

网络、通信与安全

## 基于双数组有限状态机的URL访问控制算法

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**摘要** 业务选择网关 (SSG) 中的访问控制模块从用户请求数据包中解析出URL, 并且根据用户的URL访问权限进行访问控制和路由选择。首先提出了改进的有限状态机模型, 然后用双数组表示该有限状态机, 并提出了优先处理分支结点较多的结点的优化策略。实验证明该算法不仅提高了查询速度, 而且占用的存储空间也较少, 进一步减少了数据的稀疏。最后将该算法应用在访问控制模块上, 实践证明此算法可行、高效。

**关键词** [业务选择网关](#) [URL](#) [访问控制](#) [有限状态机](#) [双数组](#)

分类号

## URL access control algorithm based on double-array finite state machine

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### Abstract

The Access Control Module in the Service Selection Gateway (SSG) is a scheme in which URL can be parsed from user request data packet, and access control and route selection can be finished according to the user access privilege. A model of improved Finite State Machine is first presented, and then described with Double-Array. Also an improved strategy that the node with most child nodes is processed firstly is presented. This algorithm not only improves search speed, but also needs a smaller space for data store than others and reduces the data sparseness. The proposed algorithm is applied to the Access Control Module. Experimental results show that this algorithm is of good efficiency.

**Key words** [Service Selection Gateway \(SSG\)](#) [URL](#) [access control](#) [Finite State Machine \(FSM\)](#) [double-array](#)

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