

22 Reasons to move to MySQL 8

And 4 reasons not to

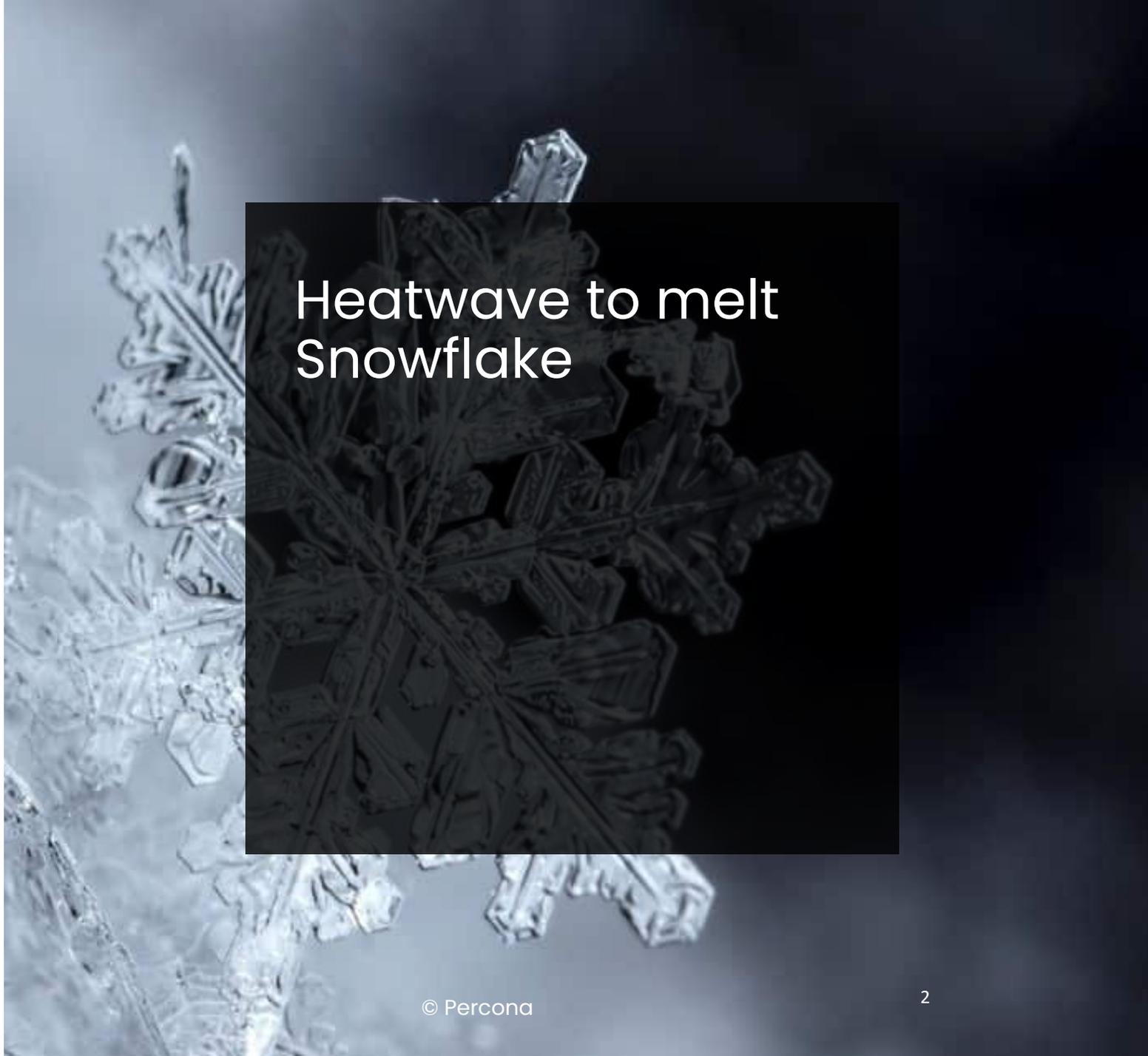


Peter Zaitsev,
Founder at Percona
24 October 2023



Montevideo, Uruguay 2023

PERCONA
UNIVERSITY



Heatwave to melt
Snowflake

#1 MySQL 5.7 Goes EOL in October 2023



#2 New Development Process

Get new Features Frequently, Rather than once every 2-3 years



#3 Innodb based Data Dictionary

- Atomic, Crash Safe DDLs
- Crash Safe Grants
- Much Faster Information Schema



#4 More SQL, Better SQL

Window Functions

CTEs (Common Table Expressions)

INTERSECT and EXCEPT

LATERAL JOIN

#5 Better Security

- **New Authentication Protocol**
- **Support for More Authentication Plugins**
- **Improvements to Transparent Data Encryption (TDE)**
- **Improvements to TLS**
- **Roles**

#6 UTF8 Default

And Proper (MB4) UTF8 that is !



#7 All Things Indexes

Functional Indexes

Descending Indexes

Invisible Indexes

Multi Value Indexes (JSON)

Generated Invisible Primary Keys

#8 Better JSON Support



#9 Improved Optimizer

Hash Joins among other things...



#10 Improved EXPLAIN

1

TREE Format

2

**EXPLAIN
ANALYZE**

3

**Default
EXPLAIN
Format**

#11 Better Agility

Much more DDLs supported as
ALGORITHM=INSTANT



#12 SET PERSIST

**New way to control
MySQL Configuration**

#13 Optimizer Hints

Number of new Hints Supported

SET_VAR to set some variables for query duration only

#14 Resource Management

**Resource Groups to Prioritize or Restrict CPU
Resources for some queries**



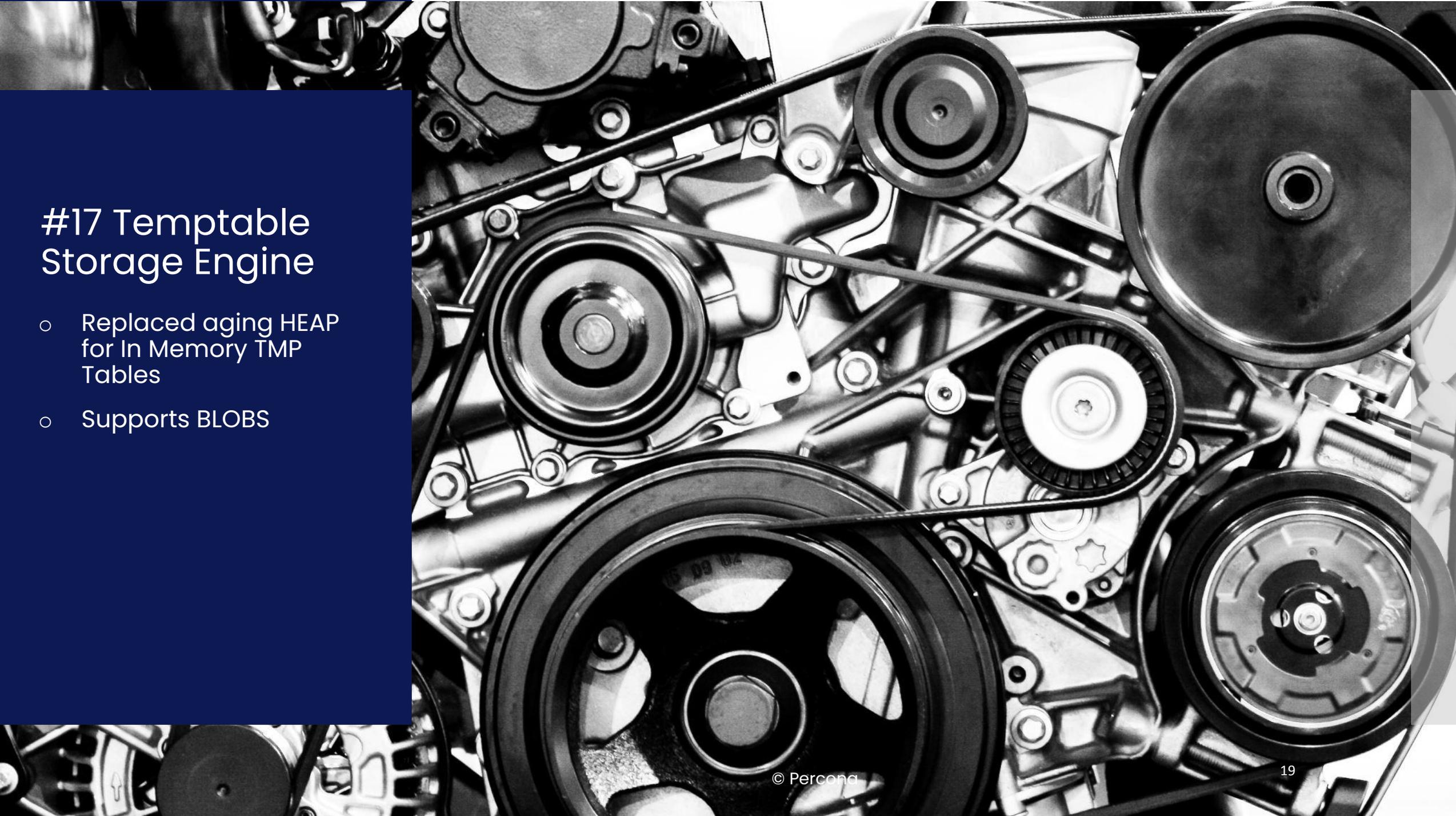
#15 NOWAIT an SKIP_LOCKED

**Flexible handling of
encountered row level
locks**



#16 Proper AUTO_INCREMENT

**Do not loose Auto
Increment Counter
value in Edge Cases**



#17 Temptable Storage Engine

- Replaced aging HEAP for In Memory TMP Tables
- Supports BLOBS

**Separate
Dynamically
Sized
location for
InnoDB Undo
Space**

#18 Undo Space

#19 Double
Write

Separate Location

Configurable

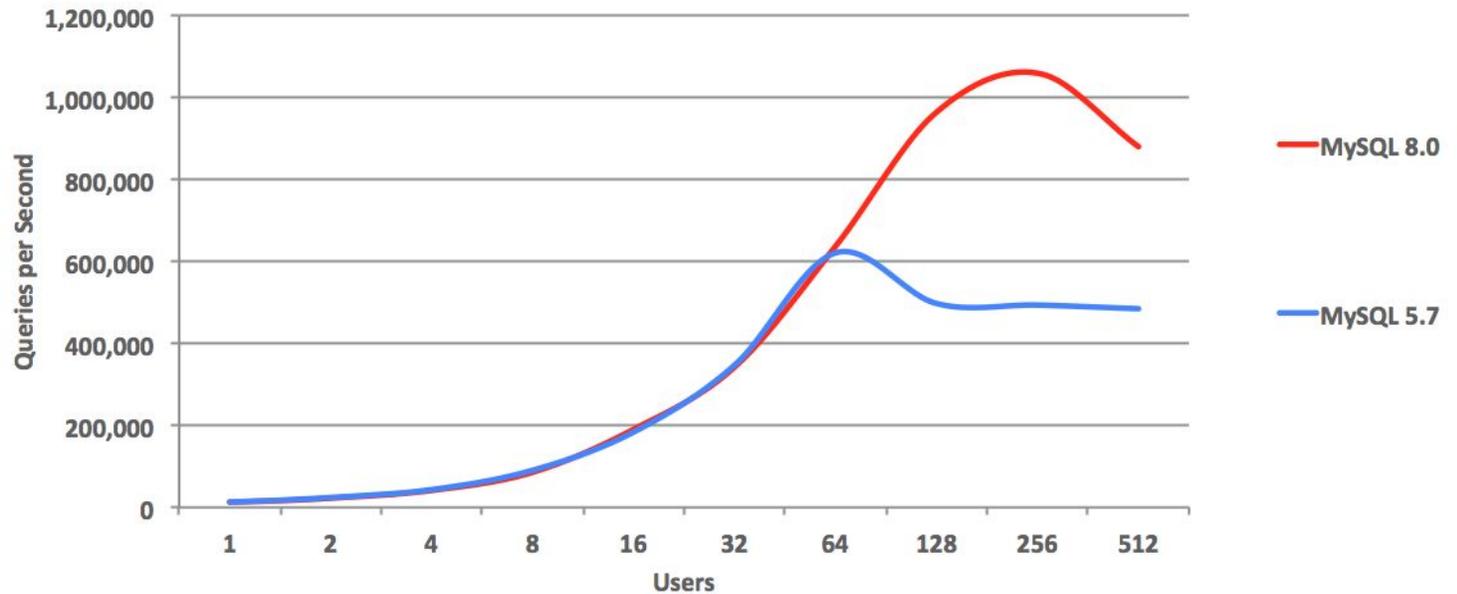
Detect Only Option

#20 Redo
Logs

Dynamically Sizable Online

**Can be Disabled for
faster data loading**

#21 Better Concurrency



#22 User Comments and Attributes

**Store Meta-Data about user accounts
directly in MySQL**

Why not Upgrade to MySQL 8 ?

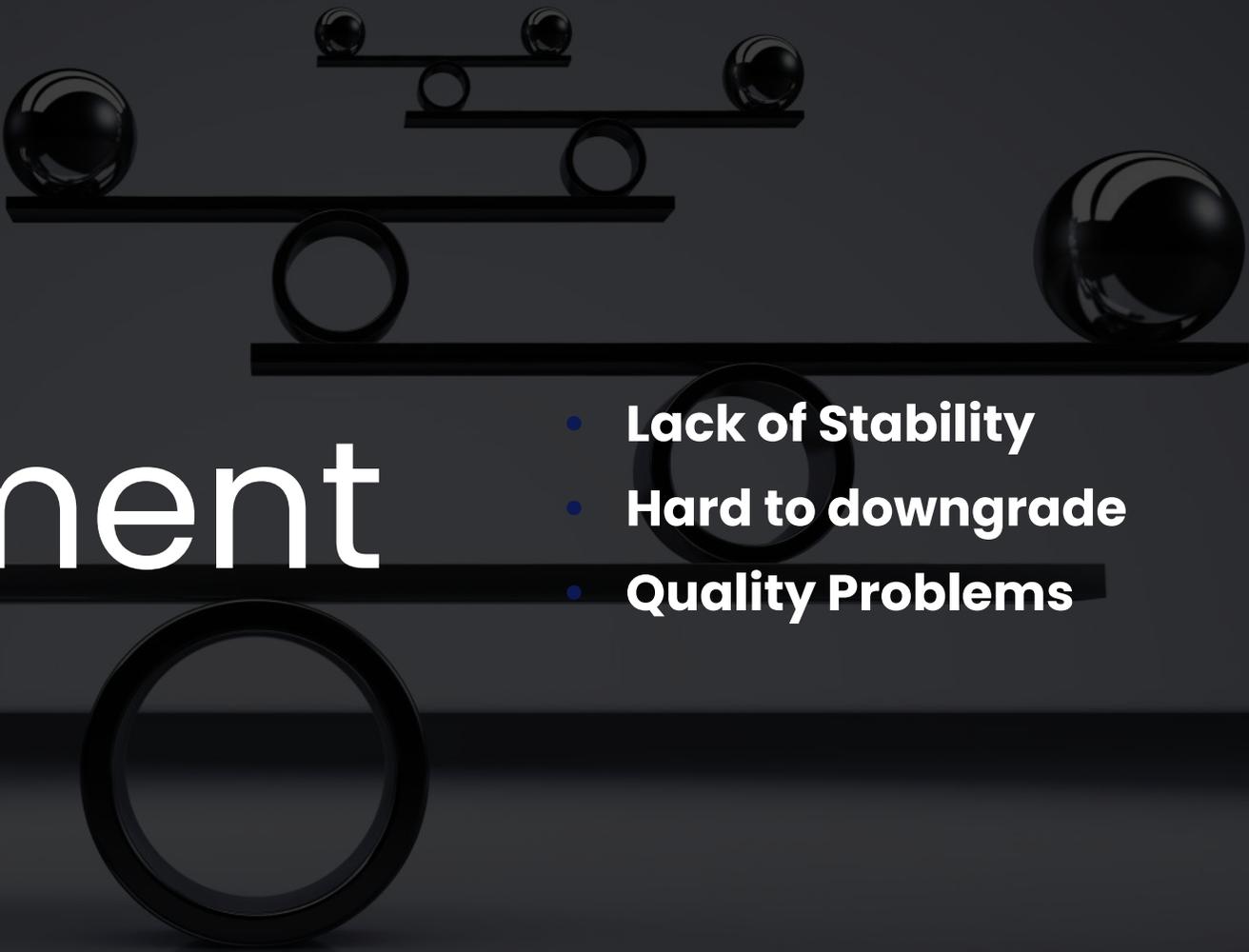




Heatwave

Is Oracle re-focusing MySQL Development on Proprietary cloud version only?

New Development Process

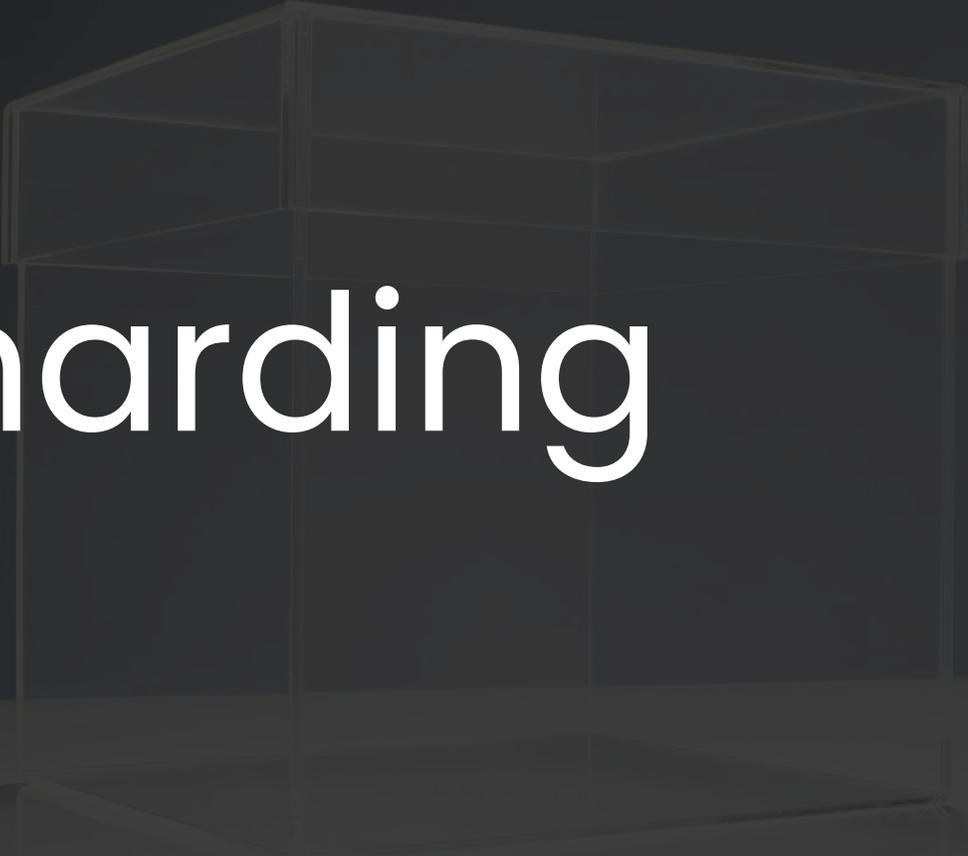


- **Lack of Stability**
- **Hard to downgrade**
- **Quality Problems**



Performance

Performance at low concurrency with simple queries perceived to be lower



Sharding

**No Built In transparent
“Scale Out” Option makes
developing large scale
applications hard**



Question

Know Even Better "MySQL" ?

Want to know more about Percona Software For MySQL?



Thank you, Let's connect!

<https://www.linkedin.com/in/peterzaitsev/>

<https://twitter.com/PeterZaitsev>

<http://www.peterzaitsev.com>