pt-query-digest --help

参考 ： https://www.percona.com/blog/2014/03/14/mysql-slow-query-log-tools-and-tips/

[root@vm-test-db01 slowlog]# pt-query-digest --help
pt-query-digest analyzes MySQL queries from slow, general, and binary log files. It can also analyze queries from C<SHOW PROCESSLIST> and MySQL protocol data from tcpdump. By default, queries are grouped by fingerprint and reported in descending order of query time (i.e. the slowest queries first). If no C<FILES> are given, the tool reads C<STDIN>. The optional C<DSN> is used for certain options like L<"--since"> and L<"--until">. For more details, please use the --help option, or try 'perldoc /usr/bin/pt-query-digest' for complete documentation.

Usage: pt-query-digest [OPTIONS] [FILES] [DSN]

Options:

--ask-pass		Prompt for a password when connecting to MySQL
--attribute-aliases=a		List of attribute|alias,etc (default db|Schema)
--attribute-value-limit=i		A sanity limit for attribute values (default 4294967296)
--charset=s	-A	Default character set
--config=A		Read this comma-separated list of config files; if specified, this must be the first option on the command line
--[no]continue-on-error		Continue parsing even if there is an error (default yes)
--[no]create-history-table		Create the --history table if it does not exist (default yes)
--[no]create-review-table		Create the --review table if it does not exist (default yes)
--daemonize		Fork to the background and detach from the shell
--database=s	-D	Connect to this database
--defaults-file=s	-F	Only read mysql options from the given file
--embedded-attributes=a		Two Perl regex patterns to capture pseudo-attributes embedded in queries
--expected-range=a		Explain items when there are more or fewer than expected (default 5,10)
--explain=d		Run EXPLAIN for the sample query with this DSN and print results
--filter=s		Discard events for which this Perl code doesn't return true
--group-by=A		Which attribute of the events to group by (default fingerprint)
--help		Show help and exit
--history=d		Save metrics for each query class in the given table. pt-query-digest saves query metrics (query time, lock time, etc.) to this table so you can see how query classes change over time
--host=s	-h	Connect to host
--ignore-attributes=a		Do not aggregate these attributes (default arg, cmd, insert_id, ip, port, Thread_id, timestamp, exptime, flags, key, res, val, server_id, offset, end_log_pos, Xid)

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--inherit-attributes=a      If missing, inherit these attributes from the
                            last event that had them (default db,ts)
--interval=f                How frequently to poll the processlist, in
                            seconds (default .1)
--iterations=i              How many times to iterate through the collect-and-
                            report cycle (default 1)
--limit=A                   Limit output to the given percentage or count (
                            default 95%:20)
--log=s                     Print all output to this file when daemonized
--order-by=A                Sort events by this attribute and aggregate
                            function (default Query_time:sum)
--outliers=a                Report outliers by attribute:percentile:count (
                            default Query_time:1:10)
--output=s                  How to format and print the query analysis
                            results (default report)
--password=s            -p  Password to use when connecting
--pid=s                     Create the given PID file
--port=i                -P  Port number to use for connection
--processlist=d             Poll this DSN's processlist for queries, with --
                            interval sleep between
--progress=a                Print progress reports to STDERR (default time,30)
--read-timeout=m            Wait this long for an event from the input; 0 to
                            wait forever (default 0).  Optional suffix s=
                            seconds, m=minutes, h=hours, d=days; if no
                            suffix, s is used.
--[no]report                Print query analysis reports for each --group-by
                            attribute (default yes)
--report-all                Report all queries, even ones that have been
                            reviewed
--report-format=A           Print these sections of the query analysis
                            report (default rusage,date,hostname,files,header,
                            profile,query_report,prepared)
--report-histogram=s        Chart the distribution of this attribute's
                            values (default Query_time)
--resume=s                  If specified, the tool writes the last file
                            offset, if there is one, to the given filename
--review=d                  Save query classes for later review, and don't
                            report already reviewed classes
--run-time=m                How long to run for each --iterations.  Optional
                            suffix s=seconds, m=minutes, h=hours, d=days; if
                            no suffix, s is used.
--run-time-mode=s           Set what the value of --run-time operates on (
                            default clock)
--sample=i                  Filter out all but the first N occurrences of
                            each query
--set-vars=A                Set the MySQL variables in this comma-separated
                            list of variable=value pairs
--show-all=H                Show all values for these attributes
--since=s                   Parse only queries newer than this value (parse
                            queries since this date)
--socket=s              -S  Socket file to use for connection
--timeline                  Show a timeline of events
--type=A                    The type of input to parse (default slowlog)
--until=s                   Parse only queries older than this value (parse
                            queries until this date)
--user=s                -u  User for login if not current user
--variations=A              Report the number of variations in these
                            attributes' values
```

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  --version                   Show version and exit
  --[no]version-check         Check for the latest version of Percona Toolkit,
                              MySQL, and other programs (default yes)
  --watch-server=s            This option tells pt-query-digest which server IP
                              address and port (like "10.0.0.1:3306") to watch
                              when parsing tcpdump (for --type tcpdump); all
                              other servers are ignored

Option types: s=string, i=integer, f=float, h/H/a/A=comma-separated list, d=DSN, z=size, m=time

Rules:

  This tool accepts additional command-line arguments. Refer to the SYNOPSIS and usage information for details.

DSN syntax is key=value[,key=value...]  Allowable DSN keys:

  KEY  COPY  MEANING
  ===  ====  =============================================
  A    yes   Default character set
  D    yes   Default database to use when connecting to MySQL
  F    yes   Only read default options from the given file
  P    yes   Port number to use for connection
  S    yes   Socket file to use for connection
  h    yes   Connect to host
  p    yes   Password to use when connecting
  t    no    The --review or --history table
  u    yes   User for login if not current user

  If the DSN is a bareword, the word is treated as the 'h' key.

Options and values after processing arguments:

  --ask-pass                  FALSE
  --attribute-aliases         db|Schema
  --attribute-value-limit     4294967296
  --charset                   (No value)
  --config                    /etc/percona-toolkit/percona-toolkit.conf,/etc/percona-toolkit/pt-query-digest.conf,/root/.percona-
toolkit.conf,/root/.pt-query-digest.conf
  --continue-on-error         TRUE
  --create-history-table      TRUE
  --create-review-table       TRUE
  --daemonize                 FALSE
  --database                  (No value)
  --defaults-file             (No value)
  --embedded-attributes       (No value)
  --expected-range            5,10
  --explain                   (No value)
  --filter                    (No value)
  --group-by                  fingerprint
  --help                      TRUE
  --history                   (No value)
  --host                      (No value)
  --ignore-attributes
arg,cmd,insert_id,ip,port,Thread_id,timestamp,exptime,flags,key,res,val,server_id,offset,end_log_pos,Xid
  --inherit-attributes        db,ts
  --interval                  .1
  --iterations                1
  --limit                     95%:20
```

```
  --log                       (No value)
  --order-by                  Query_time:sum
  --outliers                  Query_time:1:10
  --output                    report
  --password                  (No value)
  --pid                       (No value)
  --port                      (No value)
  --processlist               (No value)
  --progress                  time,30
  --read-timeout              0
  --report                    TRUE
  --report-all                FALSE
  --report-format             rusage,date,hostname,files,header,profile,query_report,prepared
  --report-histogram          Query_time
  --resume                    (No value)
  --review                    (No value)
  --run-time                  (No value)
  --run-time-mode             clock
  --sample                    (No value)
  --set-vars
  --show-all
  --since                     (No value)
  --socket                    (No value)
  --timeline                  FALSE
  --type                      slowlog
  --until                     (No value)
  --user                      (No value)
  --variations
  --version                   FALSE
  --version-check             TRUE
  --watch-server              (No value)
[root@vm-test-db01 slowlog]#
```

用法示例

(1)直接分析慢查询文件:

```
pt-query-digest  slow.log > slow_report.log
```

(2)分析最近12小时内的查询：

```
pt-query-digest  --since=12h  slow.log > slow_report2.log
```

(3)分析指定时间范围内的查询：

```
pt-query-digest slow.log --since '2014-04-17 09:30:00' --until '2014-04-17 10:00:00'> > slow_report3.log
```

(4)分析只含有select语句的慢查询

```
pt-query-digest--filter '$event->{fingerprint} =~ m/^select/i' slow.log> slow_report4.log
```

(5) 针对某个用户的慢查询

```
pt-query-digest--filter '($event->{user} || "") =~ m/^root/i' slow.log> slow_report5.log
```

(6) 查询所有所有的全表扫描或full join的慢查询

```
pt-query-digest--filter '(($event->{Full_scan} || "") eq "yes") ||(($event->{Full_join} || "") eq "yes")' slow.log>
slow_report6.log
```

(7)把查询保存到query_review表

```
pt-query-digest  --user=root  -password=abc123 --review  h=localhost,D=test,t=query_review--create-review-table  slow.log
```

(8)把查询保存到query_history表

```
pt-query-digest  --user=root  -password=abc123 --review  h=localhost,D=test,t=query_ history--create-review-table
```

slow.log_20140401

pt-query-digest --user=root -password=abc123--review h=localhost,D=test,t=query_history--create-review-table

slow.log_20140402

(9)通过tcpdump抓取mysql的tcp协议数据，然后再分析

tcpdump -s 65535 -x -nn -q -tttt -i any -c 1000 port 3306 > mysql.tcp.txt

pt-query-digest --type tcpdump mysql.tcp.txt> slow_report9.log

(10)分析binlog

mysqlbinlog mysql-bin.000093 > mysql-bin000093.sql

pt-query-digest --type=binlog mysql-bin000093.sql > slow_report10.log

(11)分析general log

pt-query-digest --type=genlog localhost.log > slow_report11.log

参考 ： http://blog.csdn.net/seteor/article/details/24017913

pt-query-digest：分析

常用选项： —create-review-table 当使用—review参数，把分析结果输出到表中

—create-history-table 当使用—history参数，把分析结果输出到表中

—filter 对输入的慢查询按指定的字符串进行匹配过滤后，在进行分析

—limit 限制输出结果百分比或数量，默认值是20，即将最慢的20条语句输出

—host HostName

—user 用户名

—password 密码

—history 将分析结果保存到表中，分析结果比较详细

—review 将分析结果保存到表中

—output 分析结果输出类型

—since 从什么时间开始分析，值为字符串

—until 截止时间，配合since一起分析

分析结果:

其中:

Overall:总共有多少条查询

unique:唯一查询数量

Time range:查询执行的时间范围

total:总计

min:最小

max:最大

avg:平均

95%:95%的查询时间，重点分析

median:中位数，把所有值从小到大排列，位置位于中间那个数

详细的分析结果：

Response:总的响应时间

time:该查询在本次分析中占用的时间比

Calls:执行次数

R/Call:平均每次执行的响应时间

Item:查询对象

pt-query-digest安装：

yum -y install perl perl-IO-Socket-SSL perl-DBD-MySQL perl-Time-HiRes

****

rpm包安装：

rpm -ivh percona-toolkit-2.1.7-1.noarch.rpm

warning: percona-toolkit-2.1.7-1.noarch.rpm: Header V4 DSA/SHA1 Signature, key ID cd2efd2a: NOKEY

```
Preparing...                ########################################### [100%]
   1:percona-toolkit        ########################################### [100%]
```

使用pt-query-digest分析满查询输出结果：

```
pt-query-digest slow.log
```

eg ：

```
pt-query-digest --limit 20 mysql-slow.log > digest_top10.log

pt-query-digest --database=wift_ecief mysql-slow.log > digest_all.log
```

eg ： 分析只含有select语句的慢查询

```
pt-query-digest  --filter '$event->{fingerprint} =~ m/^select/i' --explain u=root,p=Root@911  h=localhost slow.log> slow_report4.log
```

note ： --explain参数后必须加上登陆验证（user, password, host）

eg ：

```
pt-query-digest --explain u=root,p=Root@911, h=localhost mysql-slow.log > digest_explain.log
```

eg ： 只生成wift_ecief库的TOP SQL信息

```
pt-query-digest --filter '($event->{db} || "") =~ m/wift_ecief/' mysql-slow.log > digest_ecief.log
```

eg ： 只生成wift_ecief库的TOP SQL信息并explain

```
pt-query-digest --filter '($event->{db} || "") =~ m/wift_ecief/' --explain u=root,p=Root@911, h=localhost mysql-slow.log > digest_ecief_explain.log
```

参考 ： https://www.percona.com/forums/questions-discussions/percona-toolkit/9600-pt-query-digest-how-to-use-for-a-specific-database-only-to-analyse-slow-query-log

https://stackoverflow.com/questions/15057410/pt-query-digest-filtering-by-database-and-user-and-datetime

https://www.percona.com/blog/2014/03/14/mysql-slow-query-log-tools-and-tips/

eg ：

```
pt-query-digest mysql-slow.log > top10.log
pt-query-digest --limit=10 mysql-slow.log > digest_top10.log
pt-query-digest --limit 20 digest_top10.log
pt-query-digest --limit 20 mysql-slow.log > digest_top10.log
pt-query-digest --limit 10 mysql-slow.log > digest_top10.log
pt-query-digest --help
man pt-query-digest
pt-query-digest -
pt-query-digest --database=wift_ecief mysql-slow.log > digest_ecief.log
pt-query-digest --explain mysql-slow.log > digest_ecief.log
pt-query-digest --explain mysql-slow.log > digest_ecief_explain.log
pt-query-digest --explain localhost mysql-slow.log > digest_ecief_explain.log
pt-query-digest --explain u=root,p=Root@911, h=localhost mysql-slow.log > digest_ecief_explain.log
pt-query-digest --database=wift_ecief mysql-slow.log > digest_ecief.log
pt-query-digest --filter '($event->{db} || "") =~ m/wift_ecief/' mysql-slow.log > digest_ecief.log
pt-query-digest --filter '($event->{db} || "") =~ m/wift_ecief/' --explain u=root,p=Root@911, h=localhost mysql-slow.log > digest_ecief_explain.log
```