Stream Reservation Protocol (SRP)

Draft PAR

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Title (4)

Draft: IEEE Standard for Local and Metropolitan Area Networks –
Stream Reservation Protocol (SRP)

PAR Scope (13)

- The proposed standard will specify protocols, procedures and management elements that allow available bridge forwarding resources to be reserved for specific traffic streams traversing a bridged local area network.
- The standard will define traffic stream descriptors and provide a mechanism for dynamic maintenance of forwarding resources within a bridged local are network by signaling resource requirement requests and bridge admission control responses.

Is the completion of this document contingent upon the completion of another document?

  – This standard may make reference to Multiple Registration Protocol (IEEE P802.1ak).

PAR Purpose (14)

- This standard will provide a signaling protocol to enable the end-to-end management of resource reservation for QoS guaranteed streams

- The signaling protocol will facilitate the registration, de-registration and related maintenance operations of resource reservation information in relevant bridges and provide a means to respond to queries about the availability of local bridge forwarding resources for any given stream

- The signaling protocol is an essential component for bridged local area network applications that require hard QoS guarantees

PAR Reason (15)

- Many vendors and users desire a single network infrastructure in the residence to carry various multimedia applications such as digital video, high-fidelity digital audio, and gaming traffic, as well as traditional non-time-sensitive traffic (e.g., data traffic).

- The application of current IEEE 802 technologies for high quality time sensitive streaming allows users to load their networks unknowingly to the extent that the user experience is negatively impacted.

- To provide the robust guaranteed QoS capability for streaming applications, firstly the availability of network resources along the entire data path should be assured before transmission takes place.

- This requires the definition of traffic stream descriptors and a protocol to signal the resource reservation along the end-to-end path of streams

- Existing standards like GARP and MRP may be used as a basis but need significant extensions for this purpose.