

				Actual compression ratio of the stored data from Comprestimator (n:1)															
Flash Module Type	Total Usable (physical) per module (TiB)	Total Usable (physical) capacity of the array (TiB)		1		1.2		1.4		1.6		1.8		2		2.2			
				100%	85%	100%	85%	100%	85%	100%	85%	100%	85%	100%	85%	100%	85%		
Small	3.29	32.8	Effective Capacity:	32.8	27.88	39.3	33	45.9	39	52.4	44.5	59	50	65.6	56	72.2	61		
Medium	7.77	77.8		77.8	66.13	93.3	79	108.8	109	124.4	106	139.9	119	155.5	132	171	145		
Large	16.37	163.7		163.7	139.14	194.4	165	199.9	170	199.9	170	199.9	170	199.9	170	199.9	170		
Extra Large	16.37	163.7		163.7	139.14	194.4	165	229	195	261.9	223	294.6	250	327.4	278	360.1	306		

Figure 10-1 Usable capacity to maximum effective capacity per compression ratio

			Actual compression ratio of the stored data from Comprestimator (n:1)															
Flash Module Type	Total Usable (physical) per module (TiB)	Total Usable (physical) capacity of the array (TiB)		2.4		2.6		2.8		3		3.2		3.4		3.6		
				100%	85%	100%	85%	100%	85%	100%	85%	100%	85%	100%	85%	100%	85%	
Small	3.29	32.8	Effective Capacity:	78.7	66.9	85.3	73	91.9	78	98.4	83.6	99.9	84.9	99.9	85	99.9	85	
Medium	7.77	77.8		186.6	158.6	199.9	170	199.9	170	199.9	170	199.9	170	199.9	170	199.9	170	
Large	16.37	163.7		199.9	170	199.9	170	199.9	170	199.9	170	199.9	170	199.9	170	199.9	170	
Extra Large	16.37	163.7		392.9	334	399.9	340	399.9	340	399.9	340	399.9	340	399.9	340	399.9	340	

Figure 10-2 usable capacity to maximum effective capacity per compression ratio

The yellow marked area in Figure 10-2 reflects the theoretical *maximum effective capacity*. The bold cell line shows when the maximum effective capacity is reached, regardless of compression ratio. See the best practices document linked here, which will have the most current information:

<https://www.ibm.com/support/docview.wss?uid=ibm10735459>

Example 1:

- Installed is AE3 with 12 Extra Large Flash Modules.
- Comprestimator was not used and it is not known if data is compressible

Looking at Figure 10-1 max effective capacity for 1:1 at 85% is 139.1 TiB. This should be the total of provisioned capacity configured on this system. When data is stored, you can check the actual compression ratio.

Example 2 for a different configuration:

- Installed is AE3 with 8 Medium Flash Modules.(which after RAID give 6 modules worth of usable capacity).
- Actual compression ratio is 1.8:1.

The following effective capacity calculation is made:

usable (physical) capacity (6 x 7.7 TB) x compression ratio 1.8 = 83.16 TiB.

Following the recommendation to not exceed 85% = 70.63 TiB.