

Accepted Manuscript

Eagle+: A fast incremental approach to automaton and table online updates for cloud services

Jianxin Li, Hao Peng, Erica Yang, Chunming Hu, Shenghai Zhong, Lihong Wang



PII: S0167-739X(17)30191-7
DOI: <http://dx.doi.org/10.1016/j.future.2017.02.002>
Reference: FUTURE 3320

To appear in: *Future Generation Computer Systems*

Received date: 15 July 2016
Revised date: 22 January 2017
Accepted date: 4 February 2017

Please cite this article as: J. Li, et al., Eagle+: A fast incremental approach to automaton and table online updates for cloud services, *Future Generation Computer Systems* (2017), <http://dx.doi.org/10.1016/j.future.2017.02.002>.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Eagle+: A Fast Incremental Approach to Automaton and Table Online Updates for Cloud Services

Jianxin Li^a, Hao Peng^a, Erica Yang^b, Chunming Hu^{a,*}, Shenghai Zhong^a, Lihong Wang^{c,*}

^aSchool of Computer Science and Engineering, Beihang University, Beijing, 100191, China

^bScientific Computing Department, STFC Rutherford Appleton Laboratory, Oxfordshire, UK

^cNational Computer Network Emergency Response Technical Team/Coordination Center of China, Beijing, China

Highlights:

1. We propose Eagle+, an incremental approach for updating the matching Automaton and Table whilst avoiding recalculating the whole patterns after each change.
2. We implement three atomic operations, adding, updating and deleting, for achieving accurately incremental updating.
3. Eagle+ can save nearly 72\% - 92\% of the time consumption in AC automaton and SOBMA automaton.
4. Eagle+ can perform 100X faster in WM table.
5. The matching accuracy of Eagle+ is same as existing approaches.

Download English Version:

<https://daneshyari.com/en/article/6873326>

Download Persian Version:

<https://daneshyari.com/article/6873326>

[Daneshyari.com](https://daneshyari.com)