UNIVERSITI TEKNOLOGI MARA

IPV6 TUNNELING THROUGH MULTIPLE LAYERS OF NATS USING XTEREDO

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ABSTRACT

Internet Protocol (IP) is an internet standard that is used to send and receive messaged between devices such as computers. IPv6 was developed in 1990s, mandated by IETF as the next generation protocol to replace IPv4 since we are running out of IPv4 address. IPv6 has been designed to be extensible and offers support for new options and extensions. It is suggested that the IPv6 deployment was done in a gradual manner adopting several well recognized transition mechanism. The step by step approach was taken to ensure that the transition would be free of any technical glitches or security issues. Several transition mechanisms are designed to ensure the transition process going smoothly. However, the current Teredo and SymTeredo solution are found out still have their limitations on multiple NATs environment especially on combination with Symmetric NATs environment.This paper proposed XTeredo, an extension of Teredo and SymTeredo with capability to traverse combination of other type of NATs with Symmetric NATs. This new solution preserves the Teredo and SymTeredo architecture, and offers backward compatibility with the original Teredo and SymTeredo.