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# Internet拓扑建模综述

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## Abstract

As the basis of Internet development and exploitation on higher levels, the Internet topology modeling starts from the random model to the hierarchical model. Then it developed to a more realistic one, scale-free network model. Many characteristics of topology are analyzed with the corresponding metrics, including power law. Moreover, the related work on the current topology models, topology generation algorithms, and topology generators is fully presented. Finally, the new problems and challenges which arise from current research are discussed and some suggestions for future research work are put forward.

Zhang Y, Zhang HL, Fang BX. A survey on Internet topology modeling. *Journal of Software*, 2004,15(8): 1220~1226.

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## 摘要

Internet拓扑建模是在更高层次上开发、利用Internet的基础。Internet拓扑模型研究经历了从随机型到层次型,再到无尺度(scale-free)网络的过程。对包括幂率(power law)在内的多种Internet拓扑特征及其相应度量进行了分析,对现有的拓扑模型、拓扑生成算法以及拓扑生成器进行了全面的综述。最后论述了目前研究中遇到新的问题与挑战,并对今后技术路线进行了总结。

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