

网络、通信与安全

## BACnet/IP在广域网的建模仿真与传输性能分析

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**摘要** BACnet是楼宇自动控制系统通信协议。利用NS\_2对BACnet/IP进行了建模。分析了BACnet广域网的延迟特性, 包括分析: 节点数量, 报文长度对网络传输延迟的影响, 并对几种最常见的证实服务和非证实服务进行了模拟。分析结果可以用于调整BACnet应用层服务的网络参数, 并且对设计和操作BACnet远程控制系统有指导意义。

**关键词** [NS\\_2](#) [BACnet/IP](#) [BACnet](#) [模拟](#) [广域网](#)

分类号

## Model and analysis of transmission performance of BACnet/IP wide area networking

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### Abstract

BACnet is a standard data communication protocol for building automation and control systems. In this study, the performance of BACnet wide area networking is investigated using simulation models developed using NS\_2. This study evaluates the delay characteristics of BACnet/IP networks being used to deliver BACnet application services, and also evaluate the performance of BACnet wide area networks in terms of transmission delay for a varying number of nodes and message length. Analysis of the simulation results was used to identify the network parameters that influence the performance of BACnet application services and to develop recommendations that should be considered when designing and operating BACnet systems.

**Key words** [NS\\_2](#) [BACnet/IP](#) [BACnet](#) [simulation](#) [wide area network](#)

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