:	Threshold [%]:	Name:			utoextend [Mi		"hreshold [%]:
	10000	1000	100		100		000		100
olume type:	Year			Volume type:		Years:	Days:		
WORM with retention	~ 0	↓ 1 ↓		WORM with retention		¥ 0	1 0		
Archiving Safe files Miscellaneous				Archiving Safe files Miscellaneous					
Method:				Method:					
Immediate 👻				Immediate					
Interval: Time:	Day of wee		r:	Interval: T	Time:	Day of week:		Day:	
Daily 20:00	Sunday	▼ 1	~	Daily 🗡 :	20:00	Sunday	~	1	~
60 Mark archived files read only Random access in files				60 Mark archived files read only					
Use data compression				Use data compression					
✓ Delete files after ingest from cache				✓ Delete files after ingest from cache					
Notify if not yet archived files are older than:				Notify if not yet archived files are older to Notify if not yet archived files are older to	than:				
1 Days 0 Days Minutes				1 v Days 0 v Hours 0	Minutes				
Save	Abort				Save	Abort			

- This function cleans the head unit cache after the file has been archived. If this function is switched off, the head unit starts to delete all archived files from the cache when the cache is 50% full.
- Normally, all files should be archived in a short time with the adjustable rules. If for some reason files remain in the cache, you can have a message sent with "Notify if not yet archived files are older than:" if files are still lying unprocessed in the cache after the set time.

Step 14 — RWRO controlled volume types

Name:	Quota [M	B]: AI	utoextend [MI	B]:	Threshold [%]:
	10000	1	000		100
/olume type:		Years:	Days:		
WORM with retention	~	0	÷ 1 ÷		
WORM					
WORM with versioning	-				
WORM with retention					
WORM with retention and versioning					
WORM with retention (RWRO triggered)		of week:		Day:	
WORM with retention and versioning (RWRO triggered)		iday	~	1	*
WORM with retention (RWRO triggered, autosave)					
minimum age before archiving [5]:					
60					
Mark archived files read only					
Hark archived mes read only					
Random access in files					
Use data compression					
Delete files after ingest from cache					
Notify if not yet archived files are older them.					
Notify if not yet archived files are older than:					
1 🗘 Days 0 🗘 Hours 0 🗘 Minutes					

- With RWRO triggered volume types, the file is not archived via a time mechanism but via an active mechanism of the storing system.
- The storing system must set the file attribute Read Only for files to be archived.
 - This is the trigger for the Silent Cube System to archive the file.

If the files are not set to RO for the RWRO file types, the data remain in the cache and are not archived!

Step 15 — Worm with retention (RWRO triggered)

	Quota [MB]:	Autoextend [MB]:	Threshold [%]:	
5_WORM_with_Retention_RWRO	10000	1000	100	
Volume type:	Y	ears: Days:		
WORM with retention (RWRO triggered)	×	0 🗘 1 🗘		
Archiving Safe files Miscellaneous				
Random access in files				
Use data compression				
Delete files after ingest from cache				
✓ Notify if not yet archived files are older than:				
1 Days 0 CHours 0 CMinu	itas			
Notify if not yet triggered files are older than:				
1 🗘 Days 0 🗘 Hours 0 🗘 Minu	ites			

- With the Worm with Retention RWRO triggered, a retention time can be assigned to the stored data. After this date has expired, the data can be deleted.
- As with all RWRO volumes, the data is archived by setting the RO attribute to the file.

Step 16 — WORM with retention and versioning (RWRO triggered)

WORM_with_Retention_Versioning_RWRO	10000	1000	100
	Yea	ars: Days:	
RM with retention and versioning (RWRO triggered)	¥ 0	÷ 1 ÷	
rchiving Safe files Miscellaneous	-		
Random access in files Use data compression Delete files after ingest from cache Notify if not yet archived files are older than: Days 0 Hours 0 Days 0 Hours 0 Days 0 Hours 0 Minutes			

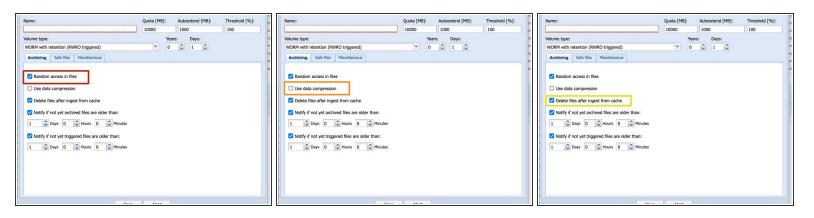
• Here the file can be versioned and a retention time can be set.

Step 17 — WORM with retention (RWRO triggered, autosave)

	Quota [MB]:	Auto	inkrem	ent [MB]:	Schwelle [%]:
7_WORM_with_Retention_Versioning_RWRO_autosave	10000		100	0		100
/olume-Typ:		Jahre	e:	Tage	:	
WORM mit Lebensdauer (RWRO getriggert, Autosave)	~	0	~	1	-	
Archivierung Safe-Dateien Sonstiges						
Automatisch archivieren nach [s]:						
60						
Vahlfreier Zugriff innerhalb von Dateien						
Daten komprimieren						
Dateien nach dem Archivieren aus dem Cache lösche	n					
Benachrichtigung wenn noch nicht archivierte Dateier	n älter sind als:					
1 Tage 0 Stunden 0 Minuten						
1 v lage 0 v stunden 0 v Plinuten						

 This volume is specifically for connecting the OpenText SAP interface and should not be used for any other purpose.

Step 18 — Additional settings with RWRO-controlled volumes



- Random access in files ensures that, for example, in the case of large file containers, only the required part of the file is transferred back from the cube to the head unit, which increases the reading speed.
- Use data compression switches on loss-free compression of the data. It must be borne in mind that many archive data are already available in a compressed format and a compressed file is no longer the original file, so that there is sometimes a need for argumentation.
- This function cleans the head unit cache after the file has been archived. If this function is switched off, the head unit starts to delete all archived files from the cache when the cache is 50% full.

Step 19 — Additional settings with RWRO-controlled volumes

Name:	Quota [MB]:	Autoextend [MB]:	Threshold [%]:	Nam	e:	Quota [MB]:	Autoextend [MB]:	Threshold [%]:
	10000	1000	100			10000		1000	100
Volume type:	Year		r	Volur	me type:		Years:		
WORM with retention (RWRO triggered)	~ 0	♀ 1 ♀	te	WO	RM with retention (RWRO triggered)	*	0	÷ 1 ÷	
Archiving Safe files Miscellaneous				An	chiving Safe files Miscellaneous				
Random access in files Use data compression			2		Random access in files Use data compression				
Delete files after ingest from cache					Delete files after ingest from cache				
Votify if not yet archived files are older than:					Notify if not yet archived files are older than:				
1 Days 0 C Hours 0 C Minutes				1	Days 0 🗘 Hours 0 🗘 Minutes				
Notify if not yet triggered files are older than:					Notify if not yet triggered files are older than:				
1 🗘 Days 0 🗘 Hours 0 🗘 Minutes				1	Days 0 C Hours 0 C Minutes				
				E.					
				E.					
Paus	Abort 1				Caus	Abort			

- Normally, all files should be archived in a short time with the adjustable rules. If for some reason files remain in the cache, you can have a message sent with "Notify if not yet archived files are older than:" if files are still lying unprocessed in the cache after the set time.
- The function "Notify if not yet triggered files are older than:" informs you if files have not been set to RO by the application software for a long time and therefore remain in the cache.

Step 20 — Safe Files

Create a new volume	Create a new volume	Create a new volume
Name: Quota [MB]: Autoextend [MB]: Threshold [%):	Name: Quota [MB]: Autoextend [MB]: Threshold [%]:	Name: Quota [MB]: Autoextend [MB]: Threshold [%):
00000 1000 100 Volume type: Varia: Days: Volume type: 0 1 Acching Safe files 1 File extension: iste iste	Vederar type: Vederar type: Vedera	Notice 1000 1000 1000 Velome type: Years: Days: Woldwith theteristicn (NWR0 triggered) 0 1 Activing Safe files 1 Safe files Est File extension: 1
Parts File format: Ind Same Abot	The format:	Internet: Internet: Internet: Same Abot

- (i) A safe-file contains information describing the status of a file which was copied to the network share or mount point of the Silent Cubes Head Unit.
- A ".safe-file" is a virtual file that has the same path as the "real" file, with a file extension appended. The default extension is '.safe', but can be changed on a per-volume basis using the "Safe Files" tab under "Management".
- To use the Safe File function, the Safe files checkbox must be activated.
- It should be clarified with the software provider whether the Safe File function is really needed, as the Safe Files can lead to problems with some providers who do not use them.
- The safe files can be created invisibly in the file system. If you activate the List box, they are also displayed in the file system.
- In the next fields you can select the desired extension of the file, e.g. .safe, and whether the file is output in text or xml format.

Step 21 — Safe Files

_	
	In "txt"-format a ".safe-file" can look like:
	hash=4216475b55472f890aff212079ffa303b6f1cfb33e5fa5802882aa37968f78a4 lookupkey=64c26d29cf7ffce5333957539d8bbb04c7d2a556dad5ed967f3eb6dfea6 size=17210 stored=1 safe=1 ciphercode=0 compressioncode=12289 online=1 ingest_epoche=1250155996 ingest_iso8601=2009-08-13T11:33:16+0200 creation_epoche=1250095987 creation_iso8601=2009-08-12T18:53:07+0200

(i) The safe file contains, among other things, the SHA512 hash of the archived file, the file size and some other data relevant for archiving.

Step 22 — Miscellaneous

10,00 GB 7 Bytes 10,00 GB 0% 1 0 0 RWIRO by	10.00 GB 7 Bytes 10.00 GB 0% 1 0 0 RWIRO try	10,00 GB 7 Bytos 10,00 GB 0% 1 0 0 RWIRD brs
Create a new volume 1 x D by	Create a new volume x 2 yr yr	Create a new volume x D brs
Veter Qeata (198): Autoestend (1980): Threadout (1981): Nome: Qeata (1981): Autoestend (1980): Threadout (1981): Veter 1000 100 Days: Voter Ware: Days: Days: Voter 0 1 Days: Prioritize ingents 1 Days: Image: Autoestender Hist, Image: Days: Days: Image: Image: Hist,	Create any working the second (MB): threshold (MB): Working type: Working type: Working Sin file: Macataneous Make, Prioritize ingets @ George optimization @ Quertum Seched optimizations @ Quertum Seched optimizations @ Quertum Seched optimizations @ Quertum Seched optimizations @ George optimizations @ G	Cella a sere volimità de la

- Prioritize ingests Here you can set the archiving prioritization for the volume high. This volume will then be archived before the other volumes. This can only be done for 1 volume of the system !
- Robocopy changes the file date during the copy process to 01.01.1980. If the copy process of the file is finished Robocopy changes the date back to the original date. If this function is activated, no files with the date 01.01.1980 are archived, since we assume then from a copy error of Robocopy.
- Quantum StorNext optimizations Special connection adjustment for archiving with Quantum StorNext.

Step 23 — Miscellaneous

	Quota [MB]: Autoextend [MB]:	Threshold [%]:	D triç iate, Name:	Quota [MB]: Autoextend [MB]: Three	shold [%]:
	10000 1000	100	ate,	10000 1000 100	
Volume type:	Years: Days:		0 trig Volume type:	Years: Days:	
WORM with retention	▼ 0 \$\$ 1 \$\$		WORM with retention	▼ 0 ↓ 1 ↓	
Archiving Safe files Miscellaneous			Archiving Safe files Miscellaneous		
			iate,		
Prioritize ingests			Prioritize ingests		
Robocopy optimizations			Robocopy optimizations		
Quantum StorNext optimizations			Quantum StorNext optimizations		
Do not archive 0-byte files			Do not archive 0-byte files		
Smart replace			Smart replace		
			×		
			e		
			5		

- Files with a file size of 0 Byte are not archived.
- Smart Replace does not delete the data, but makes them invisible in the file system deleted. The files are renamed to deleted<filename><version number>. This can be used to correct data e.g. in case of an incorrect archiving.

Step 24 — Miscellaneous - additional RWRO Volume Features

Name:	Quota [MB]:	Autoextend [MB]:	Threshold [%]:	O tr diate	Name: Quota [MB]: Autoextend [MB]: Threshold [%
	10000	1000	100	diate	10000 1000 100
Volume type:	Year			O tr	Volume type: Years: Days:
WORM with retention (RWRO triggered)	▼ 0	↓ 1 ↓		diate	WORM with retention (RWRO triggered)
Archiving Safe files Miscellaneous				O tr	Archiving Safe files Miscellaneous
Prioritize ingests				diate diate	Prioritize ingests
Robocopy optimizations				-	Robocopy optimizations
Quantum StorNext optimizations					Quantum StorNext optimizations
Do not archive 0-byte files				18	Do not archive 0-byte files
Prevent renaming of empty directories					Prevent renaming of empty directories
Prevent renaming of files					Prevent renaming of files
				~ ~	
				10 IN	
				4	
Save	Abort			10 10	Save Abort

- Prevent renaming of empty directories
- Prevent renaming of files