

Enterprise Erase Array User's Manual Revision 3.0

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1.0 Product Overview

Enterprise Erase Array is a hardware and software appliance used to eradicate data from hard drives contained in storage arrays or towers. The appliance is designed to communicate to the hard disk drives in a tower via a direct connection with the shelves inside the tower. Each of these shelves typically houses 14 to 16 hard disk drives.

Enterprise Erase Array consists of a 2U server chassis with two cards installed. These cards are either SCSI or fibre channel protocols. The appliance may have two SCSI cards, two fibre channel cards, or one of each. This card type configuration is set at the time of purchase and can only be changed by returning the appliance to Tabernus to be retrofitted.

Each of the two cards housed in the 2U chassis can communicate with two storage shelves at a time. This allows for each card to erase up to 32 drives simultaneously. If the appliance is configured with one type of card (both SCSI or both FC cards), then the appliance can be used to erase four shelves (up to 64 drives) simultaneously.

For more information on Enterprise Erase Array, including a compatibility chart showing all of the storage towers that can be erases using the appliance, please visit www.tabernus.com.

NOTE: Some Enterprise Erase Array appliances contain three cards.

2.0 Items Included in Enterprise Erase Array

Enterprise Erase Array comes with the following:

- 2U chassis with two internal cards (either SCSI or fibre channel)
- Two sets of cables to directly connect appliance to storage shelf
- Power cable (standard wall outlet)
- Product User's Manual

The user of the appliance will need to supply the following:

- Keyboard
- Mouse
- Monitor

3.0 Preparation for Use

3.1 The first step in preparing EE Array for use is to connect the user supplied mouse, monitor, and keyboard. The appliance has ports for both USB and PS2 mice and keyboards.

3.2 Next connect the supplied power cable to the back of the EE Array appliance and to the wall outlet.

3.3 Using one set of the supplied cables, directly connect from the card in the rear of the EE Array appliance to an input/output port on the back of the target storage shelf.

Note: The communication port used to directly connect the appliance to the storage tower shelf can take many forms depending on the design of the storage shelf. If questions arise regarding directly connecting the appliance to a storage shelf, please contact Tabernus support.

3.4 Turn on the EE Array appliance by first depressing the power button on the rear of the appliance. This is followed by depressing the power button on the front of the appliance.

Note: For EE Array to properly see the drives contained in the target storage shelf, power must be supplied to the storage shelf before applying power to the EE Array appliance.

3.5 Once the appliance has been powered on and the Linux software has booted, the main desktop screen will appear on the monitor. Figure 3.1 below shows the main desktop screen.



Figure 3.1 – Main Desktop Screen

3.6 Double click on the desktop icon for Enterprise Erase to launch the application.

3.7 After the software launches, you will see the main user interface (GUI). Figure 3.2 shows this interface.

Applic:	itions Places Syste	em 🥶 🚯		1	1			0 🗾	root Thu Apr 22, 2:00 P
0. Ella Halo	Advanced Licens			Ente	rprise Eras	e Array			
ocation v	Vendor and Model	Serial Number	Asset #	Sec Lvl	Capacity	Speed	Status		
1/0	none	none	none	None		-	-	idle	
1/1	none	none	none	None		-		idle	
1/2	none	none	none	None		-		idle	
1/3	none	none	none	None				idle	
1/4	none	none	none	None		4		idle	
1/5	none	none	none	None				idle	
1/6	none	none	none	None				idle	
1/7	none	none	none	None				idle	
1/8	none	none	none	None		-	4	idle	
1/9	none	none	none	None				idle	
1/10	none	none	none	None		*		idle	
1/11	none	none	none	None		1	+ .	idle	
1/12	none	none	none	None		4		idle	
1/13	none	none	none	None				idle	
1/14	none	none	none	None				idle	
2/0	none	none	none	None		4		idle	
2/1	none	none	none	None				idle	
2/2	none	none	none	None				idle	
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2/8	none	none	none	None				idle	
2/9	none	none	none	None				idle	
2/10	none	none	none	None				idle	
2/11	none	none	none	None		31 C		idle	
2/12	none	none	none	None				idle	
2/13	none	none	none	None		20	4	idle	
2/14	none	none	none	None		*E		idle	
3/0	none	none	none	None				idle	
3/1	none	none	none	None				idle	
i i		-D- Ade	d Asset #	1		1	2	Set Security Level	
Drives	datactard-0 Drives	numino: 0 Avera	one speed 0.0 N	BAL SMART CHA & Test		Artion Line	1665- 2		
	Let.	Detert		SMART TEST			Erase	deta Eind Dr	ive
	Sad +12			HARD DRIVE			HARD DRIVE	aral (Blink U	ED)
		Orive	Info		1 Yew	Logs		🕴 Çancel	
	ot@localhost:~/Des	Enterprise	e Erase Array						

Figure 3.2 – Enterprise Erase Array Main User Interface Screen (GUI)

3.9 To begin the erasure process, first highlight the drive you would like to erase on the list of drives on the user interface screen. Figure 3.3 below shows a highlighted drive as it would appear on the screen.

	Adversed at						Array			
Help ation v	Movanced L	icense Idel Serial Nur	nher Asset#	Sector		Canacibu	Sneed	Status		
nin v	ATA SAMSUNG	HM 12/01 STALLING	Magzan	SPC LY	1.1	Capacity	speed	Scalus	Black Size 512	
1/0	none	none	0000		None				idle	
1/1	none	none	DODE		None		1		idle	
1/2	none	0000	0000		None			1	idle	
1/3	0000	0000	0008		None				idle	
1/4	none	none	none		None		1 1		idle	
1/5	none	none	none		None				idle	
1/6	none	none	none		None				idle	
1/7	none	none	0000		None				idle	
1/8	none	0000	none		None		3		idle	
1/9	none	none	0006		None		2		idle	
1/10	none	none	0000		None		1		idle	
1/11	none	0000	none		None		3		idle	
1/12	0000	0000	0000		None		1		idle	
1/13	none	0000	0000		None				idle	
1/14	none	0000	none		None				idle	
2/ 0	0000	0000	0000		None				idle	
2/1	0000	0000	0000		None		2		idle	
2/2	none	none	none	*	None				idle	
2/3	none	none	none		None		1		idle	
2/ 4	none	none	0000		None		1	1	idle	
2/5	0000	0000	0000		None		1		idle	
2/6	none	none	0000		None				ide	
217	none	none	0000		None		1	1	idle	
2/8	none	none	none		None				idle	
2/9	none	none	none		None		1		idle	
2/10	none	none	0008		None		1		idle	
2/11	0000	0008	0008		None		1		idle	
2/12	none	0008	0000		None		1		idle	
2/13	none	0000	none		None		i i		idle	
2/14	none	none	none		None				idle	
3/ 0	none	none	0008		None		1		idle	
						1	1			
		+	Add Asset #						Set Security Level	
Drives	detected: 1, D	rives running: 0, A	werage speed: 0.0 MB	s, SMART: Ch	k & Test	Act	ive License	s: 2		
	1	Detect HARD DRIVES			DRIVE			HARD DRIVE	Eind D	rive ED 1
			mus Info			Butern	aar		Cascal	
		- D	nve mo			Tiem C	ogs		Cancel	

Figure 3.3 – User Interface Screen with Drives Highlighted

It is possible to start drives in batches by highlighting multiple drives at a time. This is done by selecting multiple drives while simultaneously holding down the shift key on the keyboard.

3.10 To begin the erasure process on the selected drive, press the button at the bottom of the main user interface screen labeled "Erase Hard Drive". Figure 3.4 shows the location of this button.

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000 Y	vendor and Mo	del Senal Numbe	r Asset #	Sec LVI	2	Capacity	speed	status	Mark Cine 53.5	
10	ADA SAMSUNG I	mazoji statijiogaos	700		None	137.0			BROCK SIZE SIZE	
10	none	none	none		None				idle	
12	none	none	none		None		3		idle	
12	none	none	none		None				ide	
14	none	none	none		None				idle	
15	none	0000	0000		None			() 	idle	
16	2008	0000	0008		None				idle	
17	2000	0000	0000		None				idle	
18	none	0000	0000		None				idle	
10	2000	0000	0000		None				idle	
00	none	none	0000		None				idle	
/10	none	none	none		None				ide	
0.2	none	none	none		None				idle	
122	none	none	nune		None				idie idie	
13	none	none	none		None				ide	
10	none	none	none		None			-	ide	
	none	none	none		None		-	1	Nie	
11	none	none	none	*	None				idle	
12	none	none	none		None				ide	
	none	none	none		None				idle	
	none	none	none		None		1		idle	
10	none	none	noise		None		1		ide	
10	none	none	none		None		3		Idle	
	none	none	none		None			1	ide	
10	none	none	none		None			1	idle	
9	none	none	none		None		형		Idle	
10	none	none	none		None				lale	
	none	none	none		None			1	idie	
12	none	none	none		None		1	1	Hale	
13	none	none	none		None			1	Hale	
14	none	none	none		None				idie	
/0	none	none	none		None				idle	
			d Asset #						Set Security Level	
rives	detected: 1, Dr	ives running: 0. Aver	age speed: 0.0 MB/	s. SMART: Ch	k & Test	Ac	ve License	rs: 2		
	6	Detect HARD DRIVES		SMART HARD	TEST	(. íf	HARD DRIVE	Eind Drive (Blink LED)	
							100			

Figure 3.4 – Location of Purge Button on Main User Interface Screen

3.11 After pressing the "Erase Hard Drive" button, a pop-up window will appear that allows you to choose the level of overwrite you would like to execute on the selected drive. Figure 3.5 shows this pop-up window.

NOTE: Choices of overwrite level is a configurable option on many Tabernus products, so the screen displayed on your unit may not exactly match the one shown in Figure 3.5.

🔲 Security Level 🗙
O DOD 5220.22-M-ECE (7 pass)
O DOD 5220.22-M (3 pass)
○ 1 Pass
○ other
×
<mark>⊗ c</mark> ancel 🥔 OK

Figure 3.5 – Security Level Pop-up Window

3.12 When this window appears, select the desired erasure level and press "OK". This will begin the erasure process.

3.13 After the erasure process is started, the status of the process is displayed on the user interface screen. Figure 3.6 shows where the progress can be viewed.

				Enter	prise Erase A	rray			16
Help	Advanced License								
ation ~	Vendor and Model	Serial Number	Asset #	Sec Lvl	Capacity	Speed	Status		
0/0	ATA SAMSUNG HM320JI	516LJ10Q309766	\$16LJ10Q30	1 Pass	137 68	60 MB/5	s 🚺	purging 1 Cmp. Time Lft. 38 mins	
1/0	none	none	none	None			•	idle	
1/1	none	none	none	None			•	idle	
1/2	none	none	none	None			* D	idle	
1/3	none	none	none	None			-	idle	
4/4	none	none	none	None	1 9		-	idle	
1/5	none	none	none	None			-	idle	
16	none	none	none	None			•	idle	
17	none	none	none	None	6		- 6	idle	
18	none	none	none	None		*	- 2	idle	
19	none	none	none	None	1 .		-	idle	
/10	none	none	none	None	1 2		1	idle	
/11	none	none	none	None			-	idle	
12	none	none	none	None			•	idle	
13	none	none	none	None	-		•	idle	
14	none	none	none	None	1.0			idle	
/0	none	none	none	None			•	idle	
/1	none	none	none	None	1 .		•	idle	
12	none	none	none	None			•	idle	
61	none	none	none	None	1 4		• [idle	
/ 4	none	none	none	None			•	idle	
/ 5	none	none	none	None			•	idle	
16	none	none	none	None			- 0	idle	
17	none	none	none	None				idle	
/8	none	none	none	None	1 4		- []	idle	
/9	none	none	none	None			-	idle	
/10	none	none	none	None			• 8	idle	
/11	none	none	none	None	-		-	idle	
12	none	none	none	None	1		•	idle	
/13	none	none	none	None			-	idle	
/14	none	none	none	None			- 0	idle	
0 /	none	none	none	None			- []	idle	
_		-å- Add As	set #				1.0	Set Security Level	
Irives	detected: 1. Drives rur	ning: 1. Average :	speed: 60 MB/s	SMART: Chk & Test	Activ	e Licenses	2		
						E	e Frate	as Find Drive	

Figure 3.6 – User Interface Screen Shows Purge Process Status

3.14 Once the erasure process is complete, the completed drive will be highlighted in green indicating a successful erasure. Figure 3.7 below shows the successful completion of the erasure process. If the drive fails the erasure process, it will display a red bar. Figure 3.7 also shows a drive that has failed the process.

Help	Advanced License									
v nob	Vendor and Model	Serial Number	Asset #	Sec Lvi		Capacity	Speed	Status		
0.10	ATA SAMSUNG HM320	# \$16L[10Q309766	\$16L(10030		1 Pass	137 GB	59 MB	IN LOCAL DESIGN	purge passed	
U O	none	none	none		None			- L	idle	
U/1	none	none	none		None	1.1		• E	idle	
12	none	none	none		None	1.1			idle	
/ 3	none	none	none		None	1.		*	idle	
/4	none	none	none		None			-	idle	
15	none	none	none		None			• []	idle	
16	none	none	none		None	1.1		-	idle	
17	none	none	none		None	1.		-	idle	
/ 0	none	none	none		None	1.1.2		-	idle	
/9	none	none	none		None			• [3	idle	
/10	none	none	none		None	1		-	idle	
/11	none	none	none		None			+ [:	idle	
/12	none	none	none		None			-	idle	
/13	none	none	none		None	1.1		+ []	idle	
/14	none	none	none		None			•	idle	
0.1	none	none	none		None				idle	
								- <u></u>	idle	
12	none	none	none		None	1		÷ []	idle	
/ 3	none	none	none		None	1		- 1	idle	
/4	none	none	none		None			÷	idle	
/ 5	none	none	none		None	1.		- []	idle	
16	none	none	none		None	1.12		• [];	idle	
17	none	none	none		None			- []	idle	
/8	none	none	none		None			• []	idle	
9.1	none	none	none		None	- B		+ [idle	
/10	none	none	none		None			• []	idle	
/11	none	none	none		None				idle	
/12	none	none	none		None			•	idle	
/13	none	none	none		None			•[]	idle	
/14	none	none	none		None			•	idle	
u	ARA WITC VILLOSONS-6	THE WE WERE ADDRESS	THE WAY WARDEN	84 1	1. Heast	100 000	21 140		purge failed, 1 errors	
-		to add Asset			1					
-	detected 2 Detected		-			Active Lines				
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	10 HAS	D DRIVES	9	HARD DRIVE					Bind Drive (Blink LED)	
		(A second								

Figure 3.7 – Successful Completion of Purge Process (Green Bar) Failed Completion of Erasure Process (Red Bar)

4.0 Canceling a Erase during the Erasure Process

4.1 It is possible to stop an erase while it is in process. The first step in canceling an erase is to highlight the drive in the device list on the main user interface. This can be done in the same way as shown in section 3.8.

4.2 Once the drive has been selected, press the button at the bottom of the user interface screen marked "Cancel". Figure 4.1 shows the location of this button.

Applica	bons Places System	U D 🖬	9	20	trauen		<u> </u>	0	- root inu Apr 22.
Helo	Advanced License			Enter	prise Erase Ar	тау			
Tieth	Monday and Model	I Real of Manufacture	Access #	(Foods)	(Constant)	Frank Phylor			
* 1000	vendor and model	Senai Number	ASSEL #	Sec Lui	Capacity	speed Status		and the form Town 1 ft	10 mins
0/0	AIA SAMSUNG HM320	1 210Cl100203/00	516010030	1 Pass	137 68	GU MB/S	purgi	ng 1% Cmp. Time Dt.	38 mins
1/0	none	none	none	None	1 1			iule Life	
1/1	none	none	none	None	1	-		idie	
1/2	none	none	none	None				idie	
1/ 3	none	none	none	None	-	-		icie	
1/4	none	none	none	None				idie	
1/ 5	none	none	none	None				idie	
1/6	none	none	none	None		-		idie	
1/7	none	none	none	None				idle	
1/8	none	none	none	None	1 1	h -		idle	
1/9	none	none	none	None	-	-		idle	
1/10	none	none	none	None	1			idle	
1/11	none	none	none	None	1 3			idle	
1/12	none	none	none	None				idle	
1/13	none	none	none	None				idle	
1/14	none	none	none	None				idle	
2/0	none	none	none	None				idle	
2/1	none	none	none	None				idle	
2/2	none	none	none	None		•		idle	
2/3	none	none	none	None		•		idle	
2/4	none	none	none	None		•		idle	
2/5	none	none	none	None	-	*		idle	
2/6	none	none	none	None				idle	
2/7	none	none	none	None	-	-		idle	
2/8	none	none	none	None				idle	
2/9	none	none	none	None		-		idle	
2/10	none	none	none	None				idle	
2/11	none	none	none	None	-			idle	
2/12	none	none	none	None	16 H			idle	
2/13	none	none	none	None	-	-		idle	
2/14	none	none	none	None	14	14		idle	
3/0	none	none	none	None		-		idle	
2		+ Add As	set #	1		1	96 s	et Security Level	
Drives	detected: 1. Drives ru	nning: 1. Average	speed: 60 MB/s	SMART: Chk & Test	Active	Licenses: 2			
	C	tect		SMART TEST		Eras	IC NOVE	49,5	nd Drive
		Drive Info			View Log	5		Cancel	

Figure 4.1 – Location of the Cancel Button on the Main User Interface Screen

4.3 When the erasure process is cancelled, the device will appear with a yellow bar in the device list showing that the erasure process has been stopped.

5.0 Using the Sector Viewer

Using the sector viewer allows the user the opportunity to view data contained on sectors of any of the drives that can be seen by the Enterprise Erase Array appliance.

5.1 To view the sectors on a particular drive, highlight the drive you would like to view on the device list. This is done in the same way as is shown in section 3.8 of this document.

5.2 After highlighting a drive, right click on the selected drive and a "Sector Viewer" dialog box will be displayed. Click on this dialog box and the Sector Viewer windows will appear. The sector viewer is shown in Figure 5.1 below.

										9	iec	tor '	Viev	ver		
/iewing s	sect	tors														
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	Selected devices:
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	Model: Kingston DataTraveler 2.0
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	SN: /dev/sda
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	Size: (1.0 GB)
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	5420, (215 62)
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	First Sector
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	Middle Sector
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	○ Last Sector
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	Sector: 0
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	Radix: Hexadecimal 🗘
		\$	Q	uit					-						4	▶ <u>N</u> ext

Figure 5.1 – Sector Viewer Screen

5.3 Use the "Next" or "Back" button to go to the next sector. You can also enter the sector number in the "Sector" input window. The sectors can also be viewed using the scroll bar on the right hand side of the pop-up window. Figure 5.2 shows the location of these buttons.



Figure 5.2 - Location of Next and Done Buttons on Sector Viewer Screen

5.4 To change the output display from Hexadecimal to ASCII click on the "Radix" pull down menu. Figure 5.3 shows the location of this pull down menu.



Figure 5.3 – Location of the Hexadecimal Pull-Down Menu

6.0 Viewing Erasure Logs and Creating Erasure Reports

Enterprise Erase Array creates two versions of purge logs detailing each purge that is conducted with the appliance. These two versions contain the same information, but are formatted differently. One version is a .csv file, the other a .txt file. Both are delineated in a way to allow for easy importing into spreadsheet programs.

6.1 To view the purge logs generated by the application click on the "View Logs" button at the bottom of the main user interface screen. The location of this button is shown in Figure 6.1 below.

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ie Beih	Buvanced Deense	Covid Burnhas	Access 4	Feelul	Constitu	Friend	Dates
cauon y	vendor and Model	Stell Incorporate	Asset #	Sec LVI	capacity	speed.	Status
0/0	ALA SAMSUNG HM320JI	21001100303700	210010030	1 Pass	137 08	23 MD/2	purging 27% cmp. Time UC 28 mins
1/0	none	none	none	None			idie in the second s
1/1	none	none	none	None			idle
42	none	none	none	None			Idle
4/3	none	none	none	None			idle (d)
1/4	none	none	none	None			idie Idie
1/3	none	sone	none	None			idle
1/0	none	none	none	None			idie idie
110	none	sone	none	None	1		ide ide
1/8	none	none	none	None			idie
1/9	none	none	none	None			lde Ide
1/10	none	none	none	None			idle idle
1/11	none	none	none	None			idie
1/12	none	none	none	None			idle
1/1.5	none	none	none	None			ide .
1/14	none	none	none	None			idie
210	none	none	none	None			idle
2/1	none	none	none	None			idle
212	none	none	none	None	1 1		lone
213	none	none	none	None			idle
2/4	none	none	none	None			idle
21.5	none	none	none	None			idie
27.0	none	none	none	None			kate
201	none	none	none	None			idie
2/8	none	none	none	None			idle
2/9	none	none	none	None		1	idle
2/10	none	none	none	None		-	idle
2/11	none	none	none	None			Idle
2/12	none	none	none	None			łdie
2/13	none	none	none	None			idle
2/14	none	none	none	None			idle
3/ 0	VIV MOC MDROOID-90M	5 WD-WMAR9AM26344	WD-WMAM9AM	1 Pass	80.08	27 Mb/s	purging 1% Cmp. Time Ut: 50 mins
		🕂 Add Asset #					Set Security Level
Drives	detected: 2. Drives run	ning: 2. Average speed	43 MB/s. SMAR	7: Chk & Test	Active Licen	ses: 2	
	C Det	ect DRIVES	8 S	MART TEST ARD DRIVE		HAP	Brase Bind Drive Ro DRIVE Blink LED)
	-		1				
		Orive info			View Logs	1	Sancel

Figure 6.1 – Location of View Logs Button on Main User Interface Screen

6.2 After this button is pushed, a window will appear on the screen showing the Disk Purge USB log directory. Figure 6.2 below shows this window.



Figure 6.2 – Enterprise Erase Array Log File Directory Window

6.3 The file name generated for the log for the Enterprise Erase Array application will have the prefix "usb_" followed by the date the log file was created.

Example: usb_20090601.txt

7.0 Adding Additional Licenses to Enterprise Erase Array

Adding additional licenses to Enterprise Erase Array is accomplished via email transaction between the client and the support department at Tabernus.

7.1 The first step in requesting additional licenses is to select the "Licenses" tab on the pull down menu at the top of the GUI. Figure 7.1 shows the location of this pull down menu.

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d.				Enterpr	ise Erase A	rray	
<u>F</u> ile <u>H</u> elp	<u>A</u> dvanced License)					
Location \backsim	Vendor and Model	Serial Number	Asset #	Sec Lvl	Capacity	Speed	Status
0/ 0	ATA SAMSUNG HM320JI	S16LJ10Q309766			137 GB		
1/0	none	none	none	None	-	-	
1/1	none	none	none	None	-	-	
1/2	none	none	none	None	-	-	
1/3	none	none	none	None	-	-	
1/4	none	none	none	None	-	-	
1/5	none	none	none	None	-	-	

Figure 7.1 – License Pull Down Menu

7.2 Choose the "request additional licenses" from the pull down menu.

7.3 Minimize the Enterprise Erase Array software to get back to the main desktop screen.

7.4 A file will now appear on the main desktop screen. Using a USB drive, copy this file from the desktop and email to the Tabernus support team.

7.5 The Tabernus support team will then supply the client with a return file. This file then needs to be installed onto the desktop using a USB device.

7.6 Once the return file is installed, choose the "install licenses" option from the "licenses" pull down menu. A script will then be executed by the software that will find this file and grant the new licenses.

8.0 Product Support

Tabernus has a support staff that will help you with any issues found on Enterprise Erase Array or any other Tabernus products. The support team can be reached in the following ways:

Via Phone at 1-888-700-8560 Via email at support@tabernus.com

Addendum to Manual – Example of Direct Connection on HP EVA 5000 Tower

The following is an example of the two direct connection strategies that can be employed by the operator when using Enterprise Erase Array. The example is shown using an HP EVA 5000 SAN. While the designs of SANS vary widely, this basic approach can be used on any SAN that is compatible with the Enterprise Erase Array appliance.

Connecting Enterprise Erase Array to Towers – Two Strategies

There are two methods that can be used when connecting the Enterprise Erase Array appliance to an EVA tower. These to methods are:

- Directly connect through the tower switch
- Directly connecting to the individual shelves within the tower

Both of these methods are detailed below.

Directly Connecting to Tower Switch

The first method that should be attempted is to directly connect the Enterprise Erase Array appliance to the tower switch. This may allow the appliance to see all of the hard drives contained in the tower. (Please note that this may not work with all towers. Some are configured in a way not to allow external communication to all of the drives contained). If all of the drives in the tower can be seen by the appliance, they can all be erased simultaneously.

The photos below show this connection on an EVA5000 series tower. All towers will be slightly different, but a connection point similar should be available.



View of Optical Connection to Tower Switches from Back of EVA5000

In the above photo, one direct connection is made to the switch that controls the upper half of the tower (orange optical cable) and one is made to the switch that controls the lower half of the tower (blue optical cable). These cables then run into the card on the rear of the Enterprise Erase Array appliance, allowing the software communication access to the hard drives contained in the tower.

Directly Connecting to the Individual Shelves

There will be times when connecting through the system switch may not be possible, of the tower may not be configured to allow access to the drives through the switch. If this is the case, then the Enterprise Erase Array appliance can be connected directly to the system shelves.

An example connection of optical cables running to the communication ports on the system shelves is shown in the figure shown below. The Enterprise Erase Array appliance can be attached to six shelves simultaneously using six independent cables.



Shelf Locations for Direct Connection

In the example connection point shown above, the current cable (#29) would be removed and the cable running from the Enterprise Erase Array appliance would be inserted in its place. This would allow communication between the appliance and the drives contained in this shelf. This process can then be repeated for four to six shelves (depending on configuration of the appliance).