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非对称IPv6网络地址空间的半状态翻译方法

Partial-state translation method between asymmetric IPv6 address spaces

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中文关键词: [IPv6网络地址翻译](#) [IPv6网络前缀翻译](#) [地址映射](#)

英文关键词: [IPv6 network address translation](#) [IPv6 network prefix translation](#) [address mapping](#)

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中文摘要:

提出了一种非对称的IPv6地址空间的半状态翻译方法, 可以支持短前缀到长前缀的地址转换, 同时可以尽可能少地记录地址翻译过程中产生的状态信息, 以降低设备存储负载。实验表明, 该方法能够实现任意长度前缀的IPv6地址的半状态翻译, 同时可以在传输层保持校验和的中立性, 避免端口转换, 实现对传输层协议和上层应用的透明。本方法是对IPv6前缀无状态翻译的补充, 使得IPv6地址翻译方法更为普适。

英文摘要:

A Partial-state IPv6 NAT method was proposed, which could be used to support the address transition from shorter prefix address to longer one. Meanwhile, this method is able to reduce the recording of the translation information as much as possible in order to decrease the load of translation equipment. The experiments show that the proposed method is able to realize the partial-state translation for the IPv6 addresses with arbitrary length. Moreover, it is able to keep the checksum-neutral at the transport layer and avoid port translation, with which it is able to provide transparency for transport layer and application layer protocols. This method, which is more universal, is complementary solution for IPv6 prefix stateless translation.

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