
General Simulation Information

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:	HomaTransport

Receiver's Outstanding Bytes(@ packet arrivals) and Grants (@ new grants)

In Flight Bytes	mean (KB)	stddev (KB)	min (KB)	median (KB)	75%ile (KB)	99%ile (KB)	max (KB)	count
Outstanding Grant Bytes:	4.88	3.16	0.08	4.45	9.00	9.00	9.40	476
Outstanding Total Bytes:	1.46	1.86	0.08	0.66	1.71	8.62	14.67	20428

Homa Packets Traffic Rates

Homa Packet Type	AvgRate (Mb/s)	CumRate (Mb/s)	MinRate (Mb/s)	MaxRate (Mb/s)
SX NICs Req. SxRate:	31.98	895.56	30.91	33.04
SX NICs Unsched. SxRate:	2.79	78.13	2.36	3.35
SX NICs Sched. SxRate:	0.18	4.93	0.04	0.53
RX NICs Grant SxRate:	0.25	0.25	0.25	0.25

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:	0.03	0.73	0.02	0.03	91.16			
SX NICs Send:	0.03	0.98	0.03	0.04	122.33	0.36	0.35	0.37
All NICs Send:	0.03	0.98	0.00	0.04	122.36	0.32	0.00	0.37
TORs Down Recv:	0.03	0.98	0.00	0.04	122.36	0.32	0.00	0.37
TORs Up Send:	0.12	0.98	0.00	0.14	122.36	0.32	0.00	0.37
TORs Up Recv:	0.12	0.98	0.00	0.98	122.36	0.32	0.00	2.53
TORs Down Send:	0.03	0.98	0.00	0.98	122.36	0.32	0.00	10.11
ALL NICs Recv:	0.03	0.98	0.00	0.98	122.36	0.32	0.00	10.11
RX NICs Recv:	0.98	0.98	0.98	0.98	122.33	10.11	10.11	10.11
RX Apps Recv:	0.73	0.73	0.73	0.73	91.16			

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	0.00	0.01	0.00	0.03	nan	nan	0.00	0.00	1.00	16.06
SX NICs	0.04	0.29	0.05	0.41	97.22	2.05	0.00	0.00	7.00	9.17
All NICs	0.04	0.29	0.05	0.41	97.22	2.05	0.00	0.00	7.00	9.17
SX TORs Up	0.01	0.11	0.01	0.07	98.89	1.08	0.00	0.00	3.00	1.93
All TORs Up	0.01	0.11	0.01	0.07	98.90	1.08	0.00	0.00	3.00	1.93
RX TORs Down	0.16	0.46	0.06	0.24	87.44	10.15	0.00	0.00	10.00	10.60
All TORs Down	0.16	0.46	0.06	0.24	87.45	10.14	0.00	0.00	10.00	10.60

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:	0.00	3.65	0.03	0.00	0.00	0.00	0.00	1.22	489000
TORs upward NICs:	0.00	1.22	0.01	0.00	0.00	0.00	0.00	0.35	489000
Aggr Switch NICs:	0.00	4.54	0.01	0.00	0.00	0.00	0.04	0.58	489000
TORs downward NICs:	0.03	90.58	0.12	0.00	0.00	0.00	0.71	2.14	489000
Total:	0.03	100.00							

Packet Type: Unsched. Data

Queue Location	mean	mean	stddev	min	median	75%ile	99%ile	max	count
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	(us)	(%)	(us)	(us)	(us)	(us)	(us)	(us)	(us)
Host NICs:	1.84	70.26	1.23	0.00	1.21	1.96	6.61	8.24	11610
TORs upward NICs:	0.03	1.29	0.07	0.00	0.00	0.01	0.21	0.48	11610
Aggr Switch NICs:	0.00	0.15	0.02	0.00	0.00	0.00	0.12	0.40	11610
TORs downward NICs:	0.74	28.31	0.60	0.00	0.76	0.76	2.54	7.61	11610
Total	2.62	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	476
TORs upward NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	476
Aggr Switch NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	476
TORs downward NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	476
Total:	0.00	0.00							

Packet Type: Sched. Data

Queue Location	mean (us)	mean (%)	stddev (us)	min (us)	median (us)	75%ile (us)	99%ile (us)	max (us)	count
Host NICs:	0.12	13.69	0.20	0.00	0.02	0.13	0.61	1.14	476
TORs upward NICs:	0.01	0.83	0.03	0.00	0.00	0.00	0.19	0.24	476
Aggr Switch NICs:	0.00	0.20	0.01	0.00	0.00	0.00	0.06	0.23	476
TORs downward NICs:	0.75	85.28	1.00	0.00	0.00	0.66	3.28	9.85	476
Total	0.87	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:	0.04	47.61	0.33	0.00	0.00	0.00	1.00	8.24	501114
SX TORs UP NICs:	0.00	1.26	0.01	0.00	0.00	0.00	0.00	0.48	501093
Aggr Switch NICs:	0.00	1.61	0.01	0.00	0.00	0.00	0.04	0.58	501598
RX TORs Down NICs:	0.05	49.52	0.19	0.00	0.00	0.00	0.81	9.85	501087
Total	0.09	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, 5]	2.41	0.15	2.37	2.37	2.37	3.12	5.25	147967	30.26
(5, 10]	2.42	0.16	2.38	2.38	2.38	2.94	5.03	11701	2.39
(10, 15]	2.42	0.14	2.39	2.39	2.39	3.13	4.76	70440	14.40
(15, 100]	2.49	0.15	2.40	2.40	2.40	3.29	7.04	80338	16.43
(100, 1448]	3.00	0.47	2.53	2.53	2.87	4.30	5.85	170212	34.81
(1448, 10000]	5.82	1.25	4.76	4.76	5.43	10.86	16.32	8248	1.69
(10000, 100000]	18.24	6.39	12.18	13.87	19.41	41.60	41.60	94	0.02
(100000, 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, 5]	0.02	0.15	-0.01	0.00	0.00	0.77	2.87	147967	30.26
(5, 10]	0.04	0.16	-0.00	0.00	0.00	0.81	2.65	11701	2.39
(10, 15]	0.04	0.14	0.00	0.00	0.00	0.77	2.38	70440	14.40
(15, 100]	0.05	0.15	0.01	0.01	0.01	0.62	4.63	80338	16.43

