



Monitoring MySQL from the command line

Frédéric Descamps

Community Manager

Oracle MySQL

MySQL Belgian Days - February 2024



MySQL™ Belgian Days 2024





Who am I ?
about.me/lefred

Frédéric Descamps

- @lefred
- **MySQL** Evangelist
- using **MySQL** since version 3.20
- devops believer
- likes 🏀
- living in 🇧🇪
- <https://lefred.be>

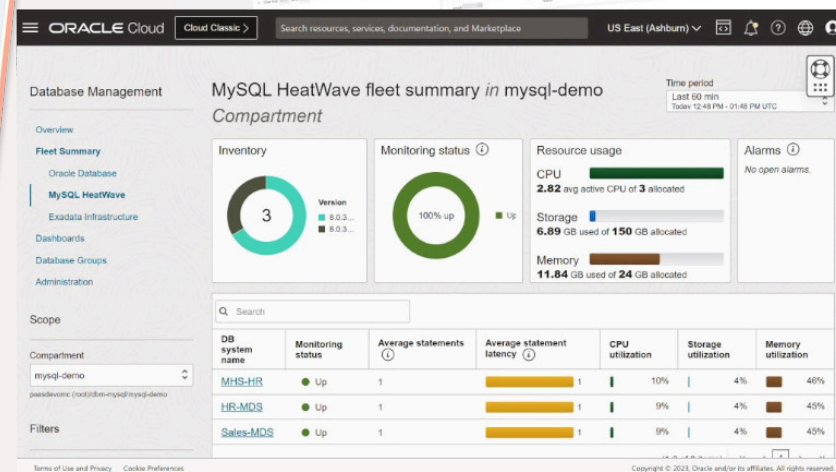
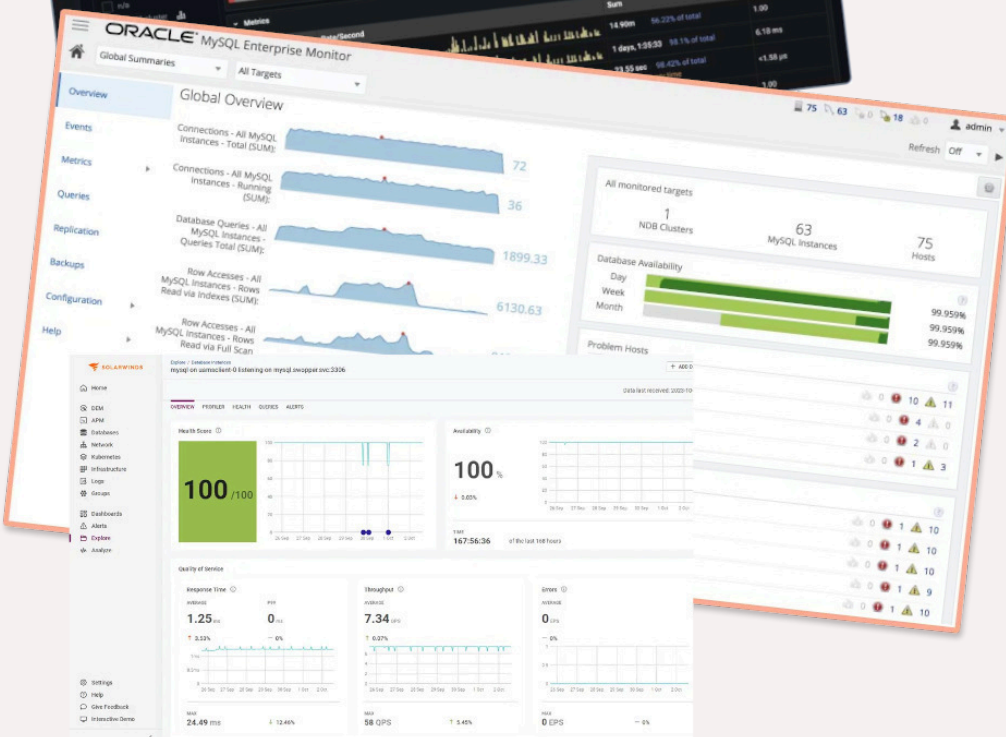
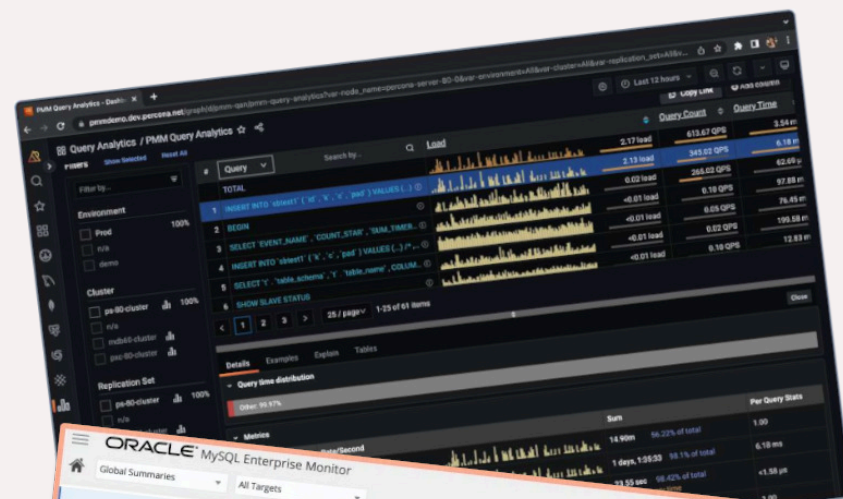




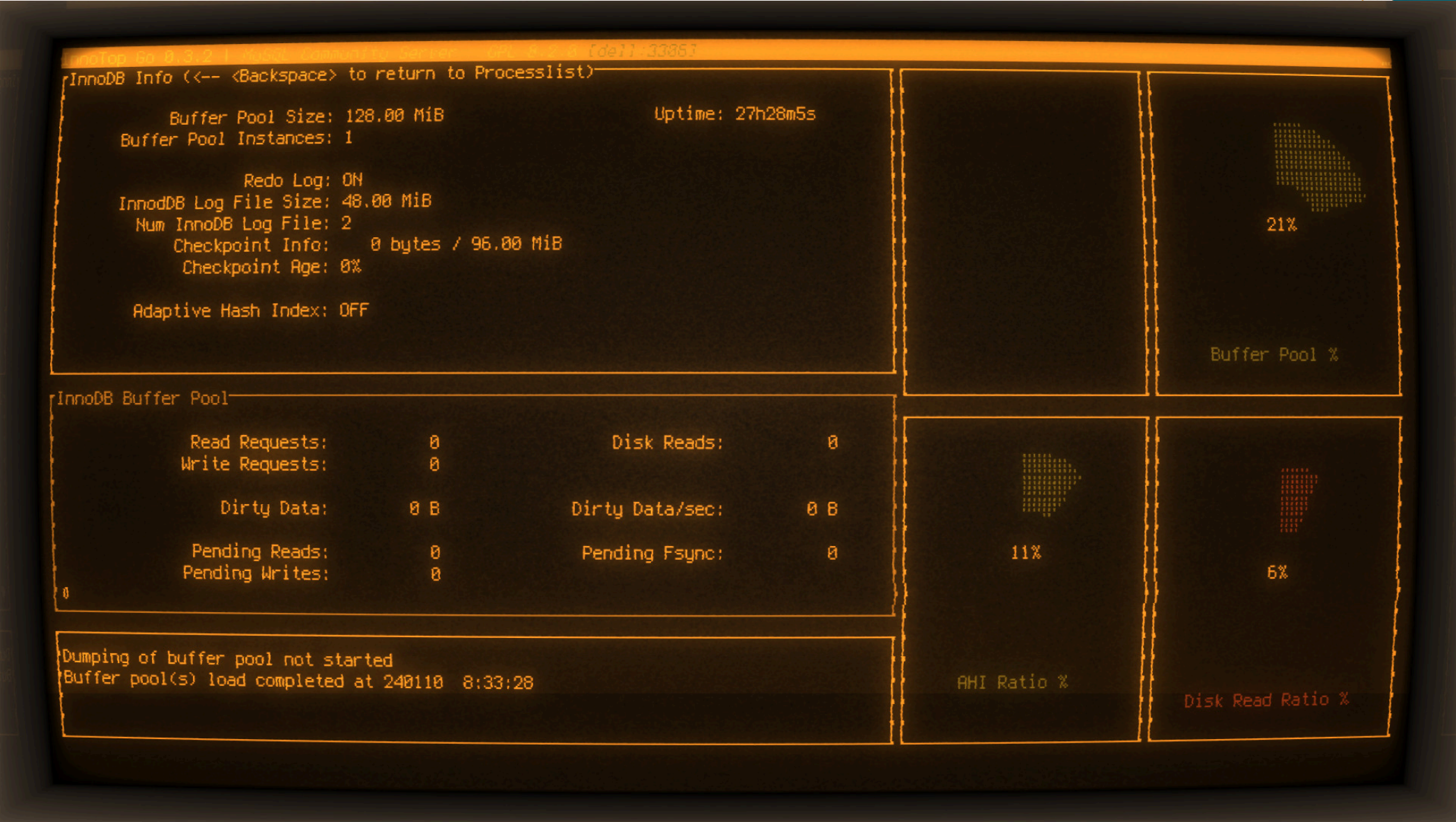
Monitoring MySQL

Why in command line ?

Plenty of GUI Monitoring Solutions



Because it's cool 😎



Any other reasons ?

- *Faster:*
 - *to deploy*
 - *to find the info*
- *Lighter*
- *Only available option*

Any other reasons ?

- *Faster:*
 - *to deploy*
 - *to find the info*
- *Lighter*
- *Only available option*
- *but often not suitable for forensics analysis*



The Top of the Top

Our best friends for a long time...

innotop / innotop

Code Issues 24 Pull requests 4 Discussions Actions Projects Wiki Security Insights Settings

innotop Public

Edit Pins Unwatch 61 Fork 118 Star 725

master 5 Branches 5 Tags

Go to file Add file Code

yoku0825 Merge pull request #197 from innotop/mysql8.1 75e3f0e · 5 months ago 215 Commits

debian	fix license declaration	4 years ago
t	Add 8.1.0 test	5 months ago
.travis.yml	adding required yaml for travis	7 years ago
COPYING	fixing issue 86	11 years ago
Changelog	Change version to 1.13.0 after accepting new PR	3 years ago
INSTALL	merge back a few clean-ups for 1.7.0 release	16 years ago
LICENSE	Create LICENSE	6 years ago
MANIFEST	embedded InnoDBParser.pm into innotop so it can be run wi...	16 years ago
Makefile.PL	merge back a few clean-ups for 1.7.0 release	16 years ago
README.md	Update README.md	6 years ago
innotop	support for 8.1	5 months ago
innotop.spec	Increase version	5 months ago
snapshot_queries.png	Add snapshot	9 years ago

README GPL-2.0 license GPL-2.0 license

About

A realtime terminal-based top-like monitor for MySQL

Readme
GPL-2.0, GPL-2.0 licenses found
Activity
Custom properties
725 stars
61 watching
118 forks
Report repository

Releases 4

innotop 1.13.0 Latest
on Apr 7, 2021
+ 3 releases

Packages

No packages published
Publish your first package

Contributors 22

Maintained now by
Tsubasa Tanaka



Oracle ACE Pro

- *Written in Perl*
- *Compatible with old versions & forks*
- *Can be complicated, no easy visualization*
- *Best processlist handling (refresh automatic or manual)*
- *First public release: July 2006*

InnoTop

```
fred@dell:~/workspace/innotop — perl ./innotop -h localhost -u root --askpass
```

[RO] Query List (? for help) localhost, 1d4h, 36.50 QPS, 13/12/0 con/run/cac thds, 8.2.0

When	Load	Cxns	QPS	Slow	Se/In/Up/De%	QCacheHit	KCacheHit	BpsIn	BpsOut
Now	0.00	12	36.50	0	0/98/ 0/ 0	0.00%	100.00%	8.79k	2.48k
Total	0.00	151	0.11	0	14/69/ 0/ 0	0.00%	100.00%	34.76	62.44

Cmd	ID	State	User	Host	DB	Time	Query
Daemon	5	Waiting on empty q	event_sc	localhost		1+04:49:34	
Query	62	waiting for handle	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 5006
Query	63	waiting for handle	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 4978
Query	64	waiting for handle	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 5049
Query	65	waiting for handle	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 5039
Query	66	Opening tables	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 5031
Query	67	waiting for handle	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 4094
Query	68	waiting for handle	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 4487
Query	69	waiting for handle	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 5030
Query	70	init	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 4978
Query	71	waiting for handle	root	127.0.0.1	sbtest	00:00	INSERT INTO sbtest1 (id, k, c, pad) VALUES (0, 4050


```
fred@dell:~/workspace/innotop — perl ./innotop -h localhost -u root --askpass
[RO] InnoDB I/O Info (? for help)                                localhost, 1d4h, InnoDB 31s :-), 588.02 QPS, 13/12/0 con/run/cac thds, 8.2.0

----- I/O Threads -----
Thread Purpose Thread Status
  0 (null) waiting for completed aio requests
  1 insert buffer thread waiting for completed aio requests
  2 read thread waiting for completed aio requests
  3 read thread waiting for completed aio requests
  4 read thread waiting for completed aio requests
  5 read thread waiting for completed aio requests
  6 write thread waiting for completed aio requests
  7 write thread waiting for completed aio requests
  8 write thread waiting for completed aio requests

----- Pending I/O -----
Async Rds Async Wrt IBuf Async Rds Sync I/Os Log Flushes Log I/Os
                                     1

----- File I/O Misc -----
OS Reads OS Writes OS fsyncs Reads/Sec Writes/Sec Bytes/Sec
   2560   51249   29938      0.91    538.49    16384

----- Log Statistics -----
Sequence No. Flushed To Last Checkpoint IO Done IO/Sec
12858808272 12858804224 12841297541    41986  418.38
```

```
fred@dell:~/workspace/innotop — perl ./innotop -h localhost -u root --askpass
```

```
[RO] InnoDB Buffers (? for help) localhost, 1d4h, InnoDB 9s :-), 576.43 QPS, 13/12/0 con/run/cac thds
```

Buffer Pool							
Size	Free Bufs	Pages	Dirty Pages	Hit Rate	Memory	Add'l Pool	
8.00k	4013	4179	1811	1000 / 1000	0		

Page Statistics					
Reads	Writes	Created	Reads/Sec	Writes/Sec	Creates/Sec
2406	10779	1773	0.41	103.16	11.88

Insert Buffers						
Inserts	Merged Recs	Merges	Size	Free List Len	Seg. Size	
	0	0	1	1778	1780	

Adaptive Hash Index						
Size	Cells Used	Node Heap Bufs	Hash/Sec	Non-Hash/Sec		
33.87k		0	0.00	1316.30		



Alternatives

and other tools

Percona Toolkit summary utilities

- `pt-summary`: *system summary report*

```
$ wget percona.com/get/pt-summary  
$ sudo sh pt-summary
```

- `pt-mysql-summary`: *MySQL summary report*

```
$ wget percona.com/get/pt-summary  
$ sh pt-mysql-summary
```


mytop

- *certainly the oldest one*
- *0.1 was released in July 2000*
- *no changes since 12 years (1.7)*
- *written in Perl*

mytop is still part of many Linux distributions but the tool is obsolete, it was designed for **MySQL** 3.22.x, 3.23.x and 4.x

mytop

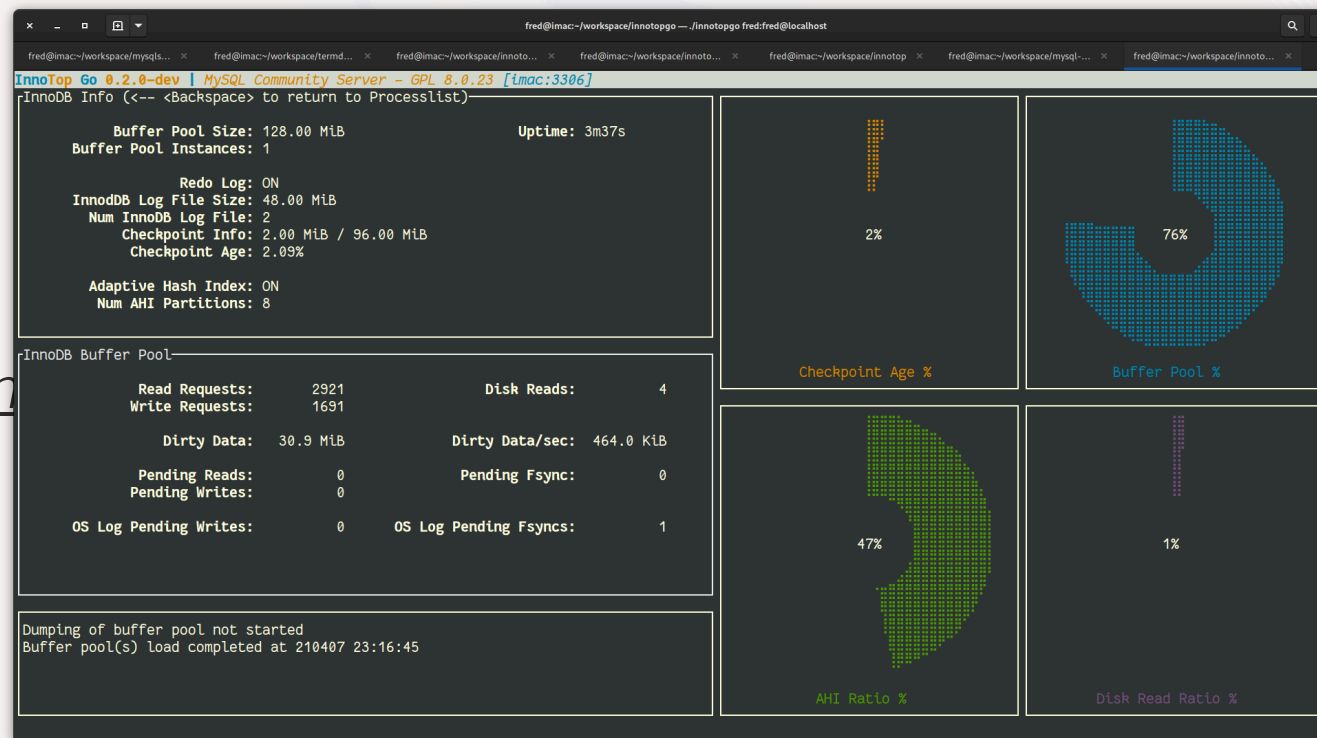
- *certainly the oldest one*
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- *no changes since 12 years (1.7)*
- *written in Perl*

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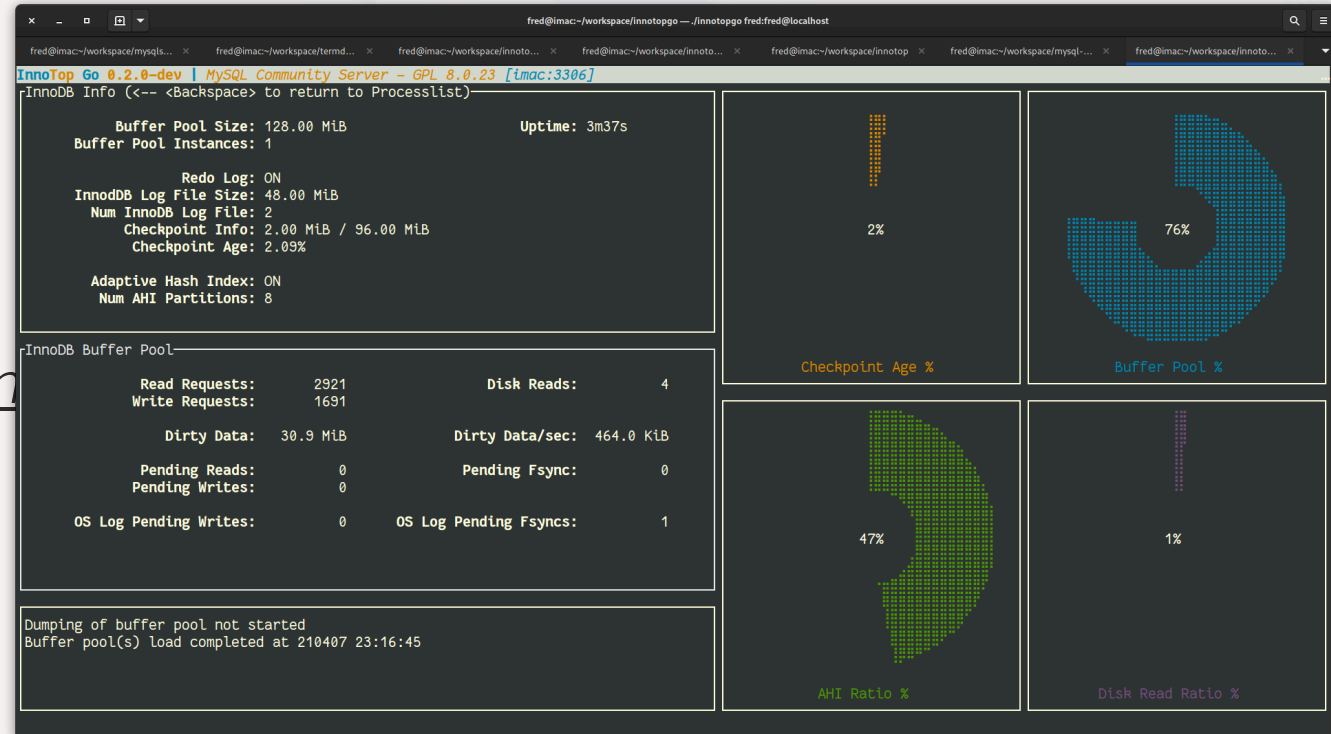
innotopGo

- **MySQL 8.x only**
- *written in Go*
- *nice widgets but complicated*
- <https://github.com/lefred/innotopgo>



innotopGo

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- *written in Go*
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The Challenger

My new best friend !

charles-001 / dolphie

<> Code

Issues

Pull requests

Actions

Projects

Security

Insights

dolphie

Public

Watch 9

Fork 18

Starred 307

main

3 Branches

28 Tags

Go to file

Add file

<> Code

charles-001

Errors now go to quick switch connection modal instead of exiting t...

190d190 · yesterday


169 Commits

.github/workflows	ci: update workflow trigger	5 months ago
dolphie	Errors now go to quick switch connection modal instead of e...	yesterday
.gitignore	v3.0.5	5 months ago
Dockerfile	feat: bump base image to py3.12	3 months ago
LICENSE	Initial commit	2 years ago
README.md	Misc	2 months ago
poetry.lock	Errors now go to quick switch connection modal instead of e...	yesterday
pyproject.toml	Errors now go to quick switch connection modal instead of e...	yesterday




README


GPL-3.0 license

Dolphie



An intuitive feature-rich terminal tool for monitoring MySQL in real-time



About

An intuitive feature-rich terminal tool for monitoring MySQL in real-time

pypi.org/project/dolphie/

mysql

python

monitoring

Readme

GPL-3.0 license

Activity

307 stars

9 watching

18 forks

Report repository

Releases 27

3.2.0

Latest

on Nov 19, 2023

+ 26 releases

Packages 1

dolphie

Contributors 4

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lefred Frédéric Descamps

gregorg Greg

Created and
Maintained by *Charles
Thompson*

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 .be

Dolphie

- *Written in Python*
- *Compatible with old versions and cloud*
- *Provides nice overview and graphs*
- *Easy to extend*
- *Supports a lot of **MySQL 8** features*
- *Relication Dashboard is amazing*
- *First release: September 2022*



Dolphie - Processlist

The screenshot shows the Dolphie v3.2.0 application interface. At the top, it displays the host name 'dell:3306' and a prompt 'press ? for help'. The main content is divided into four sections: Host Information, InnoDB, Binary Log, and Statistics/s.

Host Information		InnoDB		Binary Log		Statistics/s	
Version	MySQL 8.2.0	Read Hit	99.95%	File name	binlog.000145	Queries	7.51K
Type	Linux (x86_64)	Chkpt Age	23.92%	Position	676789764	SELECT	5.26K
Uptime	InnoDB ReplicaSet	AHI Hit	OFF	Size	645.44MB	INSERT	376
Runtime	1 day, 5:48:58	BP Instance	1	Diff	699.25KB	UPDATE	751
Replicas	0:00:39 latency: 0.04s	BP Size	128MB	Cache Hit	100%	DELETE	376
Threads	con 13/run 12/cac 0	BP Available	15.11MB	Format	ROW (FULL)	REPLACE	0
Tables	open 898/opened 981	BP Dirty	92.16MB	GTID	ON	COMMIT	376
		History List	123	Compression	OFF	ROLLBACK	0

Thread ID	Username	Command	State	TRX State	R-Lock	R-Mod	Time	Query
115	root	Execute	waiting for	RUNNING	4	4	00:00:00	COMMIT
112	root	Execute	waiting for	RUNNING	3	4	00:00:00	COMMIT
117	root	Execute	waiting for	RUNNING	3	4	00:00:00	COMMIT
119	root	Execute	waiting for	RUNNING	3	4	00:00:00	COMMIT
110	root	Execute	waiting for	RUNNING	3	4	00:00:00	COMMIT
111	root	Execute	statistics	RUNNING			00:00:00	SELECT c FROM sbtest2 WHERE id=67760
114	root	Execute	waiting for	RUNNING	3	4	00:00:00	COMMIT
116	root	Execute	waiting for	RUNNING	3	4	00:00:00	COMMIT
118	root	Execute	waiting for	RUNNING	3	4	00:00:00	COMMIT
113	root	Execute	waiting for	RUNNING	3	4	00:00:00	COMMIT

And it can switch between using Information_Schema or Performance_Schema !

Dolphie - Error Log

```
fred@dell:~/workspace/dolphie — /home/fred/.cache/pypoetry/virtualenvs/dolphie-nvCvFADT-py3.12/bin/python -c import sys; from importlib import import_module; sys.argv = [' /home/fred/.cache/...
dolphte v3.2.0 [R/W] dell:3306 Press q to return
1 = top of events/2 = bottom of events
System Warning Error
Search (hit enter when ready)
Time Level Event (1468)
2024-01-03 09:24:56 System X Plugin ready for connections. Bind-address: '::' port: 33060, socket: /run/mysqld/mysqldx.sock
2024-01-03 09:24:56 System /usr/sbin/mysqld: ready for connections. Version: '8.2.0' socket: '/var/lib/mysql/mysql.sock' port: 33
2024-01-10 08:33:27 System MySQL Server - start.
2024-01-10 08:33:27 System /usr/sbin/mysqld (mysqld 8.2.0) starting as process 3321
2024-01-10 08:33:27 System InnoDB initialization has started.
2024-01-10 08:33:28 System InnoDB initialization has ended.
2024-01-10 08:33:28 System Starting XA crash recovery...
2024-01-10 08:33:28 System XA crash recovery finished.
2024-01-10 08:33:28 System Channel mysql_main configured to support TLS. Encrypted connections are now supported for this channel.
2024-01-10 08:33:28 Error A message intended for a client cannot be sent there as no client-session is attached. Therefore, we're
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2024-01-10 08:33:28 System /usr/sbin/mysqld: ready for connections. Version: '8.2.0' socket: '/var/lib/mysql/mysql.sock' port: 33
```

Dolphie - Memory Allocation

fred@dell:~/workspace/dolphie — /home/fred/.cache/pypoetry/virtualenvs/dolphie-nvCvFADT-py3.12/bin/python -c import sys; from importlib import import_module; sys.argv = ['/home/fred/.cache/...]

dolphie v3.2.0 [R/W] dell:3306 press any key to

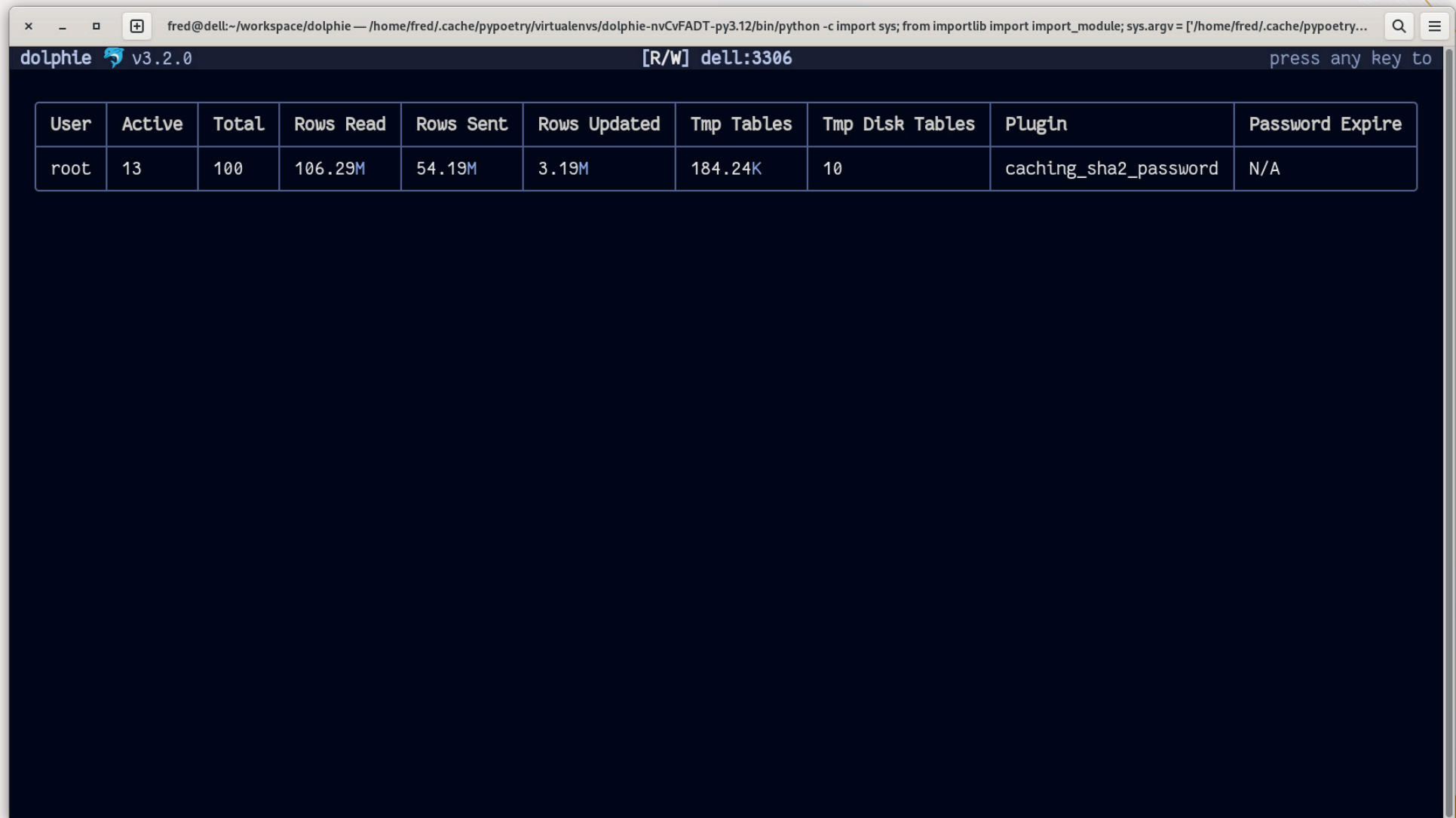
Memory Allocation

User	Current	Total
root	28.29MB	25.06GB
event_scheduler	16.27KB	16.27KB

Host	Current	Total
localhost	23.93MB	21.83GB
:::1	2.59MB	3.15GB
localhost	1.78MB	92.36MB

Code Area	Current
memory/performance_schema	291.17MB
memory/innodb	224.88MB
memory/sql	35.81MB
memory/temptable	13.00MB
memory/mysys	9.60MB
memory/mysqld_openssl	425.79KB
memory/refcache	26.41KB
memory/vio	3.34KB
memory/mysqlx	3.25KB
memory/myisam	728B
memory/csv	120B
memory/blackhole	120B

Dolphie - Active Connected Users Statistics



The screenshot shows a terminal window with the Dolphie v3.2.0 interface. The window title bar indicates the user is 'fred@del:' and the command being executed is a Python script to import system modules. The Dolphie header shows the version 'v3.2.0' and the connection details '[R/W] del:3306'. The main content is a table of active connected users statistics.

User	Active	Total	Rows Read	Rows Sent	Rows Updated	Tmp Tables	Tmp Disk Tables	Plugin	Password Expire
root	13	100	106.29M	54.19M	3.19M	184.24K	10	caching_sha2_password	N/A

Dolphie - Thread Details

fred@del:~/workspace/dolphie — /home/fred/.cache/pypoetry/virtualenvs/dolphie-nvCvFADT-py3.12/bin/python -c import sys; from importlib import import_module; sys.argv = ['/home/fred/.cache/pypoetry...]

dolphie v3.2.0 [R/W] dell:3306 press any key to

Thread Details

Thread ID	112
User	root
Host	localhost
Database	sbtest
Command	Execute
State	executing
Time	00:00:00
Rows Locked	0
Rows Modified	0
TRX Time	00:00:00
TRX State	RUNNING
TRX Operation	

Query & Explain

```
SELECT DISTINCT c
FROM sbtest1
WHERE id BETWEEN 50195 AND 50294
ORDER BY c
```

id	select_type	table	partitions	type	key	key_len	ref	rows	filtered	Extra
1	SIMPLE	sbtest1	None	range	PRIMARY	4	None	100	100.0	Using where; Using temporary; Using filesort

Transaction History

Start Time	Query
------------	-------

Dolphie - Graphs: DML



Dolphie - Graphs: Buffer Pool Requests



Dolphie - Graphs: Redo Log



Dolphie - Graphs: Disk I/O



Dolphie - Replication: InnoDB Cluster

fred@dell:~/workspace/dolphie — /home/fred/.cache/pypoetry/virtualenvs/dolphie-nvCvFADT-py3.12/bin/python -c import sys; from importlib import import_module; sys.argv = ['/home/fred/.cache/pypoetry...]

dolphie v3.2.0

[R/W] dell:3310

press ? for help

Host Information

Version	MySQL 8.2.0
	Linux (x86_64)
Type	InnoDB Cluster
Uptime	0:03:44
Runtime	0:00:36 latency: 0.04s
Replicas	0
Threads	con 17/run 14/cac 0
Tables	open 402/opened 489

InnoDB

Read Hit	99.95%
Chkpt Age	30.43%
AHI Hit	51.26%
BP Instance	1
BP Size	128MB
BP Available	19.14MB
BP Dirty	34.94MB
History List	187

Binary Log

File name	dell-bin.000003
Position	87343481
Size	83.30MB
Diff	561.39KB
Cache Hit	99.98%
Format	ROW (FULL)
GTID	ON
Compression	OFF

Statistics/s

Queries	6.11K
SELECT	4.28K
INSERT	305
UPDATE	610
DELETE	305
REPLACE	0
COMMIT	305
ROLLBACK	0

InnoDB Cluster (5e7af7ef-7421-11ee-af88-c8cb9e32df8e)

View UUID 5e7af9d3-7421-11ee-af88-c8cb9e32df8e

Communication Stack MySQL

Global Consistency EVENTUAL

Paxos Single Leader OFF

Write Concurrency 10

Protocol Version 8.0.27

Member	127.0.0.1:3310	Member	127.0.0.1:3320	Member	127.0.0.1:3330
UUID	2db9f603-741d-11ee-a9cb-c8cb9e...	UUID	33b3d2c5-741d-11ee-903f-c8cb9e...	UUID	3cb03784-7421-11ee-a4f3-c8cb9...
Role	PRIMARY	Role	SECONDARY	Role	SECONDARY
State	ONLINE	State	ONLINE	State	ONLINE
Version	8.2.0	Version	8.2.0	Version	8.2.0
Conflict	Queue: 0 Checked: 6.42K Detected: N/A	Conflict	Queue: 0 Checked: 6.19K Detected: N/A	Conflict	Queue: 0 Checked: 6.37K Detected: N/A
Applied	3 Queue: N/A	Applied	2.80K Queue: N/A	Applied	2.85K Queue: N/A
Local	Proposed: 6.42K Rollback: 0	Local	Proposed: 0 Rollback: 0	Local	Proposed: 0 Rollback: 0
Rows	7.37K (used for certification)	Rows	7.24K (used for certification)	Rows	7.35K (used for certification)

Dolphie - Replication: InnoDB Cluster

fred@dell:~/workspace/dolphie — /home/fred/.cache/pypoetry/virtualenvs/dolphie-nvCvFADT-py3.12/bin/python -c import sys; from importlib import import_module; sys.argv = ['/home/fred/.cache/pypoetry...]

dolphie v3.2.0

[R/W] dell:3310

press ? for help

Host Information		InnoDB		Binary Log		Statistics/s	
Version	MySQL 8.2.0	Read Hit	99.95%	File name	dell-bin.000003	Queries	6.11K
Type	Linux (x86_64)	Chkpt Age	30.43%	Position	87343481	SELECT	4.28K
Uptime	InnoDB Cluster	AHI Hit	51.26%	Size	83.30MB	INSERT	305
Runtime	0:03:44	BP Instance	1	Diff	561.39KB	UPDATE	610
Replicas	0:00:36 latency: 0.04s	BP Size	128MB	Cache Hit	99.98%	DELETE	305
Threads	0	BP Available	19.14MB	Format	ROW (FULL)	REPLACE	0
Tables	con 17/run 14/cac 0	BP Dirty	34.94MB	GTID	ON	COMMIT	305
	open 402/opened 489	History List	187	Compression	OFF	ROLLBACK	0

InnoDB Cluster (5e7af7ef-7421-11ee-af88-c8cb9e32df8e)

View UUID 5e7af9d3-7421-11ee-af88-c8cb9e32df8e

Communication Stack MySQL

Global Consistency EVENTUAL

Paxos Single Leader OFF

Write Concurrency 10

Protocol Version 8.0.27

Member	127.0.0.1:3310	Member	127.0.0.1:3320	Member	127.0.0.1:3330
UUID	2db9f603-741d-11ee-a9cb-c8cb9e...	UUID	33b3d2c5-741d-11ee-903f-c8cb9e...	UUID	3cb03784-7421-11ee-a4f3-c8cb9...
Role	PRIMARY	Role	SECONDARY	Role	SECONDARY
State	ONLINE	State	ONLINE	State	ONLINE
Version	8.2.0	Version	8.2.0	Version	8.2.0
Conflict	Queue: 0 Checked: 6.42K	Conflict	Queue: 0 Checked: 6.19K	Conflict	Queue: 0 Checked: 6.37K
	Detected: N/A		Detected: N/A		Detected: N/A
Applied	3 Queue: N/A	Applied	2.80K Queue: N/A	Applied	2.85K Queue: N/A
Local	Proposed: 6.42K Rollback: 0	Local	Proposed: 0 Rollback: 0	Local	Proposed: 0 Rollback: 0
Rows	7.37K (used for certification)	Rows	7.24K (used for certification)	Rows	7.35K (used for certification)

Dolphie - Replication: even further !

fred@dell:~/workspace/dolphie — /home/fred/.cache/pypoetry/virtualenvs/dolphie-nvCvFADT-py3.12/bin/python -c import sys; from importlib import import_module; sys.argv = ['/home...

dolphie v3.2.0

[R/W] dell:3310

press ? for help

Host Information		InnoDB		Binary Log		Statistics/s	
Version	MySQL 8.2.0	Read Hit	99.97%	File name	dell-bin.000003	Queries	6.76K
Type	Linux (x86_64)	Chkpt Age	31.51%	Position	119839459	SELECT	4.73K
Uptime	InnoDB Cluster	AHI Hit	53.55%	Size	114.29MB	INSERT	337
Runtime	0:07:38	BP Instance	1	Diff	612.90KB	UPDATE	675
Replicas	0:04:30 latency: 0.06s	BP Size	128MB	Cache Hit	99.99%	DELETE	337
Threads	1	BP Available	20.22MB	Format	ROW (FULL)	REPLACE	0
Tables	con 18/run 15/cac 1	BP Dirty	43.83MB	GTID	ON	COMMIT	337
	open 489/opened 576	History List	604	Compression	OFF	ROLLBACK	0

InnoDB Cluster (5e7af7ef-7421-11ee-af88-c8cb9e32df8e)

View UUID 5e7af9d3-7421-11ee-af88-c8cb9e32df8e Communication Stack MYSQL Global Consistency EVENTUAL Paxos Single Leader OFF Write Concurrency 10 Protocol Version 8.0.27

Member	127.0.0.1:3310	Member	127.0.0.1:3320	Member	127.0.0.1:3330
UUID	2db9f603-741d-11ee-a9cb-c8cb9e32df8e	UUID	33b3d2c5-741d-11ee-903f-c8cb9e32df8e	UUID	3cb03784-7421-11ee-a4f3-c8cb9e32df8e
Role	PRIMARY	Role	SECONDARY	Role	SECONDARY
State	ONLINE	State	ONLINE	State	ONLINE
Version	8.2.0	Version	8.2.0	Version	8.2.0
Conflict	Queue: 0 Checked: 24.91K Detected: N/A	Conflict	Queue: 0 Checked: 24.69K Detected: N/A	Conflict	Queue: 0 Checked: 24.87K Detected: N/A
Applied	3 Queue: N/A	Applied	19.98K Queue: N/A	Applied	20.04K Queue: N/A
Local	Proposed: 24.91K Rollback: 0	Local	Proposed: 0 Rollback: 0	Local	Proposed: 0 Rollback: 0
Rows	9.04K (used for certification)	Rows	8.89K (used for certification)	Rows	9.02K (used for certification)

1 Replica

Host	127.0.0.1:4406
User	mysql_innodb_replica_3811549098
Thread	IO Yes SQL Yes
Lag (PS)	00:00:13 Speed 0
Binlog IO	dell-bin.000003 (119837701)
Binlog SQL	dell-bin.000003 (111263935)
Relay Log	dell-relay-bin-read_replica_replication.000002 (6422017)
IO State	Waiting for source to send event
SQL State	Waiting for replica workers to process their queues
Auto Position	1
Errant TRX	None
Retrieved GTID	5e7af7ef-7421-11ee-af88-c8cb9e32df8e:16458-24987
Executed GTID	2db9f603-741d-11ee-a9cb-c8cb9e32df8e:1-9
	5e7af7ef-7421-11ee-af88-c8cb9e32df8e:1-20144
	5e7af9d3-7421-11ee-af88-c8cb9e32df8e:1-8

Dolphe - and more !

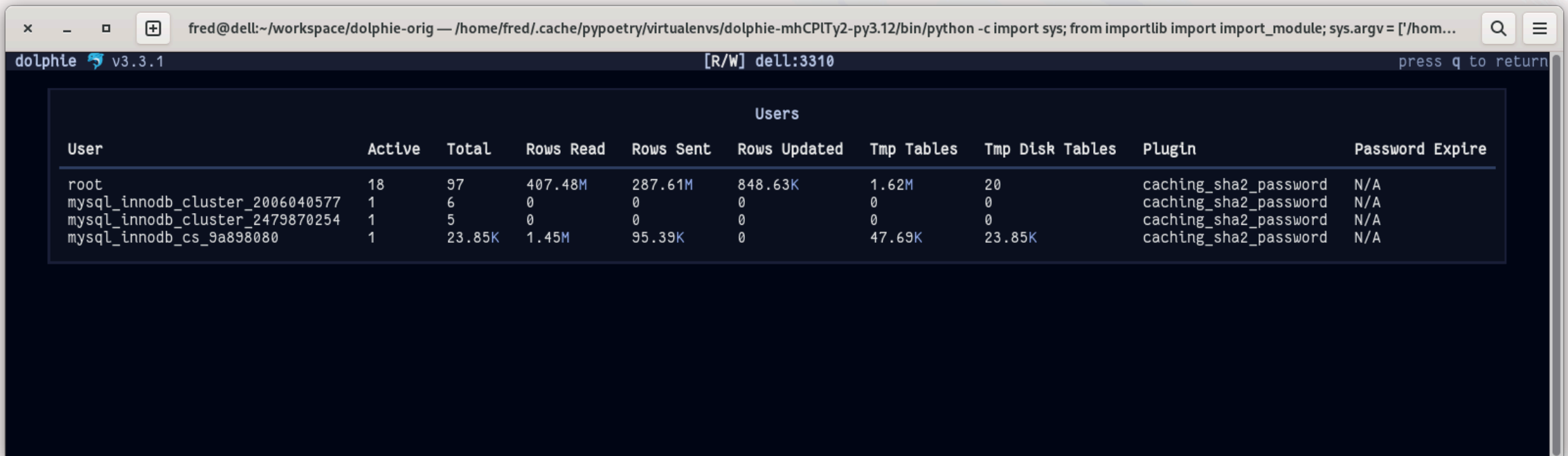
```
fred@dell:~/workspace/dolphe — /home/fred/.cache/pypoetry/virtualenvs/dolphe-nvCvFADT-py3.12/bin/python -c import sys; from importlib import import_m...
dolphe v3.2.0 [R/W] dell:3310 press any key to return
```

Commands	
Key	Description
`	Quickly connect to another host
a	Toggle additional processlist columns
c	Clear all filters set
d	Display all databases
e	Display error log from Performance Schema
f	Filter processlist by a supported option
i	Toggle displaying idle threads
k	Kill a thread by its ID
K	Kill a thread by a supported option
l	Display the most recent deadlock
o	Display output from SHOW ENGINE INNODB STATUS
m	Display memory usage
p	Pause refreshing
P	Switch between using Information Schema/Performance Schema for processlist panel
q	Quit
r	Set the refresh interval
R	Reset all metrics
t	Display details of a thread along with an EXPLAIN of its query
T	Transaction view - toggle displaying threads that only have an active transaction
s	Sort processlist by time in descending/ascending order
u	List active connected users and their statistics
v	Variable wildcard search sourced from SHOW GLOBAL VARIABLES
z	Display all entries in the host cache

Panels	
Key	Description
1	Show/hide Dashboard
2	Show/hide Processlist
3	Show/hide Replication/Replicas
4	Show/hide Graph Metrics
5	Show/hide Locks

Dolphie - 3.4 preview !

No blocking calls and a new UI style:



The screenshot shows a terminal window titled "dolphie v3.3.1" with a dark background. The window displays a MySQL query result for the "Users" table. The table has 10 columns: User, Active, Total, Rows Read, Rows Sent, Rows Updated, Tmp Tables, Tmp Disk Tables, Plugin, and Password Expire. The data is as follows:

User	Active	Total	Rows Read	Rows Sent	Rows Updated	Tmp Tables	Tmp Disk Tables	Plugin	Password Expire
root	18	97	407.48M	287.61M	848.63K	1.62M	20	caching_sha2_password	N/A
mysql_innodb_cluster_2006040577	1	6	0	0	0	0	0	caching_sha2_password	N/A
mysql_innodb_cluster_2479870254	1	5	0	0	0	0	0	caching_sha2_password	N/A
mysql_innodb_cs_9a898080	1	23.85K	1.45M	95.39K	0	47.69K	23.85K	caching_sha2_password	N/A

Dolphie - 3.4 preview !

```
fred@dell:~/workspace/dolphie-orig — /home/fred/.cache/pypoetry/virtualenvs/dolphie-mhCPITy2-py3.12/bin/python -c import sy...
dolphie v3.3.1 [R/W] dell:3310 press q to return
```

Memory Allocation							
User	Current	Total	Host	Current	Total	Code Area	Current
root	202.32MB	289.94GB	localhost	203.69MB	326.97GB	memory/group_rpl	317.16MB
mysql_innodb_cs_9a898080	1.07MB	37.00GB				memory/performance_schema	237.71MB
mysql_innodb_cluster_20...	76.48KB	24.70MB				memory/innodb	227.90MB
mysql_innodb_cluster_24...	76.48KB	1.96MB				memory/sql	21.91MB
event_scheduler	16.27KB	16.27KB				memory/mysys	9.09MB
mysqlsh.test	0	4.82MB				memory/temptable	3.00MB
mysql_innodb_cluster_13...	0	964.47KB				memory/mysqld_openssl	2.81MB
						memory/refcache	39.59KB
						memory/client	5.85KB
						memory/mysqlx	3.25KB
						memory/vio	2.33KB
						memory/myisam	728B
						memory/csv	120B
						memory/blackhole	120B

Dolphie - 3.4 preview !

```
fred@dell:~/workspace/dolphie-orig — /home/fred/.cache/pypoetry/virtualenvs/dolphie-mhCPITy2-py3.12/bin/python -c import sys; from importlib import import_module; sys.argv = ['/home/fre...
dolp hie v3.3.1 [R/W] dell:3310 press ? for help
Main
InnoDB Cluster (d167db2f-be2c-11ee-a3a3-c8cb9e32df8e)
View UUID AUTOMATIC Communication Stack MYSQL Global Consistency EVENTUAL Paxos Single Leader OFF Write Concurrency 10
Member 127.0.0.1:3310
UUID ac1731be-be2c-11ee-a0d2-c8cb9e32df8e
Role PRIMARY
State ONLINE
Version 8.3.0
Conflict Queue: 0 Checked: 6.33K Detected: N/A
Applied 0 Queue: N/A
Local Proposed: 6.33K Rollback: 0
Rows 0 (used for certification)
Member 127.0.0.1:3320
UUID b255de74-be2c-11ee-bbd0-c8cb9e32df8e
Role SECONDARY
State ONLINE
Version 8.3.0
Conflict Queue: 0 Checked: 6.26K Detected: N/A
Applied 6.26K Queue: N/A
Local Proposed: 0 Rollback: 0
Rows 0 (used for certification)
Member 127.0.0.1:3330
UUID b95d2ac4-be2c-11ee-a425-c8cb9e32df8e
Role SECONDARY
State ONLINE
Version 8.3.0
Conflict Queue: 0 Checked: 6.25K Detected: N/A
Applied 6.25K Queue: N/A
Local Proposed: 0 Rollback: 0
Rows 0 (used for certification)
Replicas (1)
Host 127.0.0.1:4410
Version 8.3.0
User mysql_innodb_cs_9a898080
Thread IO Yes SQL Yes
Lag (PS) 00:00:00 Speed 0
Binlog IO dell-bin.000002 (87120760)
Binlog SQL dell-bin.000002 (87120760)
Relay Log dell-relay-bin-clusterset_replication.000004 (459)
IO State Waiting for source to send event
SQL State Replica has read all relay log; waiting for more updates
Auto Position 1
Errant TRX None
Retrieved GTID d167db2f-be2c-11ee-a3a3-c8cb9e32df8e:92-6328
Executed GTID ac1731be-be2c-11ee-a0d2-c8cb9e32df8e:1-4
d167db2f-be2c-11ee-a3a3-c8cb9e32df8e:1-6328
Read-only mode change
Host 127.0.0.1:3310 is now read/write
```

<https://github.com/charles-001/dolphie>

```
$ pip install dolphie
```



If I need more ?

... but easy and in command line !

MySQL Shell

MySQL Shell also provides an easy way to capture information regarding the system:

- `collectDiagnostics()`

Collects MySQL diagnostics information for standalone and managed topologies

- `collectHighLoadDiagnostics()`

Collects MySQL high load diagnostics information

- `collectSlowQueryDiagnostics()`

Collects MySQL diagnostics and profiling information for a slow query

MySQL Shell - Graphs: collection

It's also possible to collect data to be plotted (locally or remotely later) using a plugin for *MySQL Shell*: <https://github.com/lefred/mysqlshell-plugins/>

```
MySQL 127.0.0.1:3310 2024-01-11 22:23:32
Py support.collect(outputdir="/home/fred/collect", os=True)
Do you want to enable ALL InnoDB Metrics for logging during the collection ? (Y/n) :
Data will be collected in /home/fred/collect/collect_dell_2024-01-11_22-23-43 for 10 minutes
Do you want to plot the collected data ? (Y/n) : n
Do you want to compress the collected data ? (Y/n) : y
MySQL 127.0.0.1:3310 2024-01-11 22:35:19
Py
```

```
[fred@dell ~] $ ls -lh /home/fred/collect/collect_dell_2024-01-11_22-23-43.zip
-rw-r--r-- 1 fred fred 8.5M Jan 11 22:35 /home/fred/collect/collect_dell_2024-01-11_22-23-43.zip
```

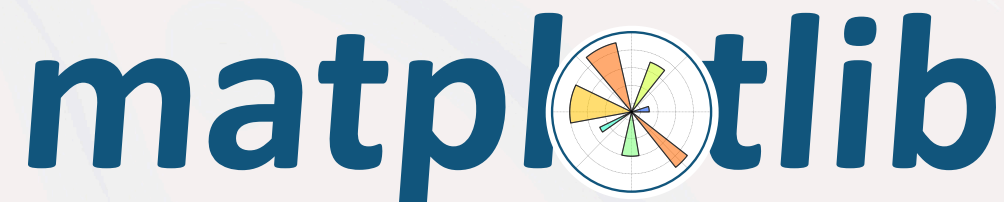

MySQL Shell - Graphs: generation

```
MySQL 127.0.0.1:3310 2024-01-11 22:50:07
Py support.plot()
Please add the path to the collected data: /home/fred/collect/collect_dell_2024-01-11_22-23-43.zip
Collected data seems to be compressed...
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/innodb_log.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/innodb_reads.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/innodb_flushing.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/innodb_os_log.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/innodb_pending.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_threads.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_threads_running.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_aborted_connections.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_joins.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_sorts.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_tmp_tables.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_handler_stats.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_queries.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_dml.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/innodb_buffer_pool.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/innodb_buffer_pool_dirty.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_history_list_length.png generated.
New Redo Log (>=8.0.30) detected
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_checkpoint.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_checkpoint_lsn.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_checkpoint_lsn_diff.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/mysql_checkpoint_lsn_diff.png generated.
Plot /home/fred/collect/collect_dell_2024-01-11_22-23-43/innodb_trx_log_util.png generated.
MySQL 127.0.0.1:3310 2024-01-11 22:50:21
Py
```


MySQL Shell - Graphs: results



To graphs generation requires the following Python modules:



Ready to extend those graphs with your preferred plots ?

To graphs generation requires the following Python modules:



Ready to extend those graphs with your preferred plots ?





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Questions ?