

Experience of monitoring
large networks with
ZABBIX

by JSC Intersvyaz

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Makurov**
CIO, engineer
inventor

**Maxim
Chernetsov**
head of NOC,
networks
engineer



one spring evening,
after working hours...

239G – history, trends

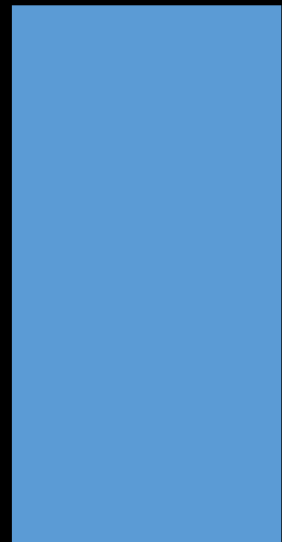
0.9Gb – configuration & rest



Maxim

Mikhail

C vs E

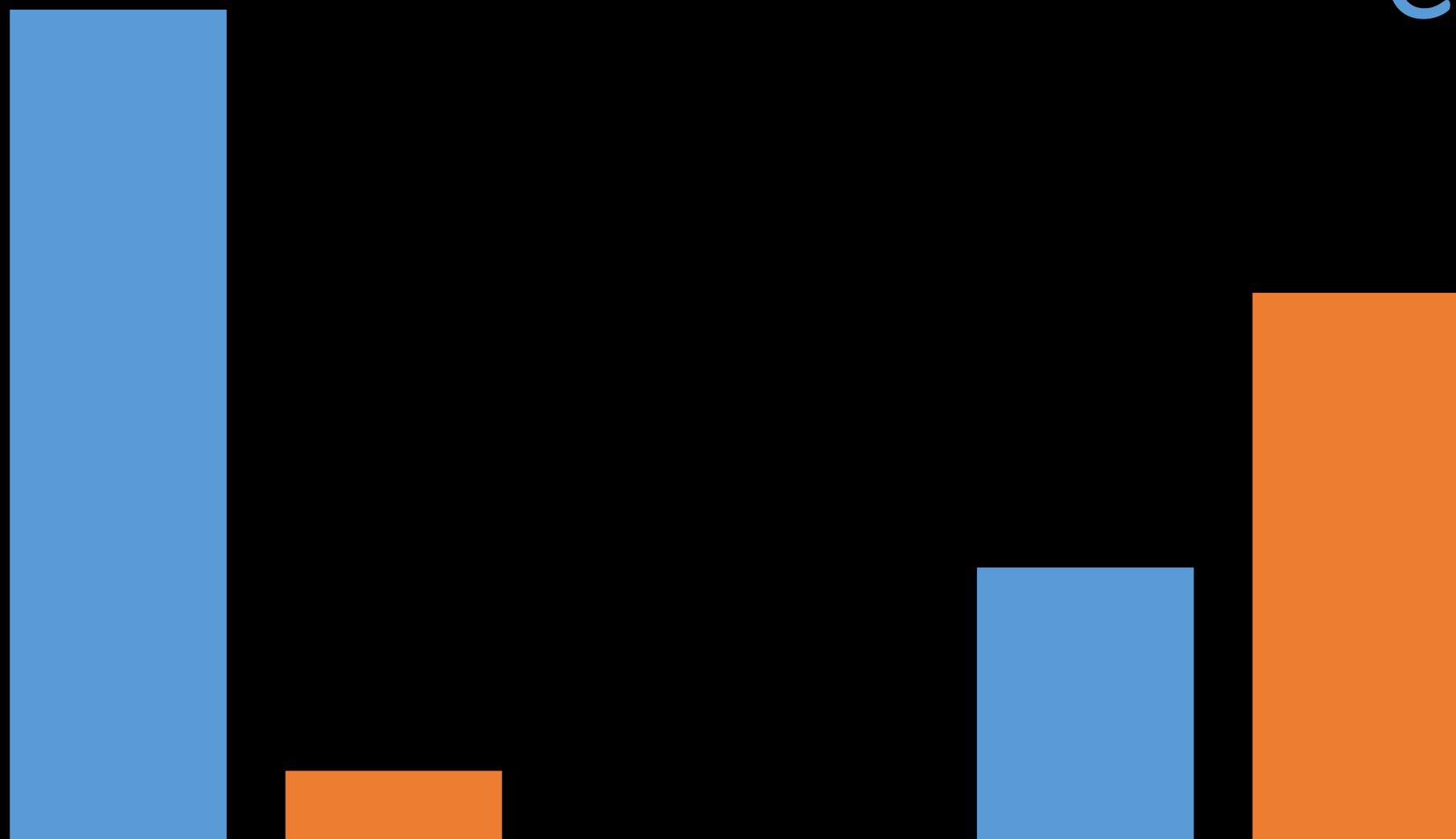


write Speed



fetch speed

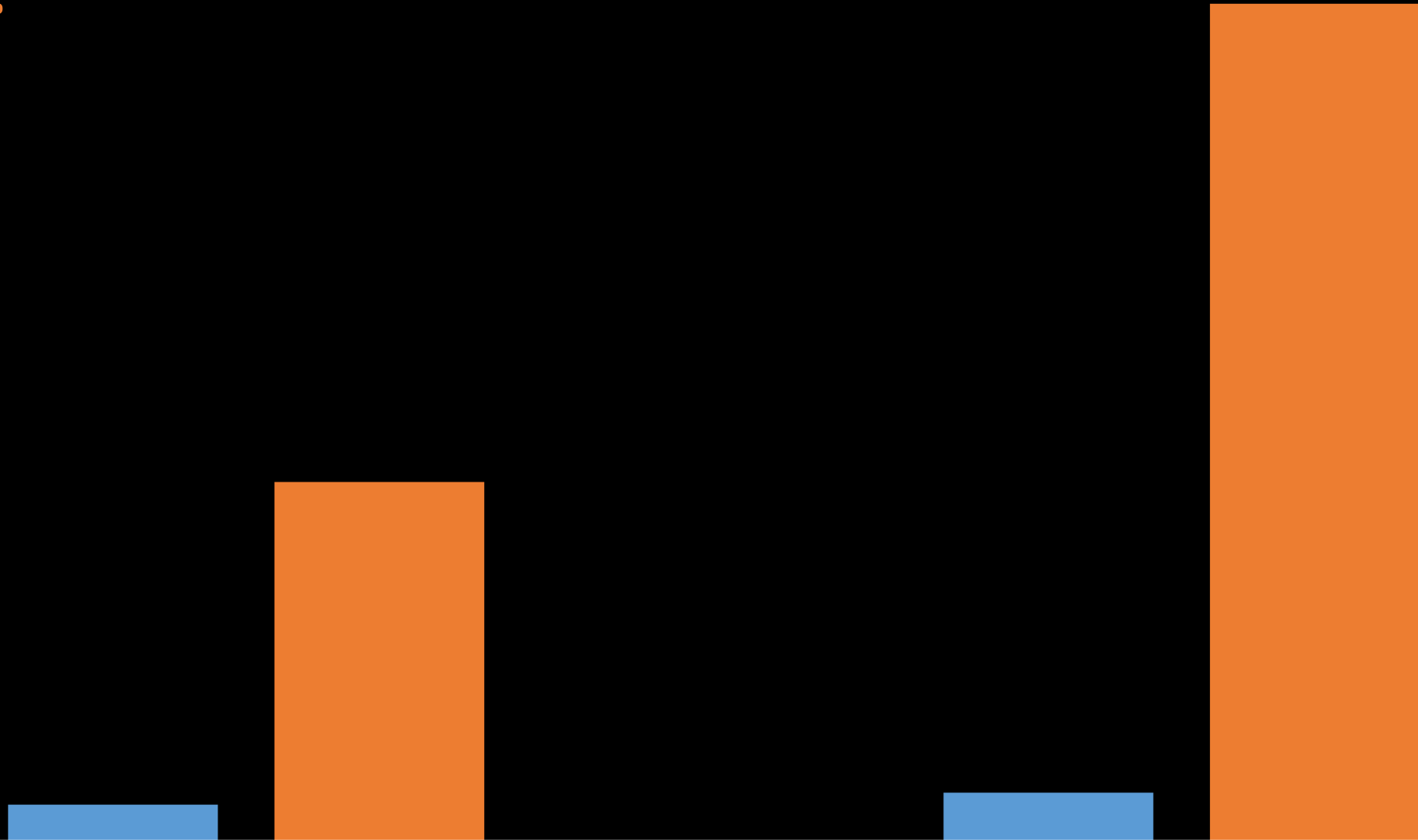
C vs E



rec write /per CPU

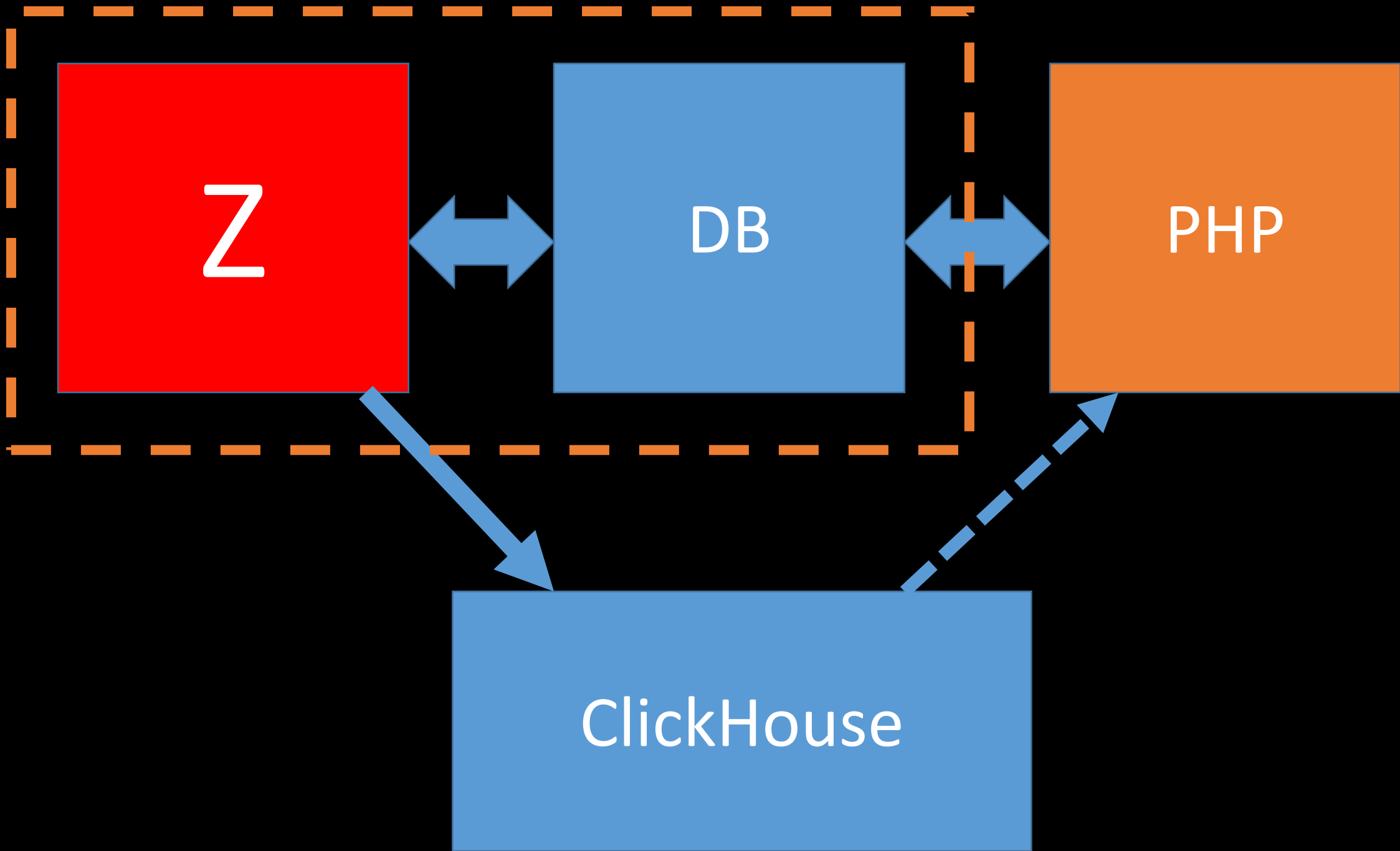
rec read/per CPU

C vs E



Data size

Disk IOPS



4 months ago...

next day...

4k hosts check time, 1 packet

93



FPING

42

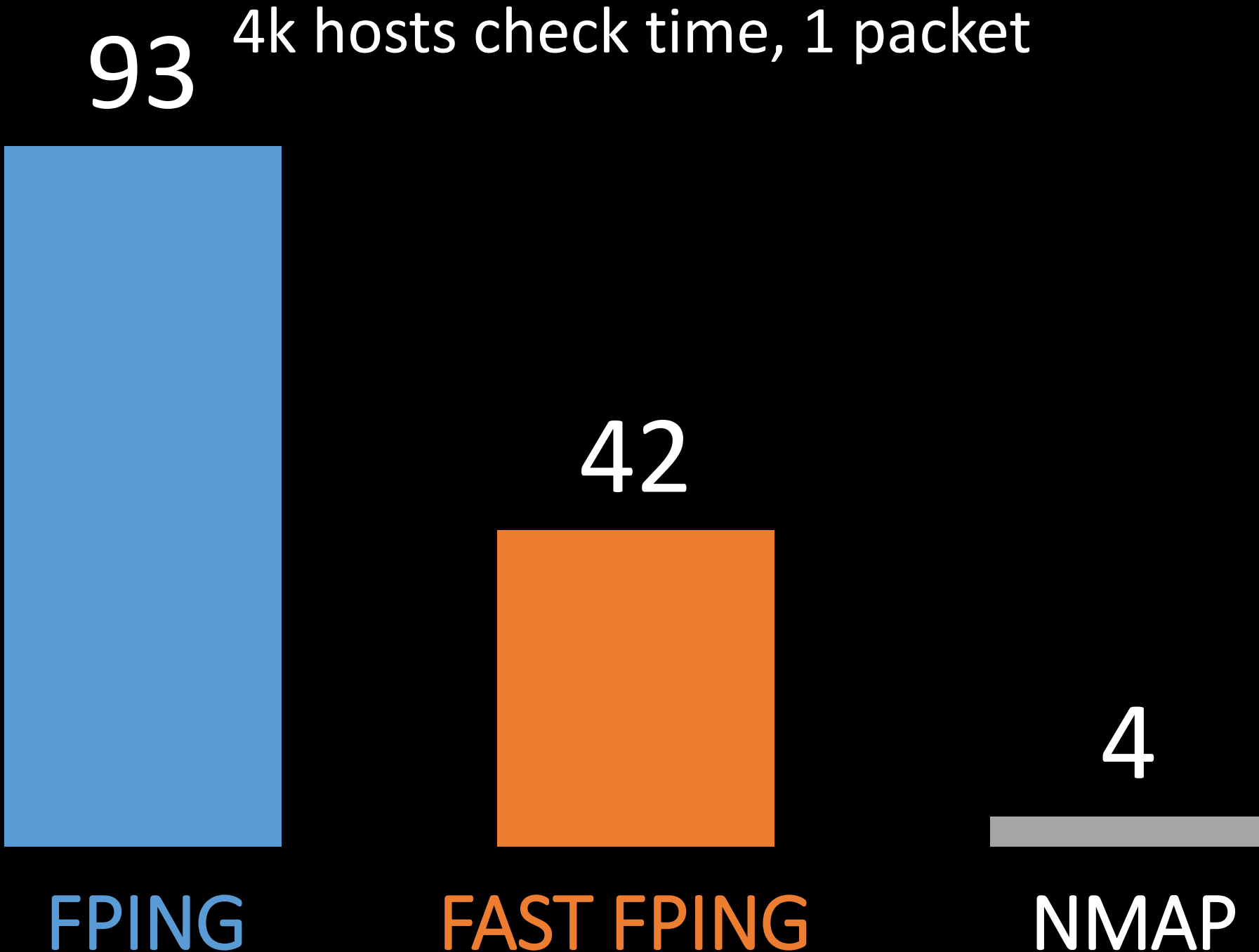


FAST FPING

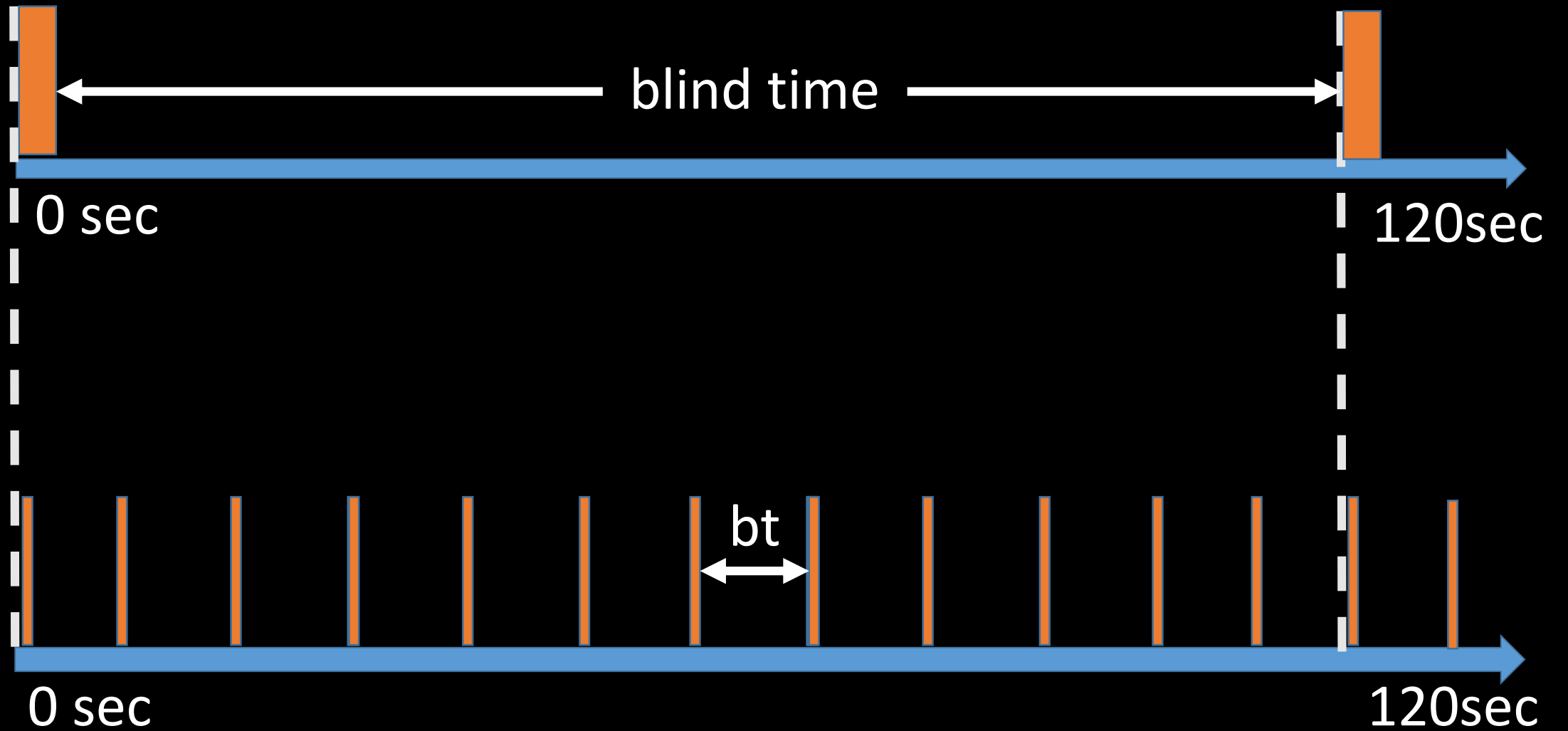
4



NMAP



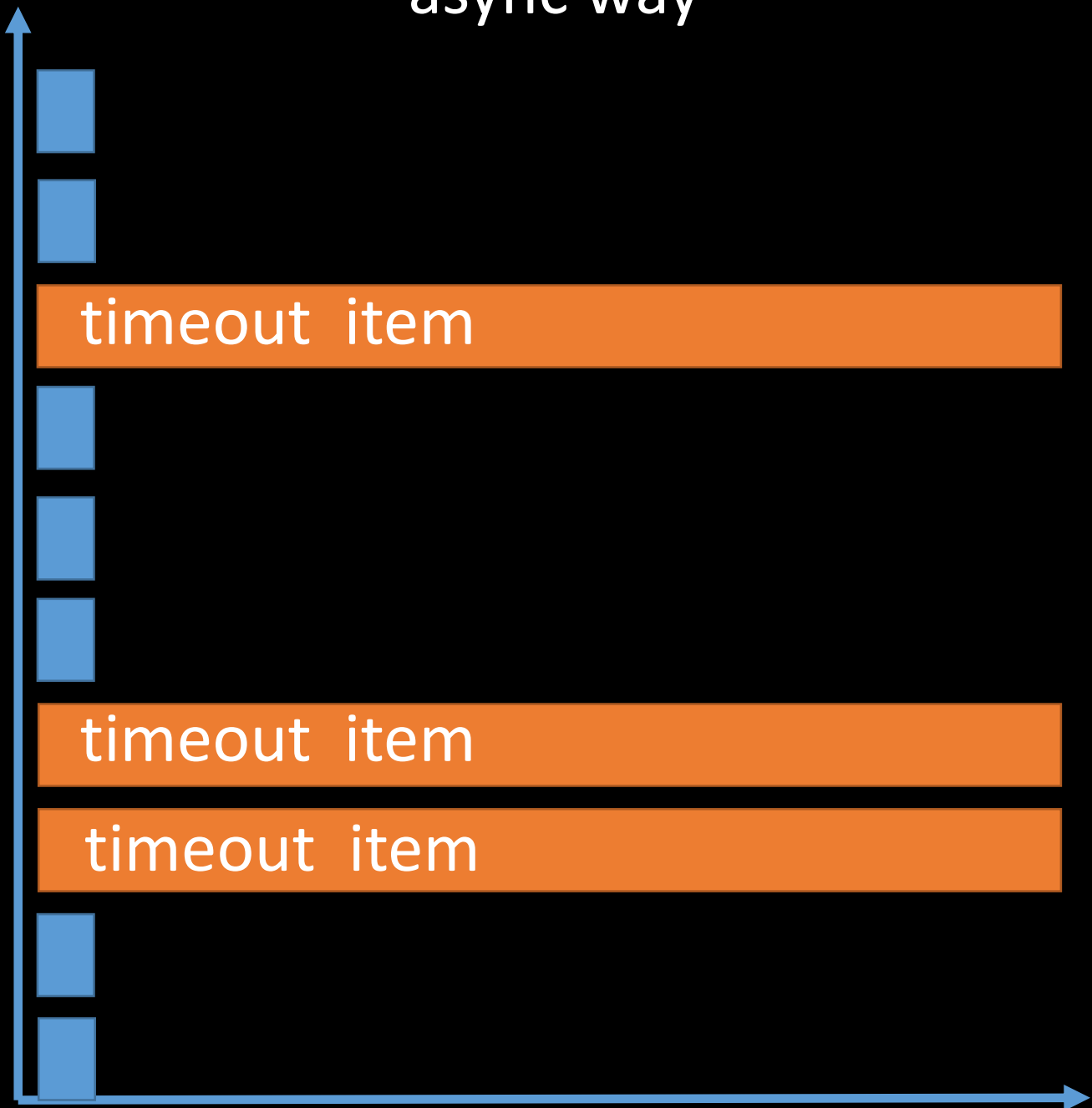
Check intervals



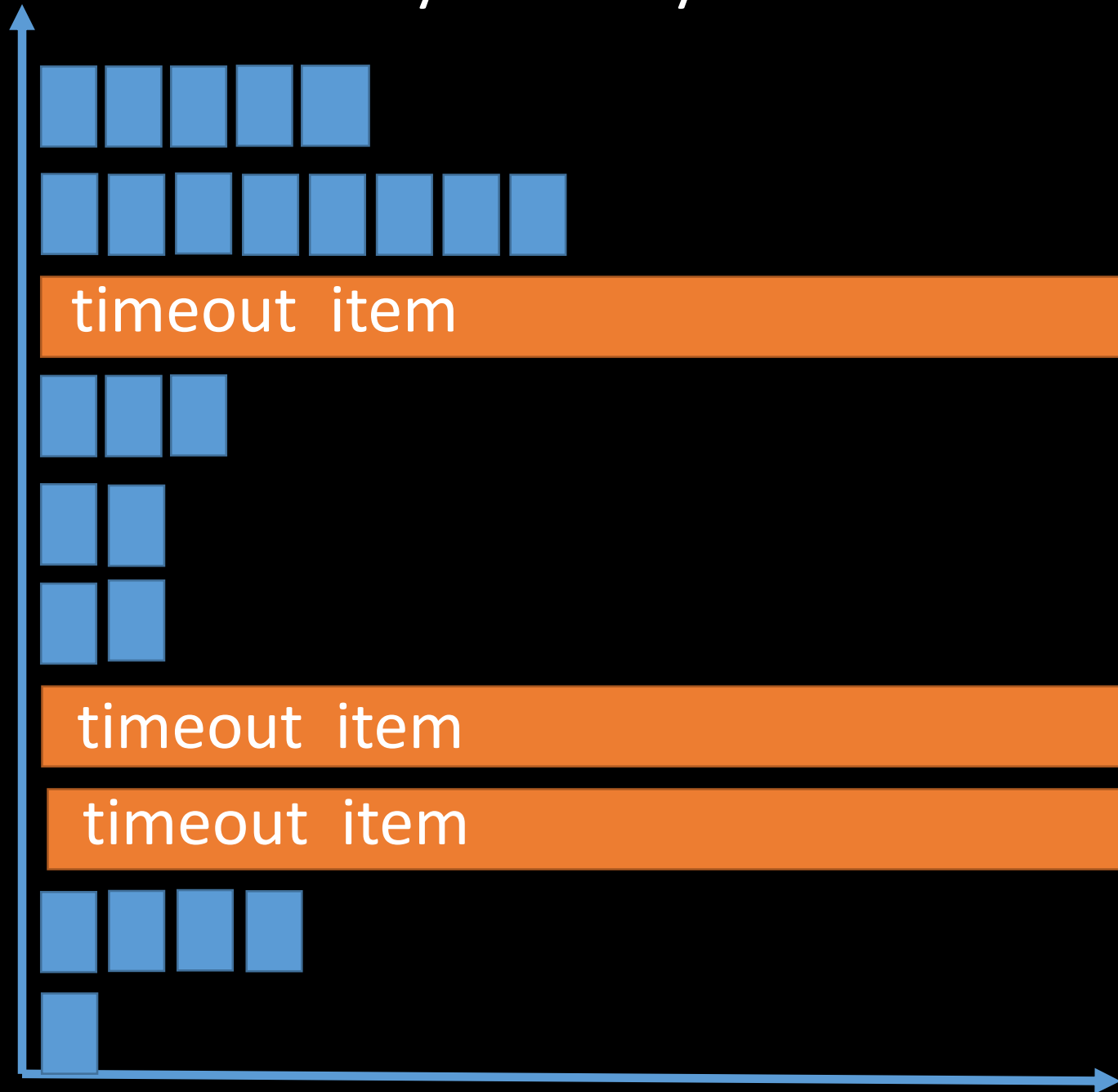
sync way



async way



hybrid way

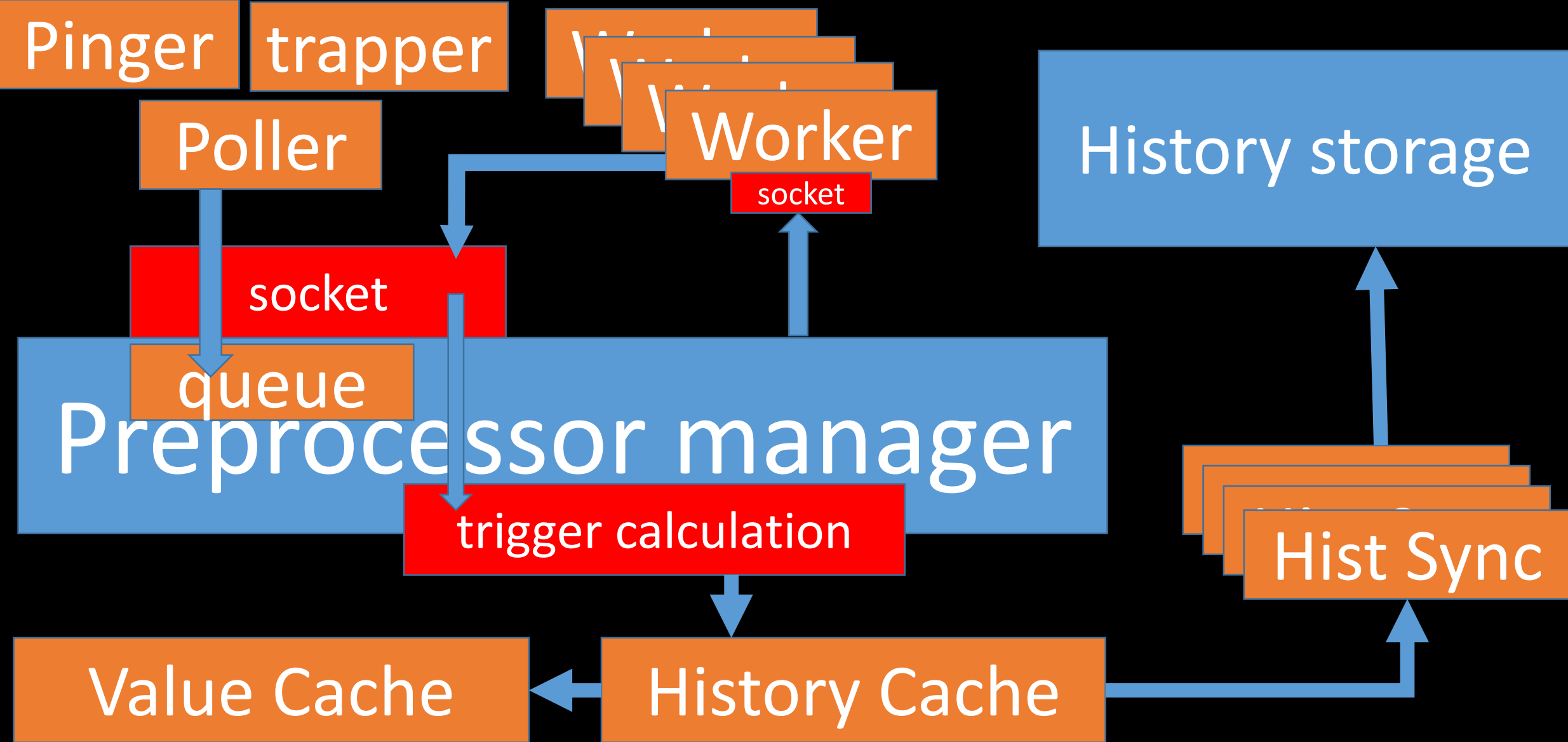


Almost 3 months ago...

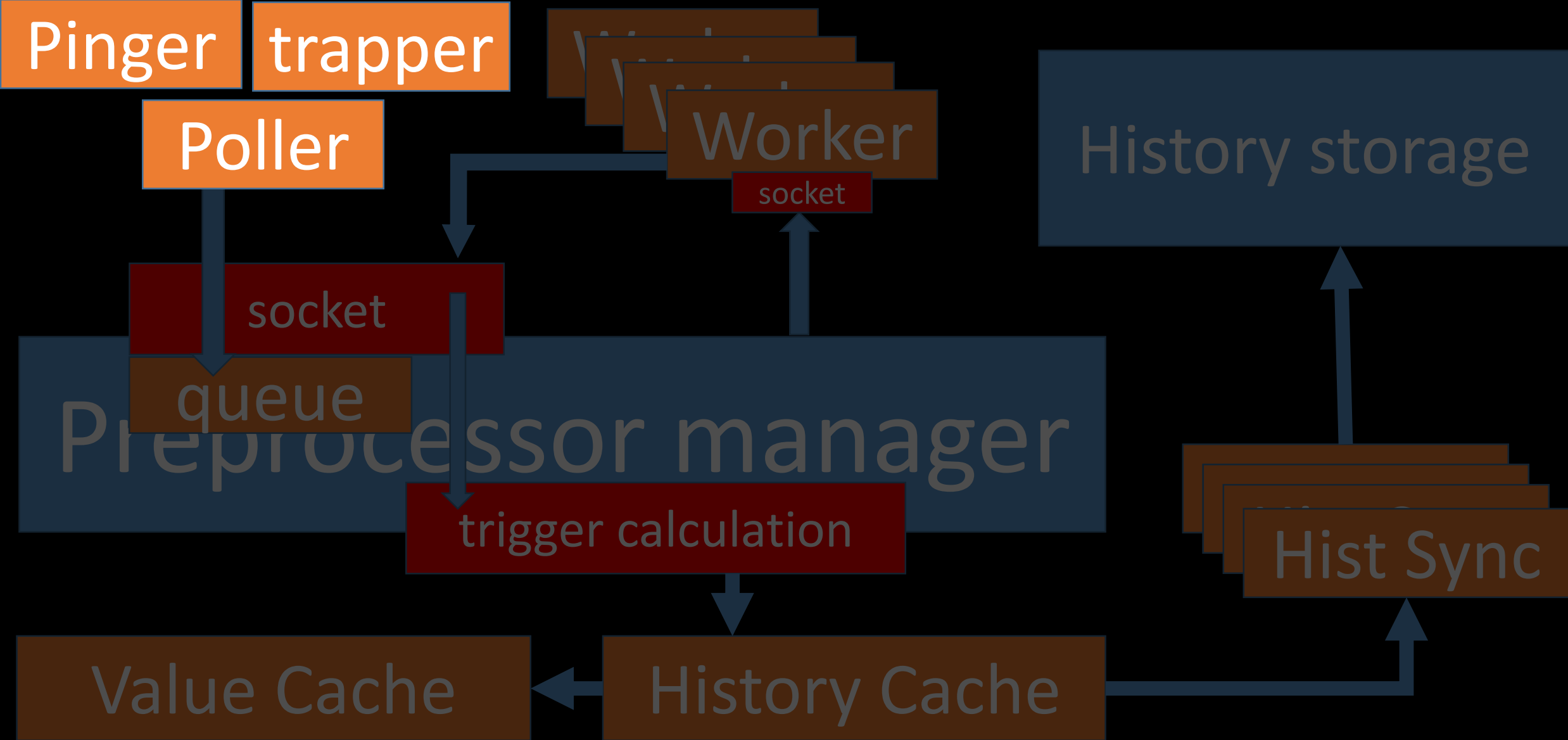
The morning
after upgrade...

5k NVPS

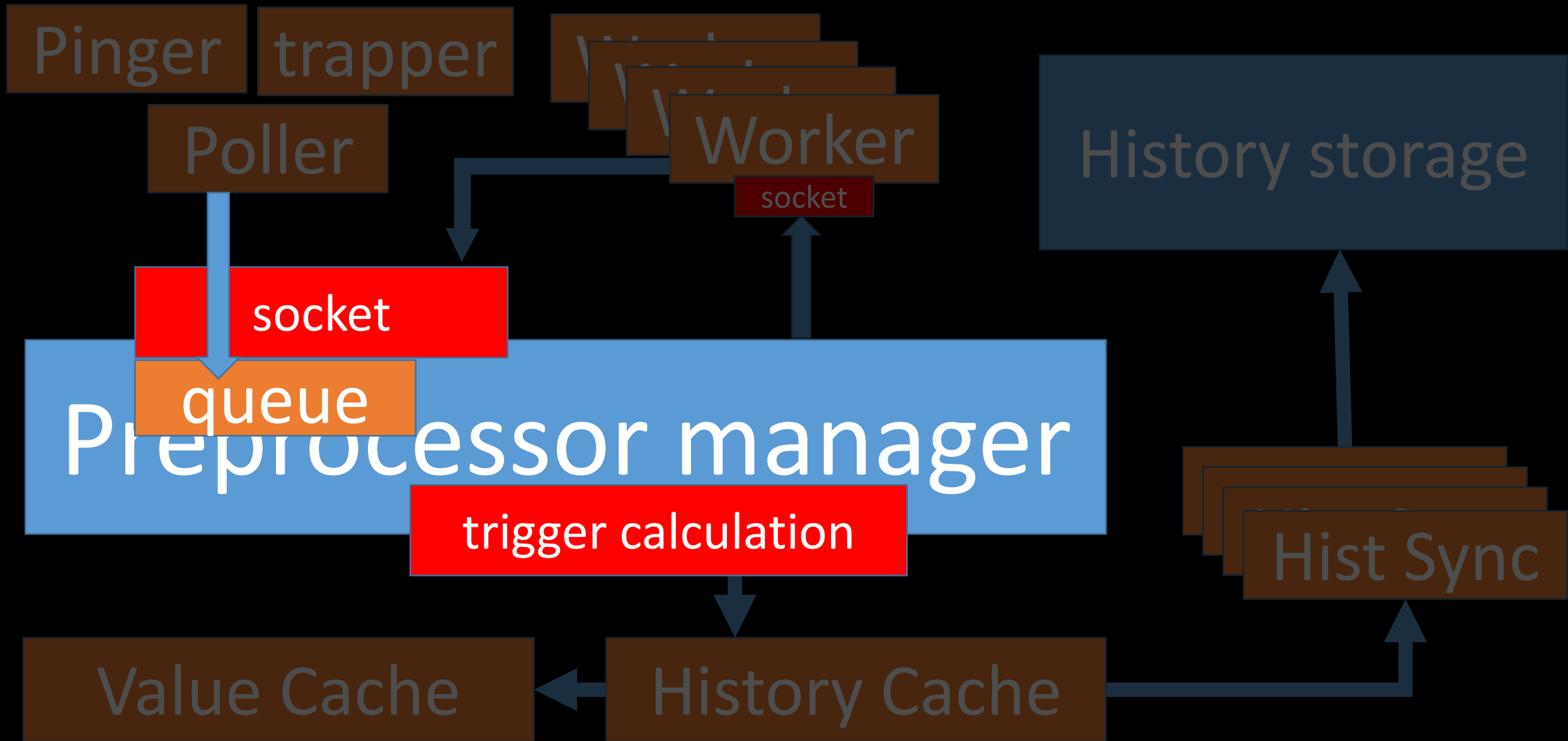
Polling and item's data flow



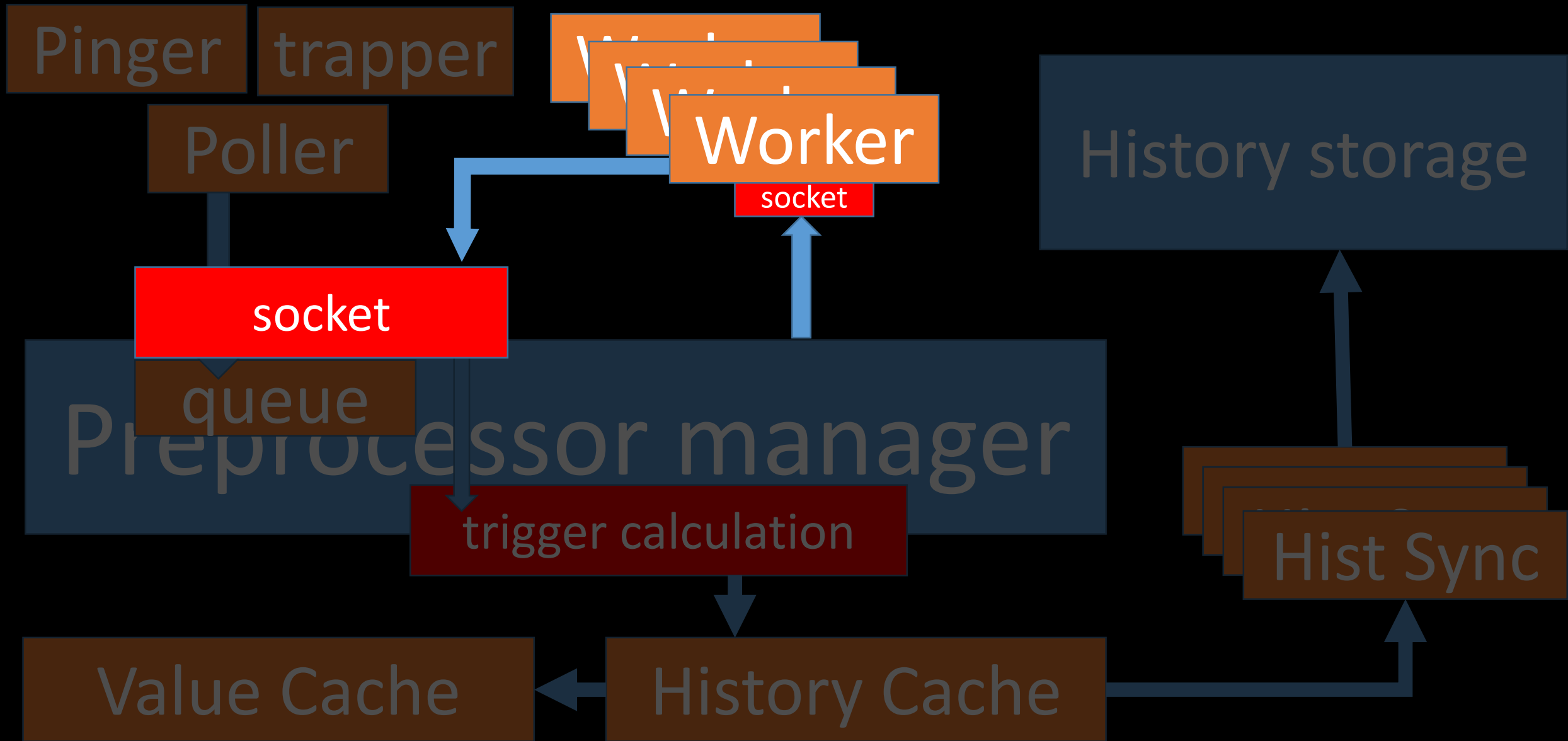
Polling and item's data flow



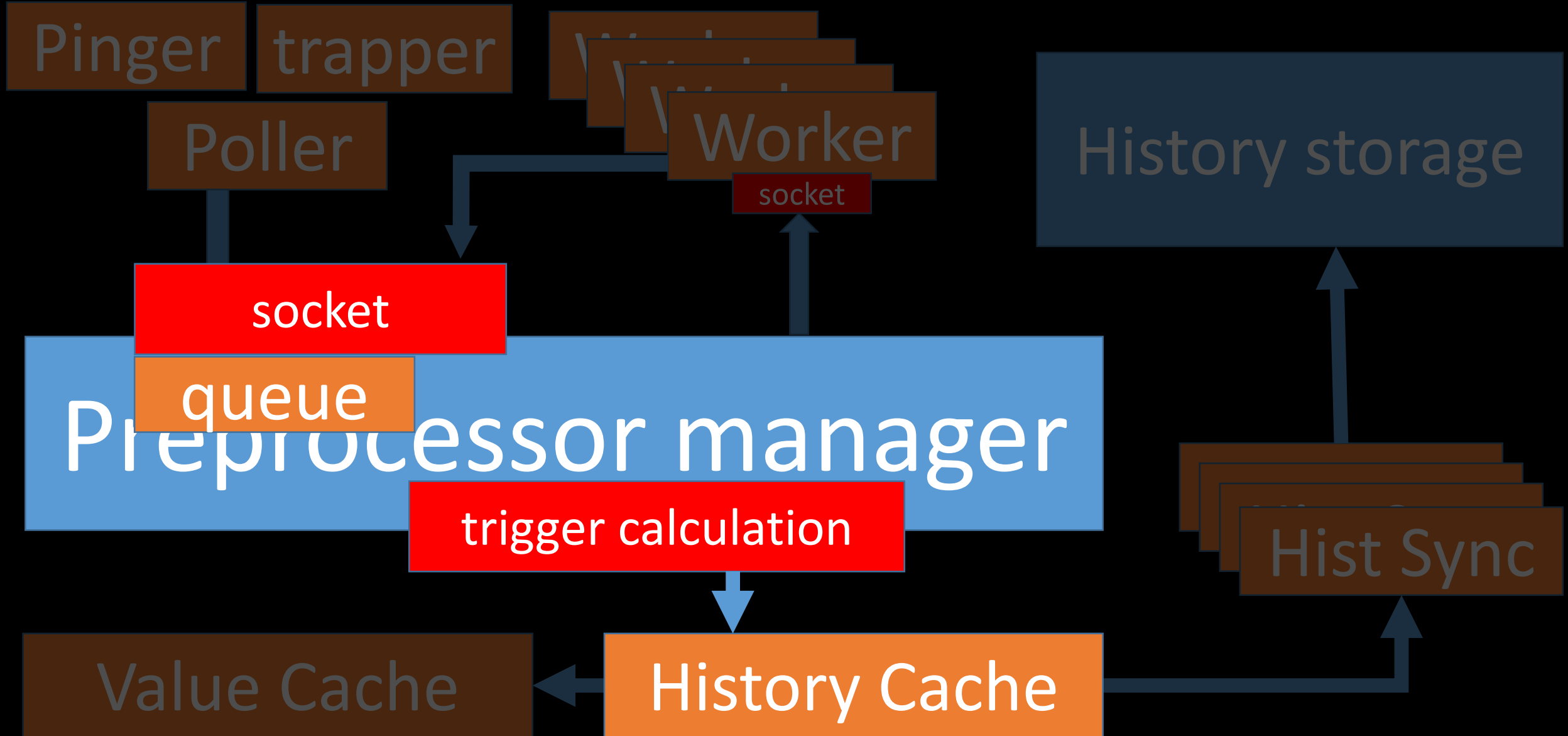
Polling and item's data flow



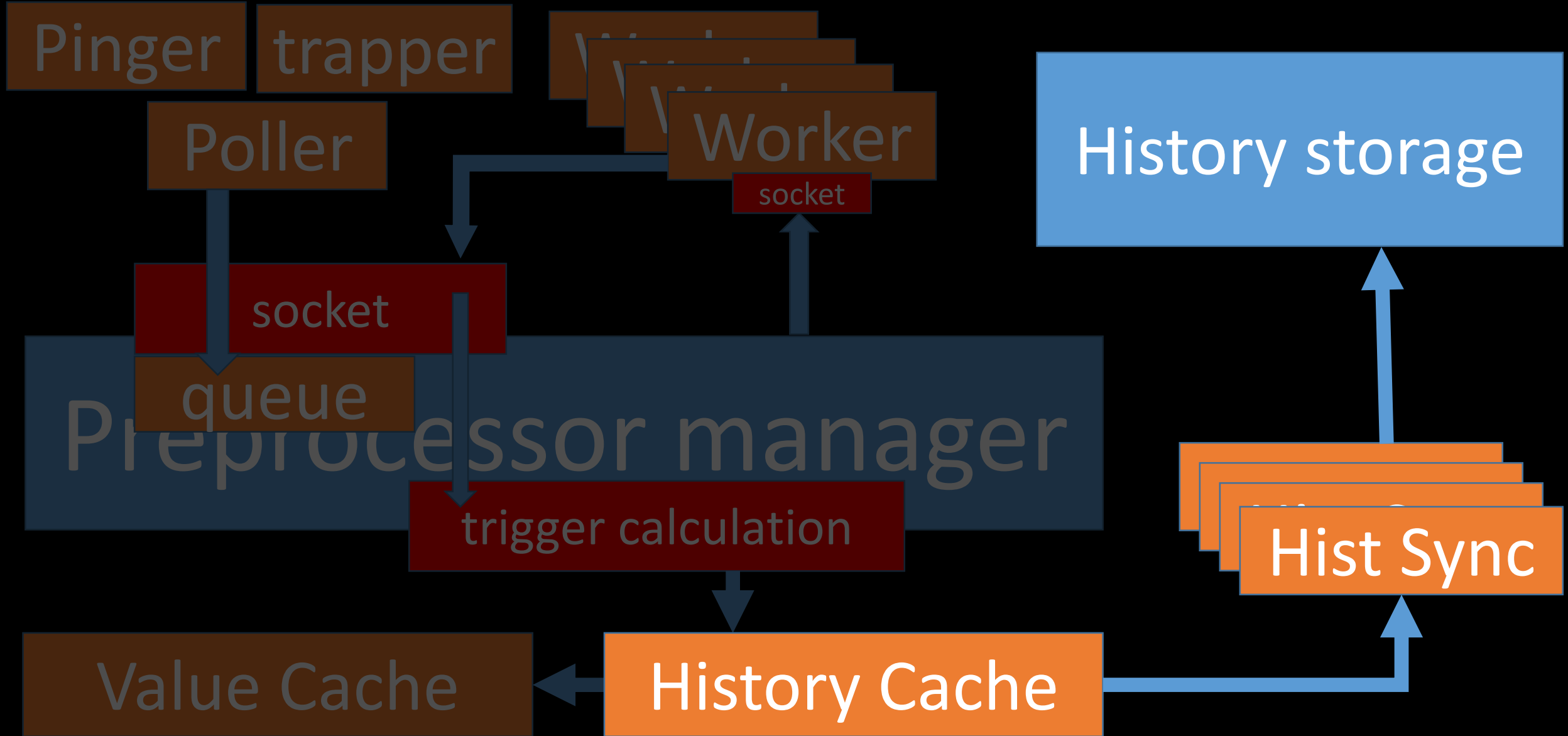
Polling and item's data flow



Polling and item's data flow

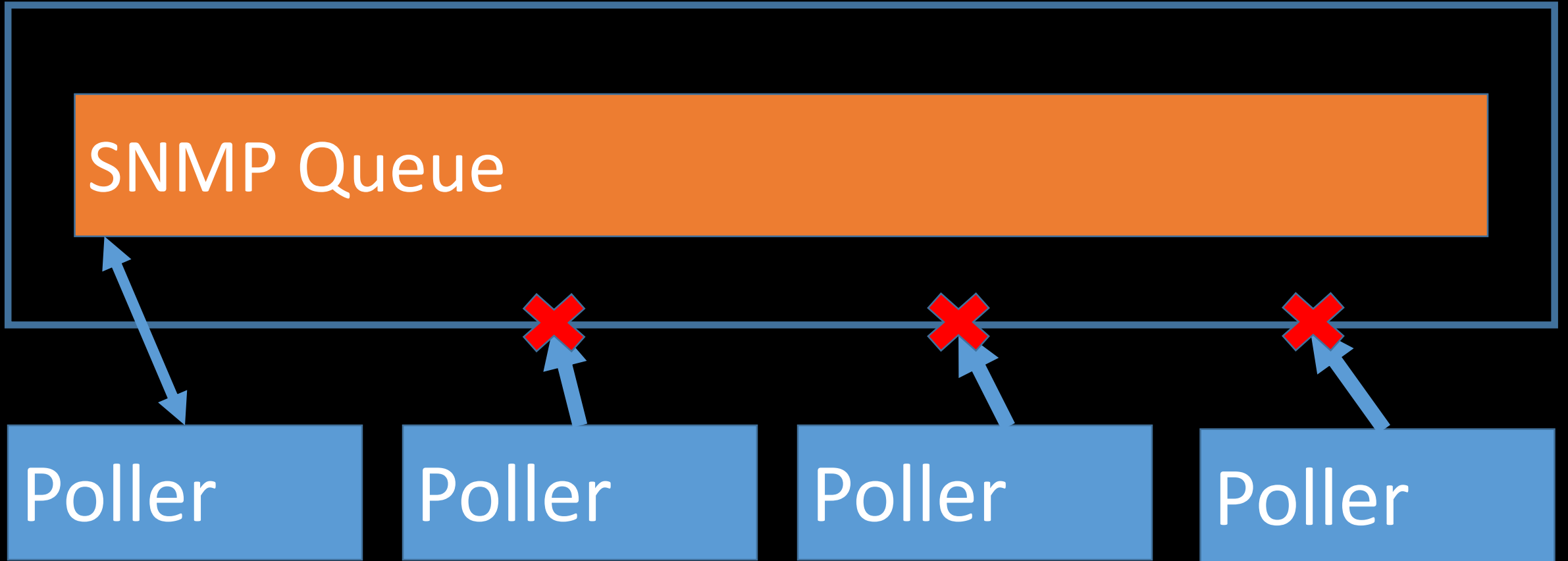


Polling and item's data flow

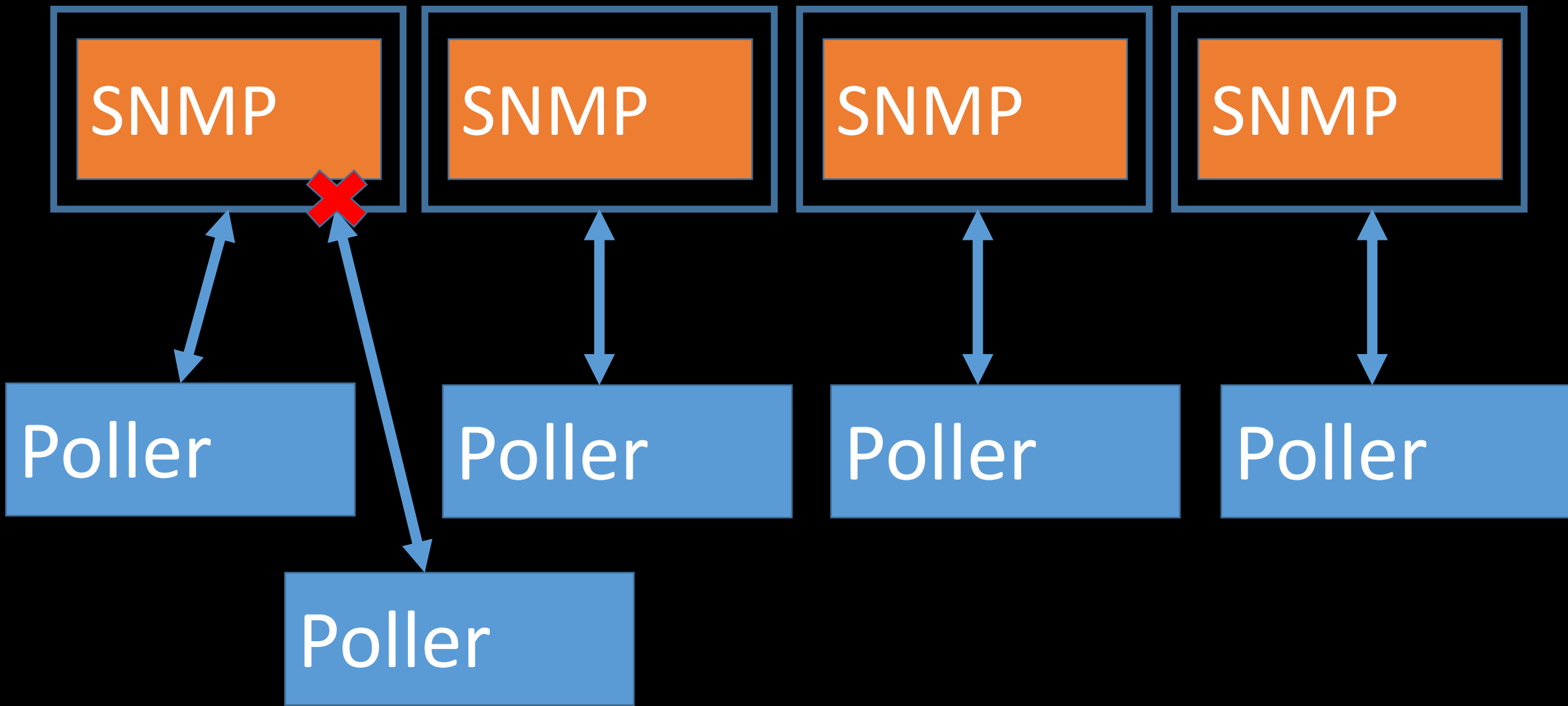




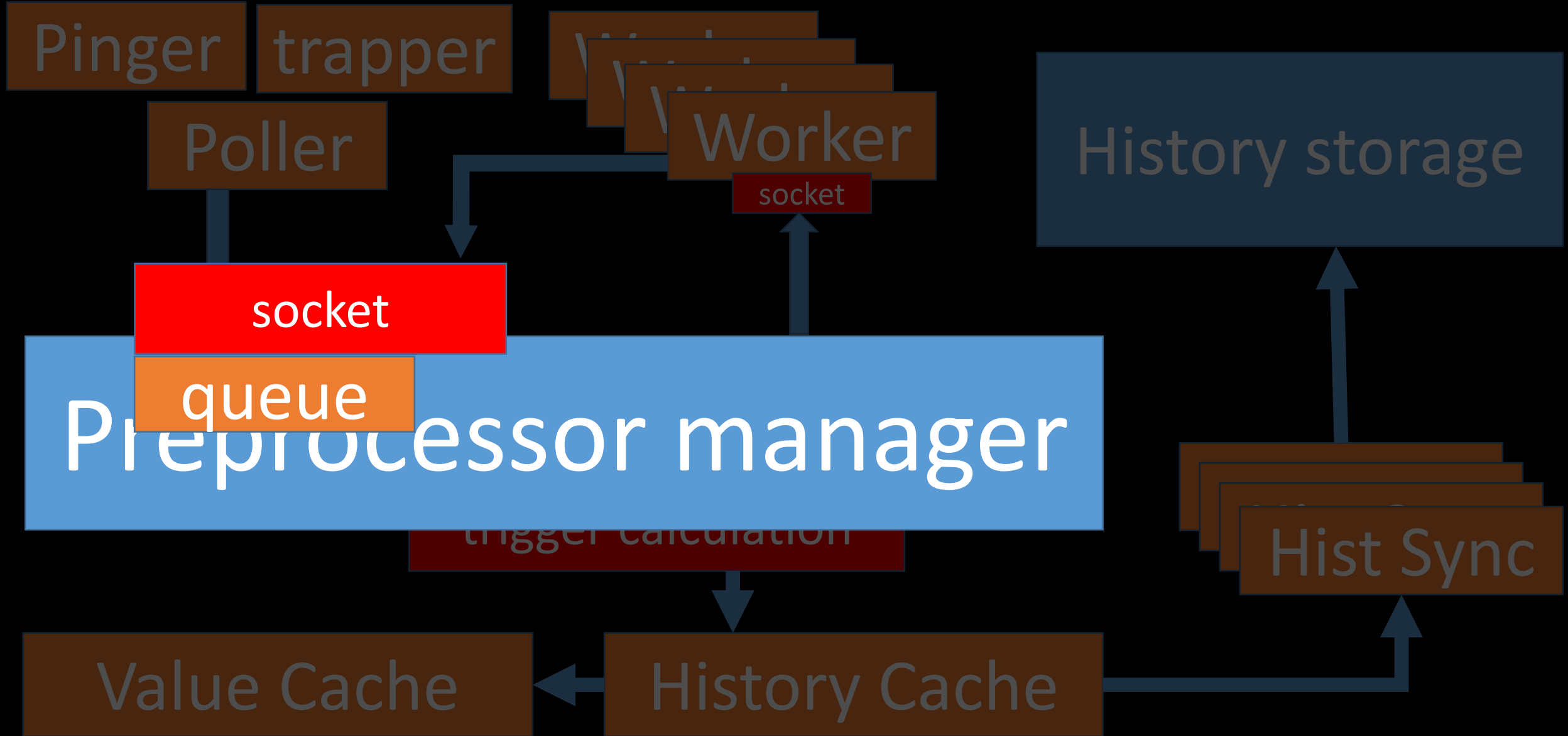
config locking



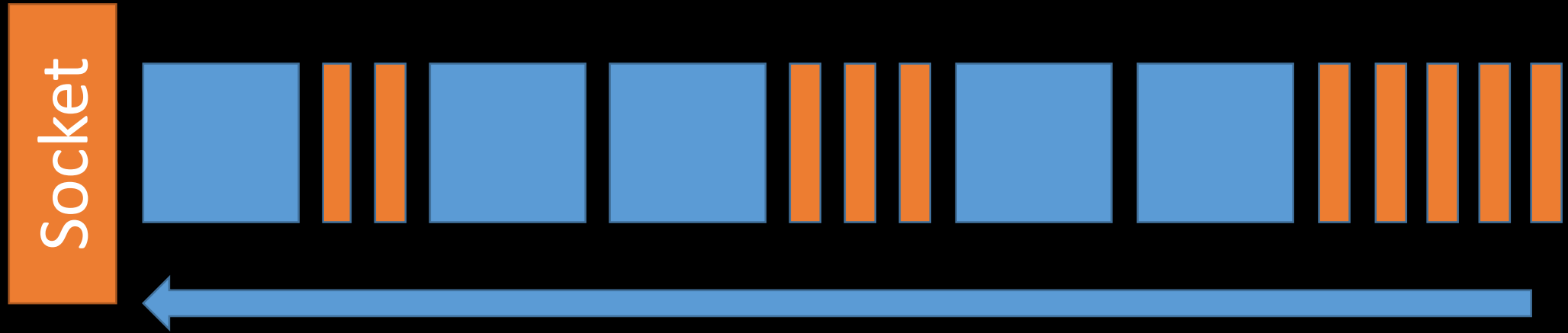
New config locking



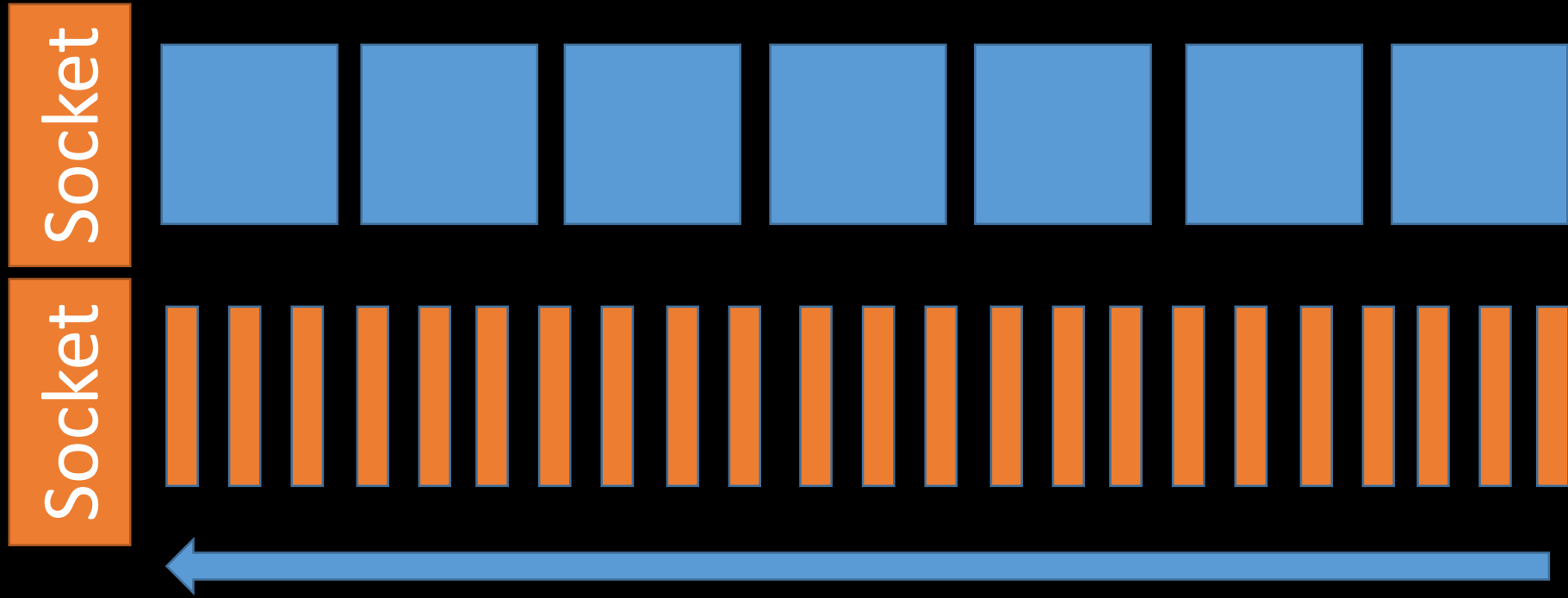
Polling and item's data flow



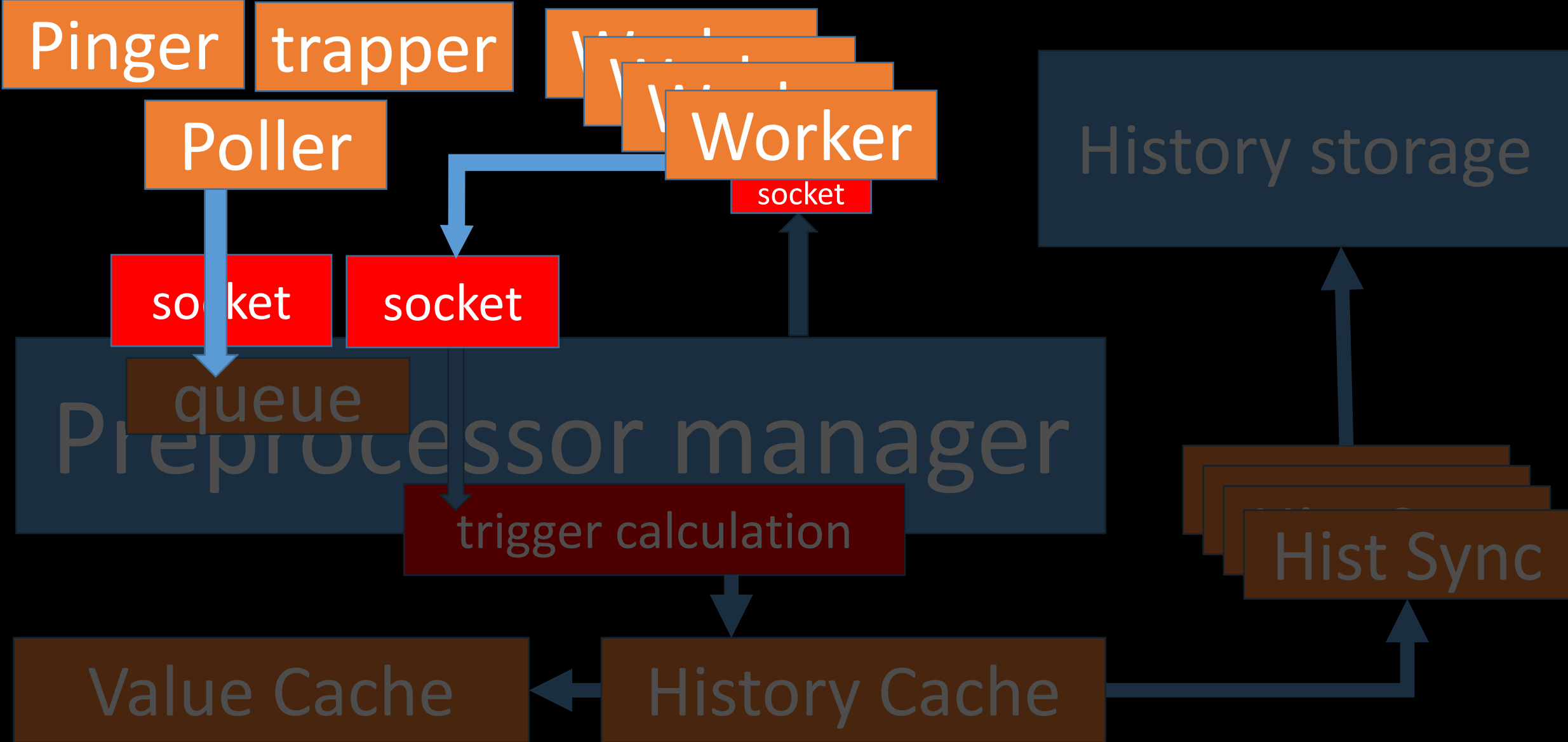
Preprocessor manager: one socket



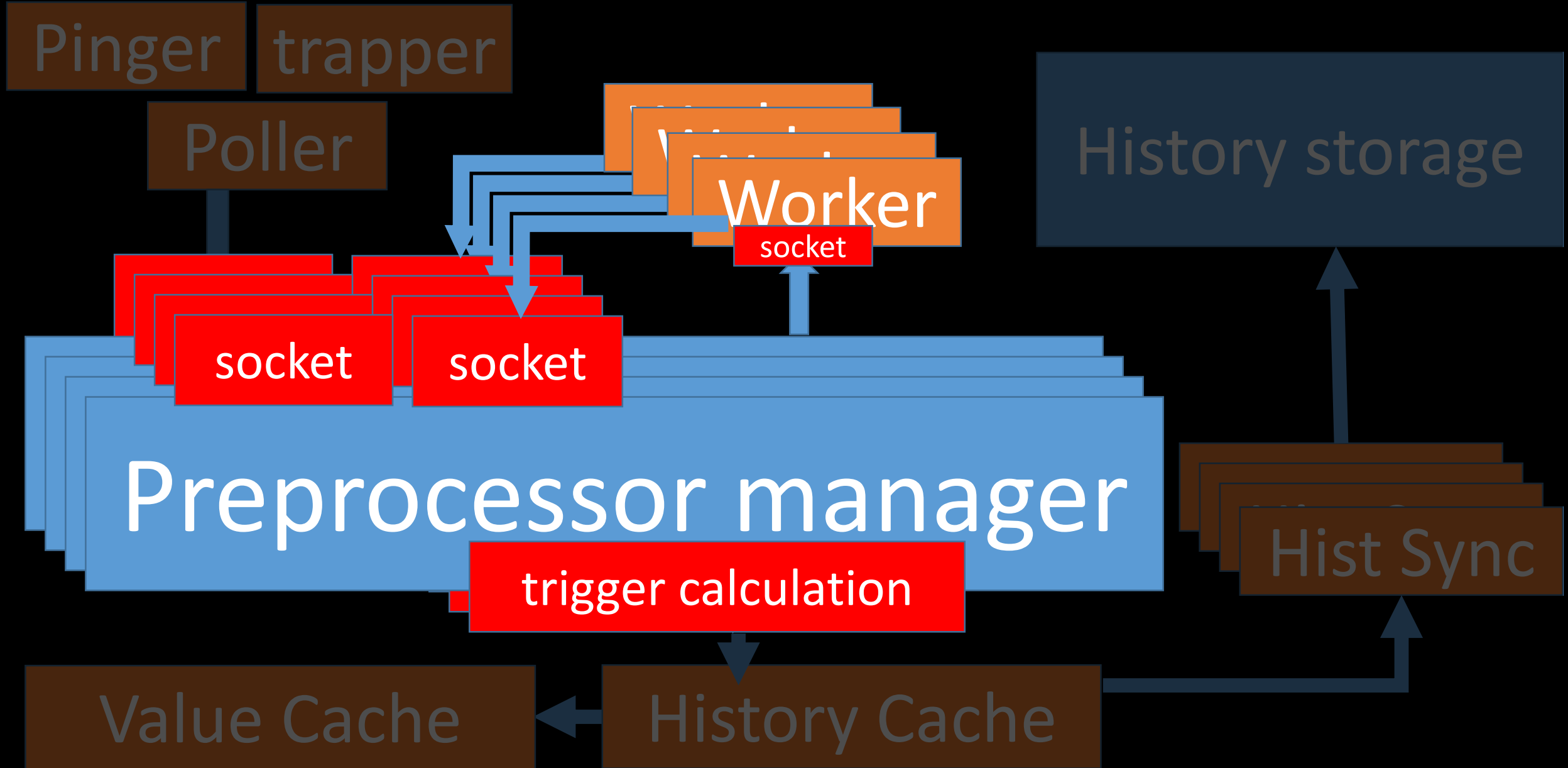
Preprocessor manager: two sockets



Polling and item's data flow



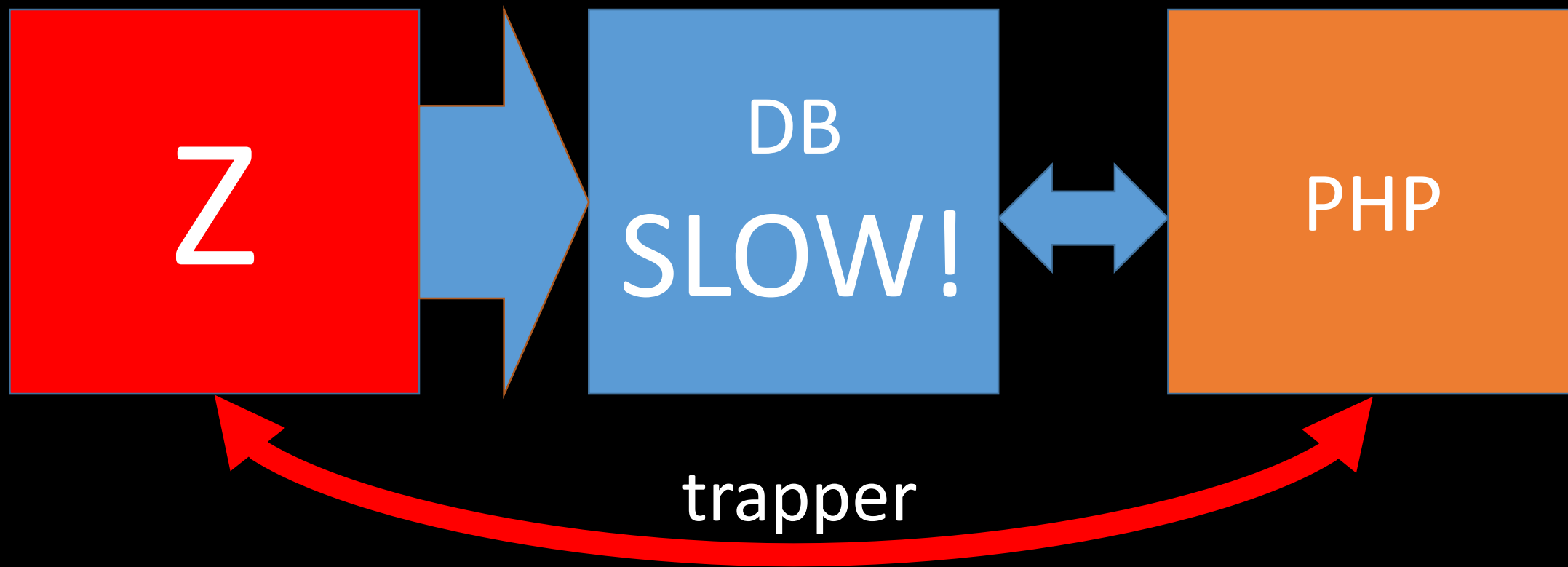
4 preprocessor managers



50k NVPS
production

after 2 days in production...





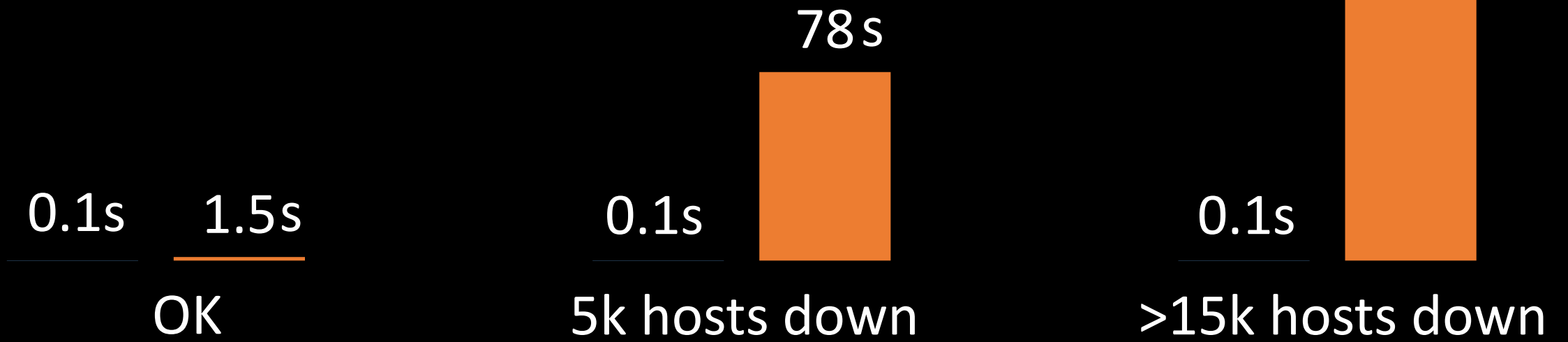


← {"request": "problems.get"}

→ {"response":
 {"problemid": 2364, ...}
 {"problemid": 2183, ...}
}

“Problems by severity” build time, sec

■ trapper ■ DB



one summer evening,
after working hours...

No pain - no gain



Без труда не вынуть и рыбку из пруда



55 000 hosts

4 100 000 items

350 000 triggers

Thank you

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<https://mmakurov.blogspot.com>

<https://github.com/miklert/zabbix>