End-to-End QoS Improvement using IPv6 Header Reduction over MPLS

Abstract

In 802.16 standards, PHS suppresses redundant parts of payload header in MAC service data unit. This paper proposes Label Switched Path-Payload Header Suppression (LSP-PHS), in which an MPLS-enabled backbone route compresses packets over an MPLS LSP without compression or decompression cycles at each router. It has two main contributions for MPLS-IPv6 header compression. First, LSP-PHS adds a new facility (MPLS/PHS) to the existing MPLS facilities. Second, it provides an analysis of the effect of implementing LSP-PHS on real-time and non-real-time IPv6 traffic in terms of QoS metrics. The implementation results using NS 2.34 show QoS improvement for real-time and non-real-time traffic.

References

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End-to-End QoS Improvement using IPv6 Header Reduction over MPLS

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Index Terms
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MPLS  IPv6  Header suppression/compression  Real-time and Heterogeneous traffic.