

1. MySQL InnoDB

SQL

read uncommitted

read committed

repeatable read

serializable

2. MySQL ENUM

ENUM

SQL

```
Create table size(name ENUM( 'Smail', 'Medium', 'Large' ));
```

3. CHAR VARCHAR

CHAR VARCHAR

CHAR 1 255

CHAR CHAR

4.

SET

BLOB

ENUM

CHAR

TEXT

VARCHAR

5. MySQL

Storage mechanism

Locking levels

Indexing

Capabilities and functions.

6. TIMESTAMP UPDATE CURRENT_TIMESTAMP

TIMESTAMP

Zero

UPDATE

CURRENT_TIMESTAMP

7.

8. MySQL

?

Show status

Bytes~~received~~

Bytessent

Com

Created

Handler

Select

Sort_*

Show session status like $\frac{1}{2}$ Select $\frac{1}{2}$; Show profiles SET

profiling=1; Show profiles\G Show profile;

9. LIKE REGEXP

LIKE REGEXP

^

SELECT * FROM <tablename> **WHERE** * REGEXP "**^b**";

SELECT * FROM <tablename> **WHERE** * **LIKE** "**%b**";

10. BLOB TEXT

BLOB

BLOB

BLOB

TINYBLOB

BLOB

MEDIUMBLOB

LOB

LONGBLOB

TEXT

TEXT BLOB TEXT

TINYTEXT

TEXT

MEDIUMTEXT

LONGTEXT

BLOB

BLOB TEXT BLOB

TEXT

11.

12. MySQL TRIGGERS

MySQL

BEFORE INSERT

AFTER INSERT

BEFORE UPDATE

AFTER UPDATE

BEFORE DELETE and

AFTER DELETE

13. SQL

Abs num

floor num

ceil num

insert (s1,index,length,s2)

o S1

- o s2
- o Index , 1
- o Lebgth

upper str ucase str

lower str lcase str

left str length str length

right str length str length

substring str index length str index

length index 1

reverse str str

curdate current_date()

curtime current_time()

now

datediff d1 d2 d1 d2

adddate date num date num

subdate date num date num

Count

sum

avg

Max

min

14. MySQL

MyISAM

InnoDB

15. MySQL

o NULL NULL , NOT
 NULL 0 -1

- o MySQL

cpu I/O

.

- o

MySQL

UTF-

8

– *count(mycol)* *count()**

- o MySQL

()

MySQL

UNION

- o UNION

UNION

- o UNION ALL

UNION ALL

UNION ALL UNION

UNION ALL

16. MySQL

```
alter table tableName add
```

primary key

unique

fulltext

index

index index_name

: BDB

: MyISAM :

INNODB

17.

MyISAM mysql

MyISAM MyISAM MyISAM

- o MyISAM

- o MyISAM varchar text BLOB
MyISAM

optimize table

- o MyISAM myisamchk

MyISAM

MyISAM Merge MyISAM

MyISAM

InnoDB InnoDB

MyISAM

memory(heap)

archive

select

insert

Desc[ribe] tablename

show engines

18.

```
mysqldump -u          -p          >
```

```
mysqldump -u          -p          >
```

```
mysqldump -u dbuser -p -d --add-drop-table  
dbname >d:/dbname_db.sql
```

```
-d          --add-drop-table          create          drop table
```

19. truncate delete drop

```
drop(DDL     )
```

truncate(DDL)

truncate

delete(DML)

drop>truncate>delete

20. Redis

key-value

2.

strings map list sets sorted sets

Redis

in-memory

Redis

Memcached

key/value

Redis

Redis

21. Redis

Redis

k/v

list set zset

hash

Redis

master-slave

Redis

22. Redis

Redis	key-value	Memcached
		value
		string
lists	sets	zsets
push/pop	add/remove	

Redis - / TCP

Socket

The diagram illustrates a distributed system with three Redis instances, each represented by a blue cylinder labeled "Redis". These instances are arranged in a triangle. In the center of the triangle is a light blue circle labeled "key". Each Redis instance has a line connecting it to the central "key", representing the data replication and consistency across the distributed nodes.

Redis

key

set

Redis

set

key

Redis

rdb/aof

Redis

resharding

23. Redis

Redis

ID 0 10000

R0 ID 10001 20000

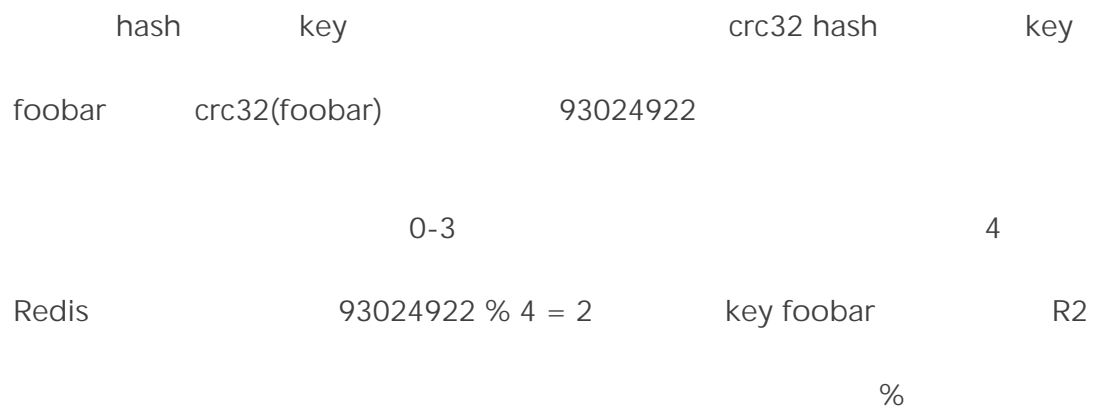
R1

Redis

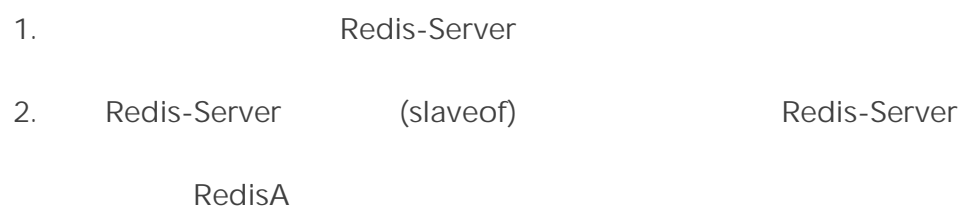
hash

key

object_name:



1.



3. (Replication) RedisA

IP Redis-Server IP

4. RedisA

Redis-Server

Prd-Sharding

Redis

2.

Redis

Redis-

Server

Redis-Server

IP

IP

IP

slaveof no

one

slaveof IP PORT

24. MongoDB

(NoSql),Mongo DB

(OO),

Mongo DB

Document

Mongo DB

SQL ,

CRUD .

25. MongoDB

Python PHP Ruby Java C C# Javascript Perl C++
Erlang .NET

BSON JSON

26. MongoDB

JSON

Mongo

JSON

Mongo

Mongo

Mongo

-

27. MongoDB

Mongo

Mongo

Mongo

Mongo

Mongo

MapReduce

JSON Mongo BSON

28. Redis memcache MongoDB

mongodb memcached mongodb

memcached Redis

tcp

1.

Redis memcache mongodb

2.

memcache

Redis Redis IO

mongodb

3.

Redis 2.0 VM

key value memcache

memcache , LRU

mongoDB VM

4.

Redis

,
sharding, hash
Redis

Memcache

hash

mongoDB master-slave,replicaset paxos

,auto sharding

5.

Redis AOF

aof

memcache ,

MongoDB 1.8 binlog

6.

Memcache

cas

Redis

mongoDB

7.

mongoDB

(mapreduce),

8.

Redis

memcache

;

sharding

MongoDB:

29. Redis

1.

C

10

/ 20

2.

Copy-on-write

save 300 10

(Append-only file aof)

3.

4. -- Slave 21

Amazon 10G key set

5. Sharding Redis

web2.0

Sharding