Access Control List Provides Security in Network

Abstract

A significant component representing network security is access control list inspects values of every packet's field and come to a decision how to implement the network policy. Real-life access control list are naturally four dimensional over fields of four packets such as: IP address of source, destination, port number of destination and type of protocol. In several access control list, the source and destination port number fields make use of a range field constraint while the internet protocol address of source and destination and protocol type fields make use of a prefix or else ternary field constraint. Compression of access control lists is functional for system management of network and optimization for the reason that diminishing large access control lists rule sets to a great extent reduces the difficulty of supervising and optimizing configurations of network. Due to an augment in Internet applications besides enhancement in identified vulnerabilities and attacks, compression lists of access control may perhaps sanction users with outsized access control lists to make use of such devices and moreover this may develop into an increasingly critical concern intended for several users. An algorithm of polynomial time optimal was proposed for the weighted one-dimensional prefix compression problem of Access control lists by means of dynamic programming.

Refer
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Indexes


Index Terms

Computer Science
Security
Keywords
Access control list  Dynamic programming  Access control lists compression
polynomial time optimal