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Stop and wait protocol:

	Average	Standard Deviation
Throughput	7031.8660000	3719.6065714
Per packet delay	0.5234600	0.7939463
Performance metric	5.2594772	0.0232071

Sliding window protocol

	Average	Standard Deviation
Throughput	470873.7812301	2772.8399301
Per packet delay	0.0021119	0.0000632
Performance metric	478.3212220	1.8700951

TCP Tahoe protocol

	Average	Standard Deviation
Throughput	28952.5652340	28.1204607
Per packet delay	0.0341753	0.0000575
Performance metric	28.1886526	0.0560736

TCP Reno

	Average	Standard Deviation
Throughput	56538.1558392	399.8306381
Per packet delay	0.0178462	0.0002865
Performance metric	57.4766594	0.663771

Report:

Stop and wait protocols send a packet and then wait for an acknowledgement before sending the next one.

Sliding window protocols maintain a window of packets that can be sent before receiving an acknowledgment. As acknowledgments are received, the window slides forward, allowing more packets to be sent without waiting for acknowledgments for every single packet.

TCP Tahoe starts with a congestion window of 1 and exponentially increases it during the Slow Start phase. After reaching the SSThreshold, TCP enters the Congestion Avoidance phase, where it increases the congestion window linearly by 1. If a timeout occurs or 3 duplicate acknowledgements are received, the congestion window is reset to 1, and the SSThresh is set to half of the current congestion window.

TCP Reno works similarly to TCP Tahoe but treats duplicate acknowledgments and timeouts differently: if it receives 3 duplicate ACKs, TCP Reno enters Fast Recovery. It sets the SSThreshold to half of the current congestion window and reduces the congestion window to the SSThreshold. Unlike Tahoe, Reno does not reset the congestion window to 1. It sends new packets within the reduced window to recover quickly. If a timeout occurs, TCP Reno behaves like Tahoe by resetting the congestion window to 1 and recalculating the SSThresh as half of the congestion window.