

ON DEMAND (2)

SQL_CACHE []

```
-- [ ]
SELECT * FROM products WHERE category_id = 5;

-- [ ]
SELECT SQL_CACHE * FROM products WHERE category_id = 5;
```

ON DEMAND []

[]

[]

```
-- [ ] 'products' [ ] 1000 [ ] SELECT [ ]
UPDATE products SET price = 19.99 WHERE product_id = 42;
-- → 'products' [ ] 1000 [ ]
```

[]

[]

query_cache_size []

```
[mysqld]
query_cache_type = 2
query_cache_size = 64M
query_cache_limit = 2M
query_cache_min_res_unit = 2048
```

- **query_cache_size** [] 256 MB []
- **query_cache_limit** []
- **query_cache_min_res_unit** []

[]

Qcache_* []

```
SHOW GLOBAL STATUS LIKE 'Qcache%';
```

████

█	█
Qcache_hits	██████████
Qcache_inserts	████████
Qcache_not_cached	██████████████
Qcache_lowmem_prunes	██████████████
Qcache_free_memory	████████
Qcache_total_blocks	██████
Qcache_free_blocks	█████ = ████

████

██████

```
██ = Qcache_hits / (Qcache_hits + Com_select) * 100
```

██

- > 40% ██████████
- 20-40% ██████████
- < 20% ██████████

██████

```
██ = Qcache_lowmem_prunes / Qcache_inserts * 100
```

██████ 10% `query_cache_size` ████████

████

██ 100 ██

MySQL 8.0 Oracle

MariaDB

Galera

Galera Galera

1. A SELECT
2. B Galera UPDATE
3. A ——
4. A SELECT

Galera `wsrep_causal_reads = ON`

MaxScale

MaxScale

```
[query-cache]
type = filter
module = cache
storage = storage_inmemory
ttl = 10s
max_size = 256Mi
```

MaxScale Galera MaxScale

- 80% SELECT
-
- 150
- Web
- Galera

