



Chproxy - ClickHouse Proxy

Guram Sigua, Senior Engineer, Contentsquare



Who am I

**Guram Sigua | @guram_sigua
Senior Engineer, Contentsquare**





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About

Open-Source ClickHouse http proxy and load balancer

www.chproxy.org/

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clickhouse-proxy

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Chproxy

Is an HTTP (TCP soon) proxy and load balancer for ClickHouse

Maintainers



Paweł Gontarz

gontarzpawel



Christophe Kalenzaga

mga-chka



Guram Sigua

sigua-cs



Lennard Eijsackers

Blokje5

History



**Vertamedia
creates first
commit in
Chproxy
project**

History



**Vertamedia
creates first
commit in
Chproxy
project**

**Contentsquare
starts to use
ClickHouse and
Chproxy**

History

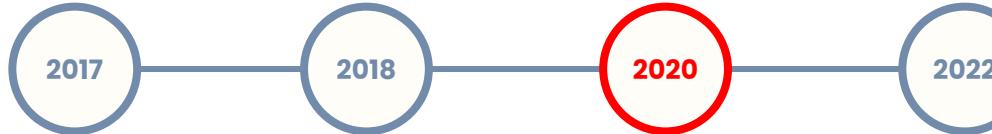


Vertamedia creates first commit in Chproxy project

Contentsquare starts to use ClickHouse and Chproxy

Last Commit on the repository, support from Vertamedia dropped

History



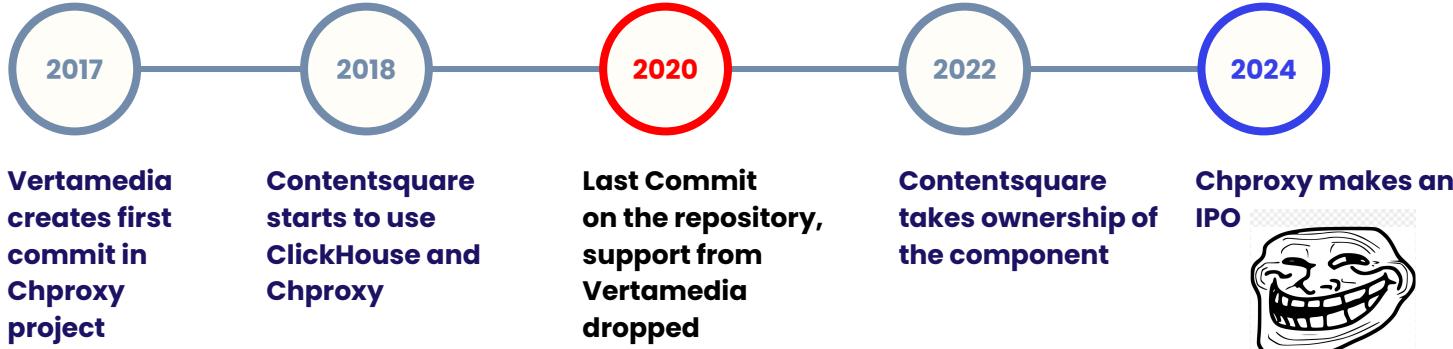
Vertamedia creates first commit in Chproxy project

Contentsquare starts to use ClickHouse and Chproxy

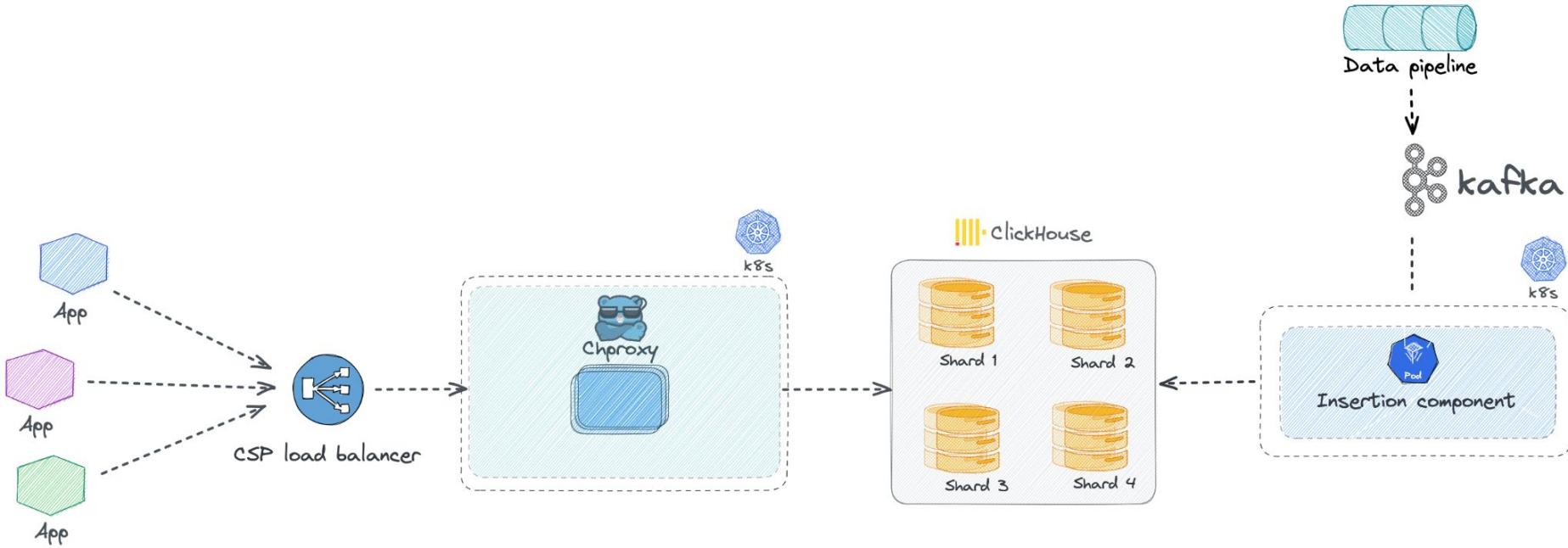
Last Commit on the repository, support from Vertamedia dropped

Contentsquare takes ownership of the component

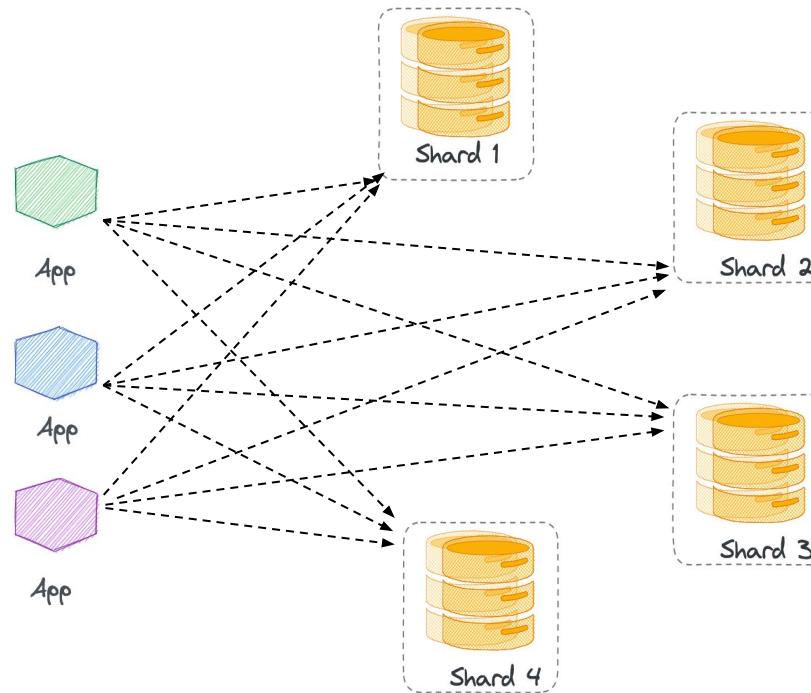
History



ClickHouse topology

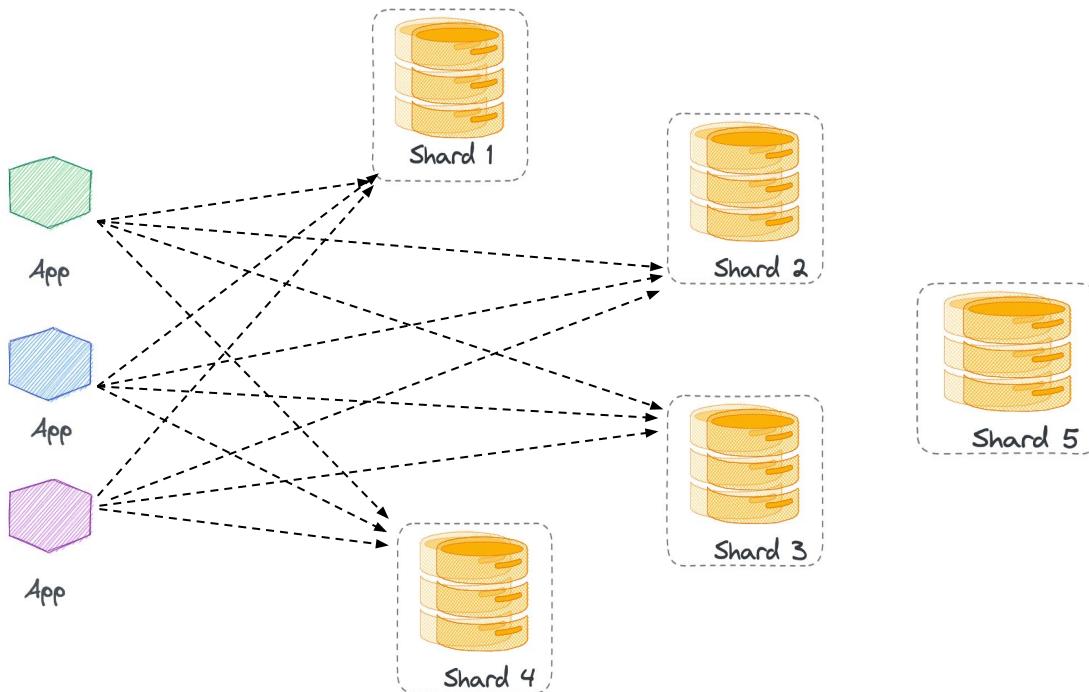


Why use proxy



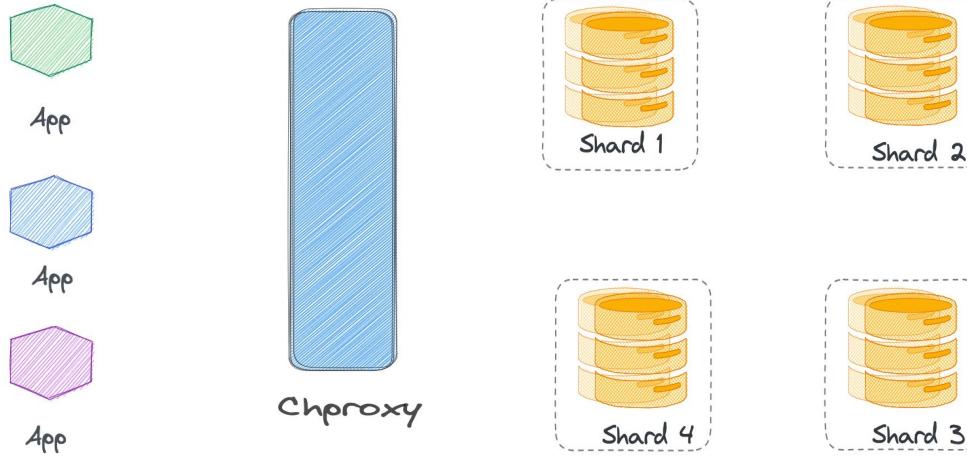
Why use proxy

ClickHouse

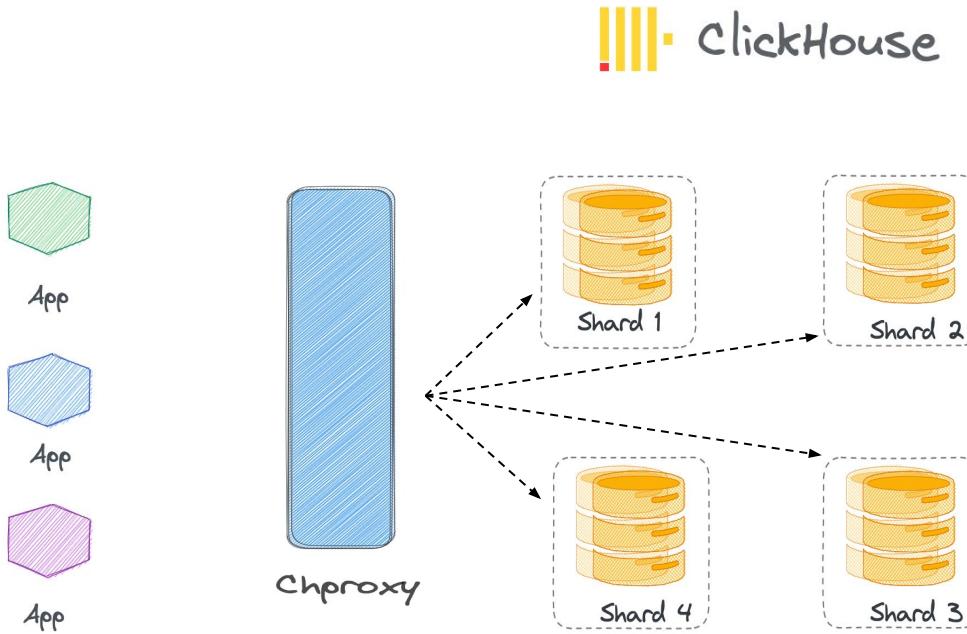


Chproxy solution

ClickHouse

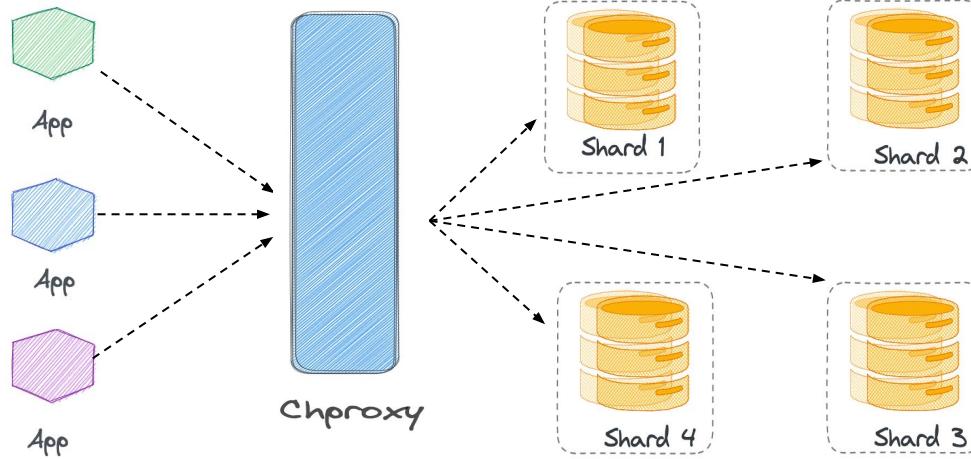


Chproxy solution



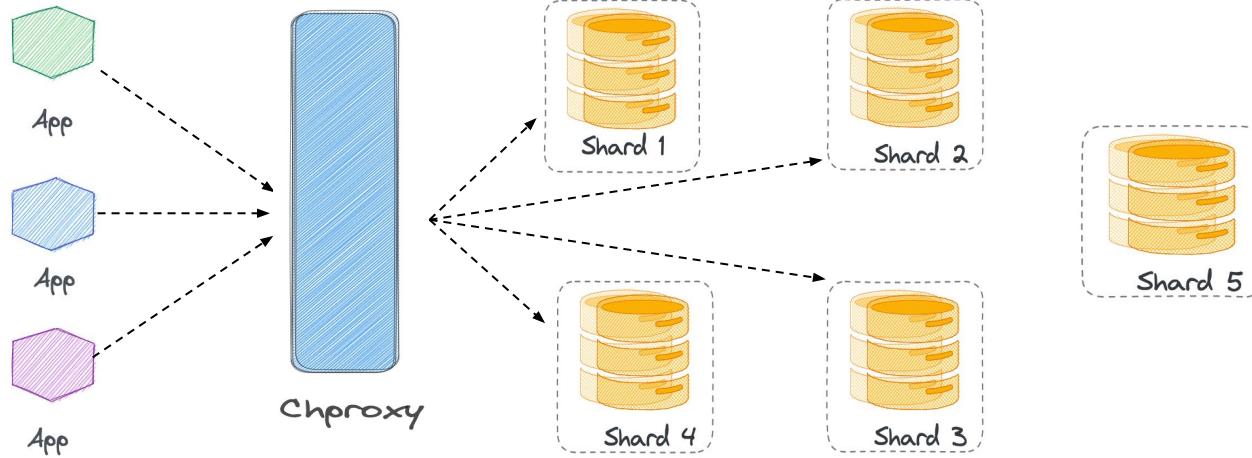
Chproxy solution

ClickHouse



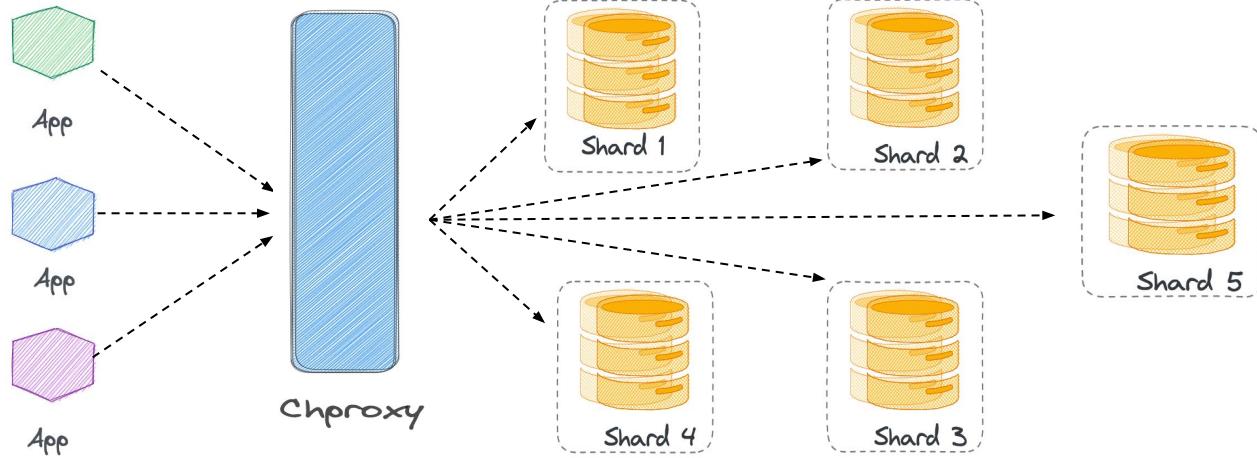
Chproxy solution

ClickHouse



Chproxy solution

ClickHouse



Chproxy overview



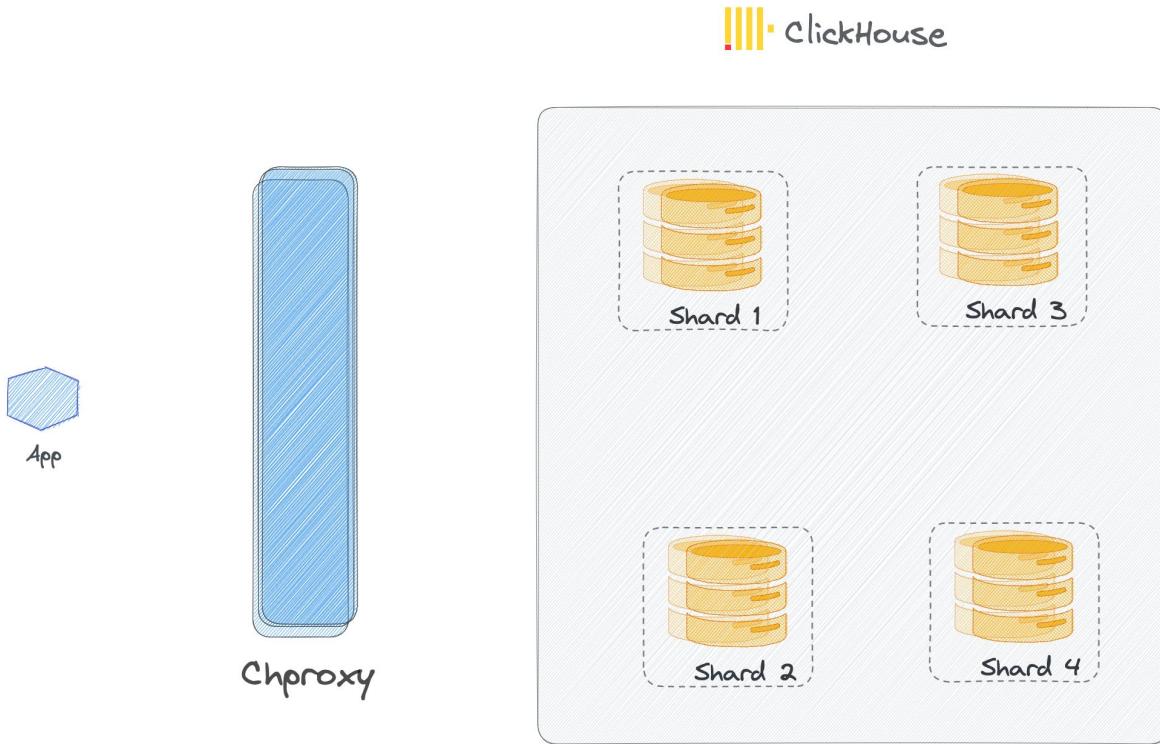
Features we use @ Contentsquare

- Load Balancing
- Routing
- User management
- Caching

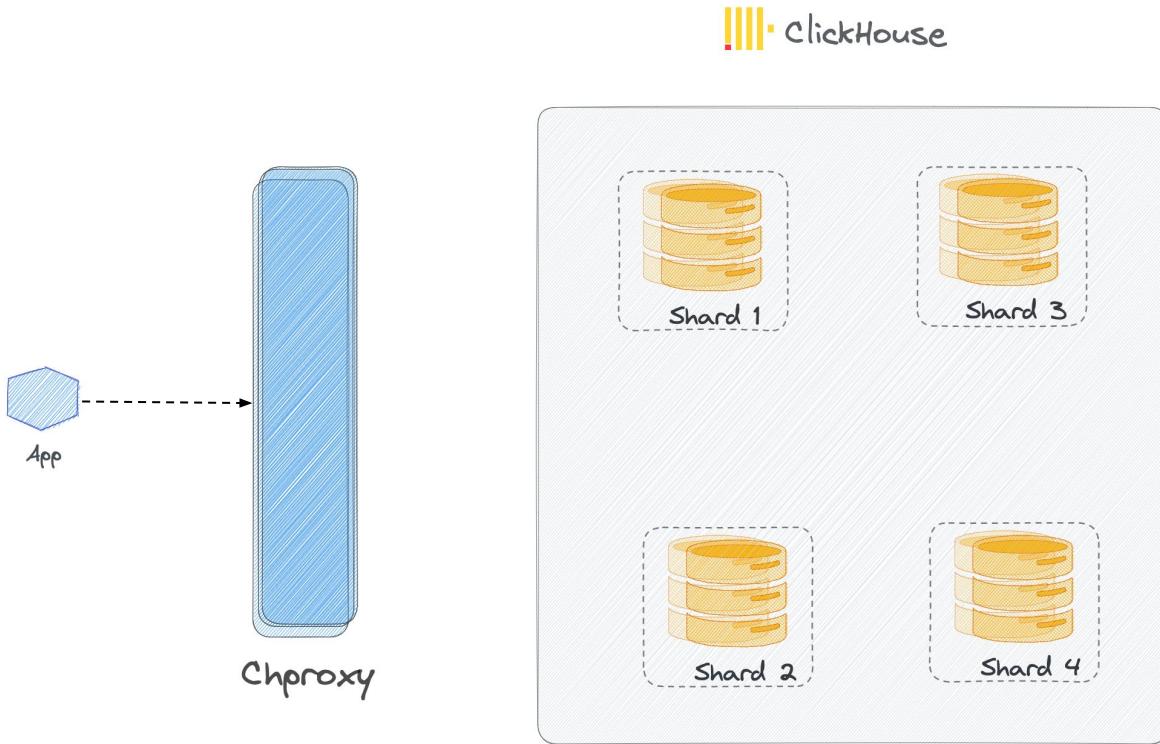
Load balancing



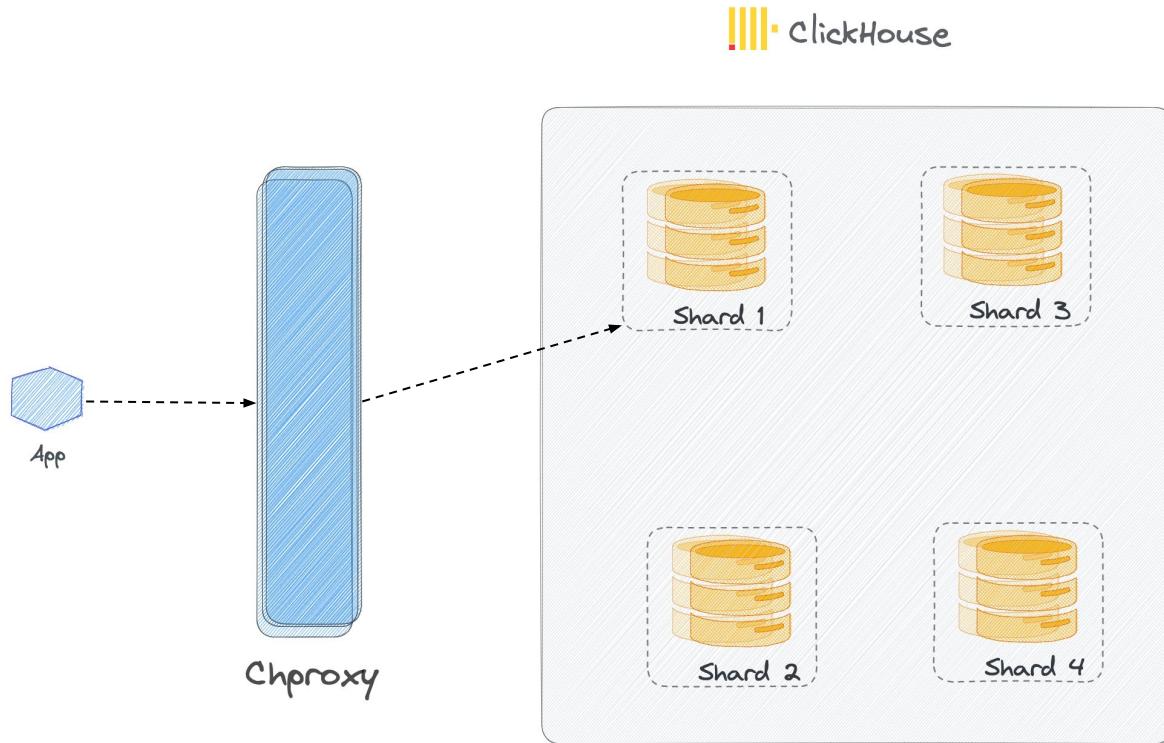
Load Balancing



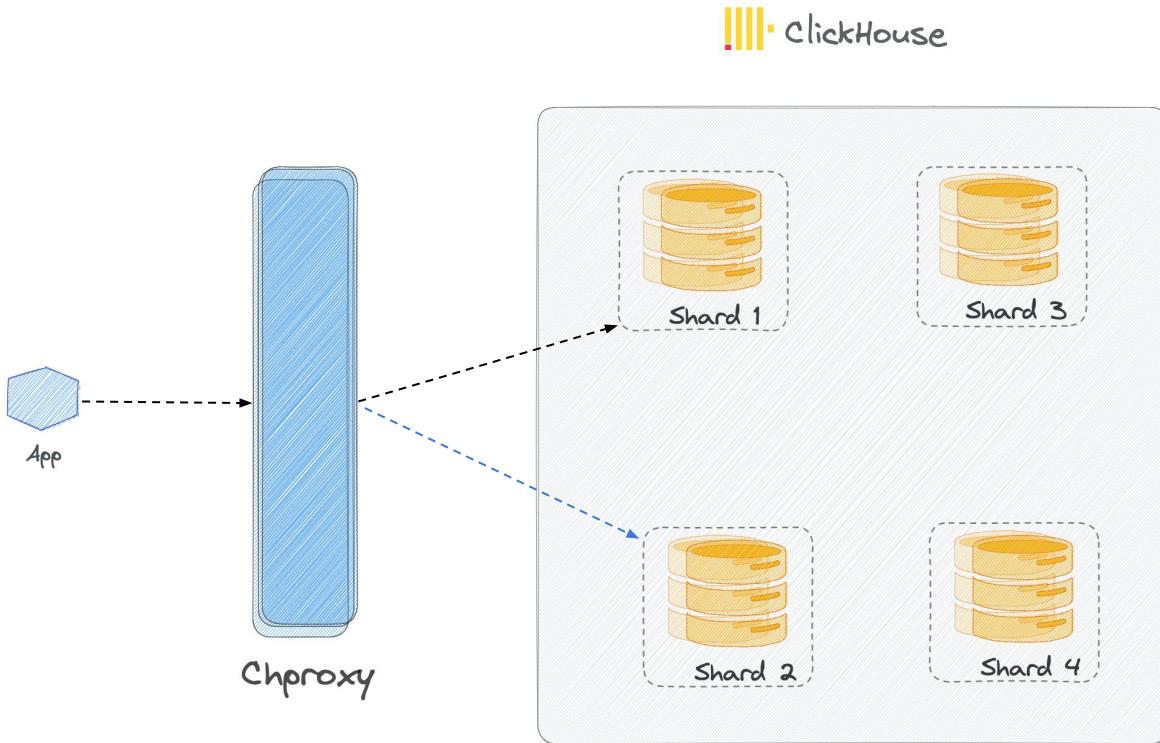
Load Balancing



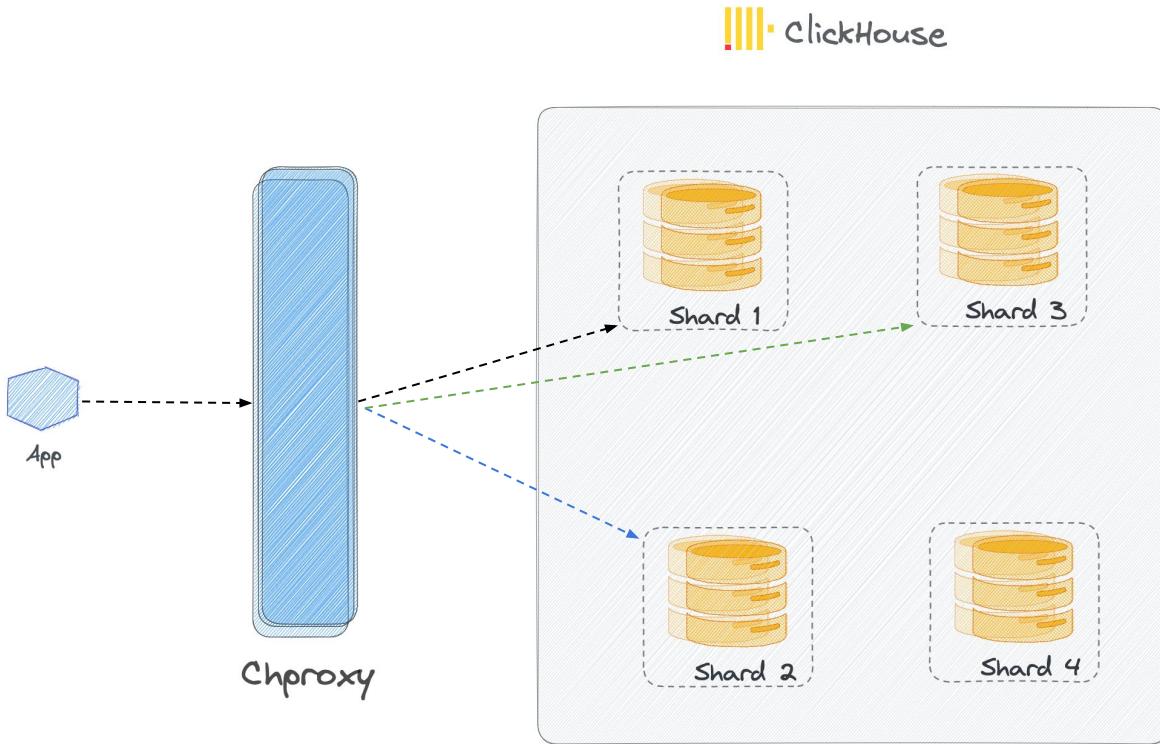
Load Balancing



Load Balancing



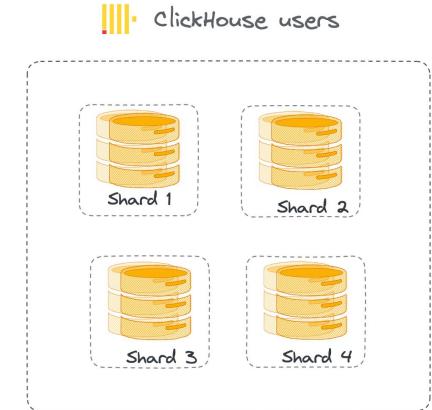
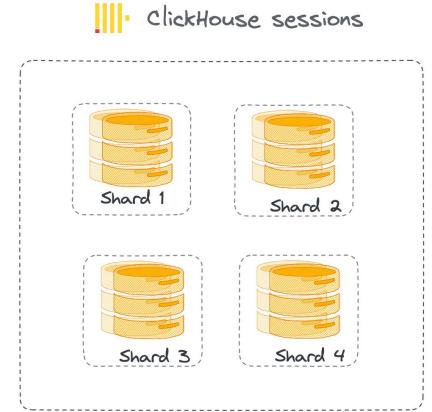
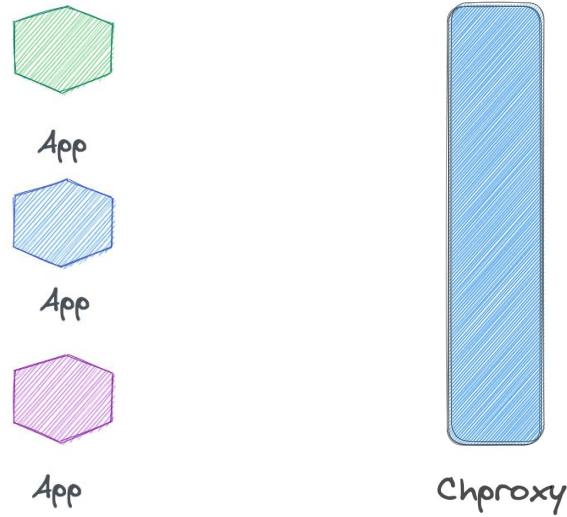
Load Balancing



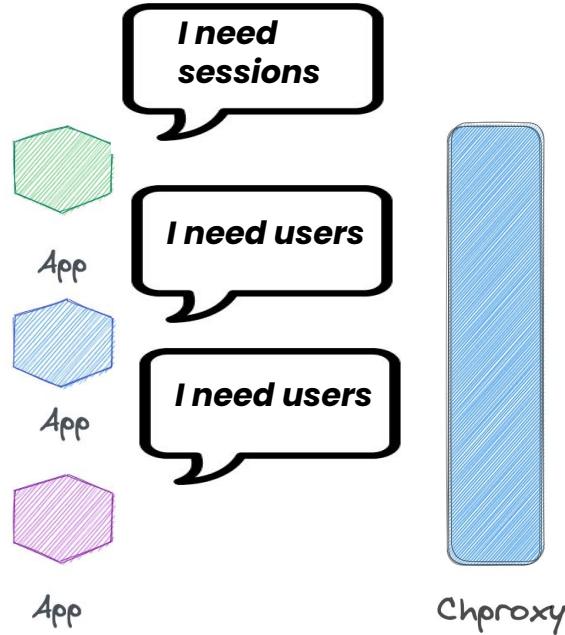
Routing



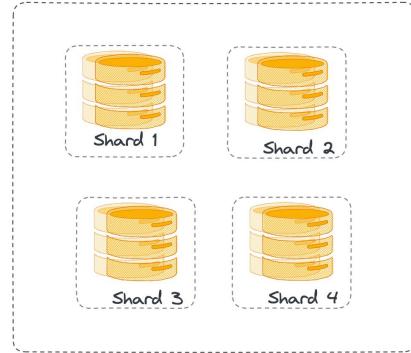
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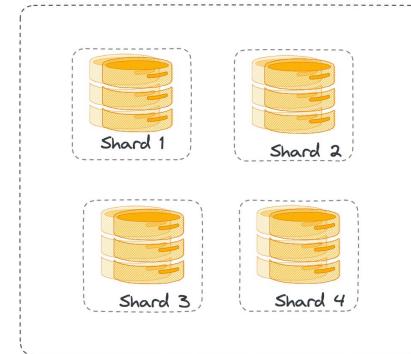
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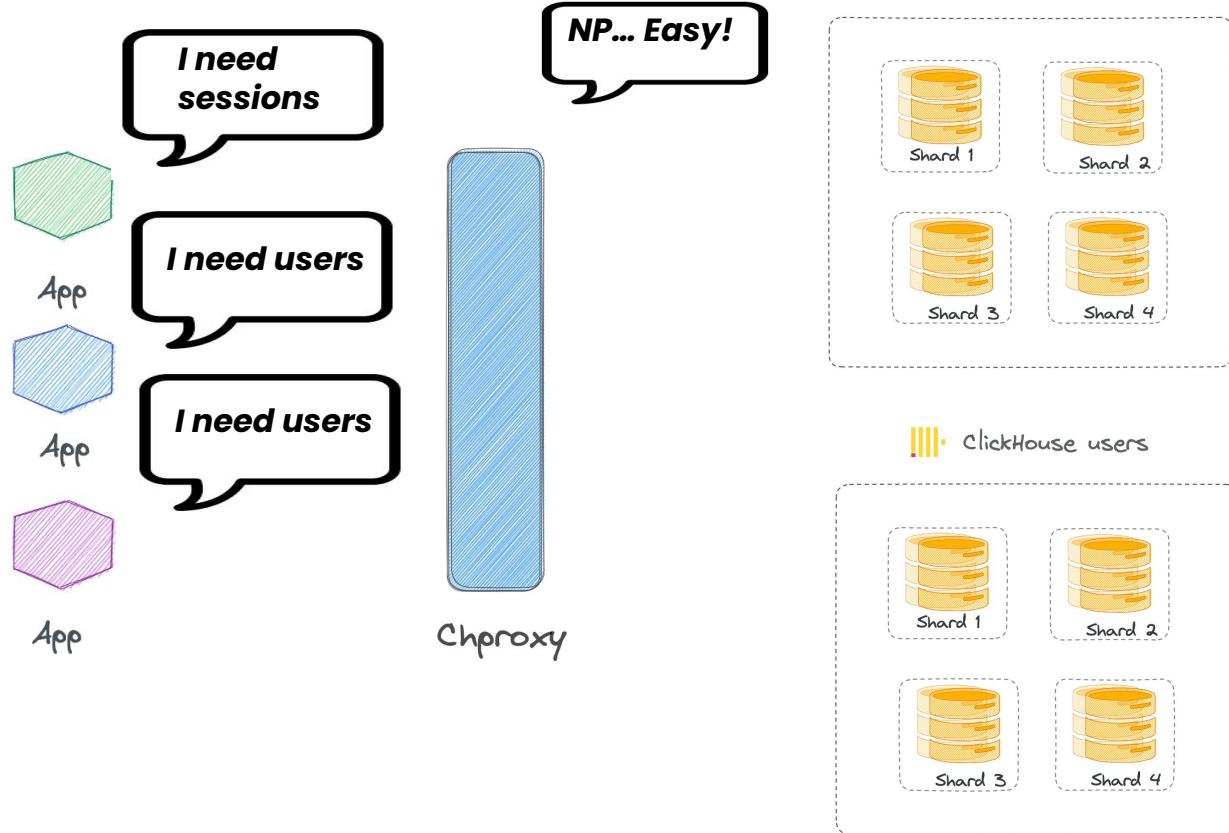
☰ ClickHouse sessions



☰ ClickHouse users



Routing

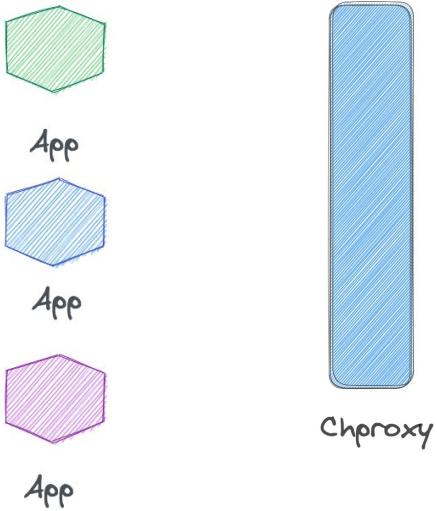


Routing

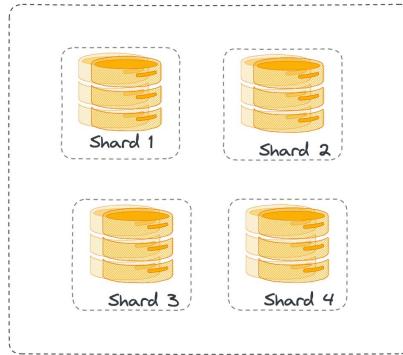
```
1 clusters:
2   - name: "clickhouse-sessions"
3     scheme: "http"
4     replicas:
5       - name: "replica_1"
6         nodes:
7           - "clickhouse-sessions-shard1-replica1.io:8123"
8           - "clickhouse-sessions-shard2-replica1.io:8123"
9       - name: "replica_2"
10      nodes:
11        - "clickhouse-sessions-shard1-replica2.io:8123"
12        - "clickhouse-sessions-shard2-replica2.io:8123"
13    users:
14      - name: "read_only_user"
15      - password: "clickhouse_pa$$word"
16
17  - name: "clickhouse-users"
18    scheme: "http"
19    replicas:
20      - name: "replica_1"
21        nodes:
22          - "clickhouse-users-shard1-replica1.io:8123"
23          - "clickhouse-users-shard2-replica1.io:8123"
24      - name: "replica_2"
25        nodes:
26          - "clickhouse-users-shard1-replica2.io:8123"
27          - "clickhouse-users-shard2-replica2.io:8123"
28    users:
29      - name: "read_only_user"
30      - password: "very_strong_pa$$word"
34
35  users:
36    - name: "green_app"
37      password: "chproxy_pa$$word_green"
38      to_cluster: "clickhouse-sessions"
39      to_user: "read_only_user"
40
41    - name: "blue_app"
42      password: "chproxy_pa$$word_blue"
43      to_cluster: "clickhouse-users"
44      to_user: "read_only_user"
45
46    - name: "purple_app"
47      password: "chproxy_pa$$word_purple"
48      to_cluster: "clickhouse-users"
49      to_user: "read_only_user"
```

Routing

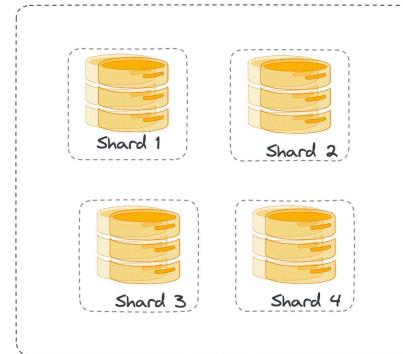
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☰ ClickHouse sessions

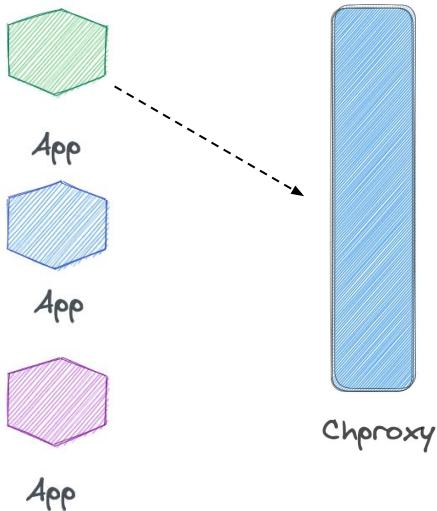


☰ ClickHouse users

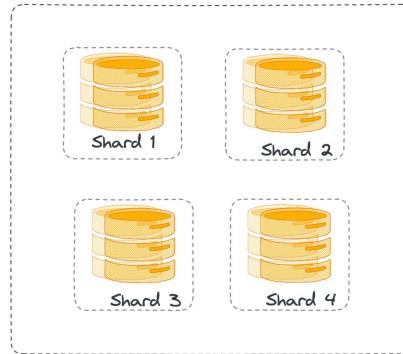


Routing

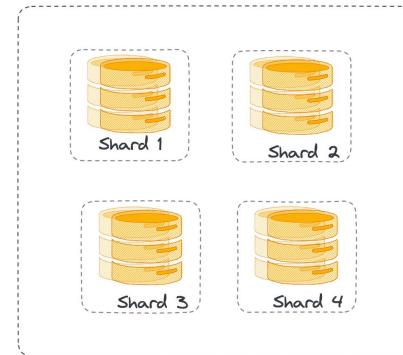
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☰ ClickHouse sessions

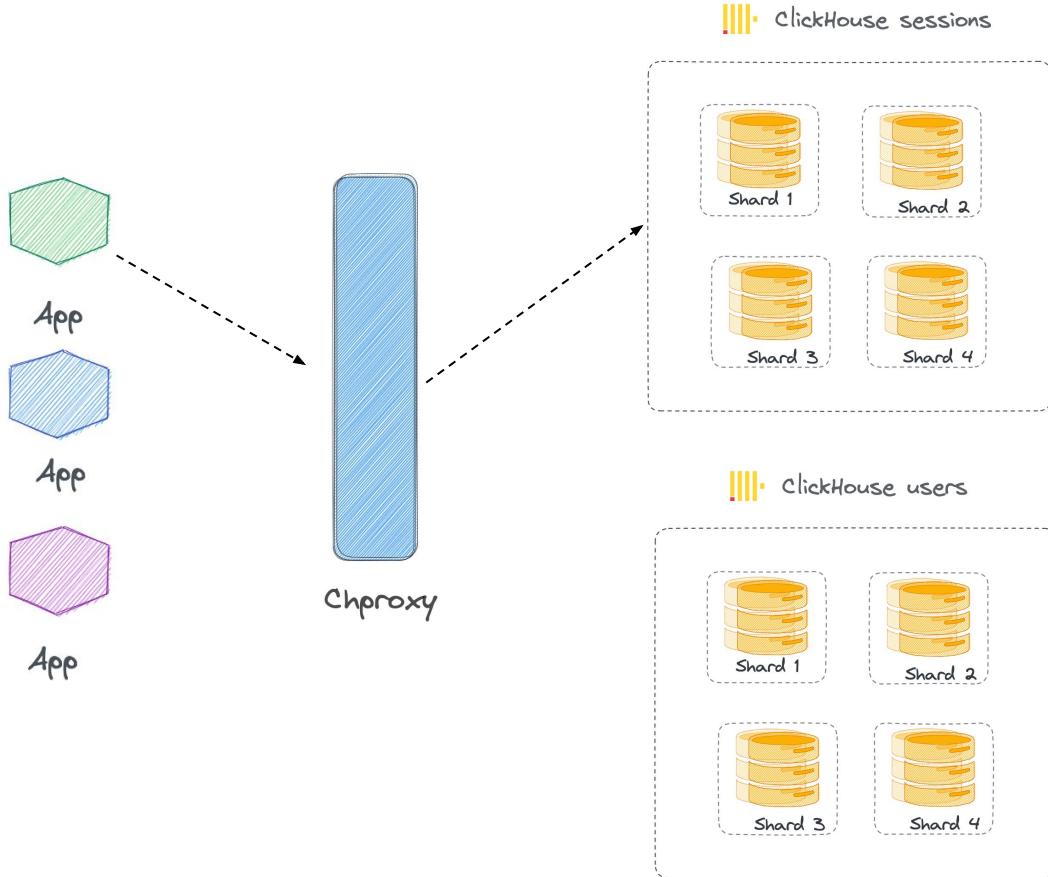


☰ ClickHouse users



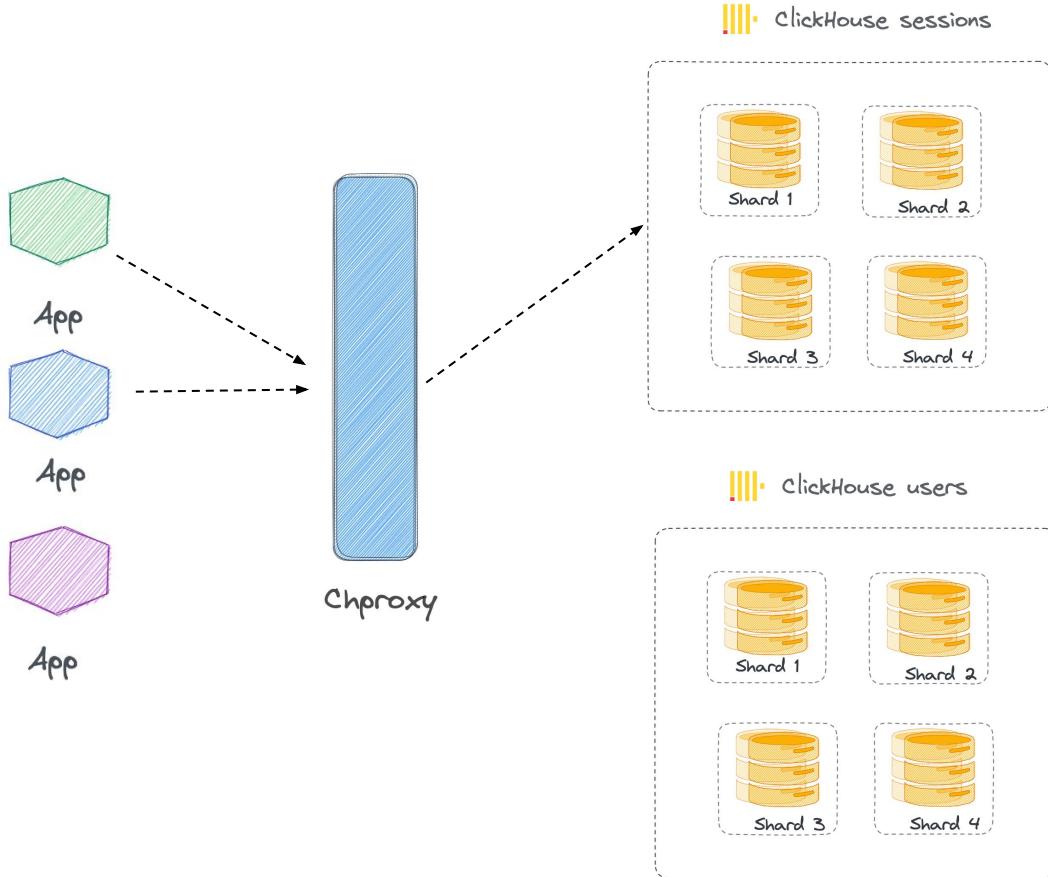
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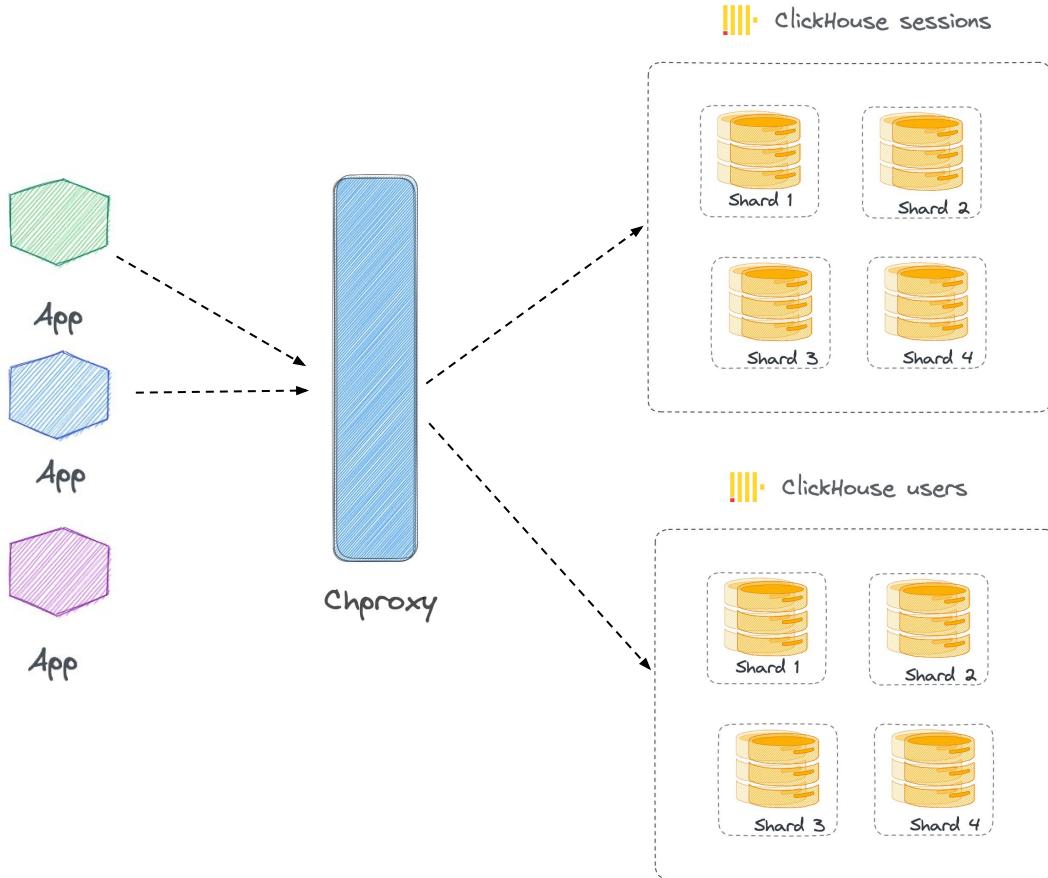
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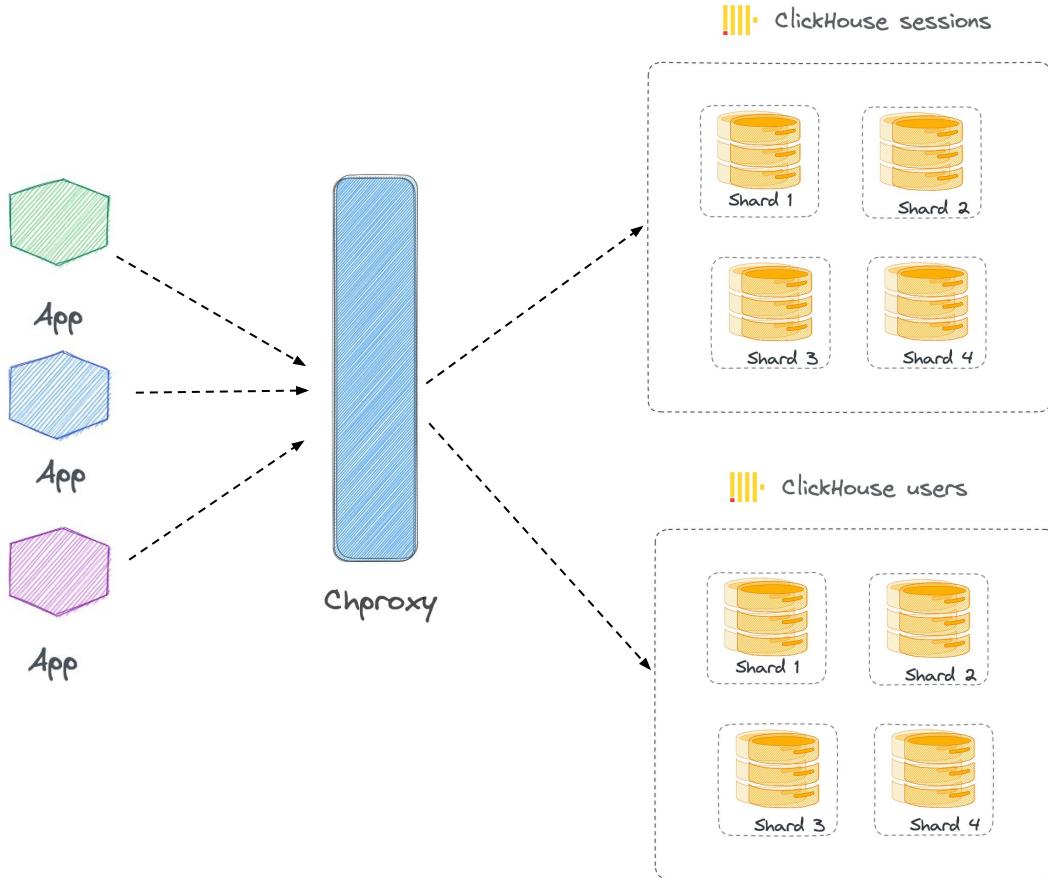
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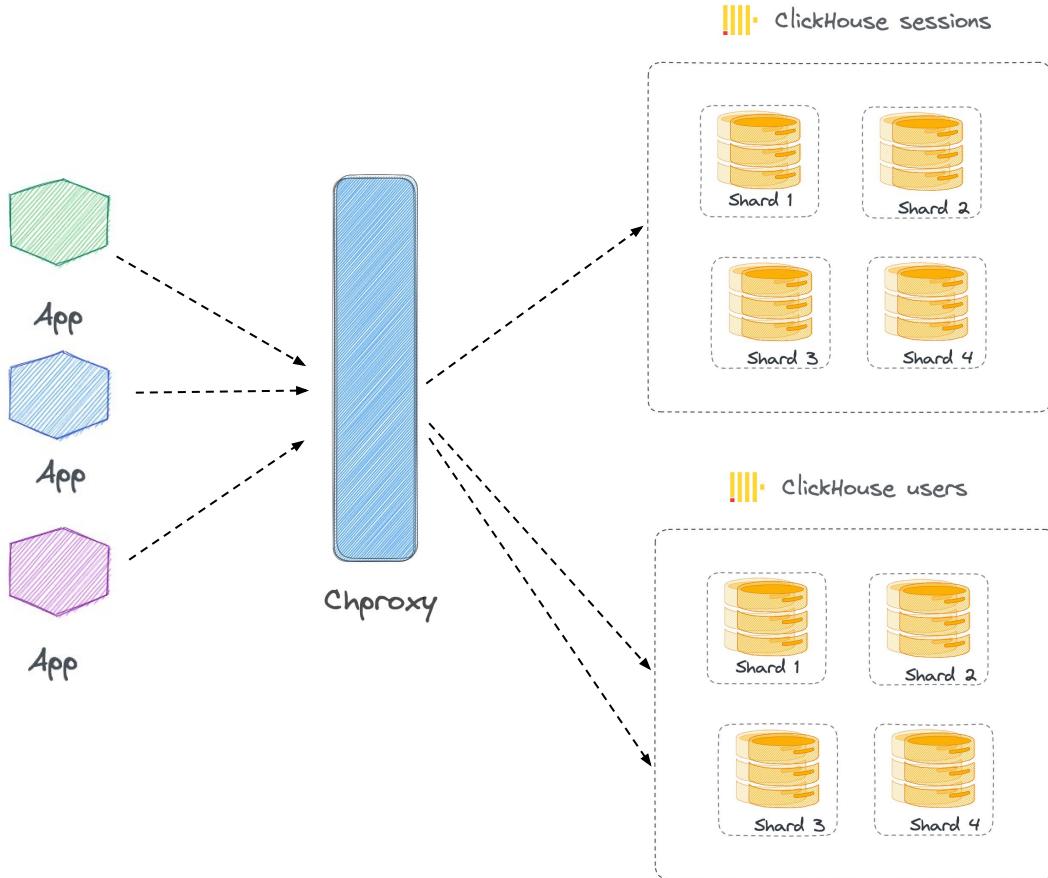
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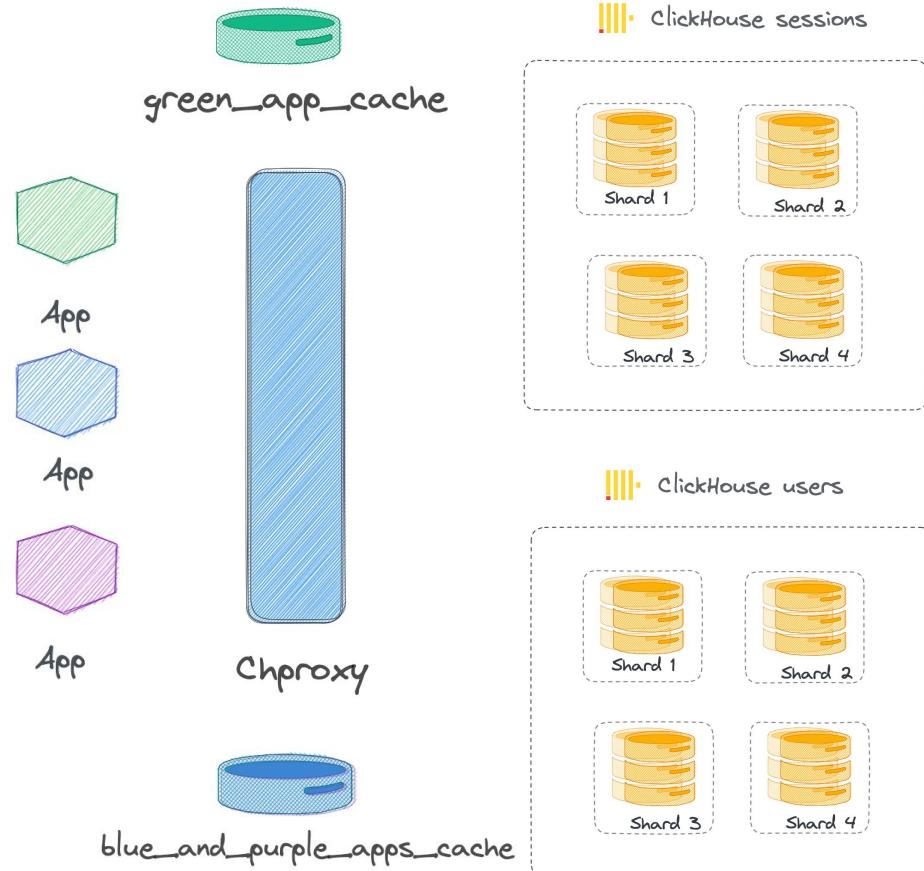


Caching



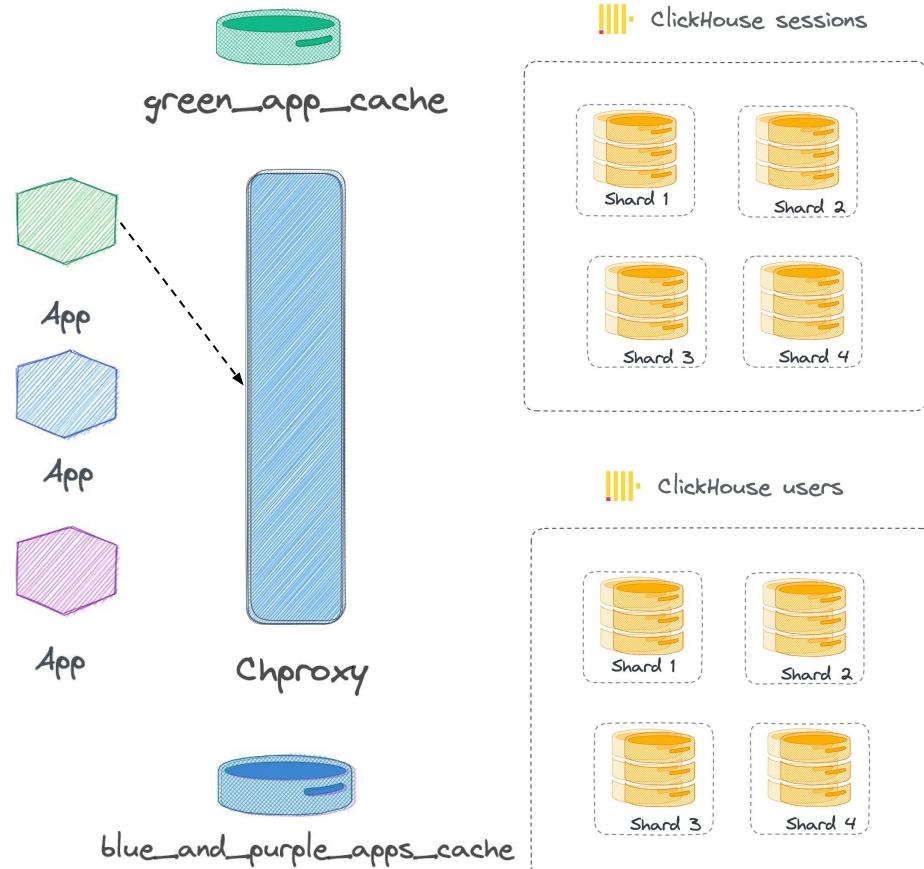
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
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30 users:  
31   - name: "green_app"  
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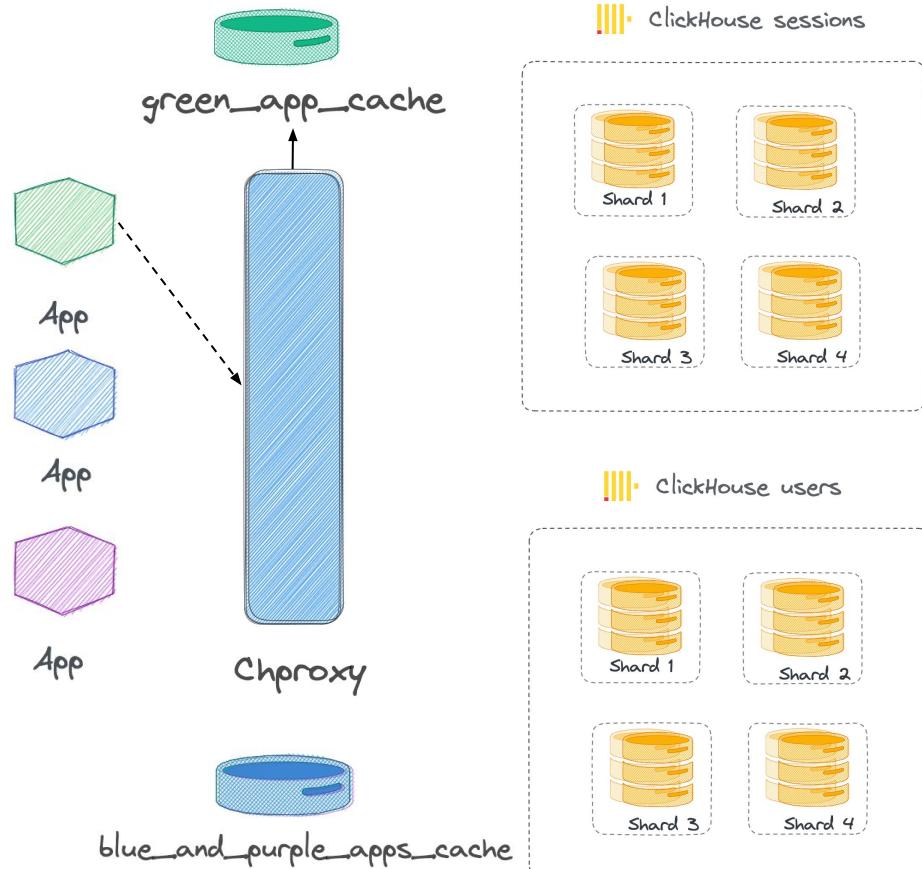
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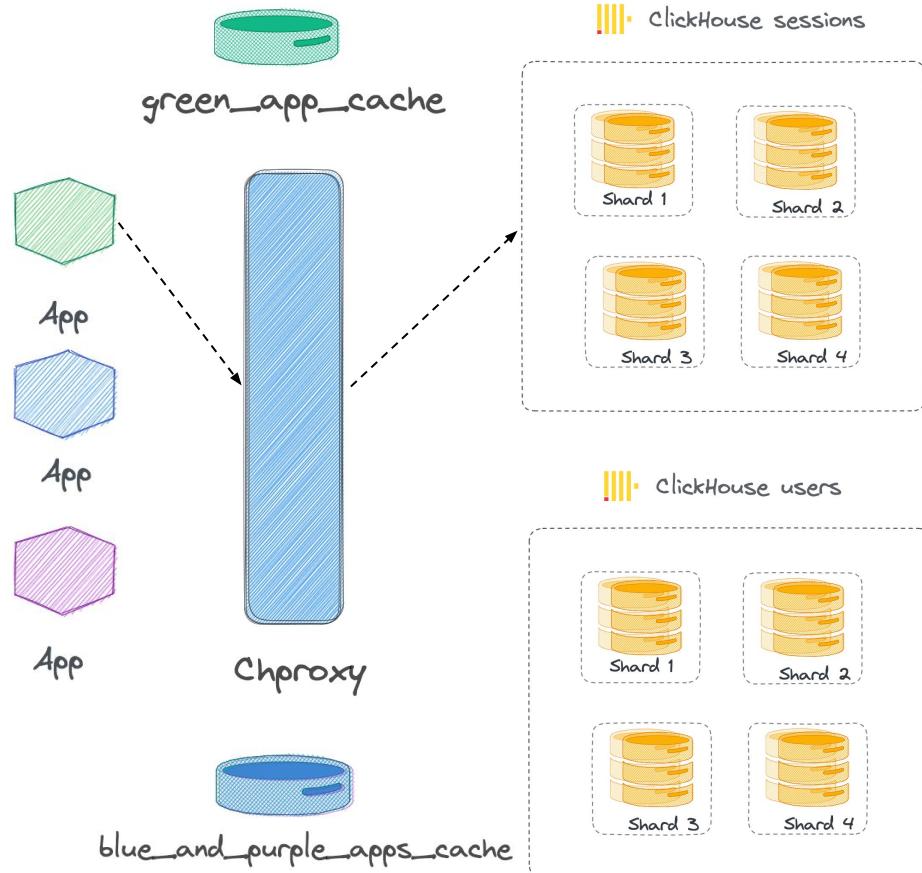
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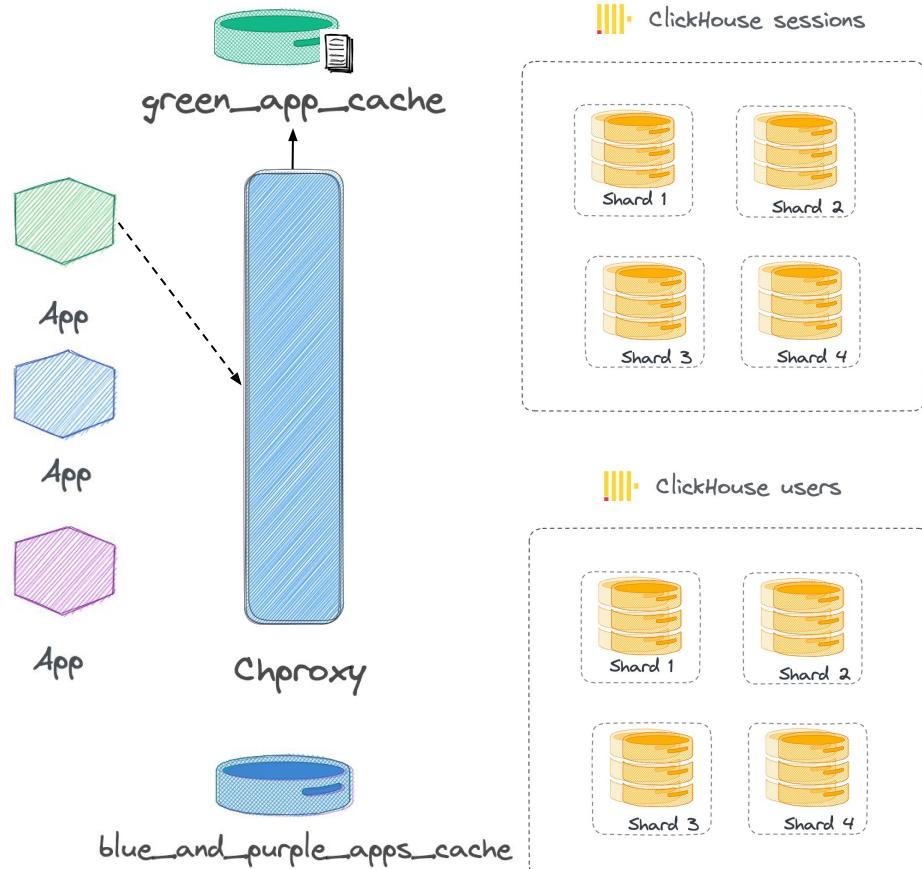
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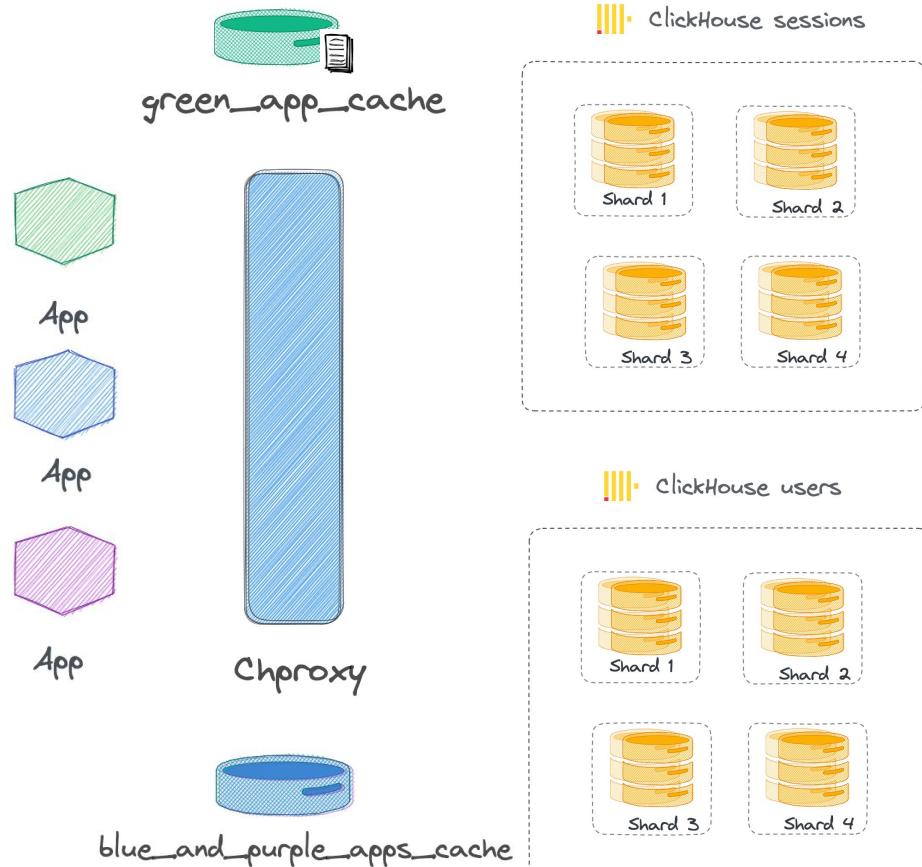
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37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```



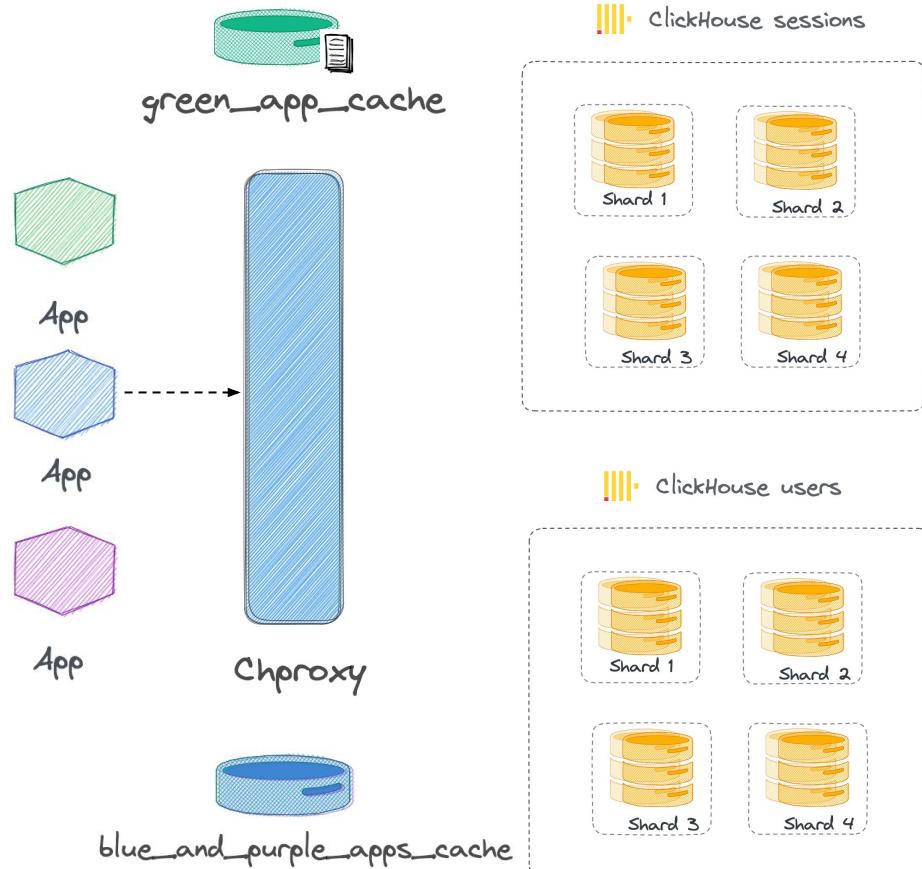
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
15      expire: "1h"  
  
30 users:  
31   - name: "green_app"  
32     password: "chproxy_pa$$word"  
33     to_cluster: "clickhouse-sessions"  
34     to_user: "read_only_user"  
35     cache: "green_app_cache"  
36   - name: "blue_app"  
37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```



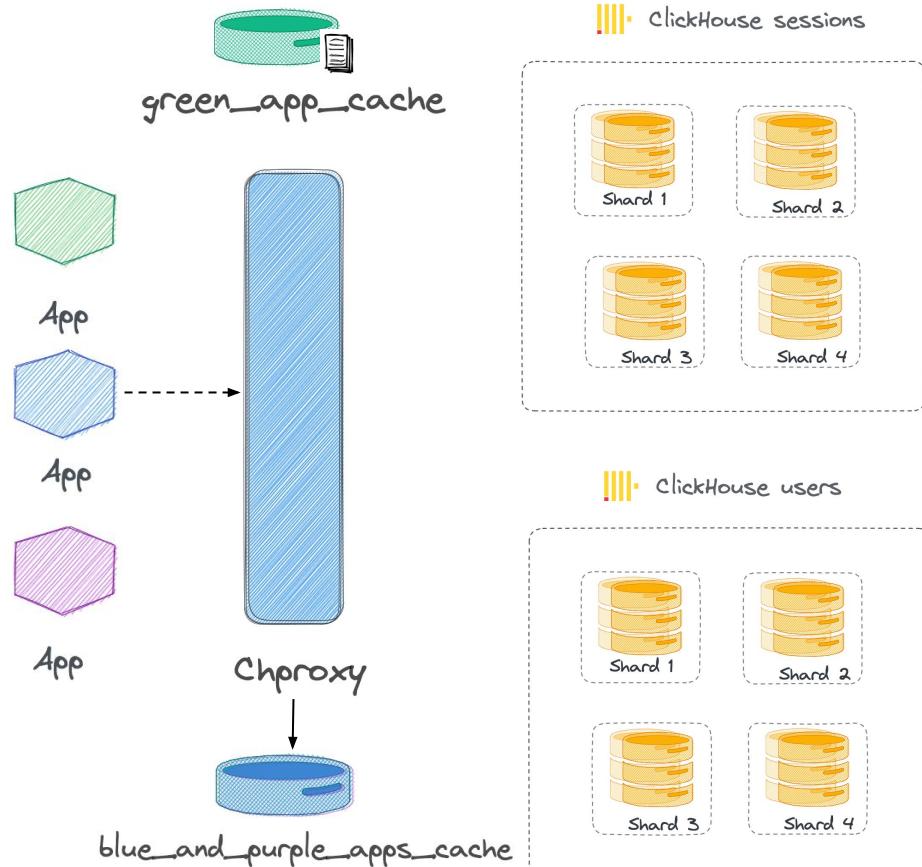
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
15      expire: "1h"  
  
30 users:  
31   - name: "green_app"  
32     password: "chproxy_pa$$word"  
33     to_cluster: "clickhouse-sessions"  
34     to_user: "read_only_user"  
35     cache: "green_app_cache"  
36   - name: "blue_app"  
37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```



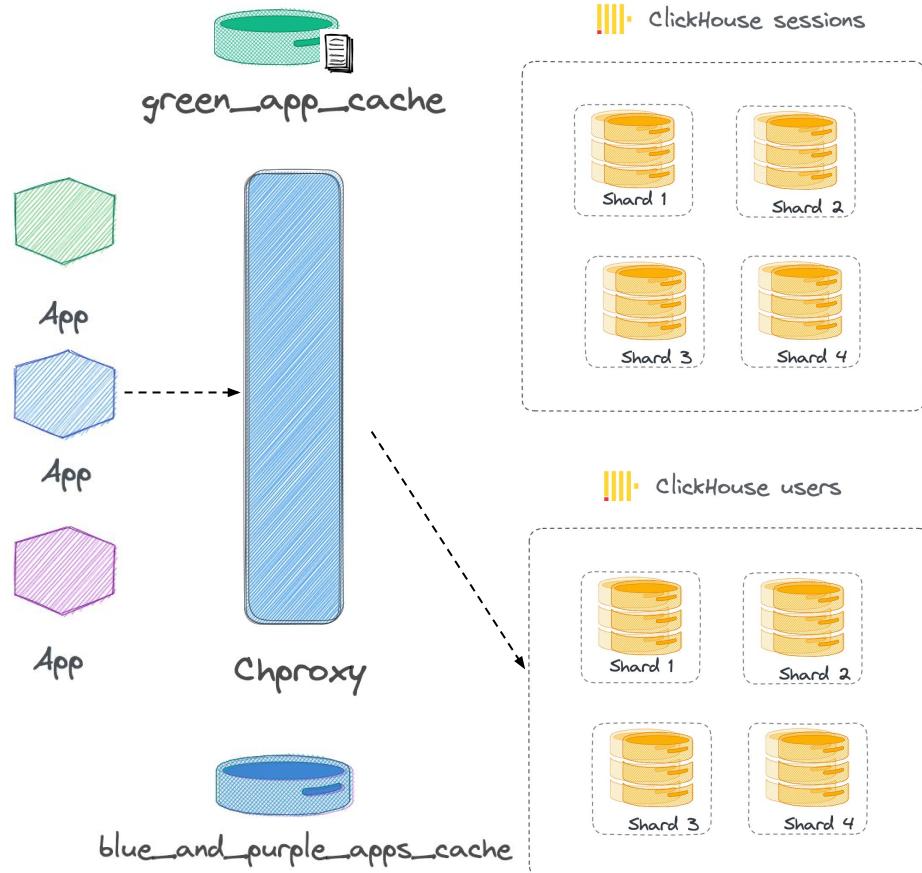
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
15      expire: "1h"  
  
30 users:  
31   - name: "green_app"  
32     password: "chproxy_pa$$word"  
33     to_cluster: "clickhouse-sessions"  
34     to_user: "read_only_user"  
35     cache: "green_app_cache"  
36   - name: "blue_app"  
37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```



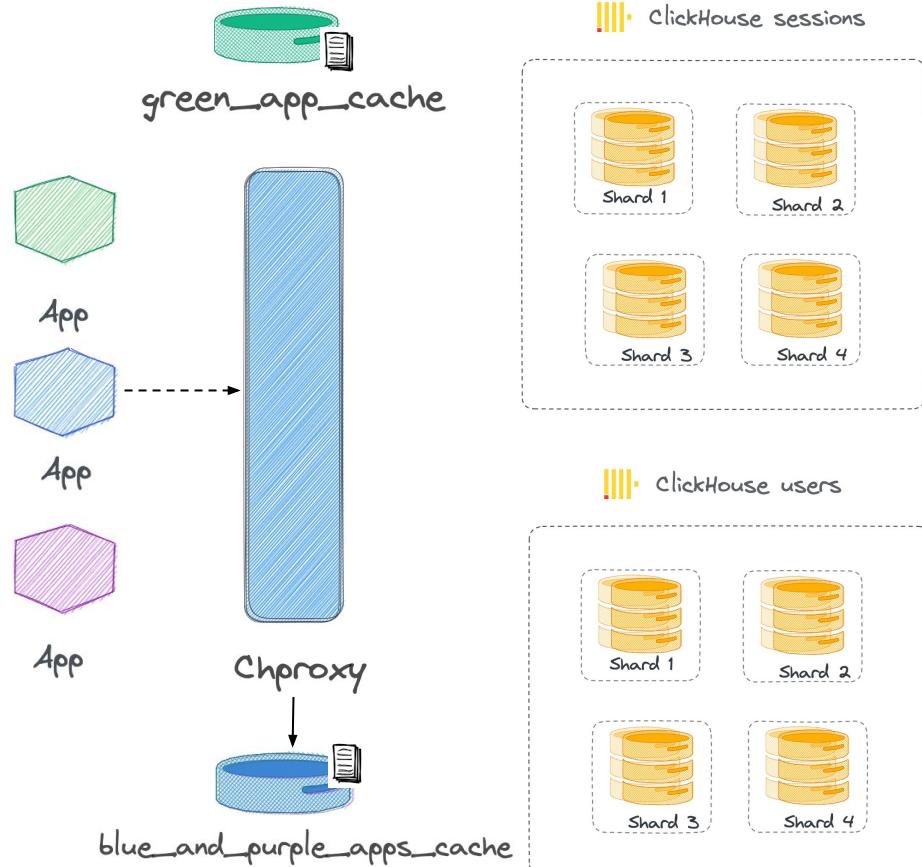
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
15      expire: "1h"  
  
30 users:  
31   - name: "green_app"  
32     password: "chproxy_pa$$word"  
33     to_cluster: "clickhouse-sessions"  
34     to_user: "read_only_user"  
35     cache: "green_app_cache"  
36   - name: "blue_app"  
37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```



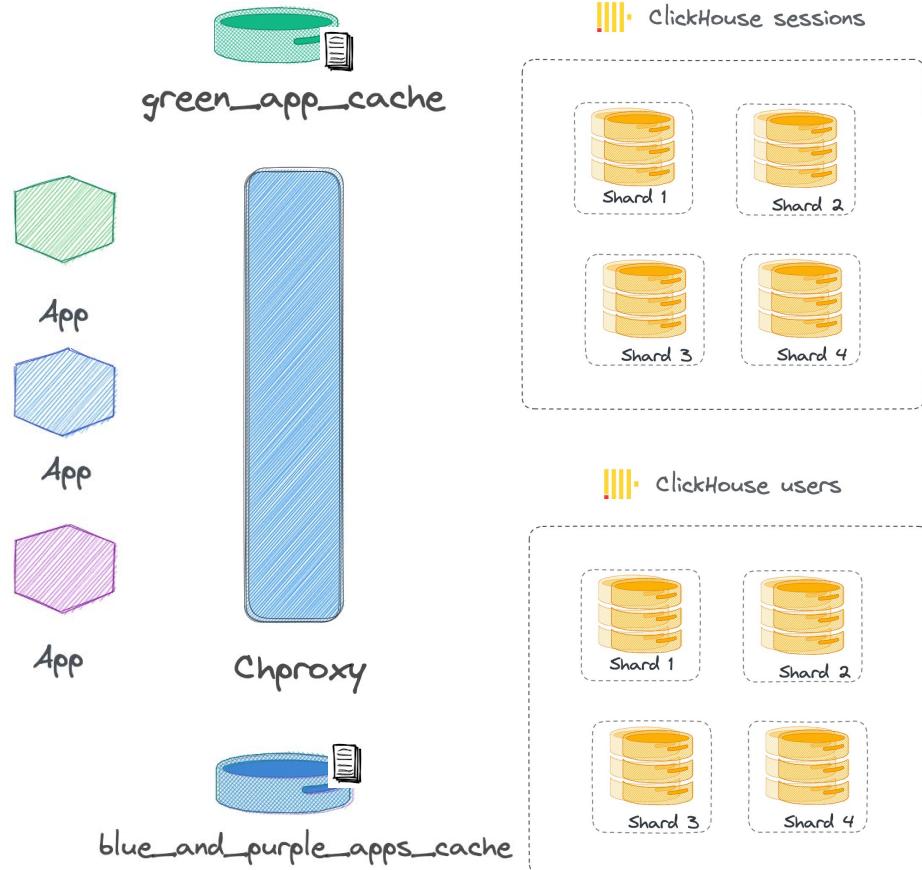
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
15      expire: "1h"  
  
30 users:  
31   - name: "green_app"  
32     password: "chproxy_pa$$word"  
33     to_cluster: "clickhouse-sessions"  
34     to_user: "read_only_user"  
35     cache: "green_app_cache"  
36   - name: "blue_app"  
37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```



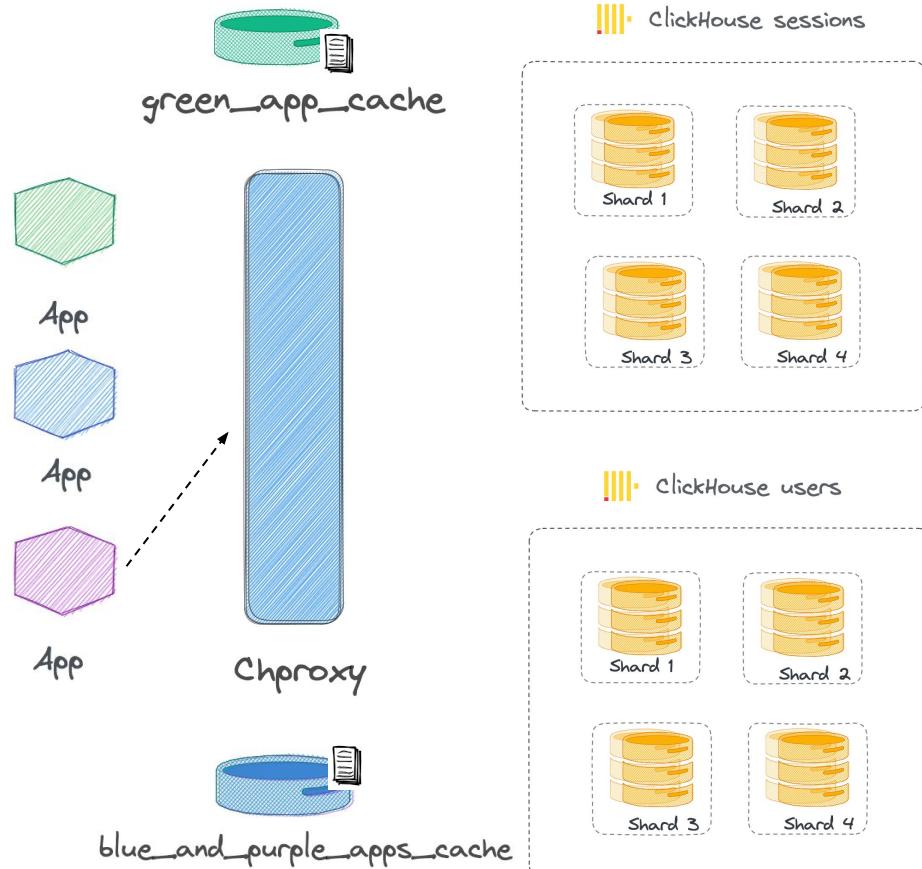
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
15      expire: "1h"  
  
30 users:  
31   - name: "green_app"  
32     password: "chproxy_pa$$word"  
33     to_cluster: "clickhouse-sessions"  
34     to_user: "read_only_user"  
35     cache: "green_app_cache"  
36   - name: "blue_app"  
37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```



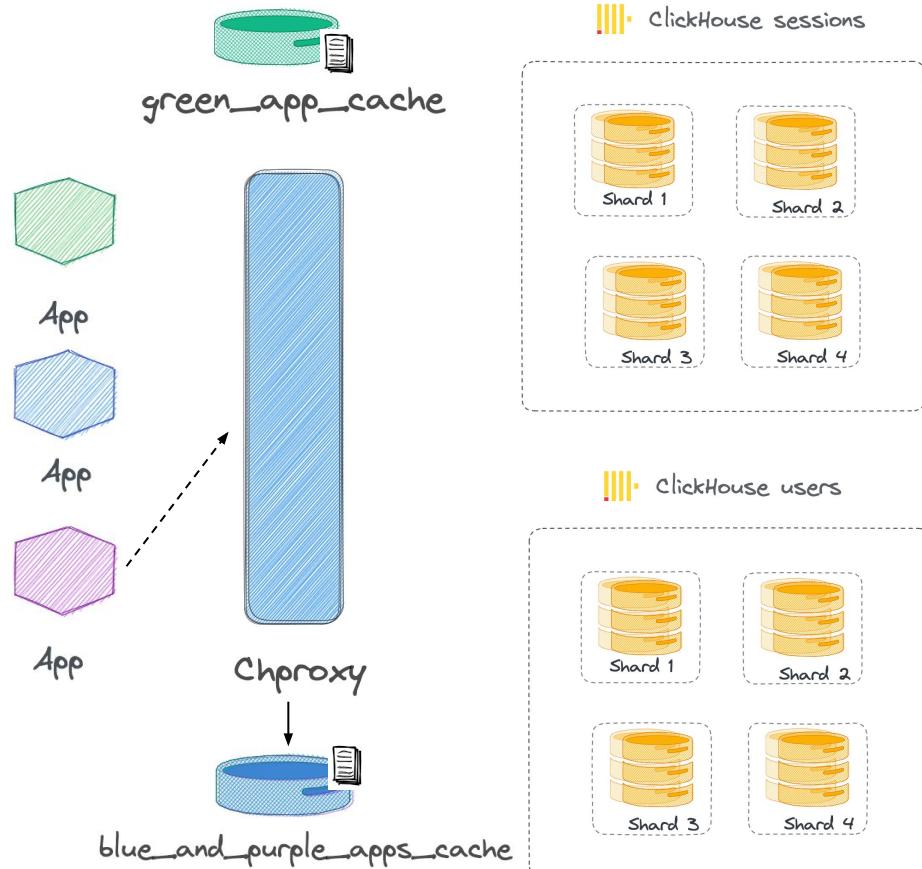
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
15      expire: "1h"  
  
30 users:  
31   - name: "green_app"  
32     password: "chproxy_pa$$word"  
33     to_cluster: "clickhouse-sessions"  
34     to_user: "read_only_user"  
35     cache: "green_app_cache"  
36   - name: "blue_app"  
37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```



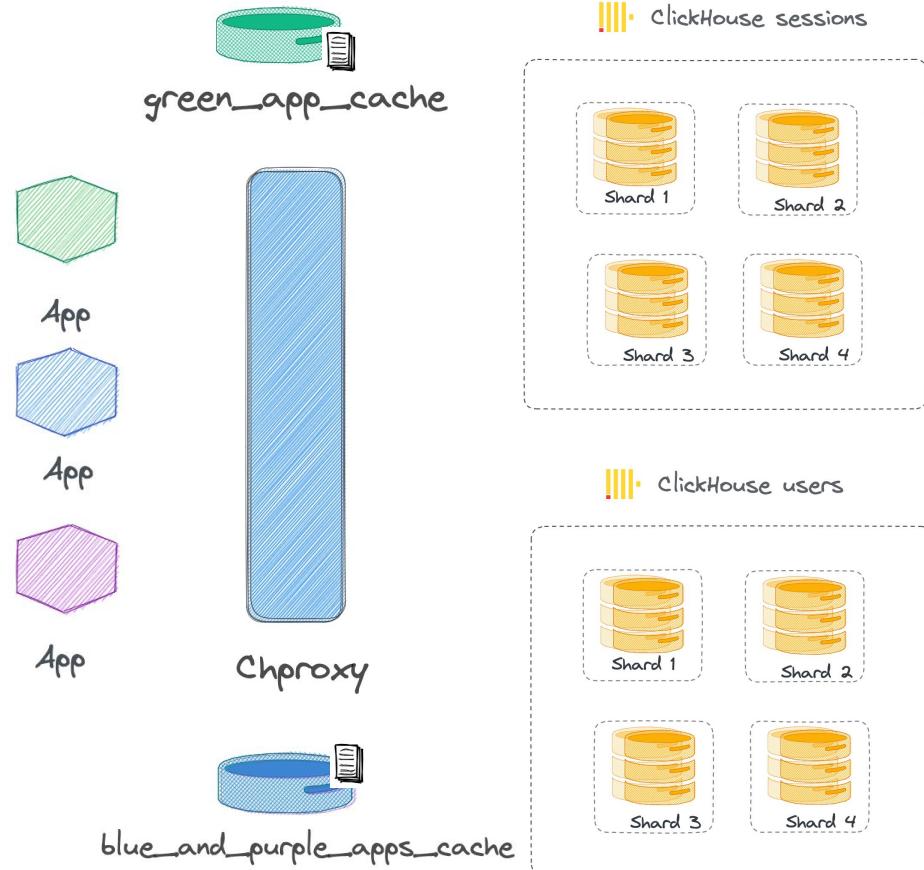
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
15      expire: "1h"  
  
30 users:  
31   - name: "green_app"  
32     password: "chproxy_pa$$word"  
33     to_cluster: "clickhouse-sessions"  
34     to_user: "read_only_user"  
35     cache: "green_app_cache"  
36   - name: "blue_app"  
37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```



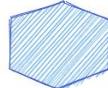
Caching

```
1 caches:  
2   - name: "green_app_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/green_app"  
6       max_size: "10G"  
7       grace_time: "30s"  
8       expire: "1h"  
9   - name: "blue_and_purple_apps_cache"  
10    mode: "file_system"  
11    file_system:  
12      dir: "/data/disk_00/cache/blue_and_purple_apps"  
13      max_size: "100M"  
14      grace_time: "30s"  
15      expire: "1h"  
  
30 users:  
31   - name: "green_app"  
32     password: "chproxy_pa$$word"  
33     to_cluster: "clickhouse-sessions"  
34     to_user: "read_only_user"  
35     cache: "green_app_cache"  
36   - name: "blue_app"  
37     password: "chproxy_pa$$word"  
38     to_cluster: "clickhouse-sessions"  
39     to_user: "read_only_user"  
40     cache: "blue_and_purple_app_cache"  
41   - name: "purple_app"  
42     password: "chproxy_pa$$word"  
43     to_cluster: "clickhouse-sessions"  
44     to_user: "read_only_user"  
45     cache: "blue_and_purple_app_cache"
```

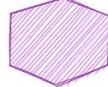


Concurrent caching

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```

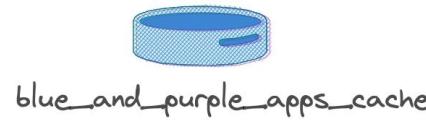


App



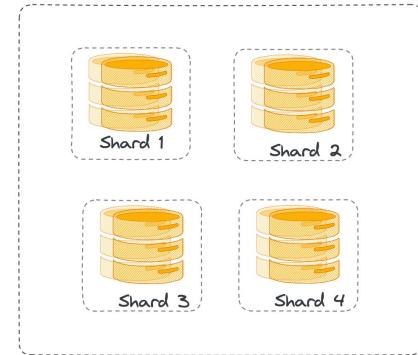
App

```
1 caches:  
2   - name: "blue_and_purple_apps_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "/data/disk_00/cache/blue_and_purple_apps"  
6       max_size: "100M"  
7       grace_time: "30s"  
8       expire: "1h"
```

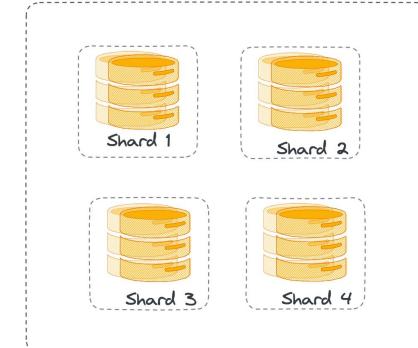


Chproxy

☰ ClickHouse sessions

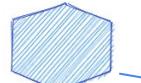


☰ ClickHouse users



Concurrent caching

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



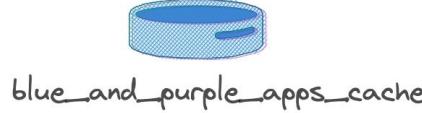
?query=QUERY

App



?query=QUERY

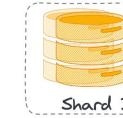
App



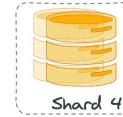
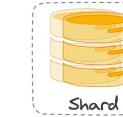
Chproxy

```
1 caches:  
2   - name: "blue_and_purple_apps_cache"  
3     mode: "file_system"  
4       file_system:  
5         dir: "/data/disk_00/cache/blue_and_purple_apps"  
6         max_size: "100M"  
7         grace_time: "30s"  
8         expire: "1h"
```

☰ ClickHouse sessions

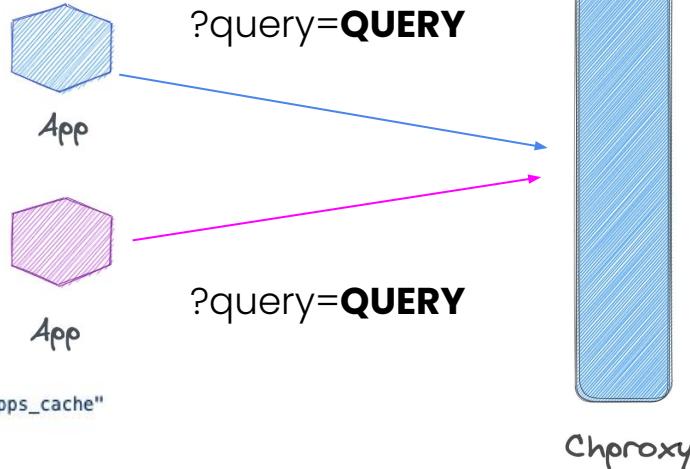


☰ ClickHouse users



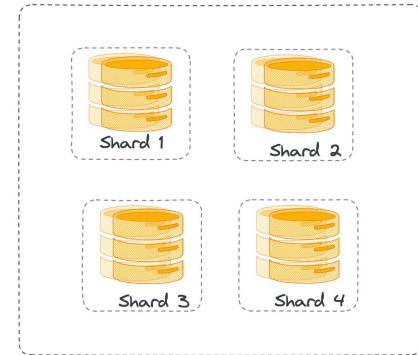
Concurrent caching

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```

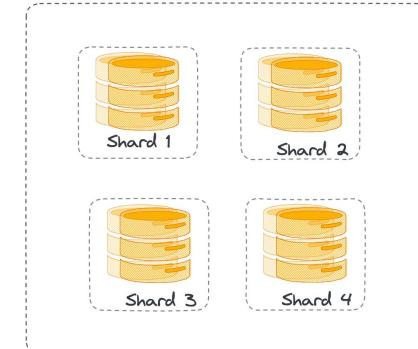


```
1 caches:  
2   - name: "blue_and_purple_apps_cache"  
3     mode: "file_system"  
4       file_system:  
5         dir: "/data/disk_00/cache/blue_and_purple_apps"  
6         max_size: "100M"  
7         grace_time: "30s"  
8         expire: "1h"
```

ClickHouse sessions

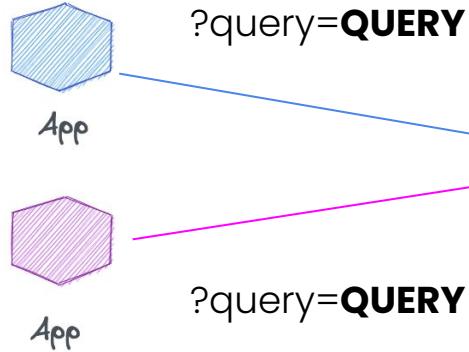


ClickHouse users



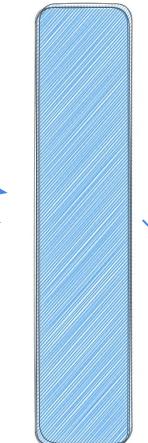
Concurrent caching

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



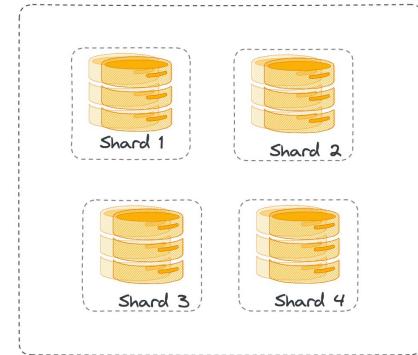
```
1 caches:  
2   - name: "blue_and_purple_apps_cache"  
3     mode: "file_system"  
4       file_system:  
5         dir: "/data/disk_00/cache/blue_and_purple_apps"  
6         max_size: "100M"  
7         grace_time: "30s"  
8         expire: "1h"
```

blue_and_purple_apps_cache

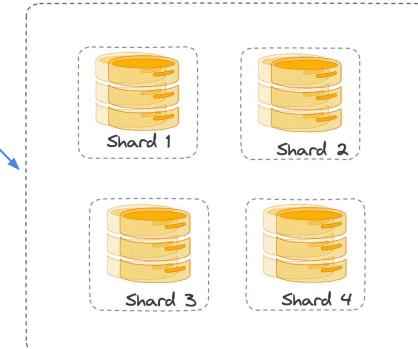


Chproxy

☰ ClickHouse sessions

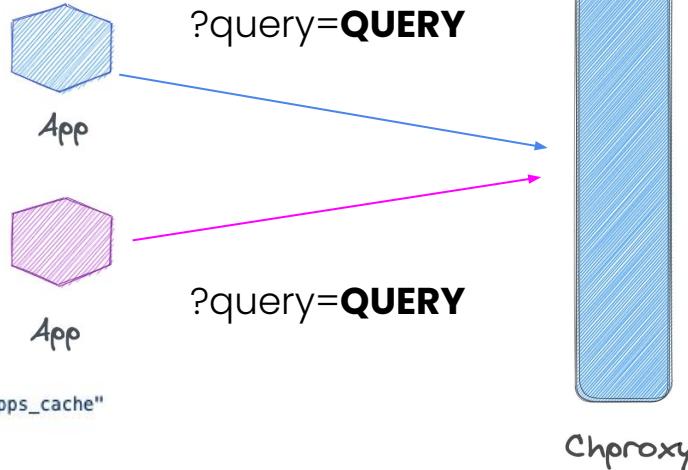


☰ ClickHouse users



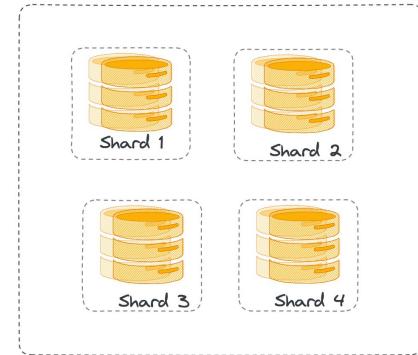
Concurrent caching

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```

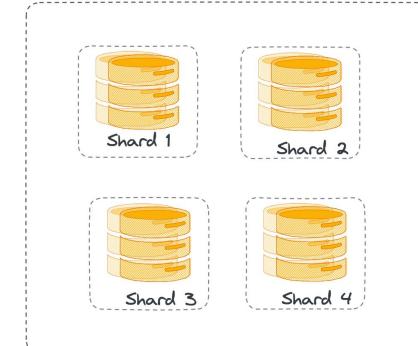


```
1 caches:  
2   - name: "blue_and_purple_apps_cache"  
3     mode: "file_system"  
4       file_system:  
5         dir: "/data/disk_00/cache/blue_and_purple_apps"  
6         max_size: "100M"  
7         grace_time: "30s"  
8         expire: "1h"
```

ClickHouse sessions

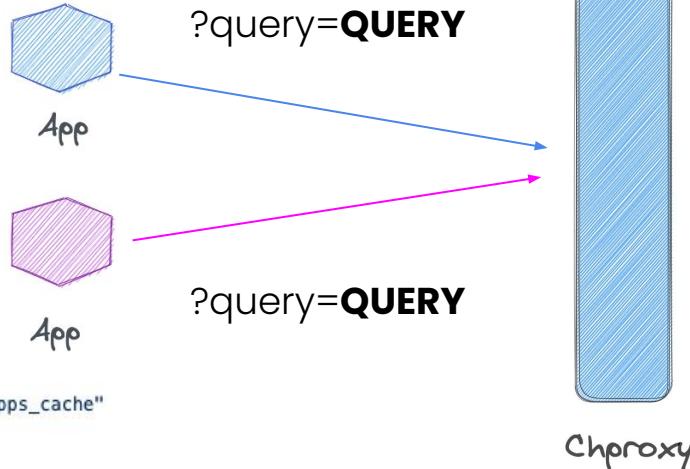


ClickHouse users

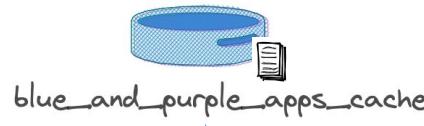


Concurrent caching

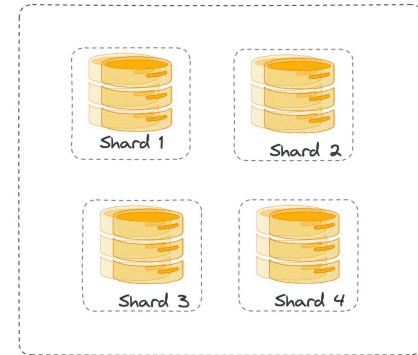
```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



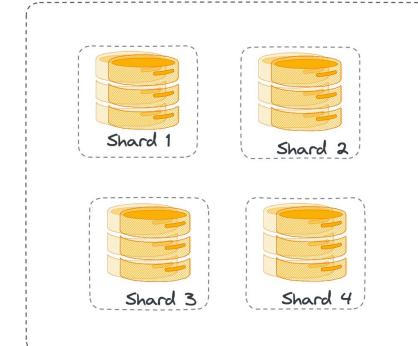
```
1 caches:  
2   - name: "blue_and_purple_apps_cache"  
3     mode: "file_system"  
4       file_system:  
5         dir: "/data/disk_00/cache/blue_and_purple_apps"  
6         max_size: "100M"  
7         grace_time: "30s"  
8         expire: "1h"
```



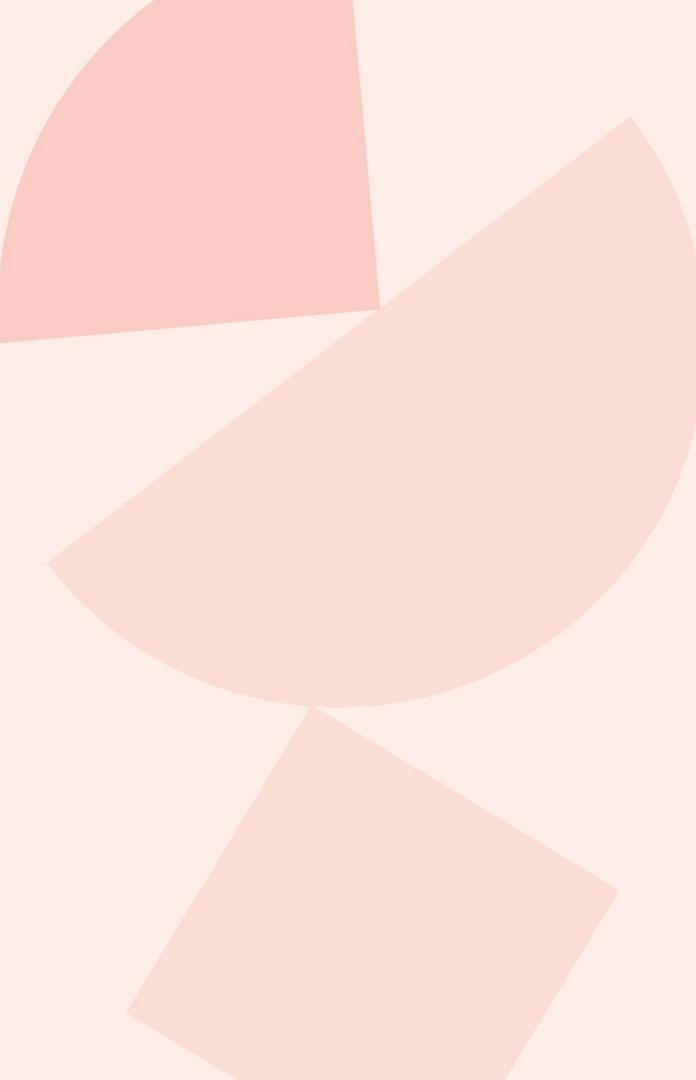
☰ ClickHouse sessions



☰ ClickHouse users

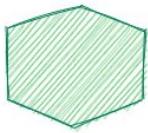


Caching problem

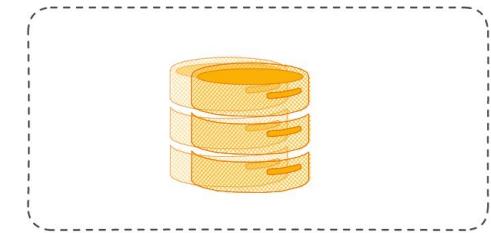
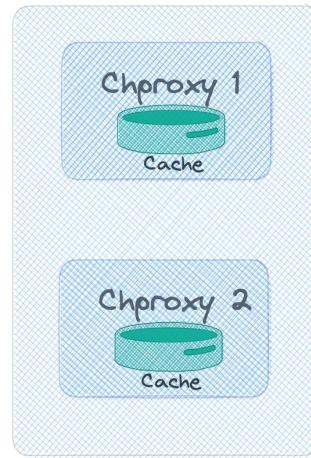


Caching problem

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```

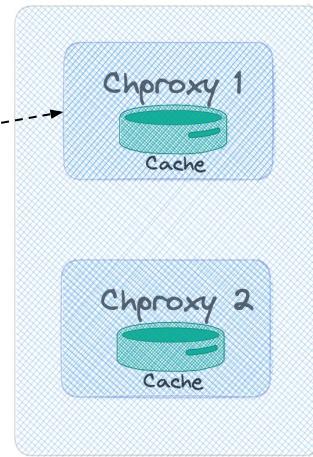
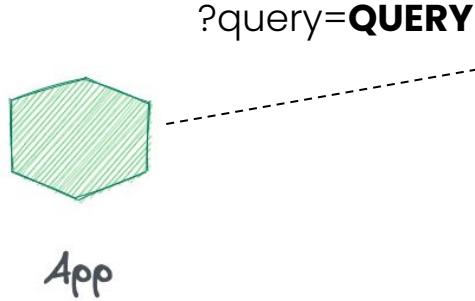


App



Caching problem

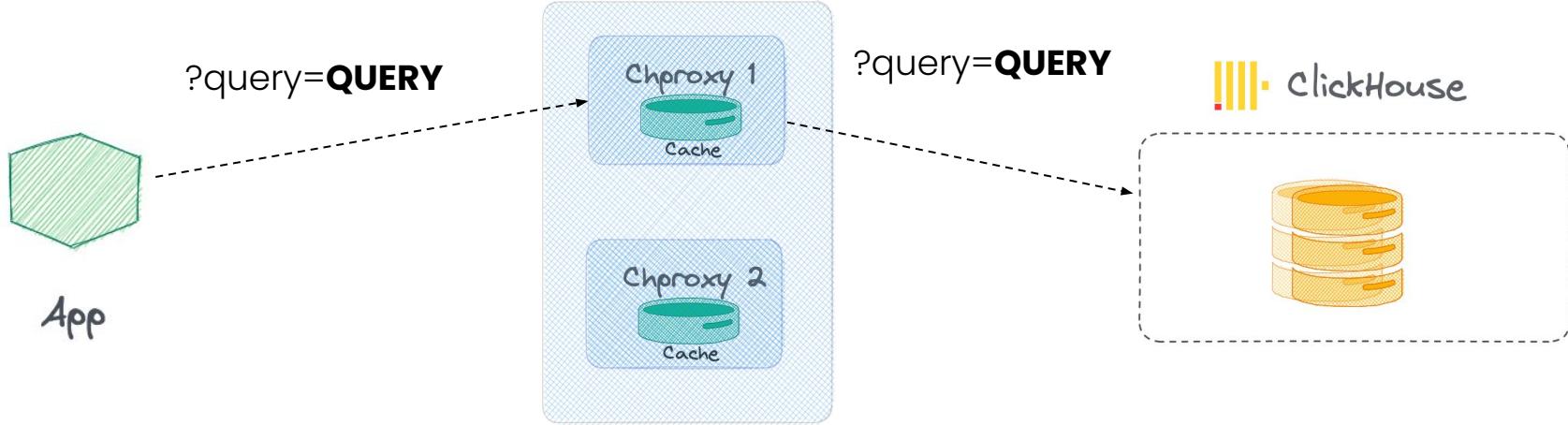
```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



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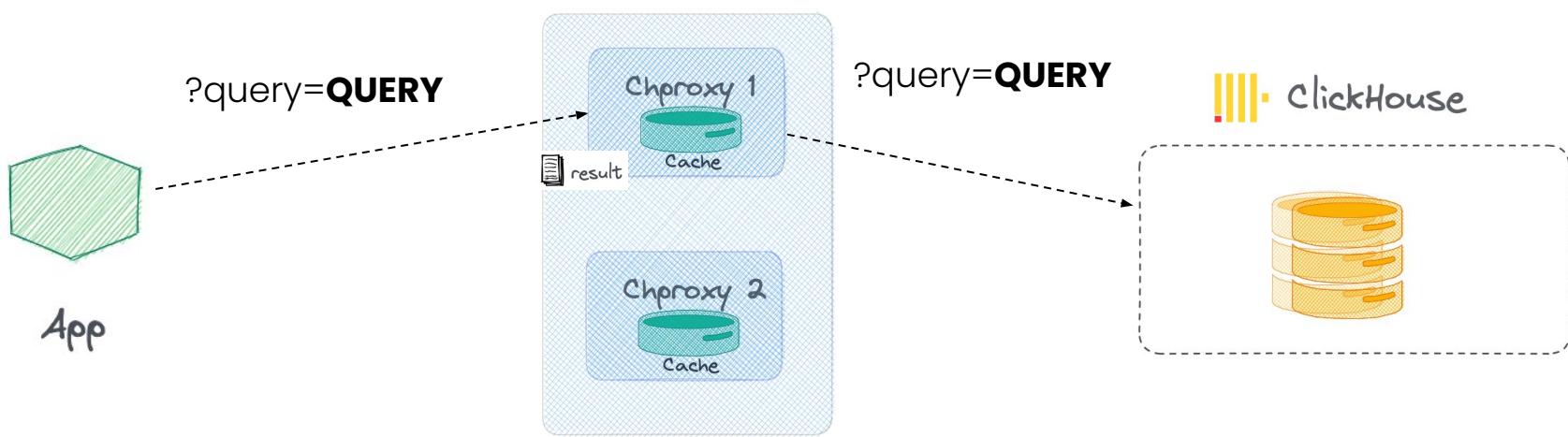
Caching problem

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



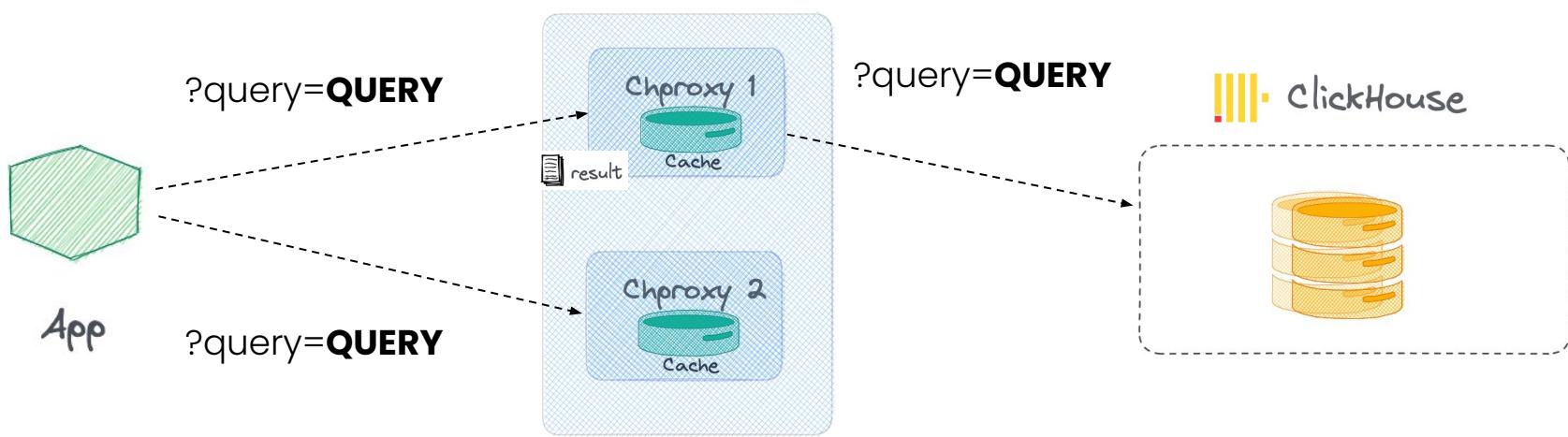
Caching problem

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



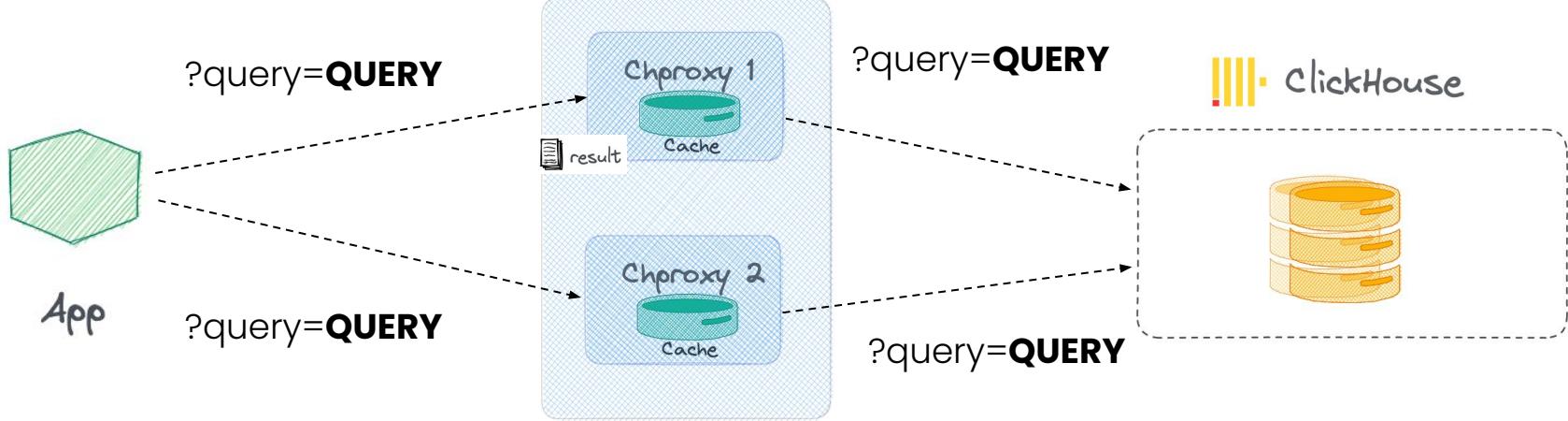
Caching problem

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



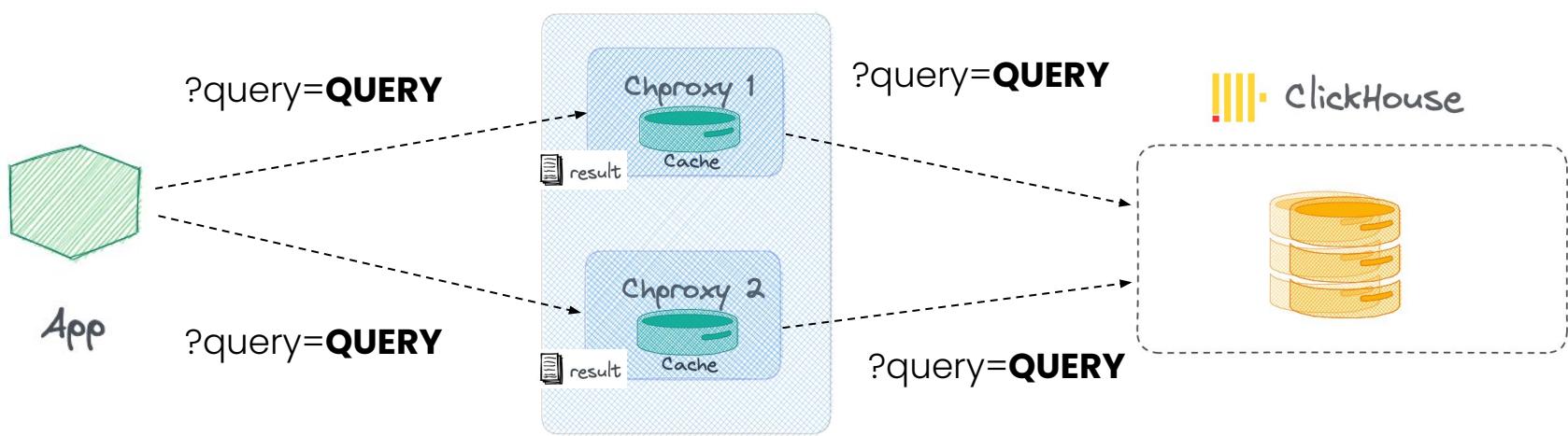
Caching problem

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



Caching problem

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```

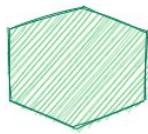


Distributed cache

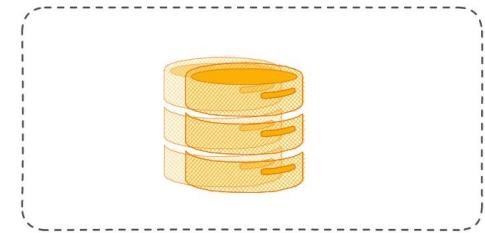
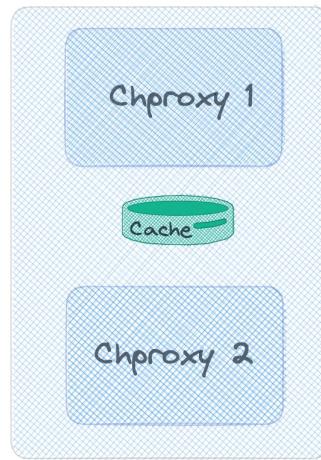


Distributed cache

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```

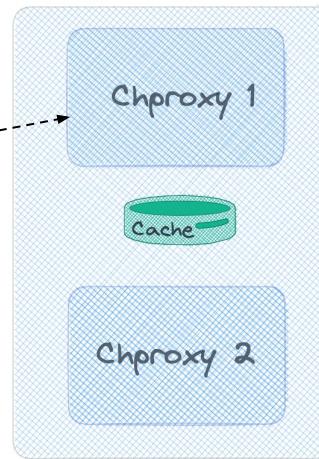
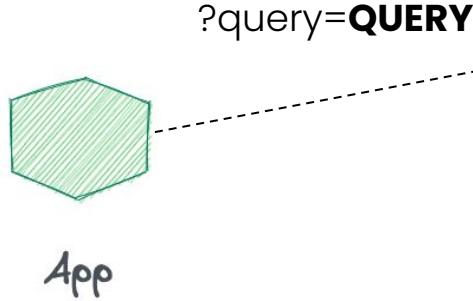


App

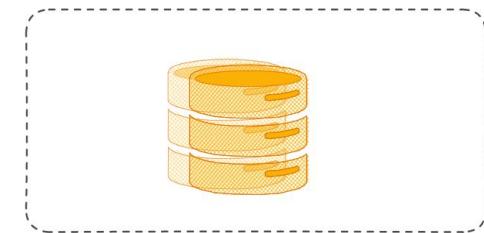


Distributed cache

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```

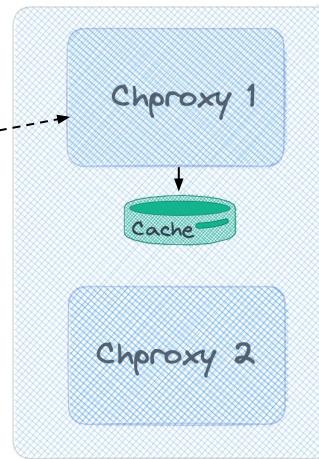
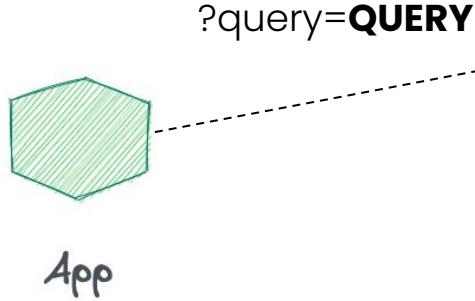


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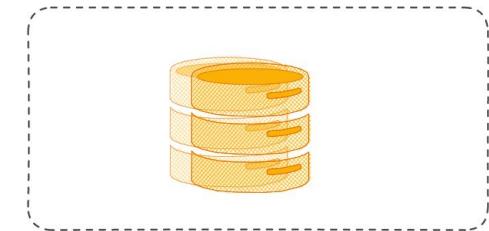


Distributed cache

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```

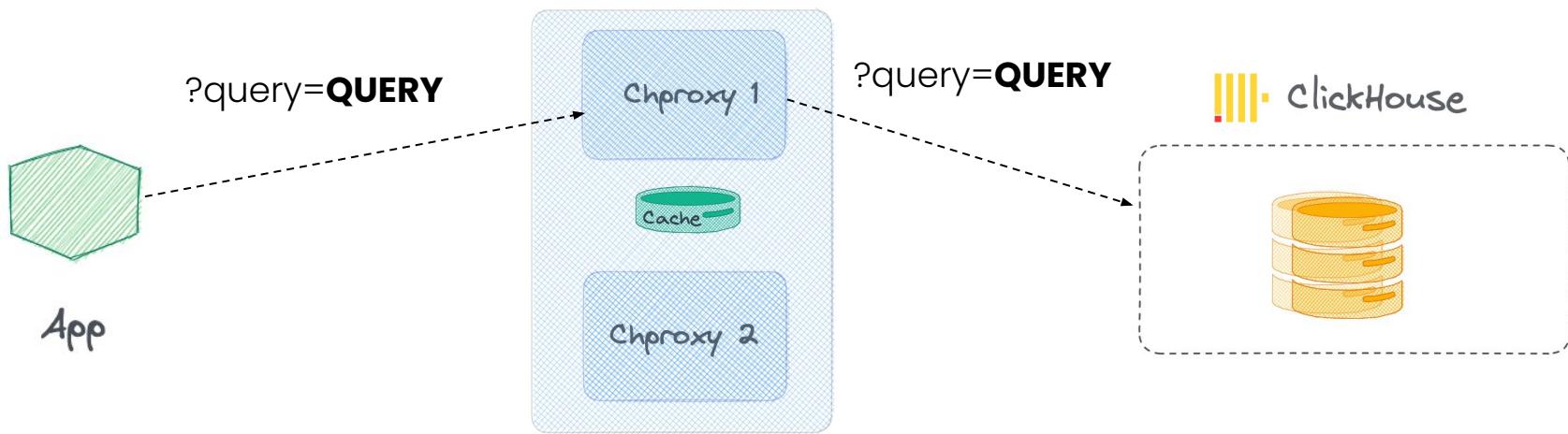


ClickHouse



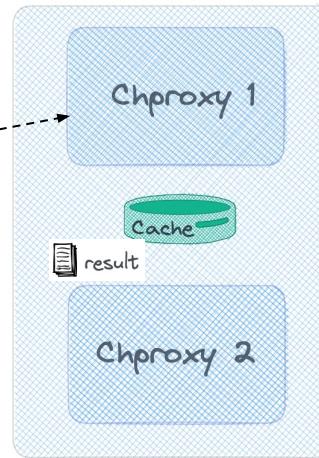
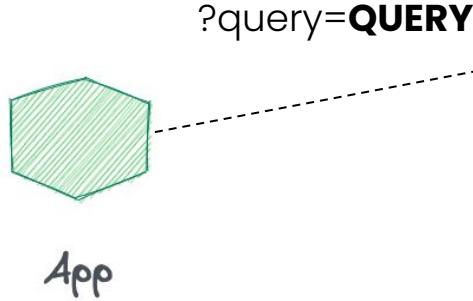
Distributed cache

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



Distributed cache

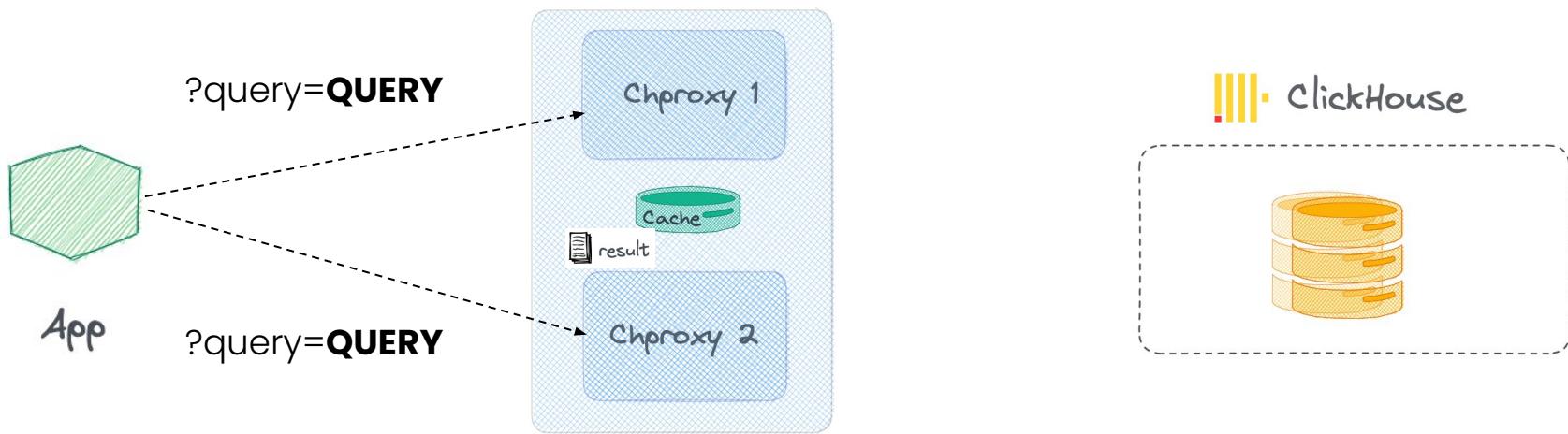
```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



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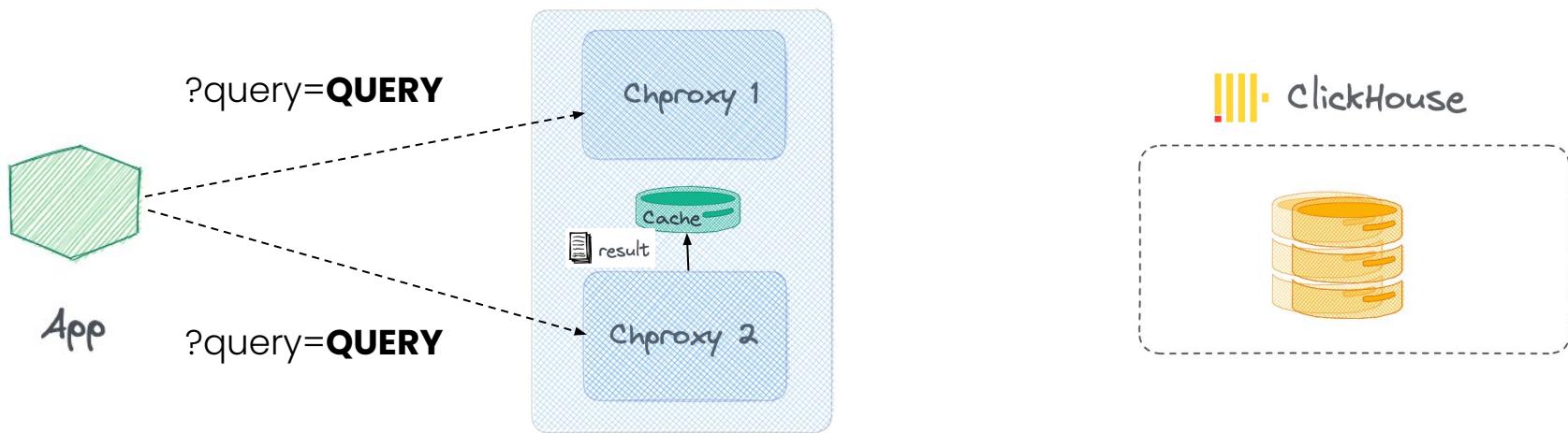
Distributed cache

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



Distributed cache

```
QUERY = SELECT * FROM  
system.events LIMIT 5
```



Cache implementation

Filesystem cache

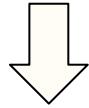
```
1 caches:  
2   - name: "https_cache"  
3     mode: "file_system"  
4     file_system:  
5       dir: "cache_dir"  
6       max_size: "10M"  
7     expire: "1m"
```

Distributed Redis cache

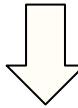
```
1 caches:  
2   - name: redis_cache  
3     mode: redis  
4     expire: 1h  
5     grace_time: 30s  
6     redis:  
7       addresses:  
8         - redis-chproxy-cache.io:6379
```

Distributed cache design

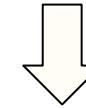
Filesystem cache



Redis cache



Any implementation of cache



```
// Cache stores results of executed queries identified by Key
type Cache interface {
    io.Closer
    Stats() Stats
    Get(key *Key) (*CachedData, error)
    Put(r io.Reader, ctMetadata ContentMetadata, key *Key) (time.Duration, error)
    Name() string
}
```

Miscellaneous features

- Allowed Networks: whitelist ip ranges (10.0.0.0/8)
- Concurrent queries: user settings max_concurrent_queries
- Max execution time per user: user settings max_execution_time
- Transparent users using prefix and wildcard in the the username: users settings is_wildcarded
- Max size of request payload for caching: cache settings max_payload_size

Monitoring

<https://www.chproxy.org/configuration/metrics>

Metrics are exposed in Prometheus text format at `/metrics` path.

Name	Type	Description	Labels
retry_request_total	Counter	The number of retry requests	user, cluster, cluster_user, replica, cluster_node
bad_requests_total	Counter	The number of unsupported requests	cache, user, cluster, cluster_user
cache_hits_total	Counter	The amount of cache hits	cache
cache_items	Gauge	The number of items in each cache	cache, user, cluster, cluster_user
cache_miss_total	Counter	The amount of cache misses	cache
cache_size	Gauge	Size of each cache	cache, user, cluster, cluster_user
cached_response_duration_seconds	Summary	Duration for cached responses.	cache, user, cluster, cluster_user
canceled_request_total	Counter	The number of requests canceled by remote client	user, cluster, cluster_user, replica, cluster_node
response_body_bytes_total	Counter	The amount of bytes written to response bodies	user, cluster, cluster_user, replica, cluster_node
request_success_total	Counter	The number of successfully proxied requests	user, cluster, cluster_user, replica, cluster_node
concurrent_queries	Gauge	The number of concurrent queries at the moment	user, cluster, cluster_user, replica, cluster_node
config_last_reload_successful	Gauge	Whether the last configuration reload attempt was successful	

Build and artefacts

5 days ago
github-actions
v1.21.0
v1.21.0
aeca5b7
Compare

v1.21.0 Latest

Changelog

- aeca5b7 update changelog (#283)
- 2105312 hide redis sensitive info (#282)
- a91f730 Improve connection pool management (#275)
- aabdcde chore: Reenable forcetypeassert
- 01e198d Bump decode-uri-component from 0.2.0 to 0.2.2 in /docs (#278)

Assets 7

chproxy_1.21.0_checksums.txt	402 Bytes	5 days ago
chproxy_1.21.0_darwin_amd64.tar.gz	4.12 MB	5 days ago
chproxy_1.21.0_darwin_arm64.tar.gz	4.08 MB	5 days ago
chproxy_1.21.0_linux_amd64.tar.gz	3.93 MB	5 days ago
chproxy_1.21.0_linux_arm64.tar.gz	3.59 MB	5 days ago
Source code (zip)		5 days ago
Source code (tar.gz)		5 days ago

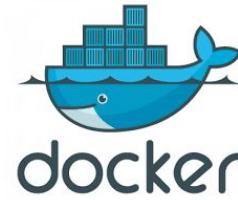
1 person reacted



contentsquareplatform/chproxy

By contentsquareplatform • Updated 5 days ago
Chproxy docker images repository

Image



Repository activity



ContentSquare / chproxy Public



Activity of chproxy in 2022

== Managing issues ==

- * 65 issues
- * from 58 people
- * generating 259 messages

== Managing PRs ==

- * 105 PRs
- * From 44 people
- * generating 378 messages



ClickHouse
не тормозит



ClickHouse
не тормозит



Chproxy
не тормозит
As well

Thank you

