

Percona Vision and Plans

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Percona University Logistics

Schedule at Glance

9:30 to 18:30

Feel Free to Attend only Talks you Like

Coffee Breaks 11:15 and 15:50

Lunch on your Own 13:10 to 14:20

Raffle about 18:15

I am available for side conversations

Check Out <http://per.co.na/careers>




**BECOME A
PERCONA SUPERHERO**

WE'RE HIRING

CONTACT

careers@percona.com

Share your insight and join the debate!



Percona Open Source Data Management Software Survey

This survey is intended to be of use to the open source community, and we want you all to contribute and share. The more responses we receive, the more useful this will be.

The resulting data will be 100% open and 100% anonymous.

[Take the survey](#)

<https://per.co.na/survey>

How Percona Got Started

2006

Peter and Vadim work for MySQL AB

MySQL AB raises Venture Capital, Trades Customer Focus on Exit Focus

Peter and Vadim has idea of Building Customer Committed Company

Start Percona focusing on MySQL and LAMP Consulting

My Belief

**Once you Charge your
customers, your primary goal
must be Their Success**

Percona Evolution

Some “Gaps” Could not be filled by Consulting – Started Creating Percona Software

Transition to Support as foundation of Long Term Relationships with Customers

Expanded to cover MongoDB in 2015

PostgreSQL Support added in 2018

Covering Top Choices in Open Source Databases

345 systems in ranking, April 2019

Rank			DBMS	Database Model	Score		
Apr 2019	Mar 2019	Apr 2018			Apr 2019	Mar 2019	Apr 2018
1.	1.	1.	Oracle +	Relational, Multi-model ⓘ	1279.94	+0.80	-9.85
2.	2.	2.	MySQL +	Relational, Multi-model ⓘ	1215.14	+16.89	-11.26
3.	3.	3.	Microsoft SQL Server +	Relational, Multi-model ⓘ	1059.96	+12.11	-35.55
4.	4.	4.	PostgreSQL +	Relational, Multi-model ⓘ	478.72	+8.91	+83.25
5.	5.	5.	MongoDB +	Document	401.98	+0.64	+60.57

Vision

Trusted Adviser for Open Source Database Technologies

There is no Silver Bullet, Tradeoffs between choices

More than one Open Source Database to be used in the future



Percona's Purpose

To Champion Unbiased Open
Source Database Solutions

Meaning

We Provide Solutions (Support, Consulting, Training, Remote DBA) for Open Source Databases

We Release 100% Free and Open Source Software

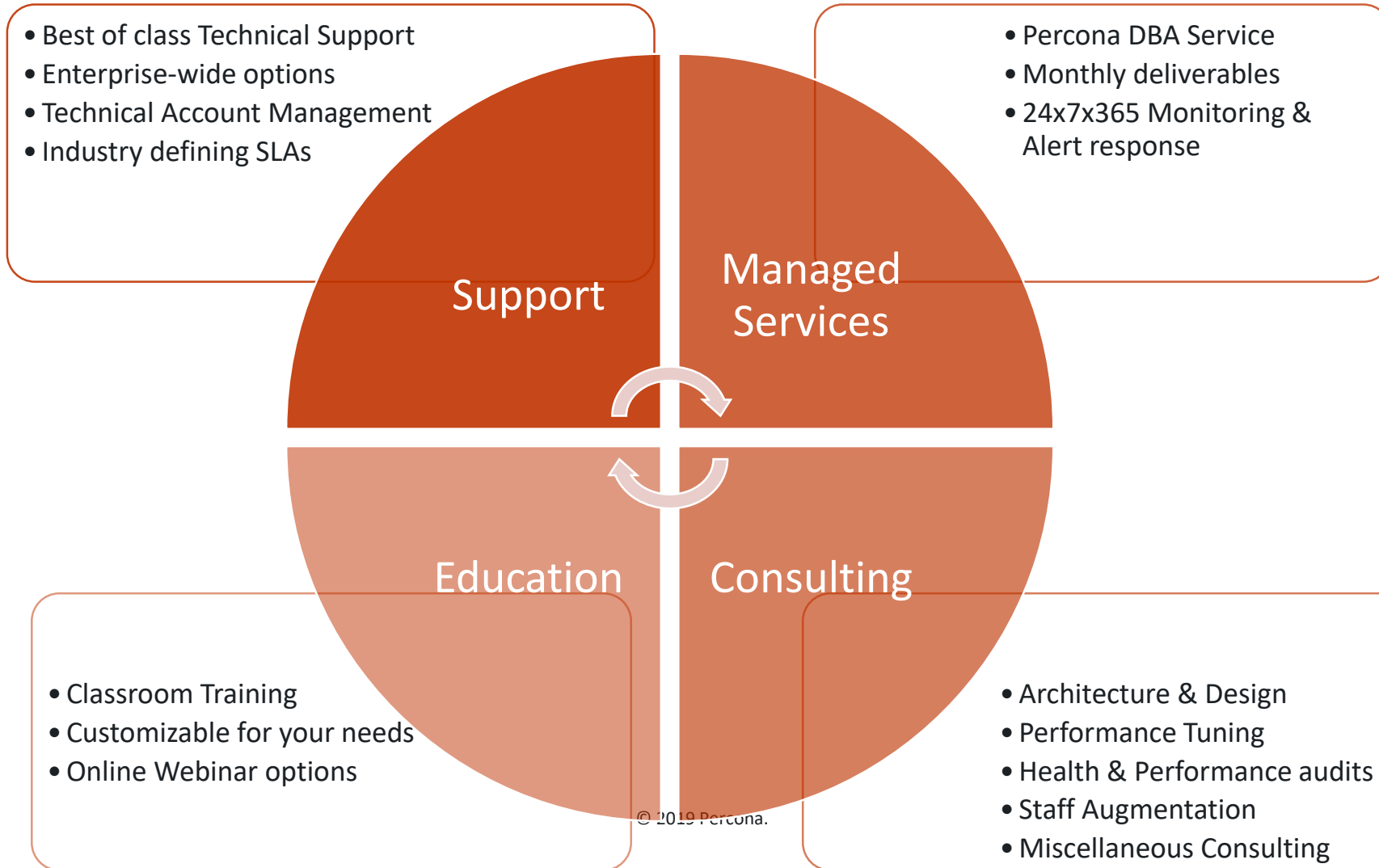
We Help Customers Avoid Software Vendor Lock-In

We Provide Open Source Alternatives to the “Enterprise” Software editions

The most popular databases on the most popular platforms



Service Overview



© 2019 Percona.

The Customer/Percona Relationship

Consulting

Single, one-off engagement
Defined time period
Specific deliverable being addressed



Support

Operational Support
Software Support
Expert Advice
24x7 Escalation

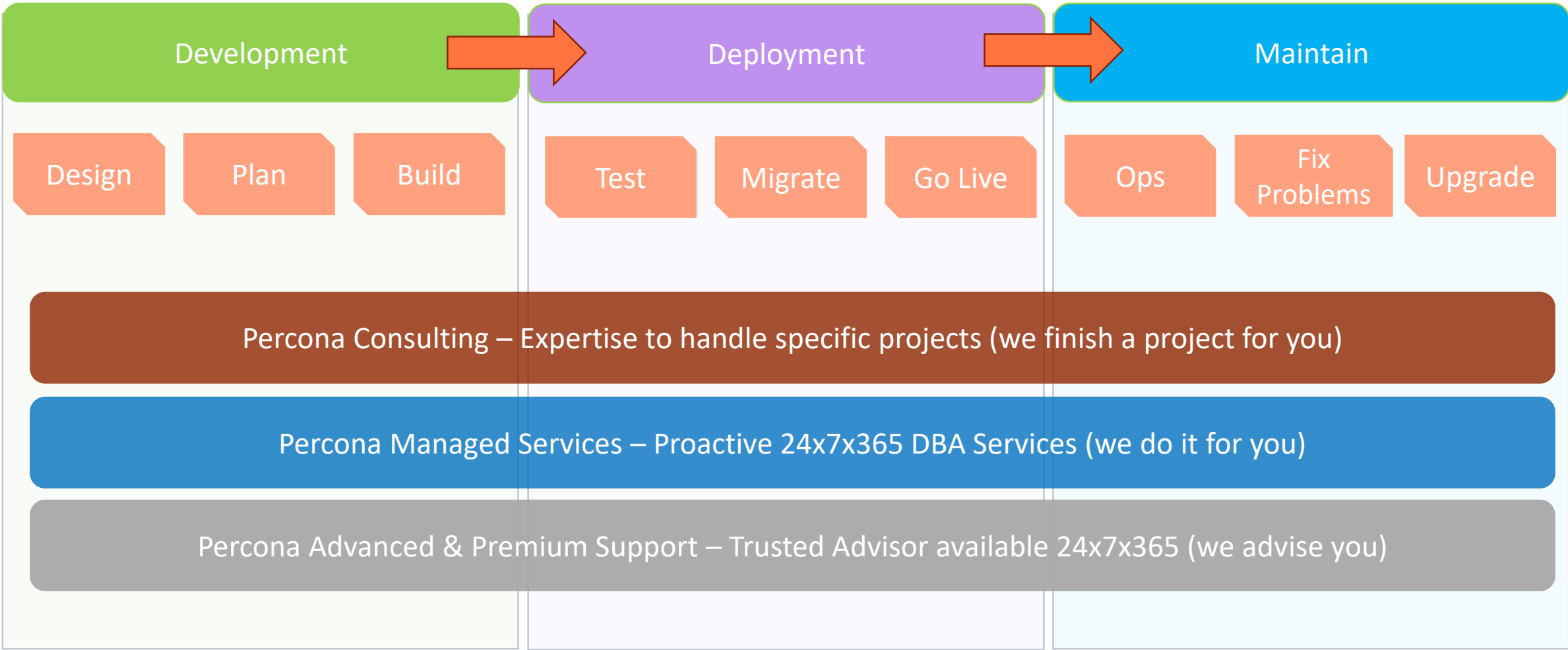


Managed Service

Full 24x7 Monitoring
Proactive Tasks
Responsive hours
Fully Managed



Entire Lifecycle



Open Source Databases Run Best With Percona

Market Leader in Open Source Database Management

- Technology-agnostic and committed to open source
- Recognized database performance experts
- Unparalleled open source services and support
- Truly open source enterprise software

Cloud Native

No Vendor Lock in

Multi-Vendor



Percona Software



PERCONA
Server for MySQL



PERCONA
Server for MongoDB



PERCONA
XtraDB Cluster



PERCONA
Toolkit



PERCONA
XtraBackup



PERCONA
Monitoring and Management

Percona Software Principles

All Percona Software is 100% Free and Open Source

No Restricted “Enterprise” version

No “Open Core”

No “Open Source... Eventually”

No “Commons Clause”

Percona Server Software

How we build Percona Server for MySQL and Percona Server for MongoDB



More secure, better performing, and more stable versions of MySQL and MongoDB.



Percona Tools

We develop tools that are specifically designed to reduce costs, increase productivity, and ensure optimal data availability and consistency.



Percona Server for MySQL



Percona Server 8.0 is now Available!

- **100% Compatible with MySQL 8.0 (Community Edition)**
- **Open Source Variants for many MySQL Enterprise Features**
- **Better Performance on High End Workloads**
- **Improved Security and Observability**



PERCONA
Server for MySQL

Enterprise Features in Open Source

Pluggable Authentication

Auditing

Scalability through Thread Pool

Advanced Encryption

Advanced Encryption ?

**Integration with
Hashicorp Vault
for key
management**

Key rotation

Scrubbing

MyRocks in Percona Server 8.0

3-4x compression compared to Innodb

10x less write amplification

Faster Data Loading

Faster Replication

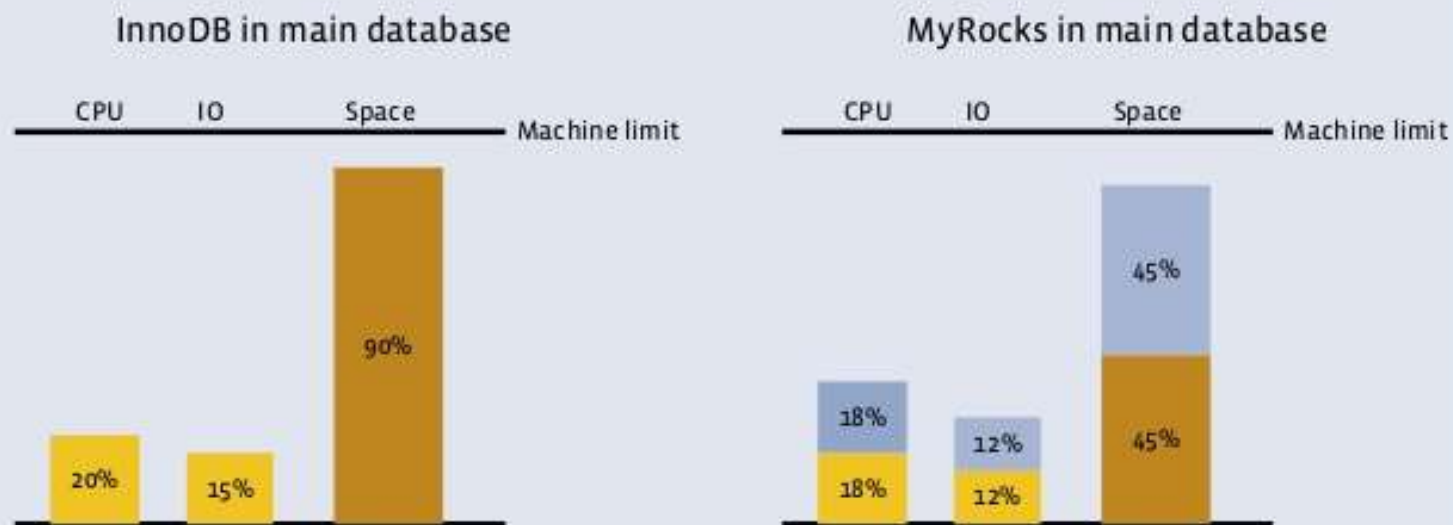
Improved in PS 8.0

<http://bit.ly/MyRocks>

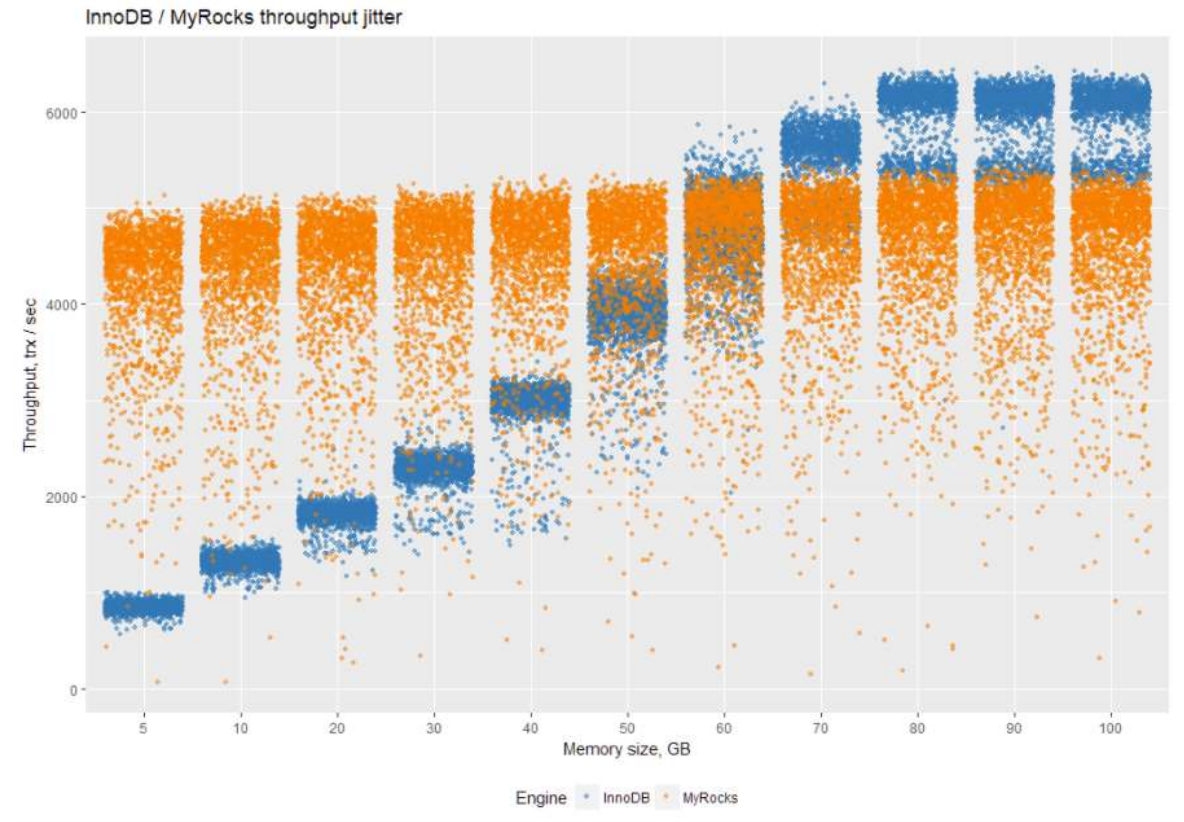
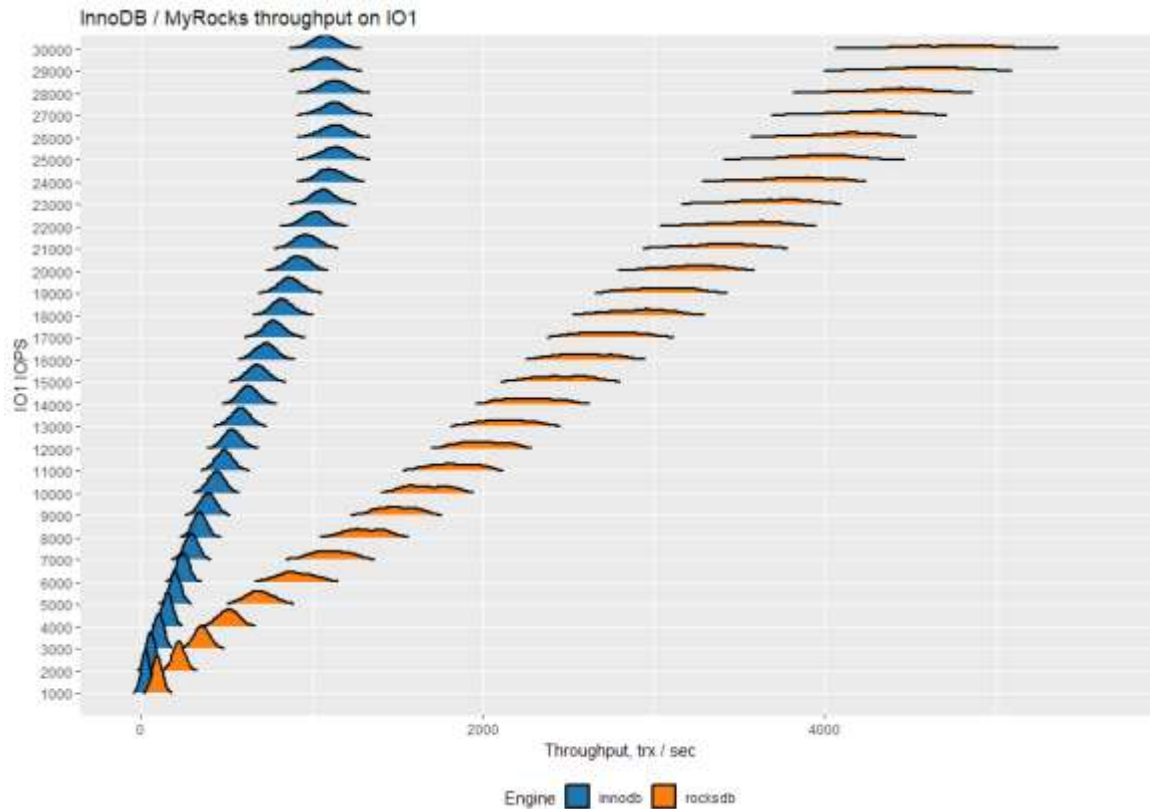


MyRocks at Facebook

MyRocks Goals

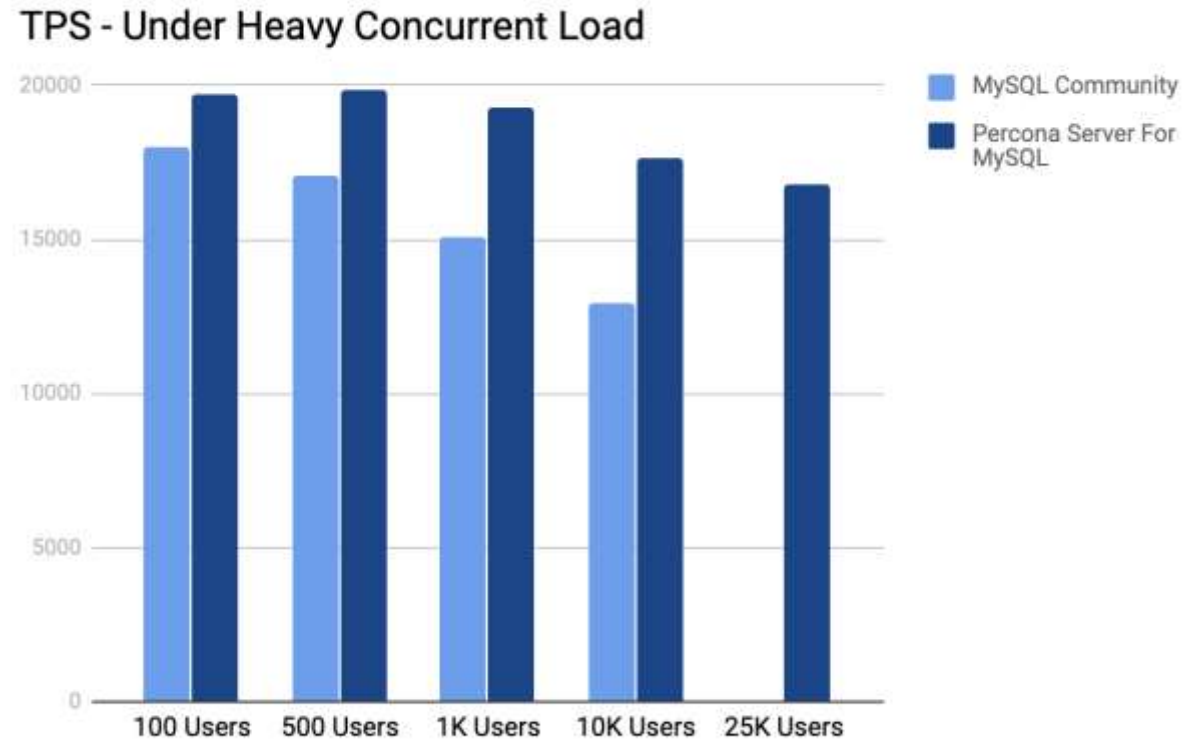


Save \$\$ in the cloud with MyRocks



Scalability under heavy Load

- **Percona Server tested for more than 100K concurrent connections**



Percona XtraDB Cluster 5.7

Based on Percona Server 5.7

Easiest way to bring HA in your MySQL Environment

Designed to work well in the Cloud

Multi-Master Replication with no Conflicts

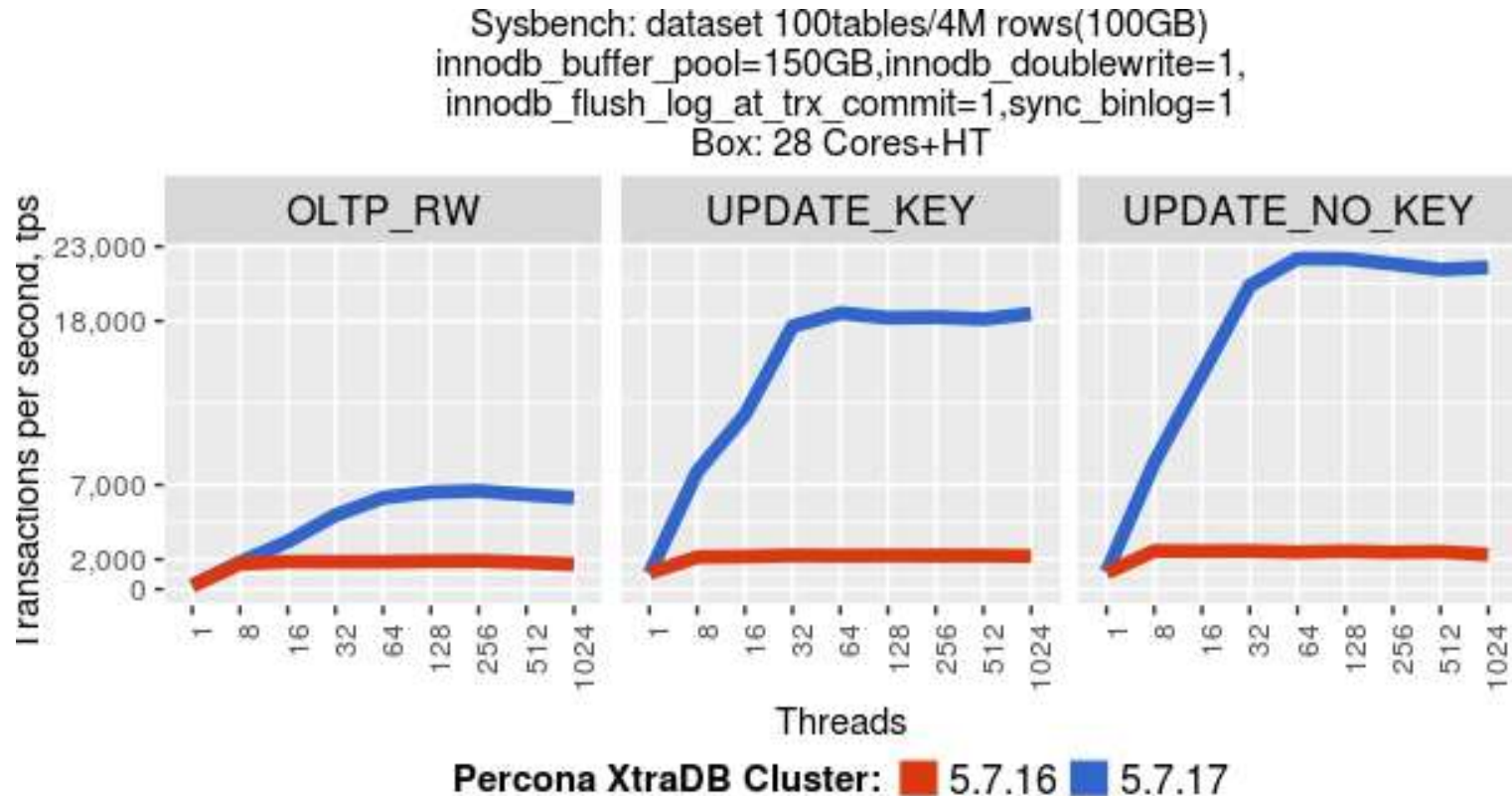
Automatic Node Provisioning for Auto Scaling and Self Healing



PERCONA
XtraDB Cluster

PXC 5.7 Performance Improvements

<http://bit.ly/2qGCr0T> and <http://bit.ly/2pzvAIW>



Data at Rest Encryption

**Now with Advanced
Encryption Support**

Percona XtraDB Cluster 8.0

Working on Percona XtraDB Cluster 8.0

Slower cycle due to higher stability demands

Integrating features from “Galera 4” replication library

Percona Server for MongoDB



Percona Server for MongoDB 4.0

100% Compatible with MongoDB 4.0 Community Edition

100% ~~Open Source~~ (SSPL Licensed)

Alternatives for many MongoDB Enterprise Features

Percona Memory Engine



PERCONA
Server for MongoDB

Data at Rest Encryption

Supported in Percona Server for MongoDB 3.6 and 4.0

Local File for Key Management

Hashicorp Vault and other Key Management Support is coming soon

Percona Backup for MongoDB

Open Source Cluster Consistent Backup solution for MongoDB

Experimental Release available now

Test it out and provide your feedback!

Percona Server for PostgreSQL

**Percona Branded
Enterprise Grade
PostgreSQL Distribution
is coming soon**

Cloud Native Software

- Kubernetes Operators For MySQL (PXC) and MongoDB
- Partnership with Redhat providing access through OperatorHub.io, official Operators for Redhat.
 - <https://operatorhub.io/>
 - <https://www.infoq.com/news/2019/03/redhat-operatorshub-io>
- Developed in conjunction with Fortune 500 launch customers
 - One of the worlds largest automotive companies building their own private cloud
 - Fortune 50 technology company building a commercial DBaaS engine
 - Fortune 500 bank looking to move off of proprietary database software

Percona Monitoring and Management

Comprehensive Database Focused Monitoring

100% Open Source Roll-your-own solution

Easy to install and use

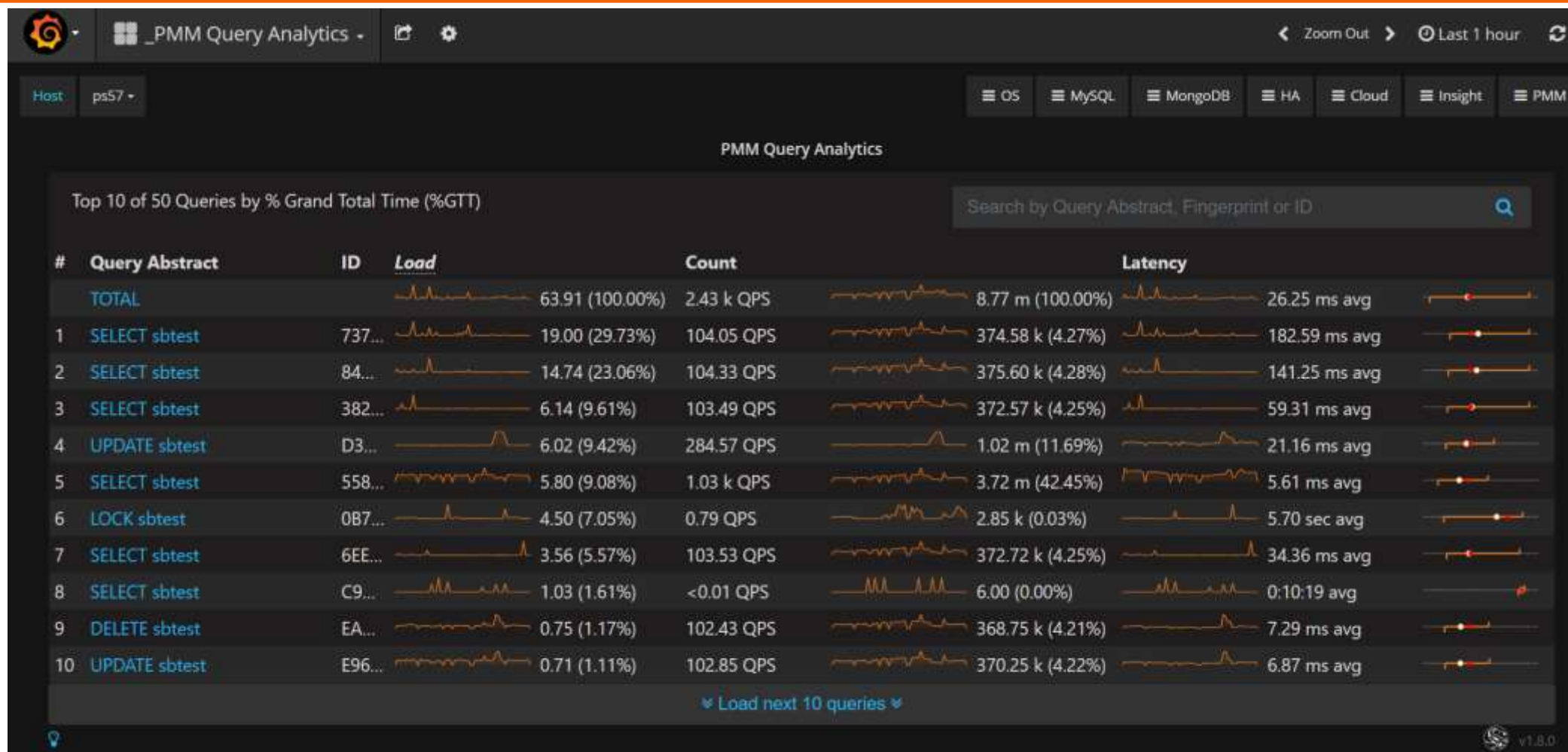
Supports MySQL, MariaDB, MongoDB and now PostgreSQL

Supports On Premises, Cloud and DBaaS Deployments

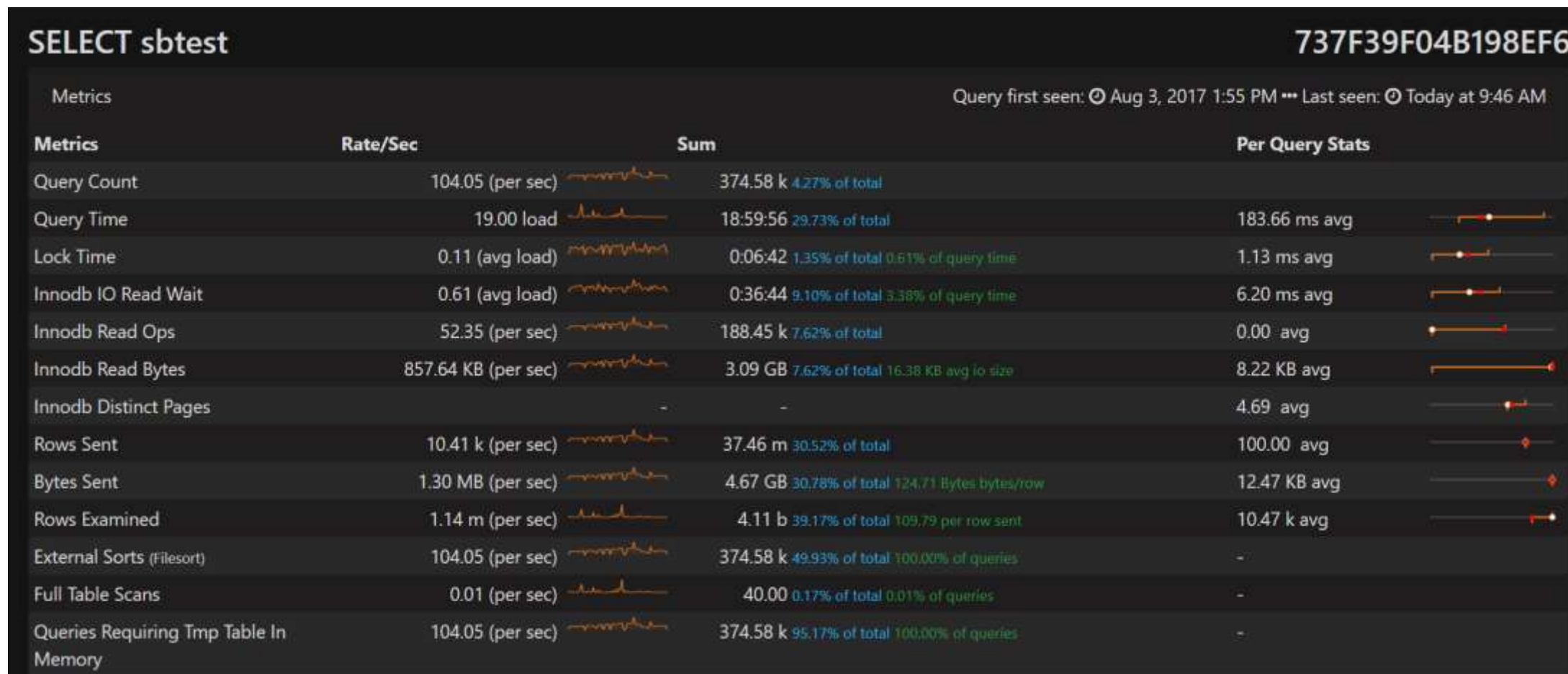


PERCONA
Monitoring and Management

Which Queries are Causing the Load



Why Are they Causing this Load



How to Improve their Performance

Example

```
SELECT DISTINCT c
FROM sbtest1
WHERE id
      BETWEEN 5559
          AND 5658
ORDER BY c
```

CREATE

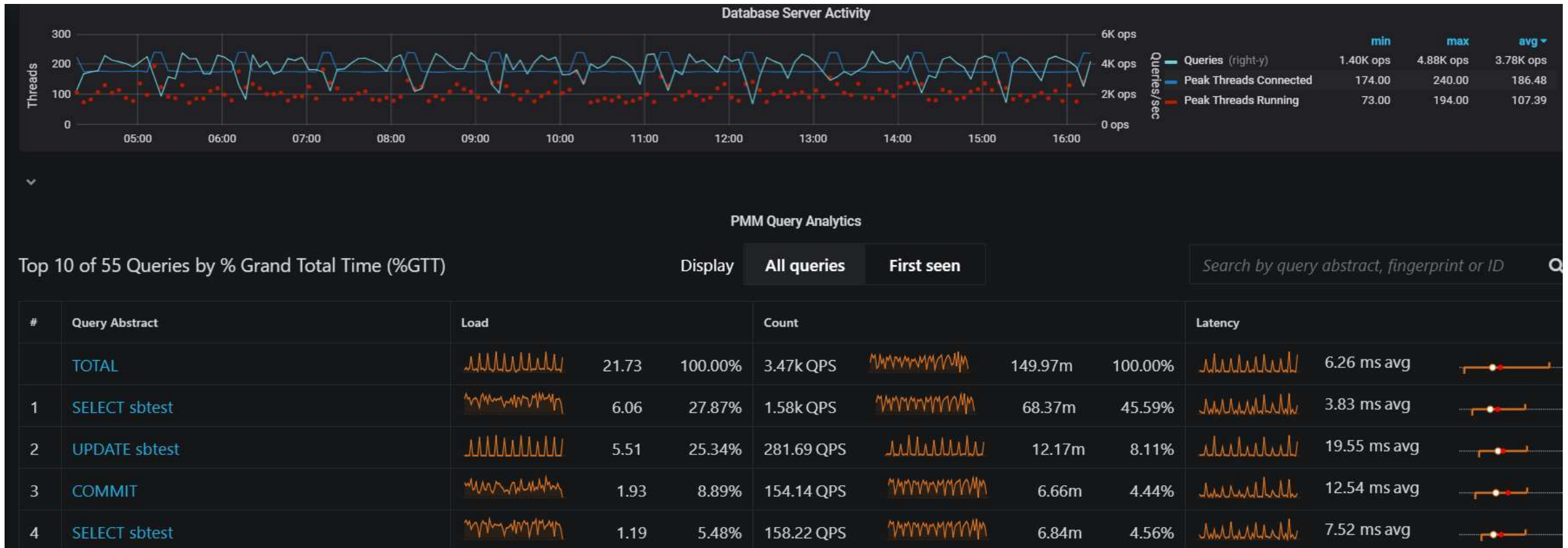
```
CREATE TABLE `sbtest1` (
  `id` int(10) unsigned NOT NULL AUTO_INCREMENT,
  `k` int(10) unsigned NOT NULL DEFAULT '0',
  `c` char(120) NOT NULL DEFAULT '',
  `pad` char(60) NOT NULL DEFAULT '',
  PRIMARY KEY (`id`),
  KEY `k_1` (`k`)
) ENGINE=InnoDB AUTO_INCREMENT=100000001 DEFAULT
```

JSON

Expand All

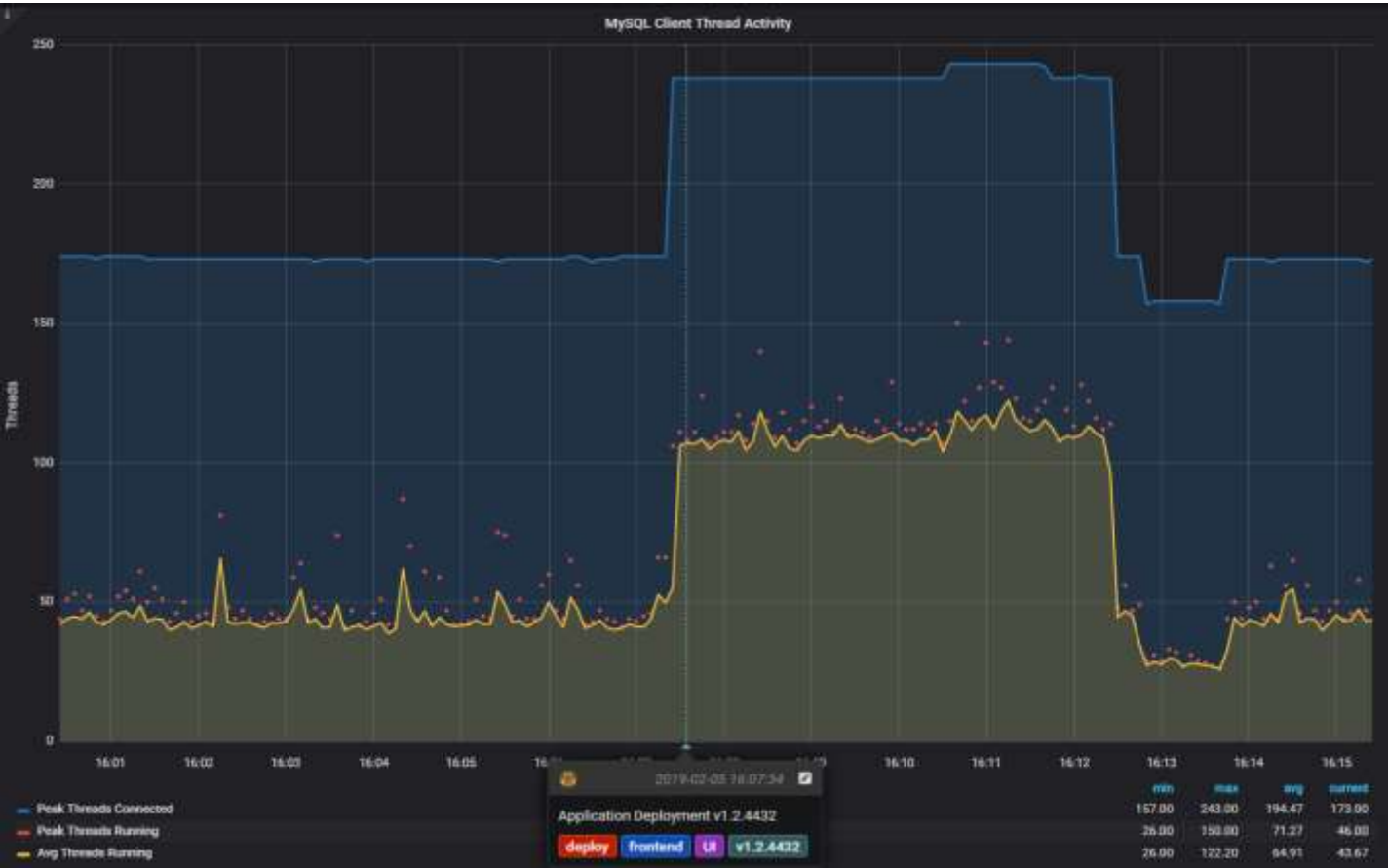
```
-{
  "query_block": -{
    "select_id": 1,
    "cost_info": +{...},
    "ordering_operation": -{
      "using_filesort": false,
      "duplicates_removal": -{
        "using_temporary_table": true,
        "using_filesort": true,
        "cost_info": +{...},
        "table": +{...}
      }
    }
  }
}
```

New Feature: Activity + Query Performance

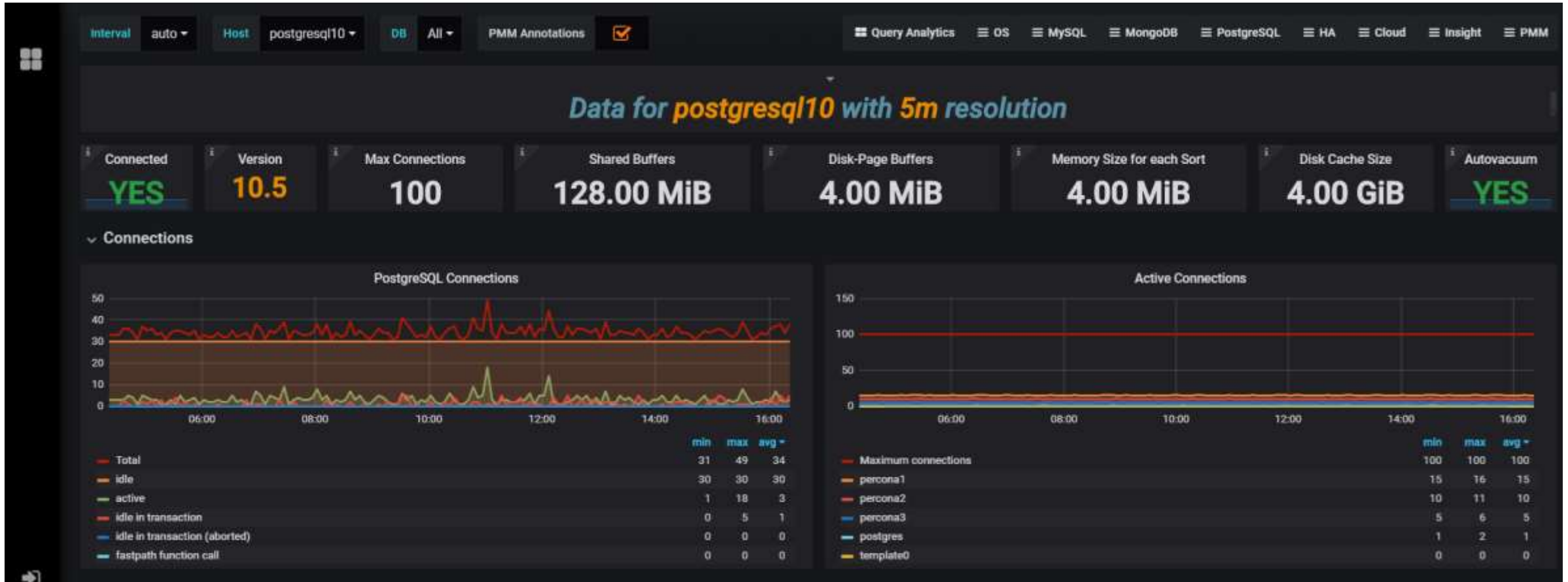


New Feature: Annotations

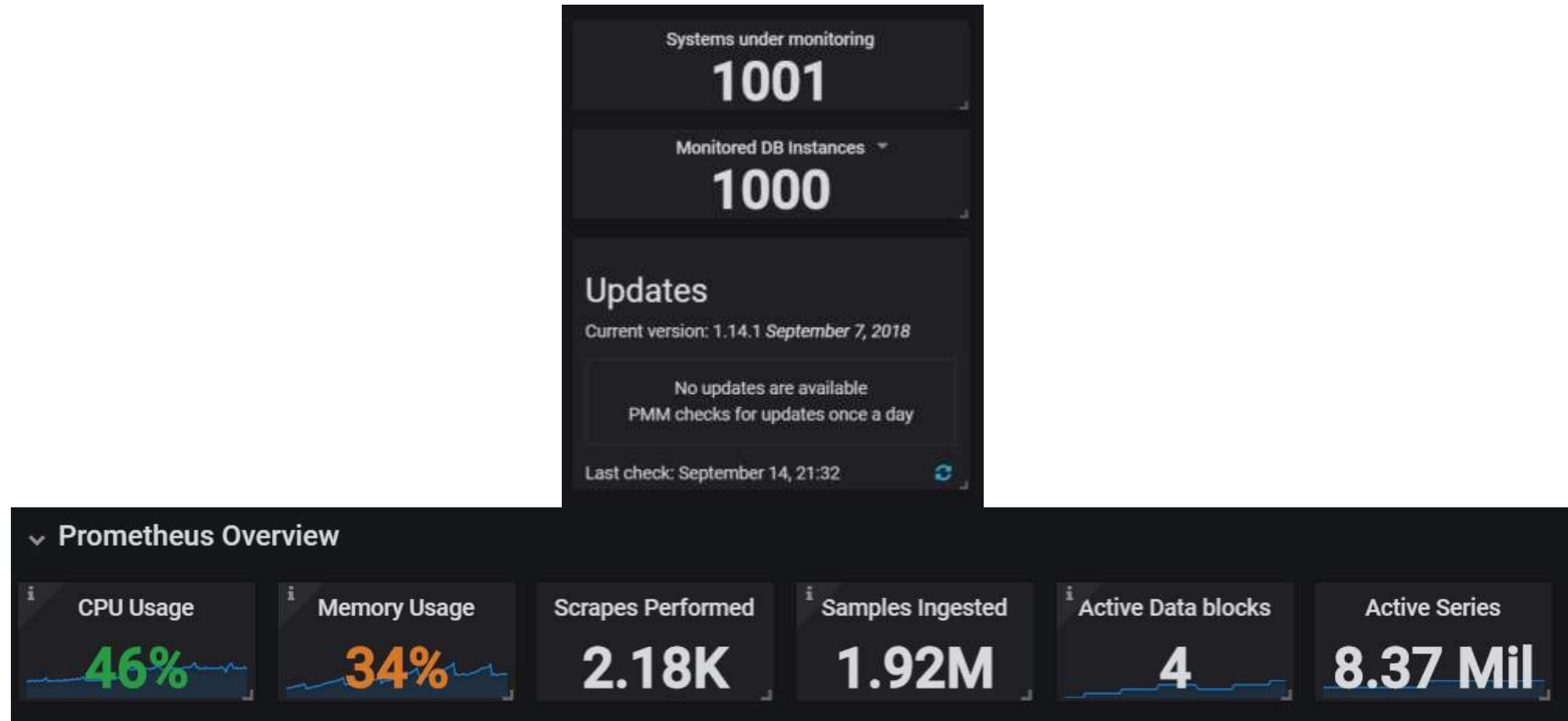
```
pmm-admin annotate "Application deploy v1.2.4432" --tags "UI, v1.2.4432, deploy, frontend"
```



New Feature: PostgreSQL Support



New Feature: Scaling to 1000+ Instances



New Feature: Custom Information Ingest

Get data into
PMM through
SQL Queries

...Or shell
script

New Feature: Improved System Dashboard

Data for *ps57* with 5m resolution

System Uptime

1.0 years

Virtual CPUs

8

Load Average

23.10

RAM

15.48 GiB

Memory Available

18%

Virtual Memory

16.48 GiB

Disk Space

233.60 GiB

Min Space Available

18%

✓ CPU

CPU Usage



	min	max	avg
user	23.15%	47.89%	39.61%
iowait	30.13%	53.33%	39.37%
system	6.28%	15.62%	12.50%
softirq	0.35%	0.84%	0.64%

CPU Saturation and Max Core Usage



	min	max	avg
Normalized CPU Load	1.20	2.34	1.77
Max CPU Core Utilization (right-y)	31.10%	64.26%	53.98%

See it Live!

<https://pmmdemo.percona.com>

Working on PMM2

Major rewrite for much more scalable architecture

Better Scalability

Better Security Controls

Better Insights for Large Environments

GA in Q3 2019, Preview Available in April

Join Us at Percona Live



Percona Live 2019 takes place in Austin, Texas from May 28-30, 2019 at the Hyatt Regency.

Percona Live provides an opportunity to network with peers and technology professionals. Mingle with all types of database community members: DBAs, developers, C-level executives and the latest database technology trend-setters.

TICKETS ON SALE!

<https://www.percona.com/live/19/>



Connect. Accelerate. Innovate.

Thank You!

Twitter: @percona @peterzaitsev
