Requirements for Scalable Transport	Normative text	[name of your (planned) L4S CC]	Evaluation/Remarks/Plans/Issues/Objections
1. Use of L4S Packet Identifier (A1.1)	Section 4.1: A sender that wishes a packet to receive L4S treatment as it is forwarded, MUST set the ECN field in the IP header (v4 or v6) to the ECT(1) codepoint.	Compliant / Partially Compliant / Non-compliant Explain at what level you (plan to) meet the requirement	Any description/limitations/remarks/explanation related to evaluation, implementation and plans (will implement or will not implement) can be explained here. Any expected or experienced issues and any objections/disagreements to the requirement can be explained and colored appropriately here.
2. Accurate ECN Feedback (A1.2)	Section 4.2: For a transport protocol to provide scalable congestion control it MUST provide feedback of the extent of CE marking on the forward path.	Compliant / Partially Compliant / Non-compliant	
(Scalable CC requirement)	Section 4.3: As a condition for a host to send packets with the L4S identifier (ECT(1)), it SHOULD implement a congestion control behaviour that ensures that, in steady state, the average time from one ECN congestion signal to the next (the 'recovery time') does not increase as flow rate scales, all other factors being equal.	Compliant / Partially Compliant / Non-compliant	
(ECT(1) use needs Prague compliance)	Section 4.3: In order to coexist safely with other Internet traffic, a scalable congestion control MUST NOT tag its packets with the ECT(1) codepoint unless it complies with the following bulleted requirements.	Compliant / Partially Compliant / Non-compliant	
(Prague compliance description)	Section 4.3: The specification of a particular scalable congestion control MUST describe in detail how it satisfies each requirement, and for any non-mandatory requirements, it MUST justify why it does not comply.	Compliant / Partially Compliant / Non-compliant	
3. Fall back to Reno-friendly congestion control on packet loss (A1.3)	Section 4.3: As well as responding to ECN markings, a scalable congestion control MUST react to packet loss in a way that will coexist safely with a TCP Reno congestion control [RFC5681].	Compliant / Partially Compliant / Non-compliant	
4. Fall back to Reno-friendly congestion control on classic ECN bottlenecks (A1.4)	Section 4.3: A scalable congestion control MUST implement monitoring in order to detect a likely non-L4S but ECN-capable AQM at the bottleneck. On detection of a likely ECN-capable bottleneck it SHOULD be capable (dependent on configuration) of automatically adapting its congestion response to coexist with TCP Reno congestion controls [RFC5681]. To participate in the L4S experiment, a scalable congestion control MUST be capable of being replaced by a Classic congestion control (by application and by administrative control).	Compliant / Partially Compliant / Non-compliant	
5. Reduce RTT dependence (A1.5)	Section 4.3: A scalable congestion control MUST eliminate RTT bias as much as possible in the range between the minimum likely RTT and typical RTTs expected in the intended deployment scenario.	Compliant / Partially Compliant / Non-compliant	
6. Scaling down to fractional congestion windows (A1.6)	Section 4.3: A scalable congestion control SHOULD remain responsive to congestion when typical RTTs over the public Internet are significantly smaller because they are no longer inflated by queuing delay.	Compliant / Partially Compliant / Non-compliant	

7. Measuring Reordering Tolerance in Time Units (A1.7)	Section 4.3: A scalable congestion control SHOULD detect loss by counting in time-based units, which is scalable, as opposed to counting in units of packets (as in the 3 DupACK rule of RFC 5681 TCP), which is not scalable. This requirement does not apply to congestion controls that are solely used in controlled environments where the network introduces hardly any reordering.	Compliant / Partially Compliant / Non-compliant	
(Burst limit)	Section 4.3: A scalable congestion control is expected to limit the queue caused by bursts of packets. It is only required that the specification of a particular scalable congestion control MUST define, quantify and justify its approach to limiting bursts.	Compliant / Partially Compliant / Non-compliant	
Scalable Transport Protocol Optimizations	**Appendix text (no normative refs)**		
1. Setting ECT in TCP Control Packets and Retransmissions (A2.1)	This item only concerns TCP and its derivatives (e.g. SCTP), because the original specification of ECN for TCP precluded the use of ECN on control packets and retransmissions. To improve performance, scalable transport protocols ought to enable ECN at the IP layer in TCP control packets (SYN, SYN-ACK, pure ACKs, etc.) and in retransmitted packets. The same is true for derivatives of TCP, e.g. SCTP.	Compliant / Partially Compliant / Non-compliant	
2. Faster than Additive Increase (A2.2)	It would improve performance if scalable congestion controls did not limit their congestion window increase to the standard additive increase of 1 SMSS per round trip [RFC5681] during congestion avoidance. The same is true for derivatives of TCP congestion control, including similar approaches used for real-time media.	Compliant / Partially Compliant / Non-compliant	
3. Faster Convergence at Flow Start (A2.3)	Particularly when a flow starts, scalable congestion controls need to converge (reach their steady-state share of the capacity) at least as fast as Classic congestion controls and preferably faster. This affects the flow start behaviour of any L4S congestion control derived from a Classic transport that uses TCP slow start, including those for real-time media.	Compliant / Partially Compliant / Non-compliant	