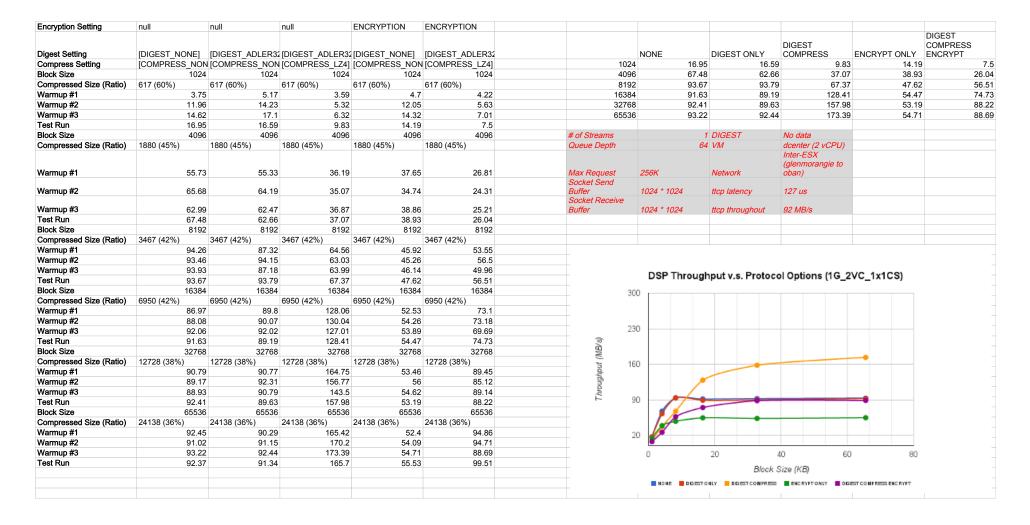
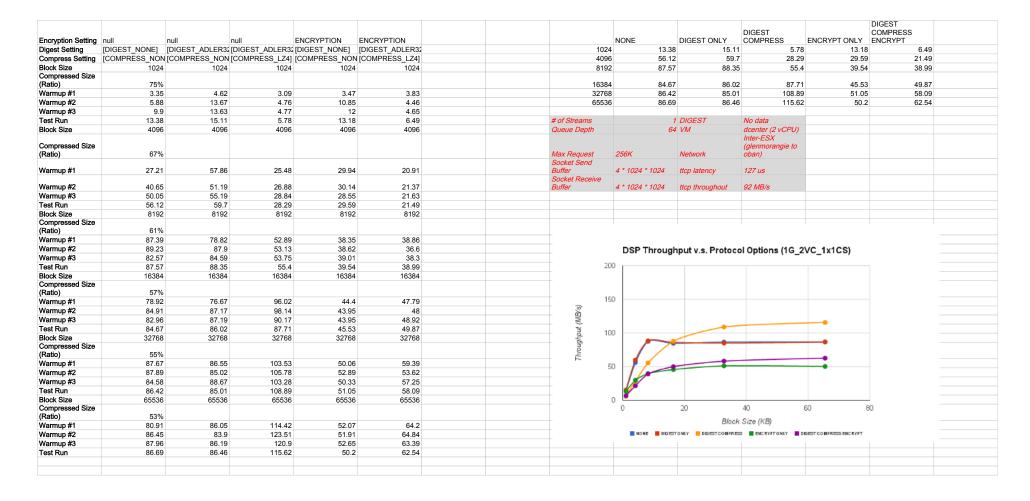
# DSP Throughput - LO\_2VC\_1x1CS\_BG

Encryption Setting	null	null	null	ENCRYPTION	ENCRYPTION						
Discot Setting	IDIOECT NONE	IDIOECT ADJECT	IDIOEST ADJEDS	IDICECT NOVE	IDIOEST ADJEDS		NONE	DIGEST ONLY	DIGEST COMPRESS	ENCRYPT ONLY	DIGEST COMPRESS
Digest Setting					[DIGEST_ADLER32	100					
Compress Setting					[COMPRESS_LZ4]	1024					
Block Size	1024	1024		1024	-	4096					
Compressed Size (Ratio)	617 (60%)	617 (60%)		617 (60%)	617 (60%)	8192					
Warmup #1	5.47	6.01		4.91		16384					
Warmup #2	5.99	9.76		11.36		32768					
Warmup #3	14.8	15.6		11.02		65536	295.14	281.3	159.46	57.17	94.02
Test Run	15.53	15.55		11.6							
Block Size	4096	4096		4096		# of Streams		DIGEST	No data		
Compressed Size (Ratio)	, ,	1880 (45%)	1880 (45%)	1880 (45%)	1880 (45%)	Queue Depth		<sup>1</sup> VM	dcenter (2 vCPU) Intra-ESX		
Warmup #1	57.1	57.95		32.06		Max Request Socket Send	256K	Network	(glenmorangie)		
Warmup #2	54.63	51.79		31		Buffer Socket Receive	1024 * 1024	ttcp latency ttcp throughout	110 us	_	
Warmup #3	55.94	54.66		32.37		Buffer	1024 * 1024	(64KB) *	260-470 MB/s		
Test Run	59.33	58.67	27.55	32.27							
Block Size	8192	8192	8192	8192	8192						
Compressed Size (Ratio)	3467 (42%)	3467 (42%)	3467 (42%)	3467 (42%)	3467 (42%)					1	
Warmup #1	93.65	108.01	48.62	41.82	44.28						
Warmup #2	99.9	106.37	51.1	42.89	44.79						
Warmup #3	102.35	96.43	49.34	43.12	2 43.1		DSP Through	put v.s. Protoco	ol Options (LO_2	VC_1x1CS)	
Test Run	110	107.49		44.36		20	10				
Block Size	16384	16384		16384		30	10				
Compressed Size (Ratio)	6950 (42%)	6950 (42%)	6950 (42%)	6950 (42%)	6950 (42%)					_	
Warmup #1	160.47	160.95		50.9							
Warmup #2	165.44	159.8		51.2		22	ve l				
Warmup #3	163.96	153.93		50.72			.5				
Test Run	175.04	168.88		51.7		Throughput (MB/s)					
Block Size	32768	32768		32768							
Compressed Size (Ratio)	12728 (38%)	12728 (38%)	12728 (38%)	12728 (38%)	12728 (38%)	ja 15	0			•	
Warmup #1	184.11	214.55		49.5		die	~   _ /				
Warmup #2	224.42	223.03		54.9		iño					
Warmup #3	218.72	228.82		54.07		- A					
Test Run	235.4			54.38			75			-	
Block Size		214.38								-	
	65536	65536		65536							
Compressed Size (Ratio)	24138 (36%)	24138 (36%)	24138 (36%)	24138 (36%)	24138 (36%)						
Warmup #1	280.21	231.47		57.2			0				
Warmup #2	289.98	295.23		56.99			0	20	40 6	0 80	
Warmup #3	295.14	281.3		57.17				D//-	Dina (VD)		
Test Run	282.73	276.18	166.35	56.38	94.86		NONE DIGEST	DIOCK :	Size (KB)	EST COMPRESS EN CHYPT	
						* intra-esx ttcp					
						throughput varies wildly whereas dsp throughput doesn't exhibit the same problem. does that indicate potential networking problems such as occasional packet drops? needs to investigate further.					

## DSP Throughput - 1G\_2VC\_1x1CS\_BG



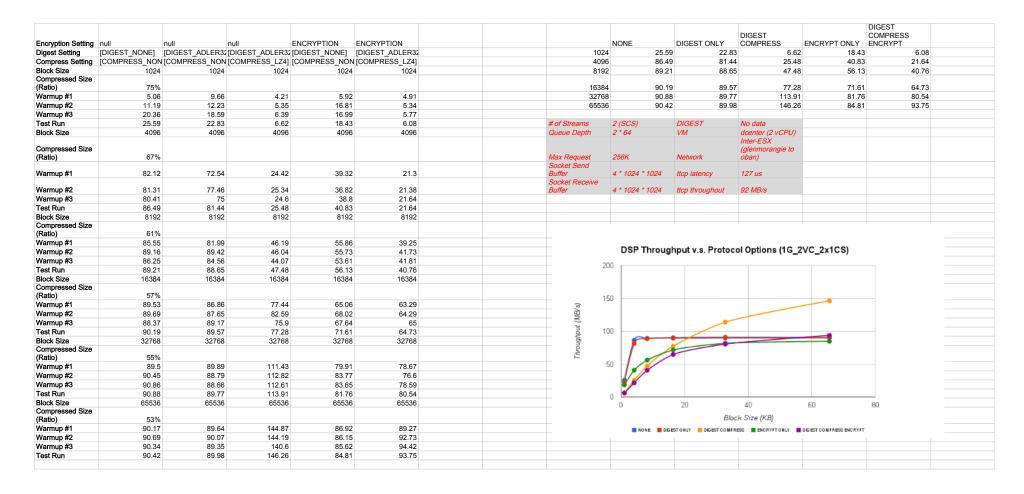
## DSP Throughput - 1G\_2VC\_1x1CS



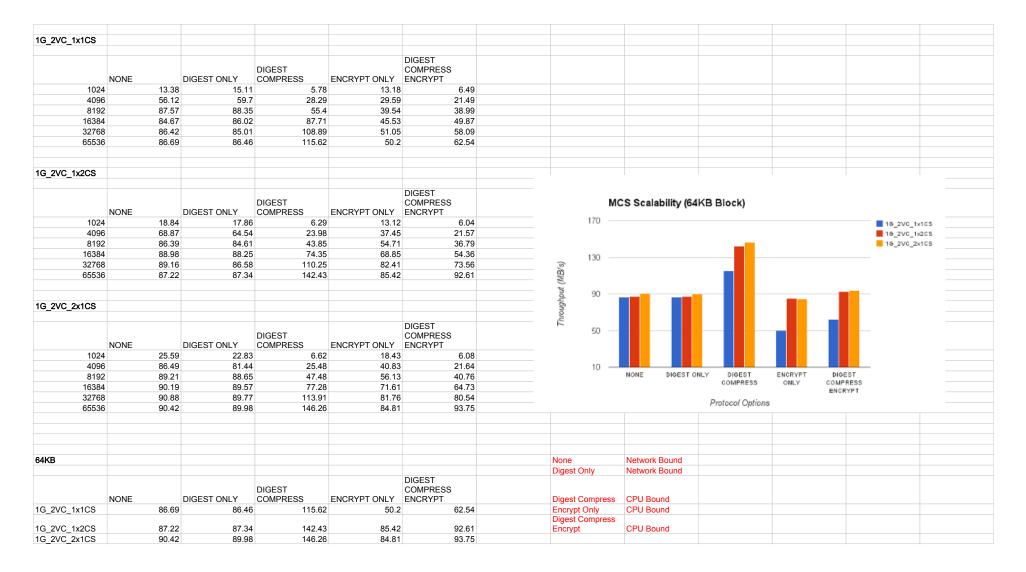
# DSP Throughput - 1G\_2VC\_1x2CS

											DIGEST
									DIGEST		COMPRESS
Encryption Setting	null	null	null	ENCRYPTION	ENCRYPTION		NONE	DIGEST ONLY	COMPRESS	ENCRYPT ONLY	
Digest Setting		[DIGEST ADLER32	[DIGEST ADLER3	[DIGEST NONE]	[DIGEST ADLER32	102	4 18.84	17.86	6.29		
Compress Setting	[COMPRESS NON					409	6 68.87	64.54	23.98	37.45	21.57
Block Size	1024					819	2 86.39	84.61	43.85	54.71	36.79
Compressed Size (Ratio)	75%					1638			74.35	68.85	54.36
Warmup #1	5.35		3.91	5.62	4.6	3276					73.56
Warmup #2	13.51					6553					
Warmup #3	15.58					0000	01.22	07.04	142.40	00.42	02.01
Test Run	18.84					# of Streams	2 (MCS)	DIGEST	No data		
Block Size	4096					Queue Depth	2 * 64	VM	dcenter (2 vCPU)		
DIOUR CIEC	4000	4000	4000	4000	4000	Queue Beput	2 04	V 101	Inter-ESX		
Compressed Size (Ratio)	67%					Max Request	256K	Network	(glenmorangie to oban)		
\A/a	C4.75	50.55	22.00	20.40	20.00	Socket Send	4 * 4004 * 4004	tten letener.	407		
Warmup #1	64.75	58.55	23.26	39.46	20.88	Buffer Socket Receive	4 * 1024 * 1024	ttcp latency	127 us		
Warmup #2	66.13	59.52	23.08	38.74	21.2	Buffer	4 * 1024 * 1024	ttcp throughout	92 MB/s		
Warmup #3	66.13					Buner	4 1024 1024	ttop unougnout	OZ IVIDIO		
Test Run	68.87										
Block Size	8192										
Compressed Size (Ratio)	61%		0102	0102	0102						
Warmup #1	63.06		42.72	50.4	37.38		DSP Through	out v.s. Protocol	Ontione (1G 2V	C 1v2CS)	
Warmup #2	86.7		43.13	52.91	34.89		Dor Hillough	Jul V.S. FTOLOCOI	options (16_24	C_1,2CO)	
Warmup #3	82.12					200	)				
Test Run	86.39		43.85								
Block Size	16384		16384								
Compressed Size (Ratio)	57%					150	)				
Warmup #1	86.64		73.74	64.03	54.24	80				·	
Warmup #2	87.65					W.					
Warmup #3	87.87					Throughput (MB/s)	,				
Test Run	88.98					de la					
Block Size	32768					SANO.				•	
Compressed Size						74					
(Ratio)	55%					50					
(Ratio)	55% 87.66		110.15	78.03	73.55	50					
(Ratio) Warmup #1		87.13				50					
(Ratio) Warmup #1 Warmup #2	87.66	87.13 88.03	105.94	80.69	74.58						
(Ratio) Warmup #1 Warmup #2 Warmup #3	87.66 88.65	87.13 88.03 87.04	105.94 106.11	80.69 80.18	74.58 71.93	5(		0 40	60	80	
(Ratio) Warmup #1 Warmup #2 Warmup #3 Test Run	87.66 88.65 88.16	87.13 88.03 87.04 66.58	105.94 106.11 110.25	80.69 80.18 82.41	74.58 71.93 73.56				60	80	
(Ratio) Warmup #1 Warmup #2 Warmup #3 Test Run Block Size Compressed Size	87.66 88.65 88.16 89.16	87.13 88.03 87.04 86.58 65536	105.94 106.11 110.25	80.69 80.18 82.41	74.58 71.93 73.56		0 2	0 40 Block Size	(KB)	80	
(Ratio) Warmup #1 Warmup #2 Warmup #3 Test Run Block Size Compressed Size (Ratio)	87.66 88.65 88.16 89.16 65536	87.13 88.03 87.04 86.58 65536	105.94 106.11 110.25 65536	80.69 80.18 82.41 65536	74.58 71.93 73.56 65536		0 2	Block Size	(KB)		
(Ratio) Warmup #1 Warmup #2 Warmup #3 Test Run Block Size Compressed Size (Ratio) Warmup #1	87.66 88.65 88.16 89.16 65536 53% 87.76	87.13 88.03 87.04 86.58 65536	105.94 106.11 110.25 65536	80.69 80.18 82.41 65536	74.58 71.93 73.56 65536		0 2	Block Size	(KB)		
(Ratio) Warmup #1 Warmup #2 Warmup #3 Test Run Block Size	87.66 88.65 88.16 89.16 65536	87.13 88.03 87.04 86.58 65536 87.63 87.53	105.94 106.11 110.25 65536 142.61	80.69 80.18 82.41 65536 82.77 87.29	74.58 71.93 73.56 65536 96.31 93.45		0 2	Block Size	(KB)		

## DSP Throughput - 1G\_2VC\_2x1CS



## DSP Throughput - 1G\_2VC\_Scalability



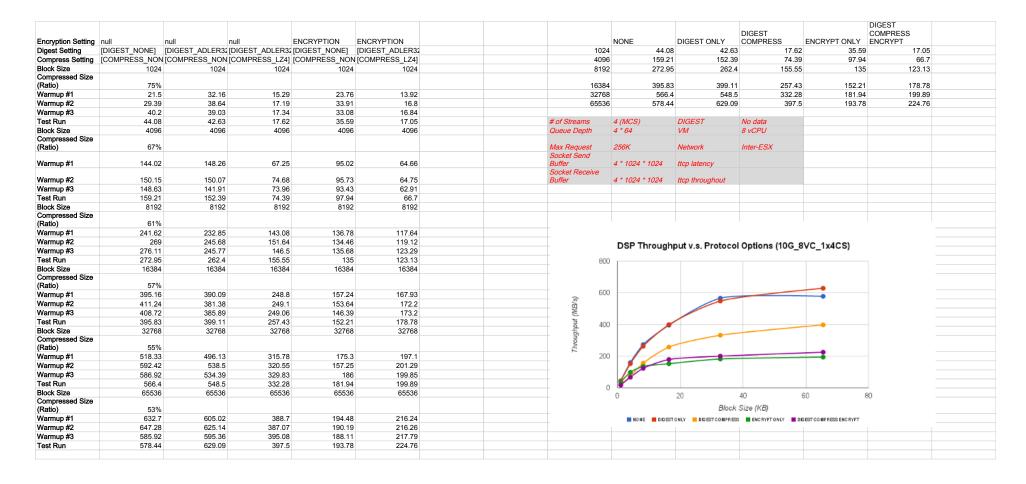
# DSP Throughput - 10G\_8VC\_1x1CS

Encryption Setting	null	null	null	ENCRYPTION	ENCRYPTION		NONE	DIGEST ONLY	DIGEST COMPRESS	ENCRYPT ONLY	DIGEST COMPRESS ENCRYPT
Digest Setting		IDIGEST ADLERS:	IDIGEST ADLERS:	IDIGEST NONEL	[DIGEST ADLER32	1024	39.7	53.92	16.47	27.86	13.89
	[COMPRESS NON					4096					
Block Size	1024			1024		8192					
Compressed Size					.,						
(Ratio)	75%					16384	330.29	338.83	96.71	56.26	48.81
Warmup #1	9.02	22.36	5.32	6.55	4.81	32768	352.77	298.47	101.31	59.33	54.65
Warmup #2	14.56	20.15	8.59	17.76	8.09	65536	287.89	281.28	117.82	59.01	60.36
Warmup #3	16.76	37.49	13.65	26.81	13.23						
Test Run	39.7	53.92	16.47	27.86	13.89	# of Streams	1	DIGEST	No data		
Block Size	4096	4096	4096	4096	4096	Queue Depth	64	<sup>‡</sup> VM	8 vCPU		
Compressed Size											
(Ratio)	67%					Max Request	256K	Network	Inter-ESX		
Warmup #1	142.18	137.88	52.6	46.69	30.62	Socket Send Buffer	4 * 1024 * 1024	ttcp latency			
Warmup #2	103.19					Socket Receive Buffer	4 * 1024 * 1024	ttcp throughout			
Warmup #3	216.7										
Test Run	183.19	189.39		45.05							
Block Size	8192	8192	8192	8192	8192						
Compressed Size (Ratio)	61%										
Warmup #1	168.65	248.91	64.31	46.91	40.56						
Warmup #2	251.84	244.11	71.58	50.35	39.67		DSP Throughp	out v.s. Protocol	Options (10G_8)	VC_1x1CS)	
Warmup #3	260.56	244.4	71.6	46.44	41.95	400					
Test Run	303.95	294.81	73.75	50.59	40.63	400					
Block Size	16384	16384	16384	16384	16384						
Compressed Size (Ratio)	57%					300					
Warmup #1	272.35	282.16	96.07	55.66	47.09	8					
Warmup #2	318.68					WB	/				
Warmup #3	283.75	294.57	95.72	56.12	48.02	, and	/				
Test Run	330.29			56.26		- 200 - 200	•				
Block Size	32768	32768	32768	32768	32768	Since					
Compressed Size (Ratio)	55%					Throughput (MB/s)				-	
Warmup #1	345.53	299.2	105.71	59.13	56.5					_	
Warmup #2	318.57			58.99						•	
Warmup #3	315.26			57.68	54.11	0					
Test Run	352.77			59.33			0	20	40 6	0 8	n
Block Size	65536										
Compressed Size (Ratio)	53%						NONE DIGESTO		Size (KB) ■ encryptonly ■ dis	BST COMPRESS ENCRYPT	
Warmup #1	313.48		114.54	57.17	60.84						
Warmup #2	268.3										
Warmup #3	275.39										
Test Run	287.89										

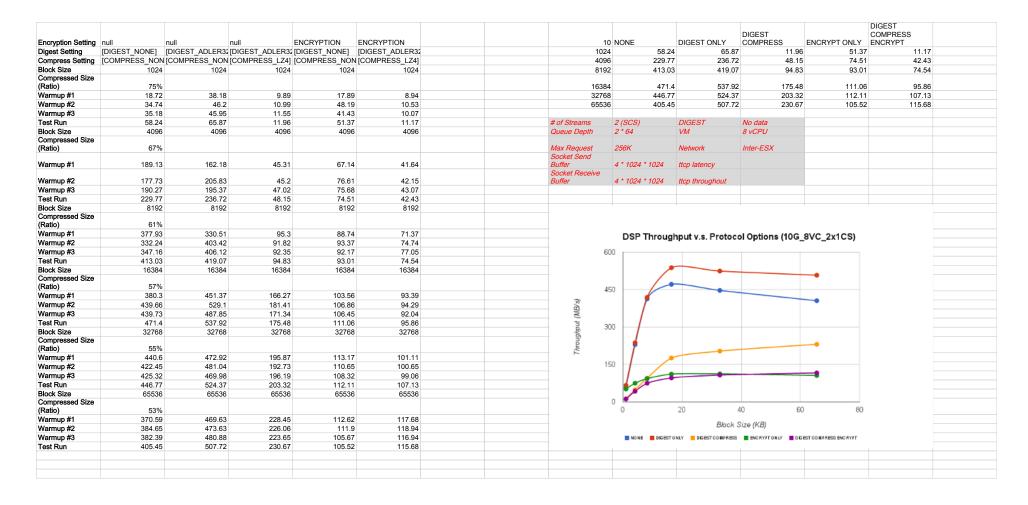
# DSP Throughput - 10G\_8VC\_1x2CS

Encryption Setting	null	null	null	ENCRYPTION	ENCRYPTION		NONE	DIGEST ONLY	DIGEST COMPRESS	ENCRYPT ONLY	DIGEST COMPRESS ENCRYPT
Digest Setting				IDIGEST NONEI	[DIGEST ADLER3	102	4 34.85				
Compress Setting	COMPRESS NON					409					
Block Size	1024					819			91.24	95.36	
Compressed Size					.,						
(Ratio)	75%					1638	4 413.34	407.45	174.49	110.63	94.07
Warmup #1	15.99	27.43	9.46	15.23	8.53	3276	8 510.62	444.53	202.2	112.23	106.97
Warmup #2	25.2	28.38	10.44	27.62	9.98	6553	6 478.57	470.83	221.86	111.25	117.24
Warmup #3	24.68	30.17	10.33	29.14	9.85						
Test Run	34.85	35.17			10.75	# of Streams	2 (MCS)	DIGEST	No data		
Block Size	4096	4096	4096	4096	4096	Queue Depth	2 * 64	VM	8 vCPU		
Compressed Size					.,,,,	400000000000000000000000000000000000000					
(Ratio)	67%					Max Request	256K	Network	Inter-ESX		
						Socket Send					
Warmup #1	126.03	108.76	42.09	64.38	39.54	Buffer	4 * 1024 * 1024	ttcp latency			
						Socket Receive					
Warmup #2	114.81					Buffer	4 * 1024 * 1024	ttcp throughout			
Warmup #3	127.73	121.92									
Test Run	136.58				40.77						
Block Size	8192	8192	8192	8192	8192						
Compressed Size (Ratio)	61%										
Warmup #1	238.9	253.96	89.6	90.58	70.23						
Warmup #2	236.49	230.56	90.15	90.19	72.98		DCD Through	put v.s. Protoco	LOntions (10C	N/C 1v2CS\	
Warmup #3	229.4				71.84		Dar Iniougi	iput v.s. Frotocc	opuons (10G_	3VC_1X2C3)	
Test Run	265.24					60	00				
Block Size	16384										
Compressed Size (Ratio)										_	
Warmup #1	341.44		146.78	108.24	94.55	44	50				
Warmup #2	395.53					জ	, j				
Warmup #3	395.32					- G					
Test Run	413.34					) i					
Block Size	32768					<u>5</u> 30	00				
Compressed Size (Ratio)			02700	02100	02100	Throughput (MB/s)	/			-	
Warmup #1	466.09		189.33	114.36	105.35		/ 🥕				
Warmup #2	496.01					15	50			_	
Warmup #3	521.4									_	
Test Run	510.62										
Block Size	65536		65536				n <b>*</b>				
Compressed Size (Ratio)				03330	03330		0		40 60	80	
Warmup #1	459.33			110.22	118.47			Block :	Size (KB)		
Warmup #2	448.15						NONE DIGEST	ONLY DIGEST COMPRESS	ENGRYPTIONLY BOG	EST COMPRESS ENCRYPT	
Warmup #3	468.2					<del></del>					
Test Run	478.57										
1 GOL FAIT	4/8.5/	470.83	221.80	111.23	117.24						

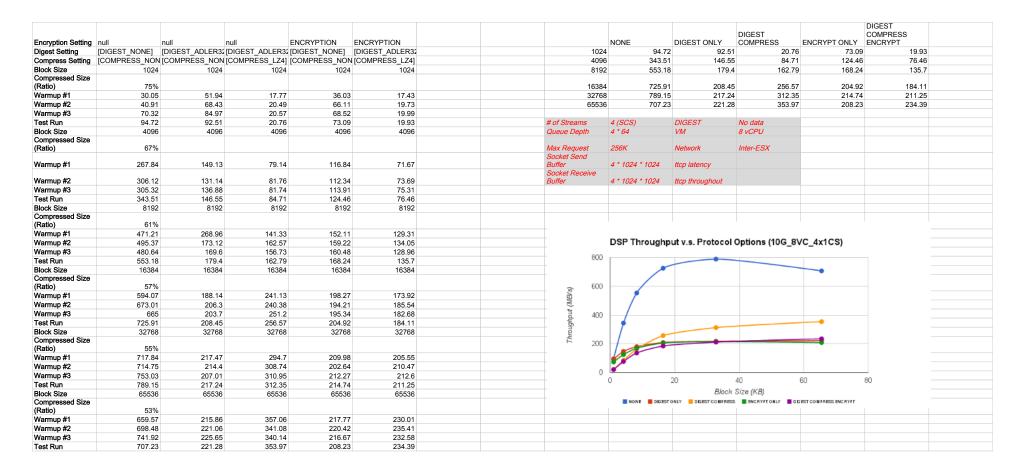
## DSP Throughput - 10G\_8VC\_1x4CS

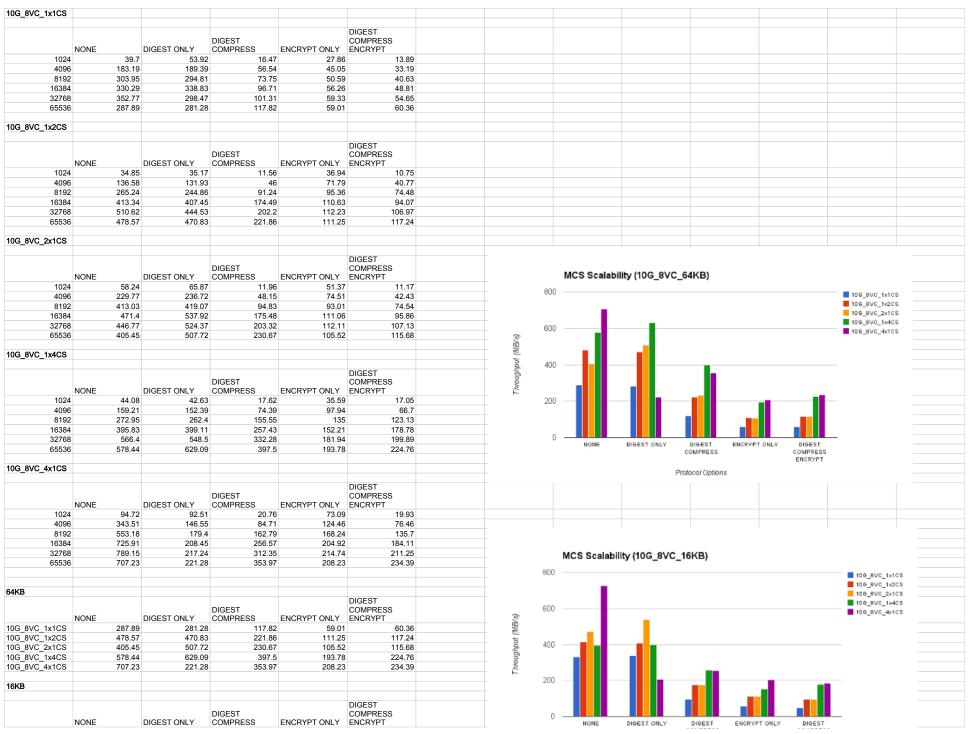


## DSP Throughput - 10G\_8VC\_2x1CS



## DSP Throughput - 10G\_8VC\_4x1CS





# DSP Throughput - 10G\_8VC\_Scalability

10G_8VC_1x1CS	330.29	338.83	96.71	56.26	48.81				
10G_8VC_1x2CS	413.34	407.45	174.49	110.63	94.07				
10G_8VC_2x1CS	471.4	537.92	175.48	111.06	95.86				
0G_8VC_1x4CS	395.83	399.11	257.43	152.21	178.78				
10G_8VC_4x1CS	725.91	208.45	256.57	204.92	184.11				

# DSP Throughput - 40M\_2VC\_Scalability

40M_2VC_1x1CS											
Encryption Setting		null	null	ENCRYPTION	ENCRYPTION						
Digest Setting					[DIGEST_ADLER32						
					[COMPRESS_LZ4]	# of Streams	1 - 8 (MCS)	DIGEST	No data		
Block Size	8192	8192	8192	8192	8192	Queue Depth	1 - 8 * 64	VM	dcenter (2 vCPU) Inter-ESX		
Compressed Size (Ratio)	61%					Max Request	256K	Network	(glenmorangie to oban)		
Warmup #1	5.02	5.11	7.58	4.44	7.39	Socket Send Buffer	4 * 1024 * 1024	ttcp latency			
Warmup #2	4.72	5.24	7.75	4.43	7.26	Socket Receive Buffer	4 * 1024 * 1024	ttcp throughout	40 MB/s (flowadm)		
Warmup #3	5.16	5.18	7.56	4.46	7.32						
Test Run	5.17	5.22	7.64	4.45	7.63						
40M_2VC_1x2CS											
Encryption Setting	null	null	null	ENCRYPTION	ENCRYPTION						
Digest Setting		[DIGEST ADLER3	DIGEST ADLERS	[DIGEST NONE]	[DIGEST ADLER32						
					COMPRESS LZ4	MCS	S Scalability (40)	M_2VC_8KB)			
Block Size	8192										
Compressed Size	0192	0192	0192	0192	0102	40 —		_		40M_2	VC_1x1CS
(Ratio)	61%									40M_2	VC_1x2CS
Warmup #1	9.7		14.3	8.51	7.56						VC_1x4CS
Warmup #2	9.75										VC_1x9CS
Warmup #2 Warmup #3	9.75										
						%					
Test Run	9.97	9.66	14.88	8.71	14.4	W					
40M_2VC_1x4CS						Throughput (MB/s)			_		
Encryption Setting		null	null	ENCRYPTION	ENCRYPTION	- hrou					
Digest Setting			[DIGEST_ADLER3:		[DIGEST_ADLER32	10					
Compress Setting	[COMPRESS_NON	[COMPRESS_NON	[COMPRESS_LZ4]	[COMPRESS_NON	[COMPRESS_LZ4]						
Block Size	8192	8192	8192	8192	8192	_					
Compressed Size (Ratio)	61%					0					
Warmup #1	19.13		25.59	16.47	14.72		NONE DIGEST (		ENCRYPT ONLY DI	GEST	
Warmup #2	19.8							COMPRESS	CON	MPRESS	
Warmup #3	19.61	19.37							EN	CRYPT	
								Protocol Option	15		
Test Run	19.68	18.94	30.42	17.24	29.46	COMPRESS OVE					
40M_2VC_1x8CS						COMPRESS 8KB 1x8CS CPU BOUND (94% usage)					
Encryption Setting	null	null	null	ENCRYPTION	ENCRYPTION						
Digest Setting		[DIGEST ADLER3:	DIGEST ADLERS	[DIGEST NONE]	[DIGEST_ADLER32						
					[COMPRESS LZ4]						
Block Size	8192										
Compressed Size			0102	0132	0102						
(Ratio)	61%										
Warmup #1	36.87										
Warmup #2	39.58										
Warmup #3	40.02		40.02	34.86	32.81						
Test Run	39.69	38.6	39.87	35.49	32.88						
	NONE	DIGEST ONLY	DIGEST COMPRESS	ENCRYPT ONLY	DIGEST COMPRESS ENCRYPT						
	5.17	5.22	7.64	4.45	7.63						
40M_2VC_1x1CS	J. 17										
40M_2VC_1x1CS 40M_2VC_1x2CS	9.97			8.71	14.4						
		9.66	14.88								