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FIB efficiency in distributed platforms

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Abstract

© 2016 IEEE.The Internet routing ecosystem is facing substantial scalability challenges due to continuous, significant growth of the state represented in the data plane. Distributed switch architectures introduce additional constraints on efficient implementations from both lookup time and memory footprint perspectives. In this work we explore efficient FIB representations in common distributed switch architectures. Our approach introduces substantial savings in memory footprint transparently for existing hardware. Our results are supported by an extensive simulation study on real IPv4 and IPv6 FIBs.

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