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 |General Simulation Information|  
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|                      |        |                      |                 |                     |             |
|----------------------|--------|----------------------|-----------------|---------------------|-------------|
| Num Servers Per TOR: | 4      | Num Sender Hosts:    | 28              | Load Factor:        | %0.0        |
| Num TORs:            | 8      | Num Receiver Hosts:  | 1               | Start Time:         | 0s          |
| Server Link Speed:   | 10Gb/s | Workload Type:       | FACEBOOK        | Stop Time:          | 9.5s        |
| Fabric Link Speed:   | 40Gb/s | InterArrival Dist:   | facebook_scaled | Warmup Time:        | 0ms         |
| Fabric Link Delay    | 0.0us  | SW Turn-around Time: | 0.5us           | NIC Send ThinkTime: | 0.5us       |
| Edge Link Delay      | 0.0us  | Switch Fix Delay:    | 0.25us          | TransportScheme:    | PseudoIdeal |

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 |Homa Packets Traffic Rates|  
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| Homa Packet Type        | AvgRate (Mb/s) | CumRate (Mb/s) | MinRate (Mb/s) | MaxRate (Mb/s) |
|-------------------------|----------------|----------------|----------------|----------------|
| SX NICs Req. SxRate:    | 0.00           | 0.00           | 0.00           | 0.00           |
| SX NICs Unshed. SxRate: | 35.55          | 995.42         | 34.40          | 36.64          |
| SX NICs Sched. SxRate:  | 0.00           | 0.00           | 0.00           | 0.00           |
| RX NICs Grant SxRate:   | 0.00           | 0.00           | 0.00           | 0.00           |

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 |Traffic Characteristic (Rates, Bytes, and DutyCycle)|  
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| 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:     | 0.03           | 0.72           | 0.02           | 0.03           | 89.58         |                   |                   |                   |
| SX NICs Send:     | 0.04           | 1.00           | 0.03           | 0.04           | 124.43        | 0.37              | 0.36              | 0.38              |
| All NICs Send:    | 0.03           | 1.00           | 0.00           | 0.04           | 124.43        | 0.32              | 0.00              | 0.38              |
| TORs Down Recv:   | 0.03           | 1.00           | 0.00           | 0.04           | 124.43        | 0.32              | 0.00              | 0.38              |
| TORs Up Send:     | 0.12           | 1.00           | 0.00           | 0.14           | 124.43        | 0.32              | 0.00              | 0.37              |
| TORs Up Recv:     | 0.12           | 1.00           | 0.00           | 1.00           | 124.43        | 0.32              | 0.00              | 2.57              |
| TORs Down Send:   | 0.03           | 1.00           | 0.00           | 1.00           | 124.43        | 0.32              | 0.00              | 10.27             |
| ALL NICs Recv:    | 0.03           | 1.00           | 0.00           | 1.00           | 124.43        | 0.32              | 0.00              | 10.27             |
| RX NICs Recv:     | 1.00           | 1.00           | 1.00           | 1.00           | 124.43        | 10.27             | 10.27             | 10.27             |
| RX Apps Recv:     | 0.72           | 0.72           | 0.72           | 0.72           | 89.58         |                   |                   |                   |

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 |Queue Length (Stats Collected At Pkt Arrivals)|  
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| Queue Location | Mean (Pkts) | StdDev (Pkts) | Mean (KB) | StdDev (KB) | Empty % | OnePkt % | Min (Pkts) | Min (KB) | Max (Pkts) | Max (KB) |
|----------------|-------------|---------------|-----------|-------------|---------|----------|------------|----------|------------|----------|
| SX Transports  | 1.00        | 0.00          | 0.18      | 0.44        | nan     | nan      | 1.00       | 0.00     | 1.00       | 66.23    |
| SX NICs        | 0.04        | 0.39          | 0.06      | 0.56        | 97.31   | 1.99     | 0.00       | 0.00     | 46.00      | 68.21    |
| All NICs       | 0.04        | 0.39          | 0.06      | 0.56        | 97.31   | 1.99     | 0.00       | 0.00     | 46.00      | 68.21    |
| SX TORs Up     | 0.01        | 0.11          | 0.01      | 0.07        | 98.91   | 1.07     | 0.00       | 0.00     | 3.00       | 2.17     |
| All TORs Up    | 0.01        | 0.11          | 0.01      | 0.07        | 98.91   | 1.07     | 0.00       | 0.00     | 3.00       | 2.17     |
| RX TORs Down   | 0.16        | 0.46          | 0.06      | 0.24        | 87.40   | 10.26    | 0.00       | 0.00     | 7.00       | 8.64     |
| All TORs Down  | 0.16        | 0.46          | 0.06      | 0.24        | 87.40   | 10.26    | 0.00       | 0.00     | 7.00       | 8.64     |

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 |Queue Wait Time Stats|  
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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:          | 0.00      | 0.00     | 0.00        | 0.00     | 0.00        | 0.00        | 0.00        | 0.00     | 0     |
| TORs upward NICs:   | 0.00      | 0.00     | 0.00        | 0.00     | 0.00        | 0.00        | 0.00        | 0.00     | 0     |
| Aggr Switch NICs:   | 0.00      | 0.00     | 0.00        | 0.00     | 0.00        | 0.00        | 0.00        | 0.00     | 0     |
| TORs downward NICs: | 0.00      | 0.00     | 0.00        | 0.00     | 0.00        | 0.00        | 0.00        | 0.00     | 0     |
| Total:              | 0.00      | 0.00     |             |          |             |             |             |          |       |

Packet Type: Unshed. Data

| Queue Location      | mean (us) | mean (%) | stddev (us) | min (us) | median (us) | 75%ile (us) | 99%ile (us) | max (us) | count  |
|---------------------|-----------|----------|-------------|----------|-------------|-------------|-------------|----------|--------|
| Host NICs:          | 0.05      | 51.17    | 0.46        | 0.00     | 0.00        | 0.00        | 1.02        | 56.85    | 497764 |
| TORs upward NICs:   | 0.00      | 1.17     | 0.01        | 0.00     | 0.00        | 0.00        | 0.00        | 0.45     | 497764 |
| Aggr Switch NICs:   | 0.00      | 1.57     | 0.01        | 0.00     | 0.00        | 0.00        | 0.05        | 0.39     | 497764 |
| TORs downward NICs: | 0.04      | 46.09    | 0.19        | 0.00     | 0.00        | 0.00        | 0.86        | 8.76     | 497764 |
| Total               | 0.10      | 100.00   |             |          |             |             |             |          |        |

Packet Type: Grant

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=====
Queue Location      mean      mean      stddev   min      median   75%ile   99%ile   max      count
                   (us)      (%)      (us)     (us)     (us)     (us)     (us)     (us)     (us)
-----
Host NICs:          0.00      0.00      0.00     0.00     0.00     0.00     0.00     0.00     0
TORs upward NICs:  0.00      0.00      0.00     0.00     0.00     0.00     0.00     0.00     0
Aggr Switch NICs:  0.00      0.00      0.00     0.00     0.00     0.00     0.00     0.00     0
TORs downward NICs: 0.00      0.00      0.00     0.00     0.00     0.00     0.00     0.00     0
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Total:              0.00      0.00
    
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Packet Type: Sched. Data

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=====
Queue Location      mean      mean      stddev   min      median   75%ile   99%ile   max      count
                   (us)      (%)      (us)     (us)     (us)     (us)     (us)     (us)     (us)
-----
Host NICs:          0.00      0.00      0.00     0.00     0.00     0.00     0.00     0.00     0
TORs upward NICs:  0.00      0.00      0.00     0.00     0.00     0.00     0.00     0.00     0
Aggr Switch NICs:  0.00      0.00      0.00     0.00     0.00     0.00     0.00     0.00     0
TORs downward NICs: 0.00      0.00      0.00     0.00     0.00     0.00     0.00     0.00     0
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Total              0.00      0.00
    
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packet Type: All Pkts

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=====
Queue Location      mean      mean      stddev   min      median   75%ile   99%ile   max      count
                   (us)      (%)      (us)     (us)     (us)     (us)     (us)     (us)     (us)
-----
SX Host NICs:       0.05      51.17     0.46     0.00     0.00     0.00     1.02     56.85     497792
SX TORs UP NICs:   0.00      1.17      0.01     0.00     0.00     0.00     0.00     0.45     497771
Aggr Switch NICs:  0.00      1.57      -nan     0.00     0.00     0.00     0.05     0.39     497772
RX TORs Down NICs: 0.04      46.09     0.19     0.00     0.00     0.00     0.86     8.76     497765
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Total              0.10      100.00
    
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|End To End Message Latency For Different Ranges of Message Sizes|

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=====
Msg Size Range     mean      stddev   min      median   75%ile   99%ile   max      count      count
                   (us)      (us)     (us)     (us)     (us)     (us)     (us)     (us)     (%)
-----
(0, 5]             2.42      0.14     2.38     2.38     2.38     2.80     7.00     147599     30.33
(5, 10]            2.43      0.15     2.39     2.39     2.39     2.88     4.81     11660      2.40
(10, 15]           2.44      0.14     2.40     2.40     2.40     2.86     6.12     69731     14.33
(15, 100]          2.50      0.15     2.41     2.41     2.41     3.12     4.80     80045     16.45
(100, 1448]        3.02      0.47     2.55     2.84     3.19     4.25     6.22     169599     34.85
(1448, 10000]      5.79      1.21     4.77     5.00     6.00     10.01     18.28     7924      1.63
(10000, 100000]   18.04     8.10     12.17     13.73     18.31     68.65     68.65     70         0.01
(100000, Huge]    0.00      0.00     0.00     0.00     0.00     0.00     0.00     0          0.00
    
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|Total Queue Delay (ie. real\_e2e\_latency - ideal\_e2e\_latency) For Different Ranges of Message Sizes|

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Msg Size Range     mean      stddev   min      median   75%ile   99%ile   max      count      count
                   (us)      (us)     (us)     (us)     (us)     (us)     (us)     (us)     (%)
-----
(0, 5]             0.04      0.14     0.00     0.00     0.00     0.62     4.62     147599     30.33
(5, 10]            0.05      0.15     0.01     0.01     0.01     0.81     2.42     11660      2.40
(10, 15]           0.05      0.14     0.02     0.02     0.02     0.75     3.74     69731     14.33
(15, 100]          0.06      0.14     0.03     0.03     0.03     0.73     2.38     80045     16.45
(100, 1448]        0.06      0.14     0.03     0.03     0.03     0.78     2.54     169599     34.85
(1448, 10000]      0.26      0.42     0.02     0.02     0.02     1.87     9.28     7924      1.63
(10000, 100000]   1.76      1.53     0.14     1.12     1.69     8.44     8.44     70         0.01
(100000, Huge]    0.00      0.00     0.00     0.00     0.00     0.00     0.00     0          0.00
    
```

