General Simulation Information

Num Servers Per TOR:	4	Num Sender Hosts:	28	Load Factor:	%3.214286
Num TORs:	8	Num Receiver Hosts:	1	Start Time:	0s
Server Link Speed:	10Gb/s	Workload Type:	TEST_DIST	Stop Time:	9.5s
Fabric Link Speed:	40Gb/s	InterArrival Dist:	exponential	Warmup Time:	0ms
Fabric Link Delay	0.25us	hostNicThinkTime:	0.5us		
Edge Link Delay	0.5us				

Traffic Characteristic (Rates, Bytes, and DutyCycle)

Measurement Point	AvgRate (Gb/s)	CumRate (Gb/s)	MinRate (Gb/s)	MaxRate (Gb/s)	CumBytes (MB)	Avg Duty Cycle(%)	Min Duty Cycle(%)	Max Duty Cycle(%)
SX Apps Send:	0.32	9.01	0.31	0.33	10699.13			
SX NICs Send:	0.33	9.32	0.32	0.34	11067.78	3.35	3.20	3.45
All NICs Send:	0.30	9.72	0.00	0.40	11545.66	3.07	0.00	4.53
TORs Down Recv:	0.30	9.72	0.00	0.40	11545.66	3.07	0.00	4.53
TORs Up Send:	1.22	9.72	0.40	1.35	11545.67	3.07	1.13	3.38
TORs Up Recv:	1.22	9.72	0.06	9.32	11545.67	3.07	0.16	23.43
TORs Down Send:	0.30	9.72	0.00	9.32	11545.66	3.07	0.00	93.72
ALL NICs Recv:	0.30	9.72	0.00	9.32	11545.66	3.07	0.00	93.72
RX NICs Recv:	9.32	9.32	9.32	9.32	11067.78	93.72	93.72	93.72
RX Apps Recv:	9.01	9.01	9.01	9.01	10699.13			

Queue Length (Stats Collected At Pkt Arrivals)

Queue Location	Mean (Pkts)	StdDev (Pkts)	Mean (KB)	StdDev (KB)	Empty %	OnePkt %	Min (Pkts)	Min (KB)	Max (Pkts)	Max (KB)
SX Transports	0.27	0.57	38.41	140.82	nan	nan	0.00	0.00	7.00	2300.10
SX NICs	1.00	0.01	1.41	0.38	0.00	99.99	0.00	0.00	2.00	3.04
All NICs	1.00	0.00	0.75	0.19	0.00	100.00	0.00	0.00	2.00	3.04
SX TORs Up	1.00	0.00	1.41	0.38	0.00	100.00	0.00	0.00	2.00	1.66
All TORs Up	1.00	0.00	0.75	0.19	0.00	100.00	0.00	0.00	2.00	1.66
RX TORs Down	35.66	50.84	50.41	71.87	0.00	13.96	0.00	0.00	317.00	436.11
All TORs Down	18.77	26.07	25.88	36.86	0.00	55.87	0.00	0.00	317.00	436.11

Queue Wait Time Stats

Packet Type: Requst

Queue Location	mean (us)	mean (%)	stddev (us)	min (us)	median (us)	75%ile (us)	99%ile (us)	max (us)	count
Host NICs:	0.02	0.05	0.13	0.00	0.00	0.00	0.80	1.35	393289
TORs upward NICs:	0.01	0.03	0.05	0.00	0.00	0.00	0.23	0.31	393289
Aggr Switch NICs:	0.05	0.13	0.10	0.00	0.00	0.04	0.28	0.31	393289
TORs downward NICs:	38.95	99.79	57.46	0.00	14.63	29.26	29.26	353.00	393289
Total:	39.04	100.00							

Packet Type: Grant

Queue Location	mean (us)	mean (%)	stddev (us)	min (us)	median (us)	75%ile (us)	99%ile (us)	max (us)	count
Host NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7466939
TORs upward NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7466939
Aggr Switch NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7466939
TORs downward NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7466939
Total:	0.00	0.00							

Packet Type: Data

Queue Location	mean (us)	mean (%)	stddev (us)	min (us)	median (us)	75%ile (us)	99%ile (us)	max (us)	count
Host NICs:	0.00	0.00	0.01	0.00	0.00	0.00	0.04	0.81	7466939
TORs upward NICs:	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.26	7466939
Aggr Switch NICs:	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.30	7466939
TORs downward NICs:	40.33	99.99	58.37	0.00	4.93	4.93	4.93	353.17	7466939
Total	40.33	100.00							

packet Type: All Pkts

Queue Location	mean (us)	mean (%)	stddev (us)	min (us)	median (us)	75%ile (us)	99%ile (us)	max (us)	count
SX Host NICs:	0.00	0.01	0.03	0.00	0.00	0.00	0.02	1.35	7860256
SX TORs UP NICs:	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.31	7860235
Aggr Switch NICs:	0.00	0.00	0.01	0.00	0.00	0.00	0.10	0.31	15327203
RX TORs Down NICs:	40.26	99.99	58.33	0.00	4.93	4.93	4.93	353.17	7860229
Total	40.27	100.00							

End To End Message Latency For Different Ranges of Message Sizes

Msg Size Range	mean (us)	stddev (us)	min (us)	median (us)	75%ile (us)	99%ile (us)	max (us)	count	count (%)
(0, 100]	84.83	114.63	6.60	33.31	99.94	249.86	711.49	197169	50.13
(100, 1472]	86.90	115.21	9.34	20.87	104.36	563.52	714.33	58772	14.94
(1472, 10000]	95.79	115.95	16.48	42.29	105.73	570.96	721.79	39130	9.95
(10000, 100000]	582.87	1257.94	91.70	91.70	357.39	5718.25	48241.29	97796	24.87
(100000, 1000000]	16037.44	14102.74	1315.98	11656.31	17484.46	69937.84	87422.31	422	0.11
(1000000, Huge]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00

Total Queue Delay (ie. real_e2e_latency − ideal_e2e_latency) For Different Ranges of Message Sizes

Msg Size Range	mean (us)	stddev (us)	min (us)	median (us)	75%ile (us)	99%ile (us)	max (us)	count	count (%)
(0, 100]	81.38	114.63	3.14	32.39	97.18	242.95	708.04	197169	50.13
(100, 1472]	84.18	115.21	6.62	20.69	103.45	558.62	711.61	58772	14.94
(1472, 10000]	84.53	115.95	5.21	20.40	101.98	550.67	710.52	39130	9.95
(10000, 100000]	496.71	1257.94	5.55	5.55	351.65	5626.35	48155.14	97796	24.87
(100000, 1000000]	15205.88	14102.74	484.42	5772.72	17318.15	69272.60	86590.75	422	0.11
(1000000, Huge]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00

End To End Message Stretch For Different Ranges of Message Sizes

Msg Size Range	mean	stddev	min	median	75%ile	99%ile	max	count	count%
(0, 100]	24.56	33.18	1.91	9.64	28.93	72.33	205.97	197169	50.13
(100, 1472]	31.94	42.34	3.43	7.67	38.35	207.12	262.54	58772	14.94
(1472, 10000]	8.50	10.29	1.46	3.75	9.38	50.67	64.05	39130	9.95
(10000, 100000]	6.77	14.60	1.06	1.06	4.15	66.37	559.95	97796	24.87
(100000, 1000000]	19.29	16.96	1.58	14.02	21.03	84.10	105.13	422	0.11
(1000000, Huge]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00