

Advances in Mobility Management for IP Networks

Editors:

Aisha Hassan Abdalla Hashim

Othman Khalifa

Shihab A. Hameed



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THE STUDY OF SIGNALING COST OF M-HMIPv6 WITH CONTEXT TRANSFER

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19.1 INTRODUCTION

This chapter analyzes the signaling cost of the Multicast Hierarchical Mobile IPv6 (M-HMIPv6) with Context Transfer Protocol (M-HMIPv6/CXTP) [1] scheme. It also discusses the signaling cost performance of M-HMIPv6/CXTP with the Multicast Hierarchical Mobile IPv6 (HMIPv6) [2]. In the M-HMIPv6/CXTP scheme the multicast information transfer is implemented based on the CXTP [3] predictive handover scheme.

19.2 SIGNALING COST

The signaling cost can be defined as the messages involved in packets transmission other than the data itself such as the control message and the process of encapsulation and decapsulation. It is assumed that the total signaling cost is equal to the summation of the packet delivery cost and Binding Update (BU) messages cost. In addition, it is assumed that the signaling cost of message depends on the number of binding update messages involved in both approaches.

The signaling cost packets transmission for HMIPv6 and M-HMIPv6/CXTP derived from the signal flows. Fig. 19.1 shows the process flow for Hierarchical Mobile IPv6 [2], while Fig. 19.2 shows the process flow for M-HMIPv6/CXTP.