

-----  
General Simulation Information

```

Num Servers Per TOR:      4      Num Sender Hosts:      28      Load Factor:           %1.785714
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:	0.18	4.96	0.17	0.19	5888.65			
SX NICs Send:	0.18	5.13	0.17	0.19	6091.75	1.84	1.75	1.96
All NICs Send:	0.17	5.35	0.00	0.22	6354.83	1.69	0.00	2.49
TORs Down Recv:	0.17	5.35	0.00	0.22	6354.83	1.69	0.00	2.49
TORs Up Send:	0.67	5.35	0.22	0.75	6354.83	1.69	0.62	1.88
TORs Up Recv:	0.67	5.35	0.03	5.13	6354.83	1.69	0.09	12.90
TORs Down Send:	0.17	5.35	0.00	5.13	6354.83	1.69	0.00	51.59
ALL NICs Recv:	0.17	5.35	0.00	5.13	6354.83	1.69	0.00	51.59
RX NICs Recv:	5.13	5.13	5.13	5.13	6091.75	51.59	51.59	51.59
RX Apps Recv:	4.96	4.96	4.96	4.96	5888.65			

-----  
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	0.03	0.18	2.67	27.11	nan	nan	0.00	0.00	3.00	1010.21
SX NICs	1.00	0.01	1.41	0.38	0.00	100.00	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	1.18	0.55	1.67	0.82	0.00	87.53	0.00	0.00	10.00	12.14
All TORs Down	1.09	0.28	0.89	0.42	0.00	93.61	0.00	0.00	10.00	12.14

-----  
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:	0.01	1.52	0.09	0.00	0.00	0.00	0.51	1.29	218758
TORs upward NICs:	0.01	0.89	0.04	0.00	0.00	0.00	0.23	0.31	218758
Aggr Switch NICs:	0.03	3.81	0.08	0.00	0.00	0.00	0.28	0.32	218758
TORs downward NICs:	0.69	93.79	0.87	0.00	0.00	0.95	3.80	8.73	218758
Total:	0.74	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	4110686
TORs upward NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4110686
Aggr Switch NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4110686
TORs downward NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4110686
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	0.34	0.01	0.00	0.00	0.00	0.03	0.81	4110686
TORs upward NICs:	0.00	0.08	0.01	0.00	0.00	0.00	0.00	0.24	4110686
Aggr Switch NICs:	0.00	0.13	0.01	0.00	0.00	0.00	0.00	0.30	4110686
TORs downward NICs:	0.43	99.45	0.72	0.00	0.17	0.50	2.51	8.83	4110686
Total	0.43	100.00							

packet Type: All Pkts

```

=====
Queue Location      mean      mean      stddev   min      median   75%ile   99%ile   max      count
                   (us)      (%)      (us)     (us)     (us)     (us)     (us)     (us)
-----
SX Host NICs:      0.00      0.44      0.02     0.00     0.00     0.00     0.02     1.29    4329472
SX TORs UP NICs:  0.00      0.15      0.01     0.00     0.00     0.00     0.00     0.31    4329451
Aggr Switch NICs: 0.00      0.22      0.01     0.00     0.00     0.00     0.00     0.32    8440166
RX TORs Down NICs: 0.44     99.19     0.73     0.00     0.12     0.48     3.60     8.83    4329445
-----
Total              0.45     100.00
    
```

-----  
End To End Message Latency For Different Ranges of Message Sizes

```

=====
Msg Size Range      mean      stddev   min      median   75%ile   99%ile   max      count   count
                   (us)      (us)     (us)     (us)     (us)     (us)     (us)
-----
(0, 100]            8.21      1.97     6.60     6.88     8.25     13.76    25.60    109469  50.04
(100, 1472]         10.66     1.72     9.34     9.93     11.35    17.02    27.31    32878   15.03
(1472, 10000]       18.08     2.19    16.48    16.48    18.31    25.63    37.02    22041   10.08
(10000, 100000]    135.63    74.83    91.70    91.70    106.38   372.33   2041.67   54179   24.77
(100000, 1000000] 1851.04   594.20  1014.49 1643.65 2191.53 3561.24 4109.12    191     0.09
(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      stddev   min      median   75%ile   99%ile   max      count   count
                   (us)      (us)     (us)     (us)     (us)     (us)     (us)
-----
(0, 100]            4.76      1.97     3.14     3.44     5.73     11.45    22.14    109469  50.04
(100, 1472]         7.94      1.72     6.62     6.62     8.66     13.61    24.59    32878   15.03
(1472, 10000]       6.81      2.19     5.21     5.40     7.56     15.12    25.75    22041   10.08
(10000, 100000]    49.48     74.83    5.55     5.55     47.45    332.12  1955.52   54179   24.77
(100000, 1000000] 1019.49   594.20  182.94   874.02  1311.03 2840.56 3277.57    191     0.09
(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%
                   (us)      (us)     (us)     (us)     (us)     (us)     (us)
-----
(0, 100]            2.38      0.57     1.91     1.99     2.39     3.98     7.41     109469  50.04
(100, 1472]         3.92      0.63     3.43     3.65     4.17     6.25    10.04     32878   15.03
(1472, 10000]       1.60      0.19     1.46     1.46     1.62     2.27     3.29     22041   10.08
(10000, 100000]    1.57      0.87     1.06     1.06     1.23     4.32    23.70     54179   24.77
(100000, 1000000] 2.23      0.71     1.22     1.98     2.64     4.28     4.94     191     0.09
(1000000, Huge]    0.00      0.00     0.00     0.00     0.00     0.00     0.00     0        0.00
    
```