Accuracy of packet loss monitoring over networked CPE

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ABSTRACT

In this paper we study the accuracy achievable when using probing to measure packet loss probability. Active monitoring using widely used to measure network performance at the packet level, especially where direct measurements from network nodes this paper we develop an analytical solution that allows us to predict the number of samples (probes) needed to measure pack This formula relates the number of probes needed to the networking scenario, the traffic characteristics, the target packet loss the accuracy to which this loss probability must be resolved. We show that the number of probes required to accurately measu probability is a highly sensitive function of the link bandwidth, the traffic load and burstiness, and the packet loss probability it how many probes are needed in certain typical scenarios involving either VoIP or generic data traffic models

INDEX TERMS

- **INSPEC**
  - **Controlled Indexing**
    computer network management , probability , telecommunication traffic
  - **Non Controlled Indexing**
    CPE , PLP , active monitoring , corporate premises equipment , network performance , packet loss probability , sensitive function , traffic