Advanced MySQL Optimization and Troubleshooting with PMM

Peter Zaitsev,
Founder at Percona
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PERCONA UNIVERSITY

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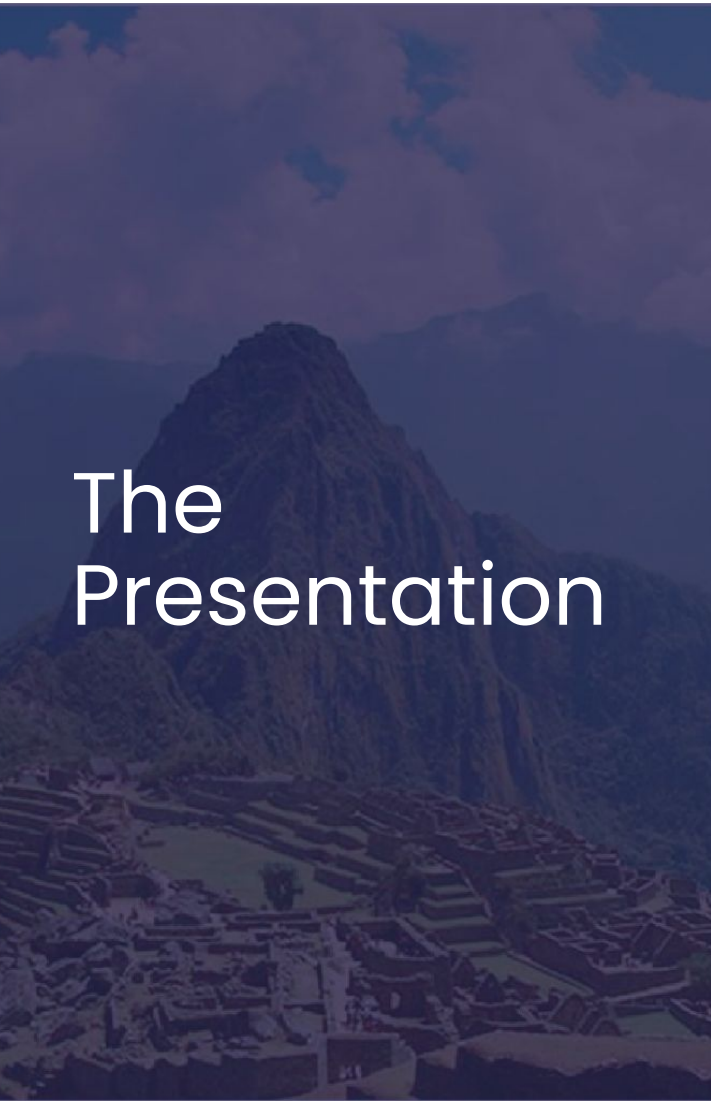

The Presentation

- Intro to Performance Optimization and Troubleshooting
- Intro to Percona Monitoring and Management (PMM)
- Demo

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Performance Optimization and Troubleshooting

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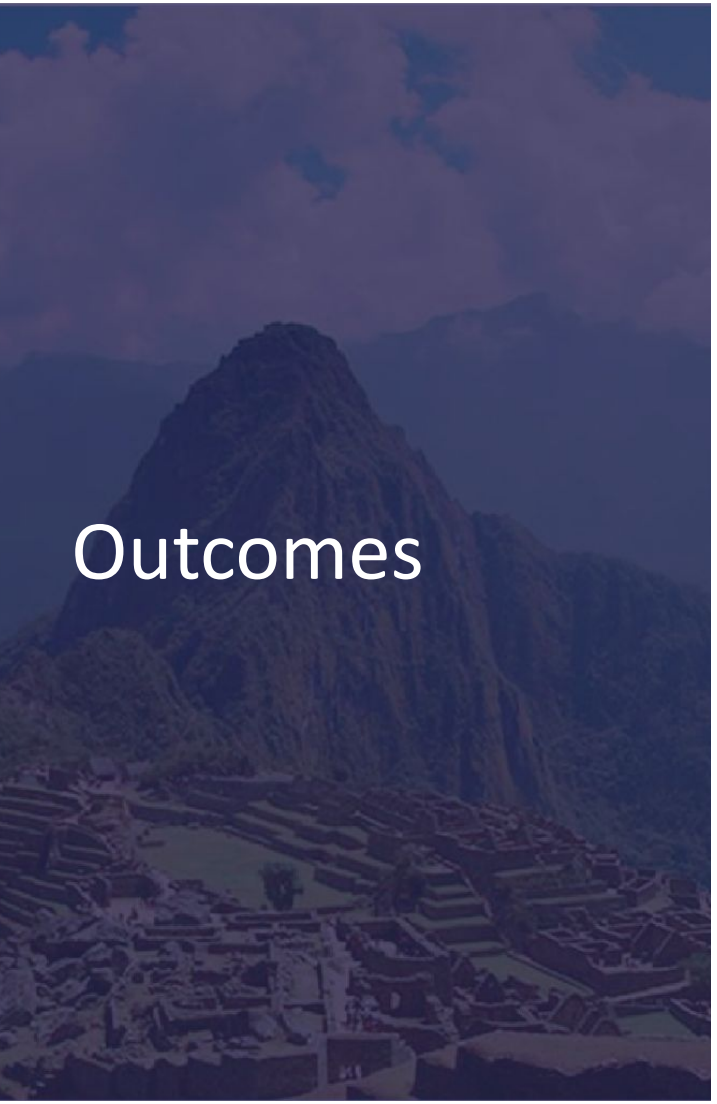

Outcomes

- **Developer**
  - I want this damn database to work

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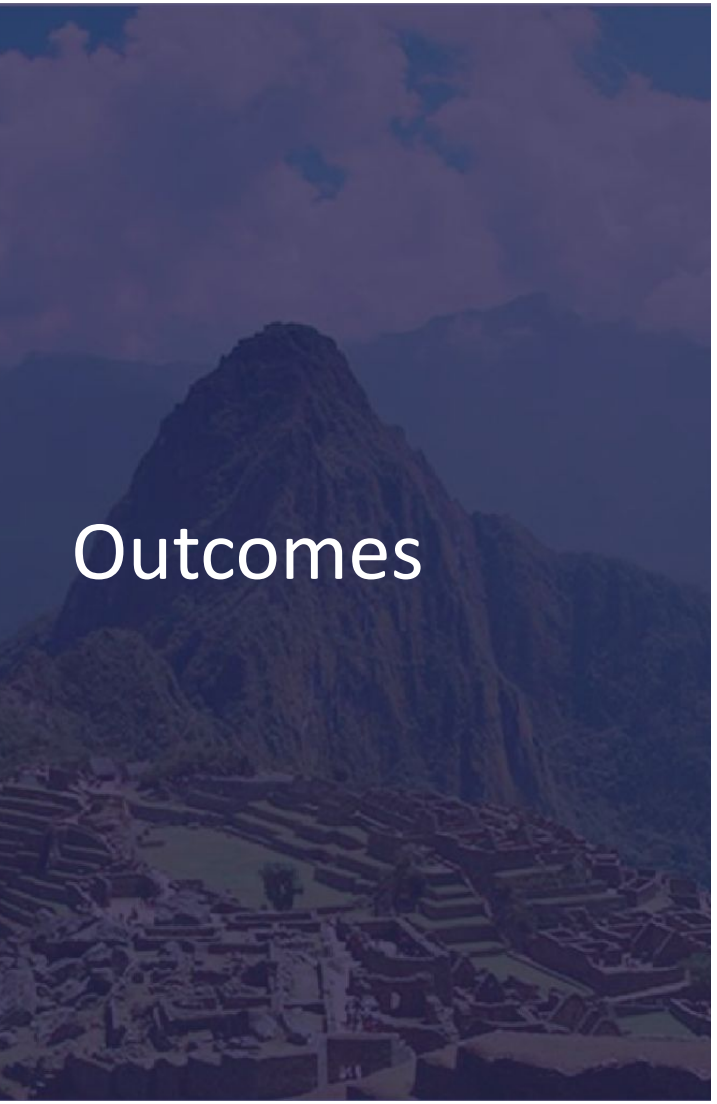

Outcomes

- **Manager**
  - I want this database not to cost so much money to run

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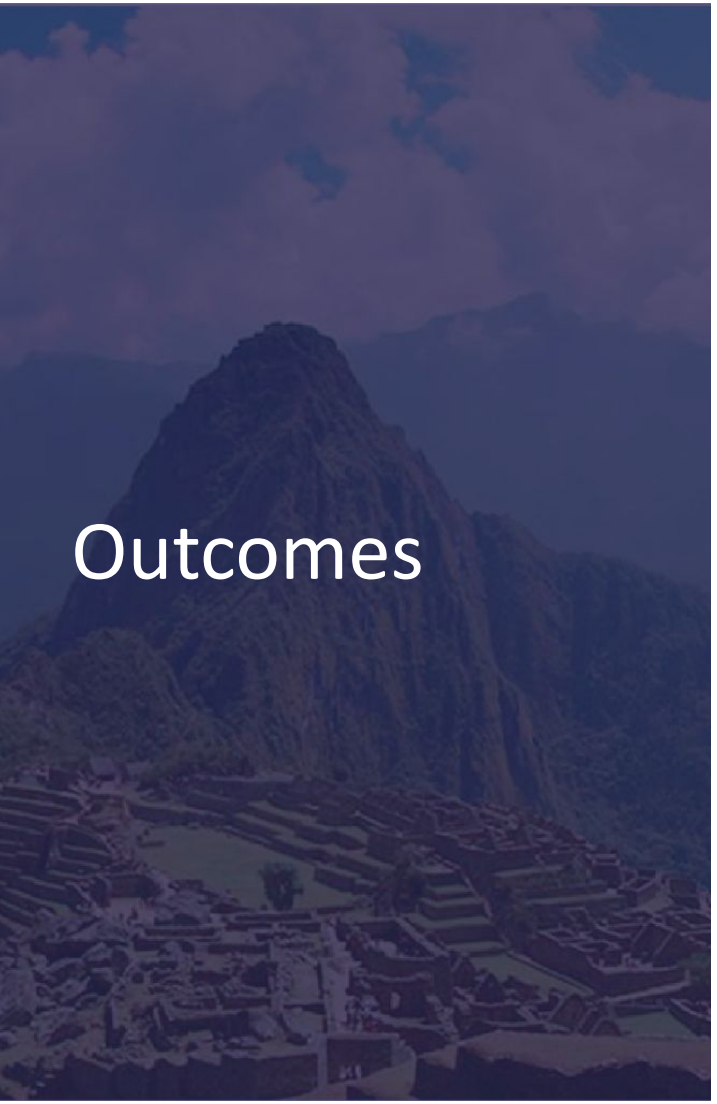

- **DBA**
  - I do not want to spend too much time and effort keeping Developer and Manager Happy

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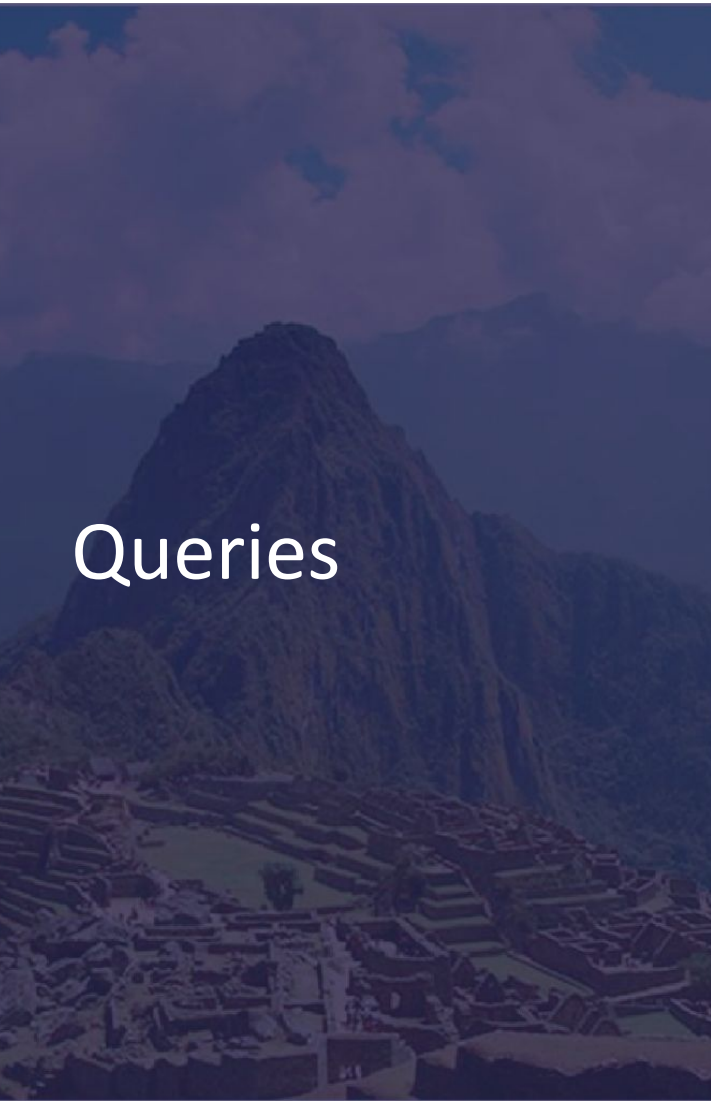

- Executed with Great Performance
- Correct Result
- Not Impacting other Applications
- Not Using Too Much Resources

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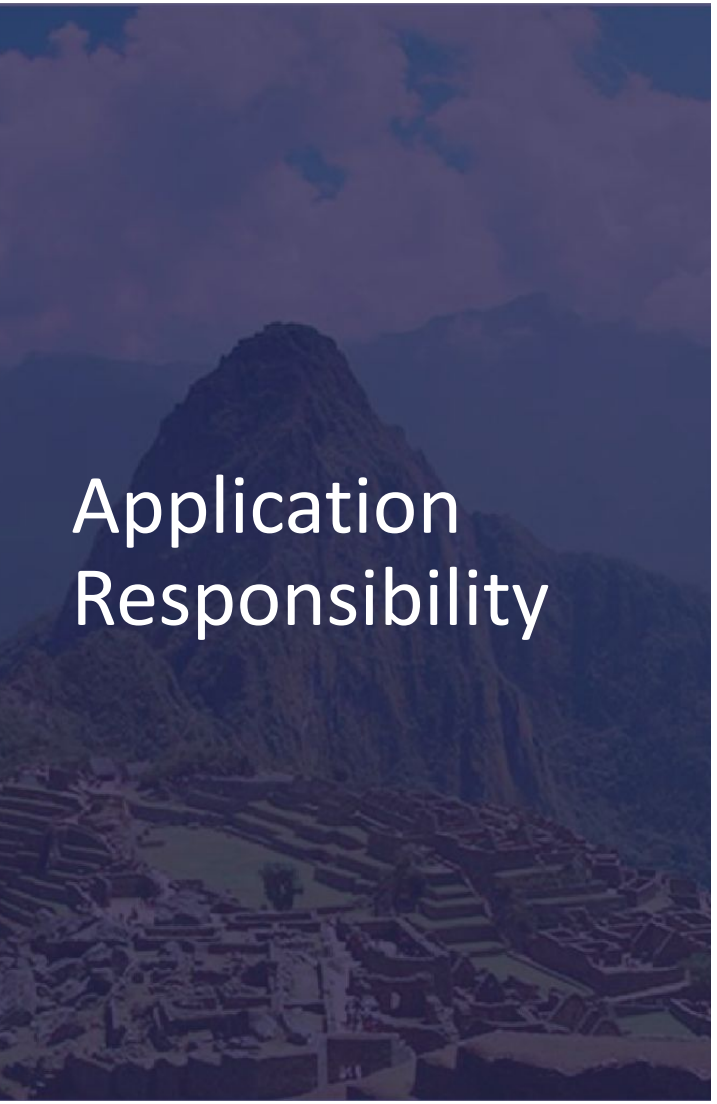
Database Focus

While We can capture queries and their timing on application side, execution details are only available on Database Side



Application Responsibility

Application is responsible for volume and kinds of queries it generates

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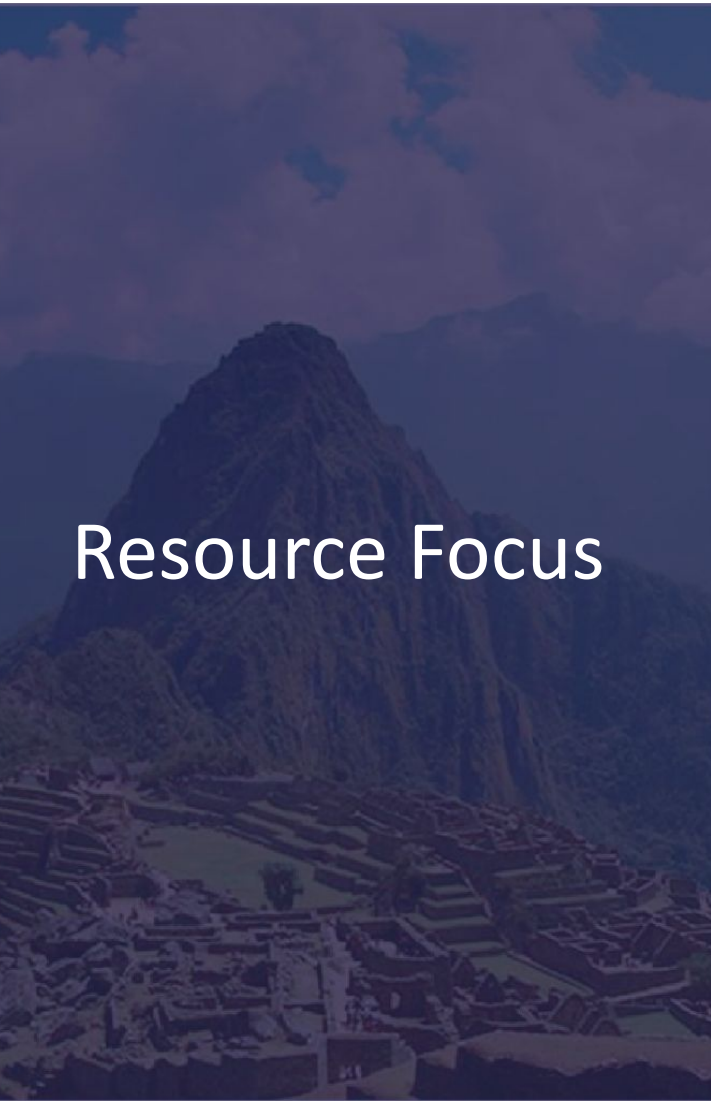

Oversubscribed resource can make even simple queries run slow

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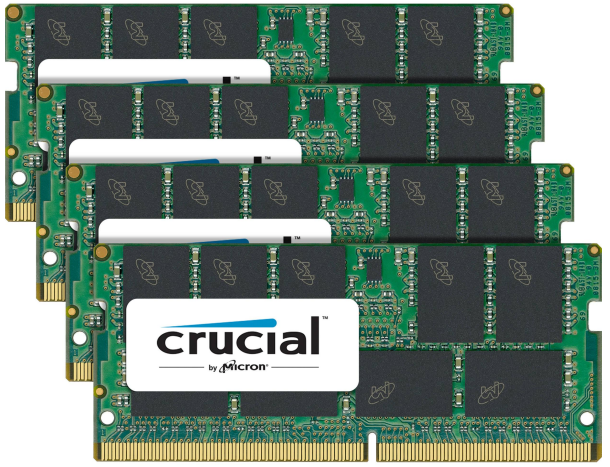
Primary Raw Resources



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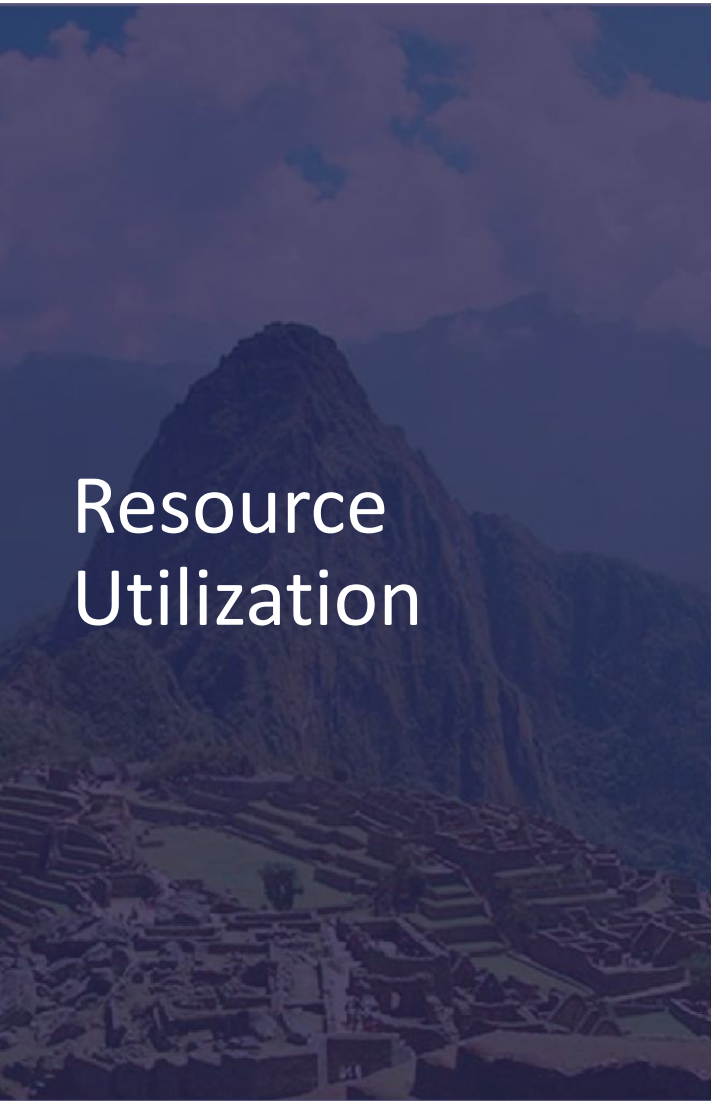

Resource Utilization

- ✔ Other Queries
- ✔ Database Background Activities
- ✔ Other Processes on the same Node
- ✔ Noisy Neighbors

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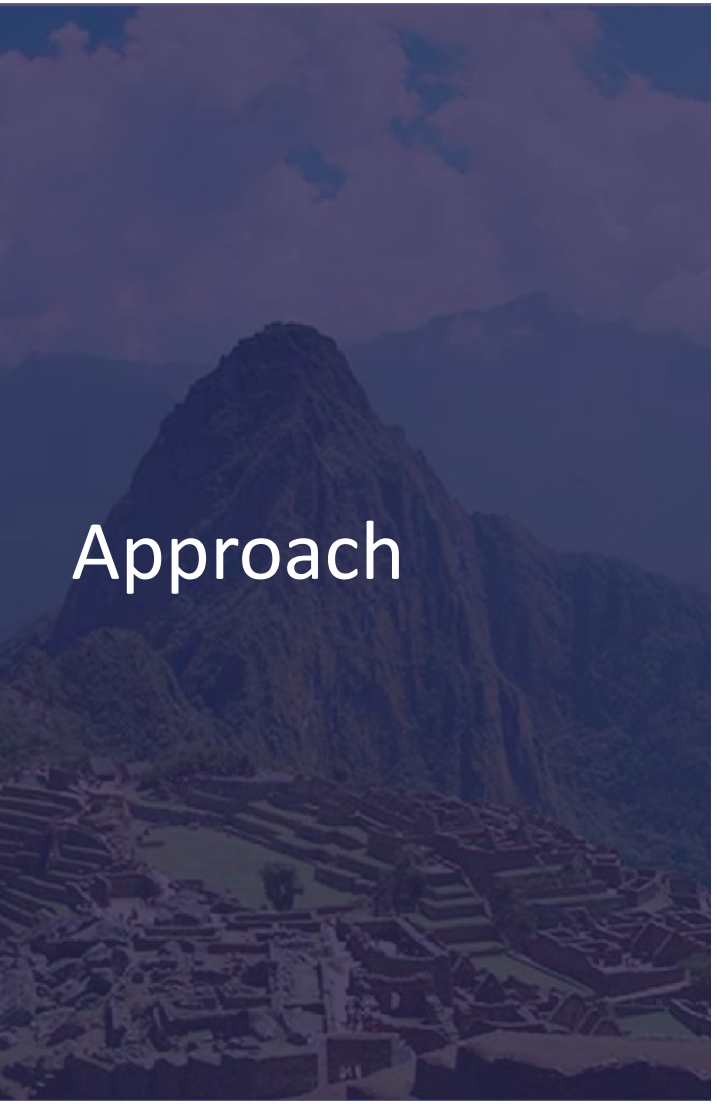

It may make sense to approach Performance Optimization and Troubleshooting from Resource side or Queries Side.

Percona Monitoring and Management (PMM) enables both

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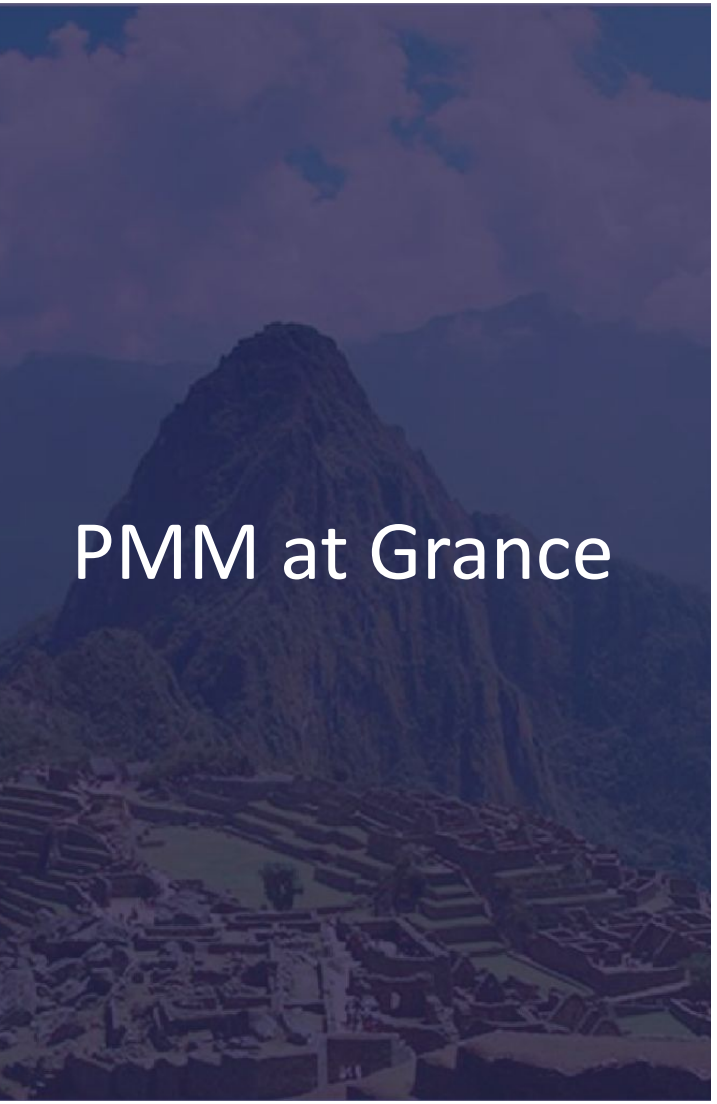
Percona Monitoring and Management (PMM)



PMM at Grance

- Purpose build Monitoring/Observability platform focused on Databases
- 100% Free and Open Source
- Roll your own, On Prem and In the Cloud
- Supports MySQL, MongoDB, PostgreSQL
- Supports Cloud Based database deployments such as Amazon RDS

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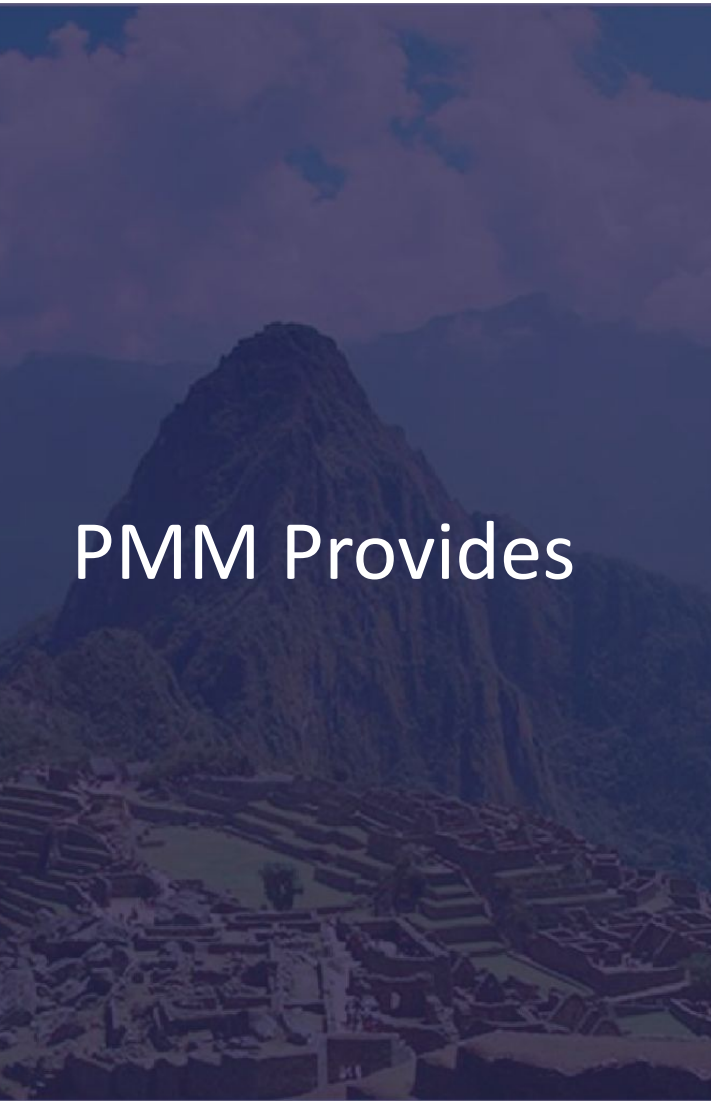

Bring together your Devs and Ops to build better apps faster and run Open Source Databases better

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Show Time

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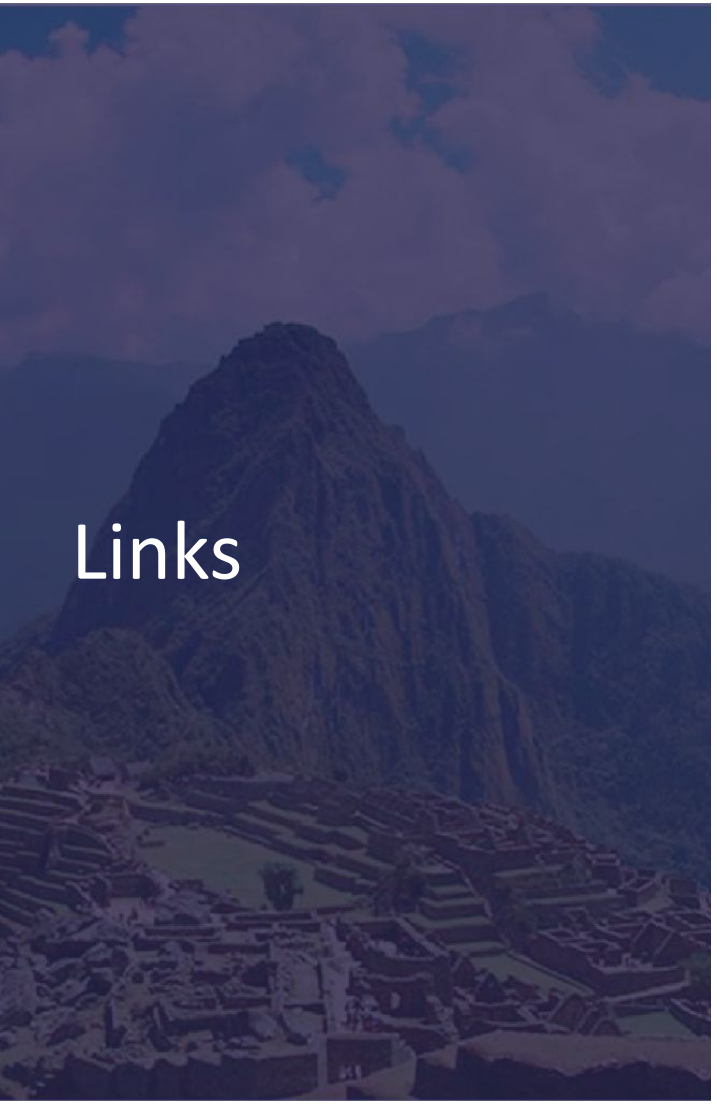

Links

- https://per.co.na/PMM
- https://pmmdemo.percona.com
- https://www.percona.com/resources/webinars

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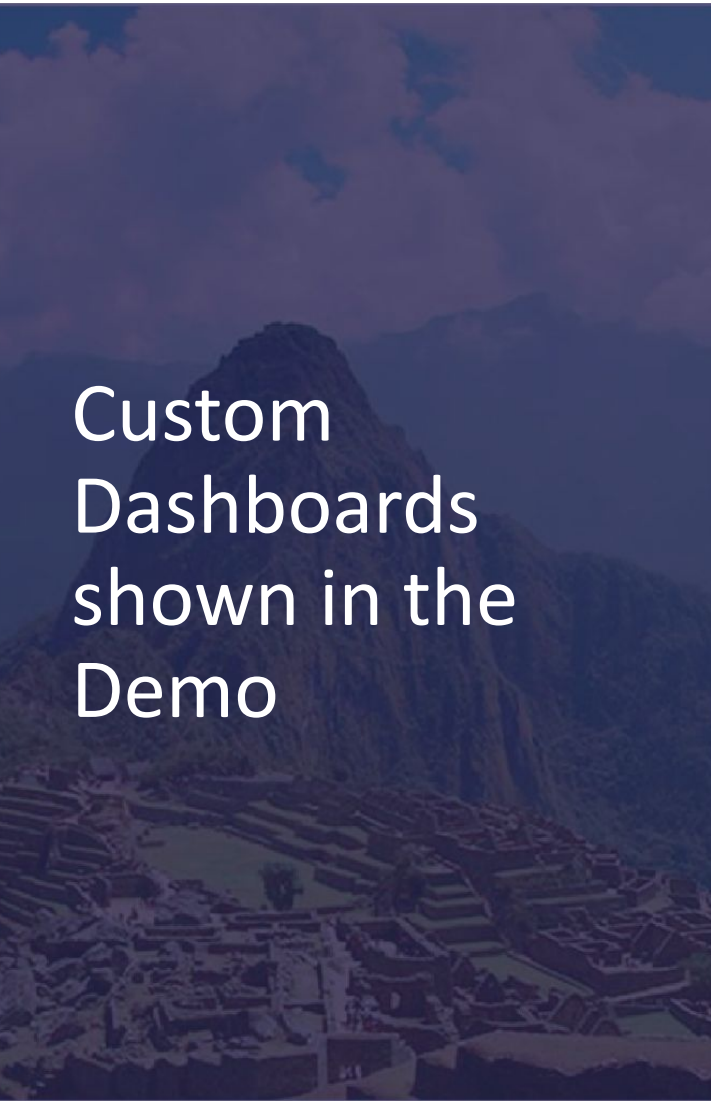

Custom Dashboards shown in the Demo

https://www.percona.com/blog/2020/11/02/understanding-mysql-memory-usage-with-performance-schema/

https://www.percona.com/blog/2021/04/22/understanding-processes-running-on-linux-host-with-percona-monitoring-and-management/

https://www.percona.com/blog/2020/07/15/mysql-query-performance-troubleshooting-resource-based-approach/

https://www.percona.com/blog/2020/06/17/red-method-for-mysql-performance-analyses/

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