

PISketch: Finding Persistent and Infrequent Flows (Supplementary Material)

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This work has been accepted by ACM SIGCOMM 2022 Workshop on Formal Foundations and Security of Programmable network INfrastructures (**primary version**), and is being reviewed by IEEE/ACM ToN (**journal version**).

Please contact fanzc@pku.edu.cn if you have any questions. This supplemental material may be continuously updated.

A Main Parameter Configurations

A.1 PISketch

Memory Allocation: 10% memory for Bloom filter (with 3 hash functions), and 90% memory for the Weight sketch.

Main Parameter Settings: (1) Defaults: $L = 10$, $V = 1000$, $\mathcal{T} = 3000$; (2) The optimal parameters in Section 5.3/V.C: $p = 5$, $N_{Total} = 5e6$.

A.2 Sol-1: On-Off + CM sketch

Memory Allocation: 10% memory for On-Off, and 90% memory for CM sketch.

Main Parameter Settings: For On-Off, we set the number of arrays to 3 ($d = 3$), and the number of key-value pairs in a bucket to 8 ($w = 8$). For the CM sketch, we set the number of arrays to 3.

A.3 Sol-2: PIE + CM sketch

Memory Allocation: 1% memory for CM sketch, and 99% memory for PIE.

Main Parameter Settings: Since PIE needs to maintain a Space-Time Bloom filter for every period, we use Q times the default memory for PIE, where Q denotes the number of periods. In all our experiments, we set $Q = 1000$. For the CM sketch, we set the number of arrays to 3. We first assign memory to PIE and then allocate the remaining memory to the CM sketch.