The Development of Network Address Translation and Protocol Translation on Embedded Linux

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ABSTRACT

Rapid growth of Internet participants and development of mobile computing have escalated the depletion of limited 32bits IPv4 addresses. In responding, newer IPv6 that equipped with 128 bits addresses is developed. The transition of IPv4 to IPv6 takes time, hence IETF develops a series of schemes for the Internet to sustain both IPv4 and IPv6 during the transition. Among these schemes, NAT-PT is well adapted for its simplicity. This paper concerns implementation of NAT-PT on an embedded based Residential Gateway and assesses the power dissipation of the implementation using dynamic profiling and cross-compiling techniques.

Keywords : Embedded system,Linux,IPv6,Gateway,NAT-PT

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