
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	stddev	min	median	75%ile	99%ile	max	count
	(KB)	(KB)	(KB)	(KB)	(KB)	(KB)	(KB)	
Outstanding Grant Bytes:	4.98	3.10	0.10	4.45	9.00	9.09	9.38	413
Outstanding Total Bytes:	1.61	1.95	0.08	0.84	1.99	8.99	12.60	19746

Homa Packets Traffic Rates

Homa Packet Type	AvgRate	CumRate	MinRate	MaxRate
	(Mb/s)	(Mb/s)	(Mb/s)	(Mb/s)
SX NICs Req. SxRate:	159.81	4474.68	154.12	164.90
SX NICs Unshed. SxRate:	13.22	370.09	10.07	15.50
SX NICs Sched. SxRate:	0.78	21.71	0.01	2.24
RX NICs Grant SxRate:	1.09	1.09	1.09	1.09

Traffic Characteristic (Rates, Bytes, and DutyCycle)

Measurement Point	AvgRate	CumRate	MinRate	MaxRate	CumBytes	Avg Duty	Min Duty	Max Duty
	(Gb/s)	(Gb/s)	(Gb/s)	(Gb/s)	(MB)	Cycle(%)	Cycle(%)	Cycle(%)
SX Apps Send:	0.13	3.62	0.12	0.14	90.54			
SX NICs Send:	0.17	4.87	0.16	0.18	121.67	1.80	1.70	1.86
All NICs Send:	0.15	4.87	0.00	0.18	121.69	1.57	0.00	1.86
TORs Down Recv:	0.15	4.87	0.00	0.18	121.69	1.57	0.00	1.86
TORs Up Send:	0.61	4.87	0.00	0.70	121.69	1.57	0.00	1.82
TORs Up Recv:	0.61	4.87	0.00	4.87	121.69	1.57	0.00	12.57
TORs Down Send:	0.15	4.87	0.00	4.87	121.69	1.57	0.00	50.27
ALL NICs Recv:	0.15	4.87	0.00	4.87	121.69	1.57	0.00	50.27
RX NICs Recv:	4.87	4.87	4.87	4.87	121.66	50.27	50.27	50.27
RX Apps Recv:	3.62	3.62	3.62	3.62	90.54			

Queue Length (Stats Collected At Pkt Arrivals)

Queue Location	Mean	StdDev	Mean	StdDev	Empty	OnePkt	Min	Min	Max	Max
	(Pkts)	(Pkts)	(KB)	(KB)	%	%	(Pkts)	(KB)	(Pkts)	(KB)
SX Transports	0.00	0.02	0.00	0.11	nan	nan	0.00	0.00	1.00	40.98
SX NICs	0.06	0.33	0.06	0.41	95.60	3.45	0.00	0.00	9.00	11.62
All NICs	0.06	0.33	0.06	0.41	95.60	3.44	0.00	0.00	9.00	11.62
SX TORs Up	0.03	0.19	0.01	0.10	97.05	2.77	0.00	0.00	4.00	2.43
All TORs Up	0.03	0.19	0.01	0.10	97.05	2.77	0.00	0.00	4.00	2.43
RX TORs Down	1.43	2.10	0.49	0.98	45.94	22.66	0.00	0.00	27.00	13.25
All TORs Down	1.43	2.09	0.49	0.98	45.99	22.64	0.00	0.00	27.00	13.25

Queue Wait Time Stats

Packet Type: Request

Queue Location	mean	mean	stddev	min	median	75%ile	99%ile	max	count
	(us)	(%)	(us)	(us)	(us)	(us)	(us)	(us)	
Host NICs:	0.01	1.98	0.06	0.00	0.00	0.00	0.14	1.89	488836
TORs upward NICs:	0.00	0.69	0.02	0.00	0.00	0.00	0.06	0.50	488836
Aggr Switch NICs:	0.01	2.95	0.03	0.00	0.00	0.00	0.19	0.67	488836
TORs downward NICs:	0.26	94.38	0.44	0.00	0.00	0.33	1.80	6.45	488836
Total:	0.28	100.00							

Packet Type: Unshed. 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:	1.83	37.19	1.20	0.00	1.21	1.91	6.50	9.71	11148
TORs upward NICs:	0.03	0.70	0.07	0.00	0.00	0.01	0.21	0.50	11148
Aggr Switch NICs:	0.02	0.46	0.07	0.00	0.00	0.00	0.31	0.89	11148
TORs downward NICs:	3.03	61.65	2.89	0.00	1.58	3.15	12.62	23.66	11148
Total	4.92	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	413
TORs upward NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	413
Aggr Switch NICs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	413
TORs downward NICs:	0.00	0.00	-nan	0.00	0.00	0.00	0.00	0.00	413
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:	0.07	1.10	-nan	0.00	0.00	0.03	0.68	2.08	413
TORs upward NICs:	0.01	0.10	0.03	0.00	0.00	0.00	0.19	0.35	413
Aggr Switch NICs:	0.01	0.15	0.04	0.00	0.00	0.00	0.24	0.30	413
TORs downward NICs:	6.57	98.65	4.02	0.00	5.81	7.74	17.42	29.04	413
Total	6.66	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:	0.05	11.96	0.33	0.00	0.00	0.00	1.05	9.71	500425
SX TORs UP NICs:	0.00	0.68	0.02	0.00	0.00	0.00	0.10	0.50	500404
Aggr Switch NICs:	0.01	2.20	0.04	0.00	0.00	0.00	0.18	0.89	500846
RX TORs Down NICs:	0.33	85.16	0.77	0.00	0.00	0.00	2.71	29.04	500398
Total	0.39	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]	2.66	0.48	2.37	2.38	2.38	4.28	9.68	148517	30.38
(5, 10]	2.67	0.49	2.38	2.38	2.66	4.44	7.93	11627	2.38
(10, 15]	2.68	0.48	2.39	2.39	2.68	4.47	8.32	69991	14.32
(15, 100]	2.74	0.48	2.40	2.40	2.81	4.21	8.56	80702	16.51
(100, 1448]	3.25	0.65	2.53	2.70	3.24	4.86	9.58	169814	34.74
(1448, 10000]	8.01	3.32	4.77	6.04	8.06	20.14	39.33	8110	1.66
(10000, 100000]	30.09	12.39	16.08	25.34	31.68	95.03	95.03	75	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]	0.28	0.48	-0.01	0.00	0.32	1.90	7.30	148517	30.38
(5, 10]	0.29	0.49	-0.00	0.00	0.29	2.00	5.54	11627	2.38
(10, 15]	0.29	0.48	0.00	0.00	0.29	2.02	5.93	69991	14.32
(15, 100]	0.30	0.48	0.01	0.01	0.31	1.85	6.13	80702	16.51

