

Monitoring MySQL Prod. Env. with PMM

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What's in this presentation

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- Overview of PMM
- Production Deployment
- Demo
- What's next?
- Questions/Discussion



Introduction

Alawi Assaggaf



- From Ottawa, Canada
- Data Engineer @ Fuze
- Young Professionals Chair @ IEEE Ottawa
- Previously OSDB Consultant @ Pythian

Fuze



www.fuze.com

- Global voice, video, and messaging.
- Fuze is a global, cloud-based unified communications platform. Designed for the way people work, Fuze powers business conversations and insights across the modern enterprise. With a single unified voice, video, and messaging application, people can now communicate anytime, anywhere, across any device.



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What was I looking for?

- Performance/Metrics monitoring for multiple servers
- Compare performance between machines/instances
- Lookup configurations across multiple servers
- Comparing technologies and new setup
- Price vs Features

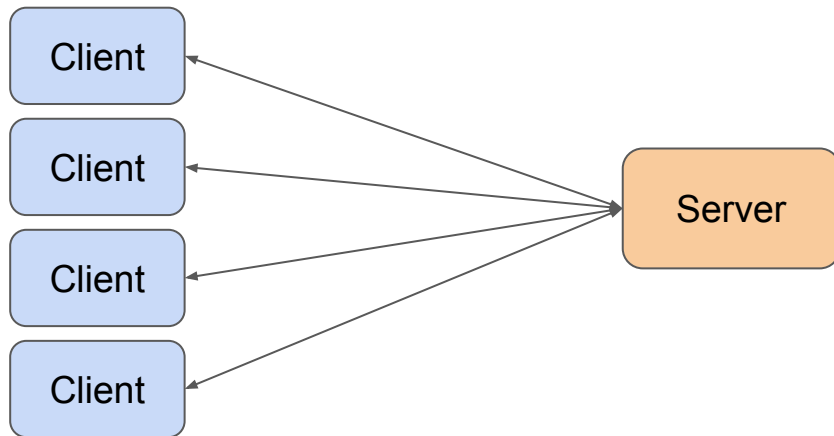


PMM

Overview

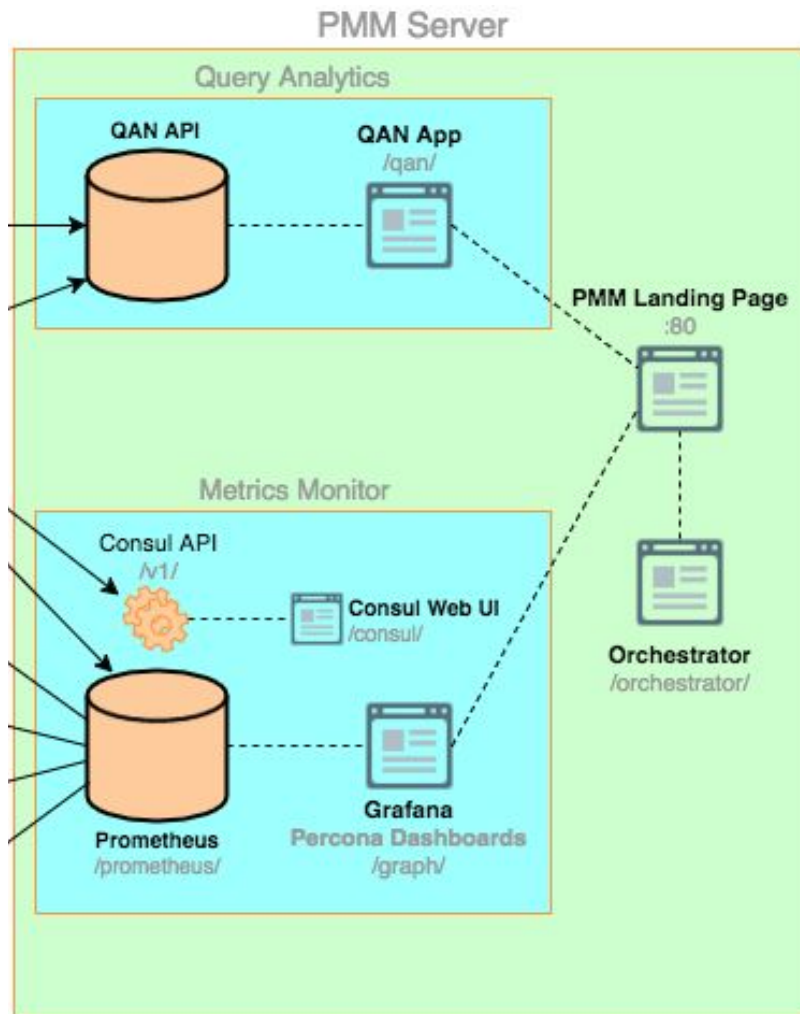
What is it?

- What is PMM? (Percona Metrics Monitoring)
 - Free
 - OpenSource
 - MySQL (et al.) and MongoDB
- How does PMM work?



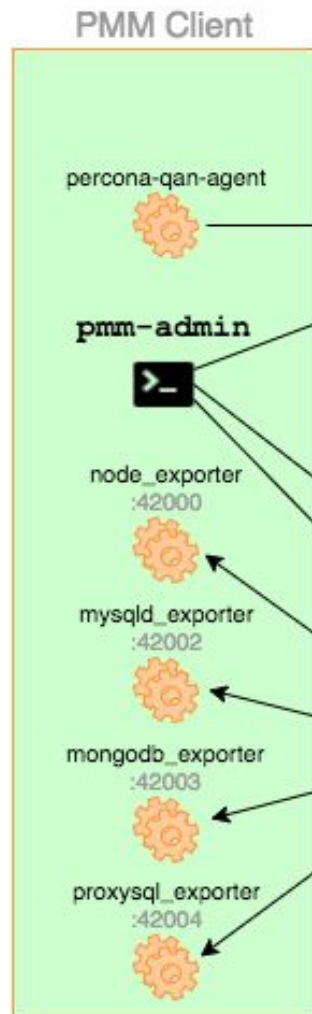
PMM Server

- QAN
- MySQL
- Prometheus
- Consul
- Grafana

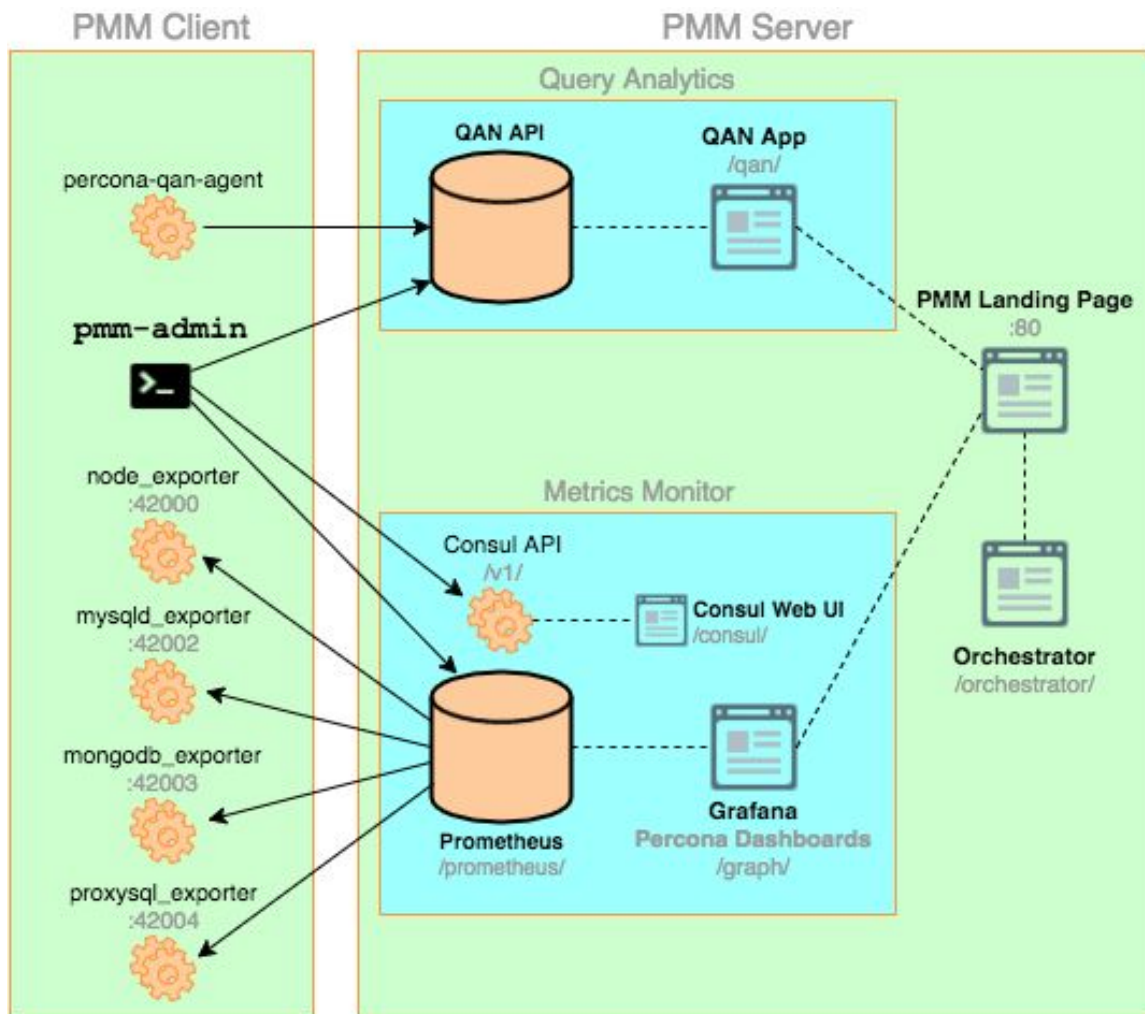


PMM Client

- pmm-admin
- [QAN agent](#)
- [MySQL Metrics exporter](#)
- [OS/node Metrics exporter](#)



Full Picture



pmm-admin

“is a command-line tool for managing PMM Client”

```
[root@mysql1 ~]# pmm-admin config --server 192.168.56.106
[root@mysql1 ~]# pmm-admin add mysql
[root@mysql1 ~]# pmm-admin list
pmm-admin 1.1.3
```

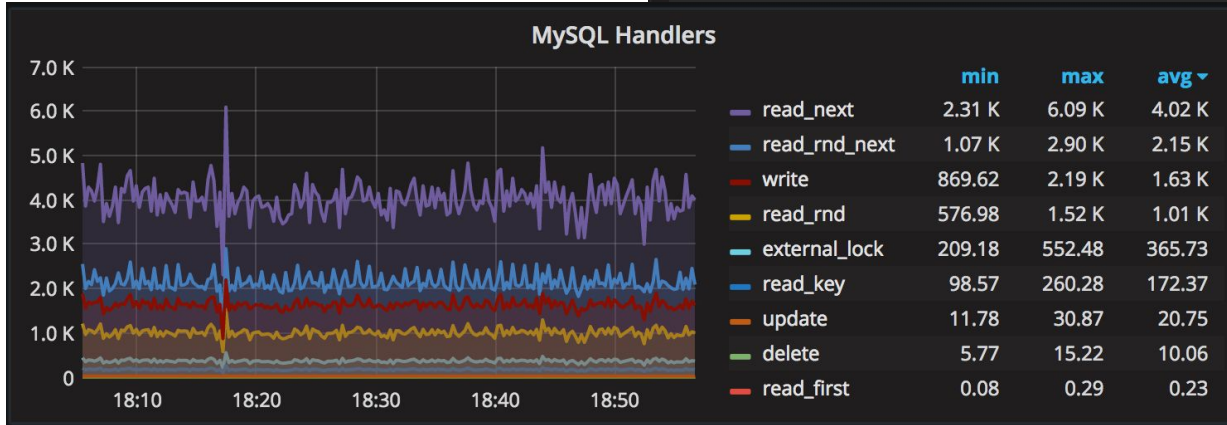
```
PMM Server      | 192.168.56.106 (password-protected)
Client Name     | mysql1
Client Address  | 192.168.56.11
Service Manager | linux-systemd
```

```
-----
SERVICE TYPE  NAME      LOCAL PORT  RUNNING  DATA SOURCE                                OPTIONS
-----
mysql:queries  mysql1    -           YES      root:***@tcp(127.0.0.1:3306)                query_source=slowlog,...
linux:metrics  mysql1    42000       YES      -
mysql:metrics  mysql1    42002       YES      root:***@tcp(127.0.0.1:3306)
```

```
[root@mysql1 ~]# pmm-admin --help
```

Percona Dashboards

<http://pmmdemo.percona.com/>




mysql | starred | tags

- MySQL InnoDB Metrics MySQL Percona ☆
- MySQL InnoDB Metrics Advanced MySQL Percona ☆
- MySQL Percona ☆
- MySQL Percona ☆
- MySQL Percona ☆
- MySQL Percona ☆
- MySQL Percona ☆
- MySQL Percona ☆
- MySQL Percona ☆
- MySQL User Statistics MySQL Percona ☆

Customized Dashboards

Examples be demonstrated in the demo



Production Deployment

Tip 1: Networking

- Client side
 - Open ports 42000 - 42004
- Server side
 - Added `-p 9090` and `-p 9001`

```
$ docker run -d \  
  -p 80:80 \  
  --volumes-from pmm-data \  
  --name pmm-server \  
  --restart always \  
  percona/pmm-server:1.1.3
```

Tip 2: Diskspace & Memory

- -e METRICS_RETENTION=192h
- -e METRICS_RESOLUTION=3s
- -e METRICS_MEMORY=4194304

```
$ docker run -d \  
  -p 80:80 \  
  -p 9090:9090 \  
  -p 9001:9001 \  
  --volumes-from pmm-data \  
  --name pmm-server \  
  --restart always \  
  -e METRICS_RETENTION=192h \  
  -e METRICS_RESOLUTION=3s \  
  -e METRICS_MEMORY=4194304 \  
percona/pmm-server:1.1.3
```

Tip 3: Upgrades

- Source code vs repository



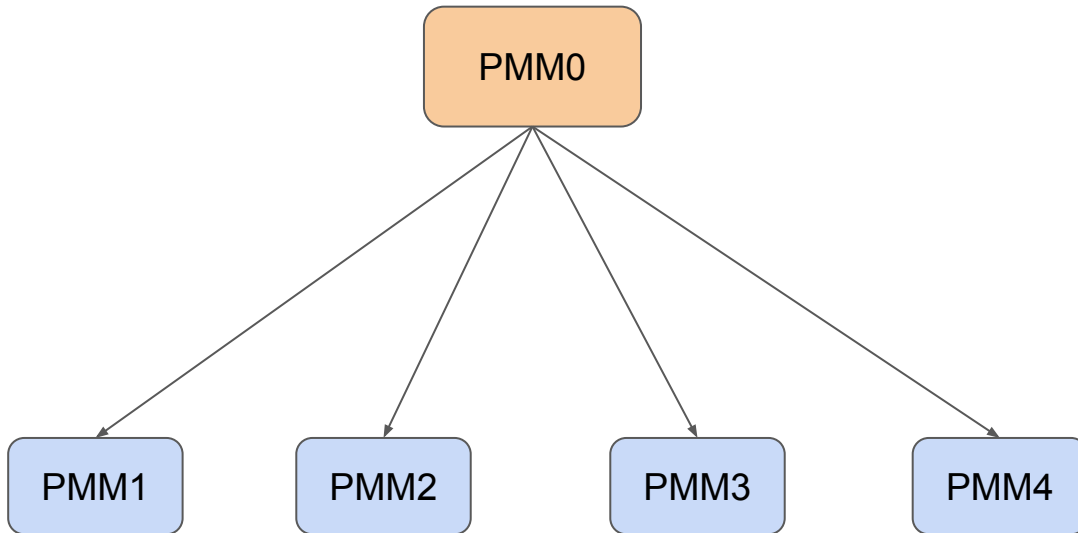
Scalability

The problem

- 100s of servers
- Disk and RAM limitation
- Horizontal vs Vertical Scalability
- Latency (zones and regions)

A solution

- PMM server per DC
- Centralized PMM server
- Manually tweaking for the Dashboards



The downside

- Manual tweaking
- Tweaks are not transferable



Demo



What's Next?

What's Next?

- Personal scripts
- More engines/technologies comparison
- Combine with ProxySQL's mirroring
- Slave discovery and auto install
(make use of orchestrator?)
- Alerting ⚠
- QAN and Grafana integration
 - e.g. view metrics at the time of query
- Configuration highlights/recommendations



Questions & Discussion



Thank you!