

ByteBucket rate at 98%

General Simulation Information

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Num Servers Per TOR:      4      Num Sender Hosts:      31      Load Factor:           %1.6129
Num TORs:                 8      Num Receiver Hosts:    1      Start Time:            0s
Server Link Speed:       10Gb/s  Workload Type:         DCTCP   Stop Time:             9.5s
Fabric Link Speed:       40Gb/s  InterArrival Dist:    exponential Warmup Time:          0ms
  
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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:	0.15	4.58	0.07	0.28	5360.53			
SX NICs Send:	0.15	4.64	0.08	0.28	5528.20	1.51	0.76	2.84
All NICs Send:	0.15	4.84	0.08	0.28	5761.27	1.53	0.76	2.84
TORs Down Recv:	0.15	4.84	0.08	0.28	5761.27	1.53	0.76	2.84
TORs Up Send:	0.54	4.28	0.17	0.72	5097.32	1.35	0.49	1.80
TORs Up Recv:	0.54	4.28	0.02	4.11	5097.32	1.35	0.05	10.32
TORs Down Send:	0.15	4.84	0.00	4.64	5761.27	1.53	0.04	46.68
ALL NICs Recv:	0.15	4.84	0.00	4.64	5761.27	1.53	0.04	46.68
RX NICs Recv:	4.64	4.64	4.64	4.64	5528.20	46.68	46.68	46.68
RX Apps Recv:	4.50	4.50	4.50	4.50	5360.53			

Queue Length (Stats Collected At Pkt Arrivals)

Queue Location	Mean (Pkts)	StdDev (Pkts)	Mean (KB)	StdDev (KB)	Min (Pkts)	Min (KB)	Max (Pkts)	Max (KB)
SX Transports	0.03	0.15	203.80	1327.80	0.00	0.00	2.00	29440.00
SX NICs	60.03	63.17	91.12	95.89	0.00	0.00	510.00	774.18
All NICs	58.15	61.20	88.27	92.89	0.00	0.00	510.00	774.18
SX TORs Up	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
All TORs Up	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RX TORs Down	303.27	429.19	460.24	651.35	0.00	0.00	2615.00	3968.12
All TORs Down	9.48	13.41	14.38	20.35	0.00	0.00	2615.00	3968.12

Queue Wait Time Stats

Packet Type: Request

Queue Location	mean (us)	mean (%)	stddev (us)	min (us)	median (us)	75%ile (us)	99%ile (us)	max (us)	count
Host NICs:	1.64	1.01	12.12	0.00	0.00	0.00	103.36	487.89	2410
TORs upward NICs:	0.01	0.00	0.04	0.00	0.00	0.00	0.23	0.29	2185
Aggr Switch NICs:	0.02	0.01	0.07	0.00	0.00	0.00	0.28	0.30	2185
TORs downward NICs:	160.80	98.97	380.05	0.00	0.00	0.00	1810.85	3217.27	2410
Total:	162.47	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	3641664
TORs upward NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3221985
Aggr Switch NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3221985
TORs downward NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3641664
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:	77.89	17.25	81.23	0.00	42.61	48.89	48.89	628.70	3641664
TORs upward NICs:	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.28	3221985
Aggr Switch NICs:	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.50	3221985
TORs downward NICs:	373.64	82.75	528.12	0.00	0.00	0.00	0.00	3216.93	3641664
Total:	451.54	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:	77.84	17.25	81.22	0.00	42.49	48.75	48.75	628.70	3644105
SX TORs UP NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	6446191
Aggr Switch NICs:	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.50	6446191
RX TORs Down NICs:	373.50	82.75	528.06	0.00	0.00	0.00	0.00	3217.27	3644075
Total	451.34	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
(0, 1Pkt]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
(1Pkt, 3Pkts]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
(3Pkts, 6Pkts]	367.34	775.49	8.82	0.00	0.00	3506.26	4781.27	350
(6Pkts, 13Pkts]	242.99	494.51	17.44	0.00	0.00	1699.25	2832.08	102
(13Pkts, 33Pkts]	377.06	829.07	24.82	0.00	0.00	3837.29	6395.48	500
(33Pkts, 133Pkts]	424.88	746.91	66.65	0.00	0.00	3453.96	5180.94	512
(133Pkts, 1333Pkts]	1691.54	1037.77	822.12	1538.69	1538.69	5128.98	7693.46	471
(1333Pkts, Huge]	11781.04	12393.44	4102.36	5324.85	10649.71	63898.23	79872.79	475

End To End Message Stretch For Different Ranges of Message Sizes

Msg Size Range	mean	stddev	min	median	75%ile	99%ile	max	count
(0, 1Pkt]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
(1Pkt, 3Pkts]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
(3Pkts, 6Pkts]	50.15	105.87	1.20	0.00	0.00	478.68	652.75	350
(6Pkts, 13Pkts]	15.31	31.16	1.10	0.00	0.00	107.07	178.45	102
(13Pkts, 33Pkts]	12.96	29.49	1.04	0.00	0.00	128.67	275.72	500
(33Pkts, 133Pkts]	4.91	9.29	1.02	0.00	0.00	42.71	80.07	512
(133Pkts, 1333Pkts]	1.45	0.84	1.01	1.03	1.54	4.62	7.70	471
(1333Pkts, Huge]	1.39	0.50	1.01	0.95	1.27	3.18	4.76	475