

论文

XML文档压缩技术比较研究

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摘要:

XML已经成为互联网上信息交换和信息表示的事实标准。然而XML文档中包含大量重复出现的标签和结构等冗余信息,导致XML文档在查询处理和数据交换时付出更高的代价,特别在带宽和资源受限的设备上显得更为突出。压缩技术是解决这一问题的重要途径。搜集了近几年提出的各种XML压缩方法,从压缩率、压缩与解压时间、内存消耗、查询性能等方面比较分析了六个具有代表性的XML压缩技术,最后简要归纳了各自的优点和存在的不足,并探讨未来努力的方向。

关键词: XML压缩 查询处理 Web应用

Comparison of XML compression techniques

Abstract:

XML is a de facto standard for exchanging and presenting information on the Web. However, XML data is also recognized as verbosity since it heavily inflates the data size due to the repeated tags and structures. The data verbosity problem gives rise to many challenges of conventional query processing and data exchange. The hindrance is more apparent in bandwidth- and memory-limited devices. Compression techniques are the important way to overcome the verbosity problem. Multifarious XML-conscious compression methods were collected, and six XML-conscious compression technologies were compared and analyzed in terms of compression ratio, compression and decompression times, memory consumption, and query performance. Their advantages and shortcomings were discussed, and then further work of XML-conscious compression was pointed out.

Keywords: XML compression query processing Web applications

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