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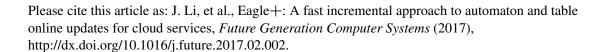
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#### **ACCEPTED MANUSCRIPT**

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

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#### **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 SOBM automaton.
- 4. Eagle+ can perform 100X faster in WM table.
- 5. The matching accuracy of Eagle+ is same as existing approaches.

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