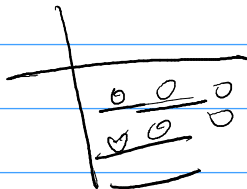


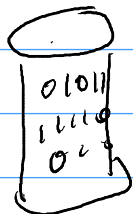
MySQL 数据文件 IBD

表



磁盘

InnoDB (IBD)



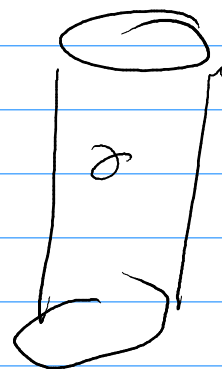
数据文件

h

t1	k1, c1, c2
----	------------

t1.ibd

```
mysql> create table t1(
->   k1 int,
->   c1 varchar(8),
->   c2 varchar(8),
->   primary key (k1)
-> );
Query OK, 0 rows affected (0.07 sec)
```



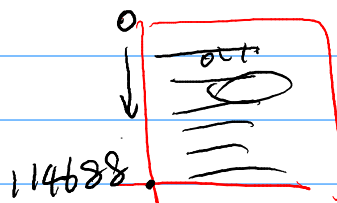
offset

IBD 地址(偏移)

114688 字节

```
mysql> select * from t1;
```

k1	c1	c2
1	r1c1	r1c2
2	r2c1	r2c2

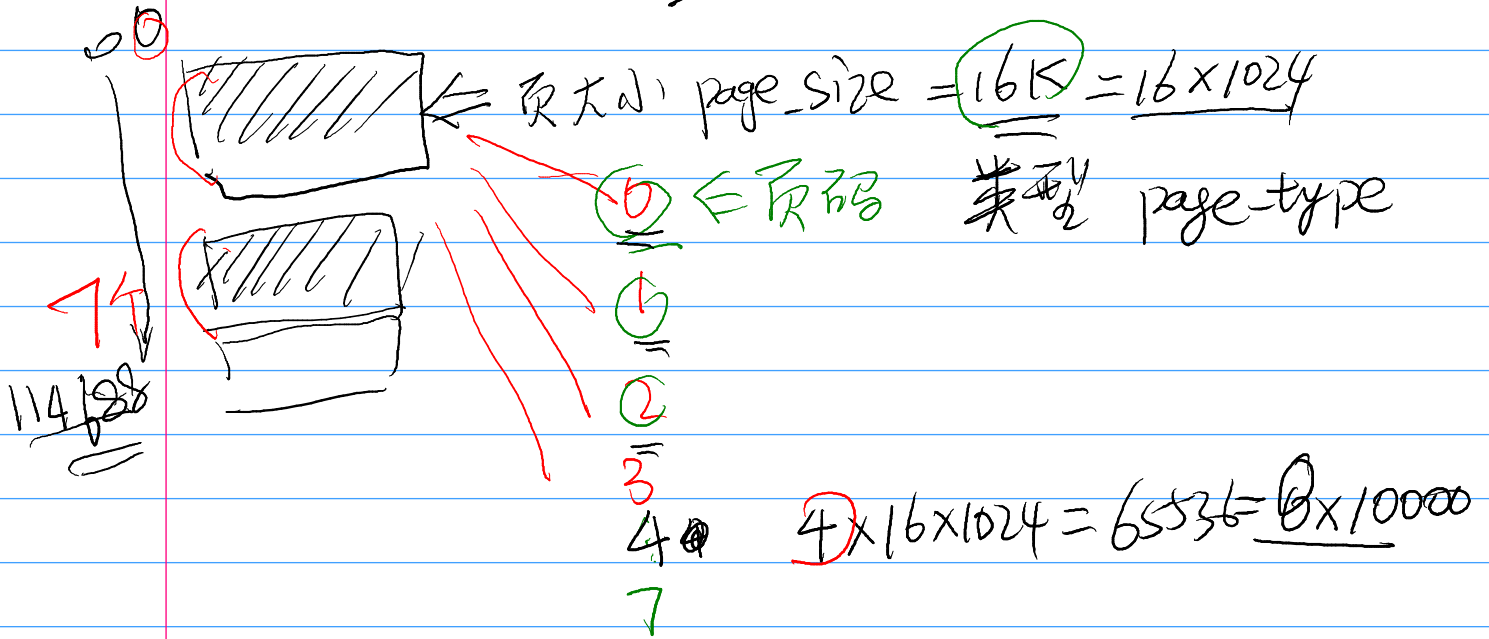


hex dump

分块(页)

block page

IBR



data/rtc » hexdump -C -s 0x10000 -n 256 t1.ibd

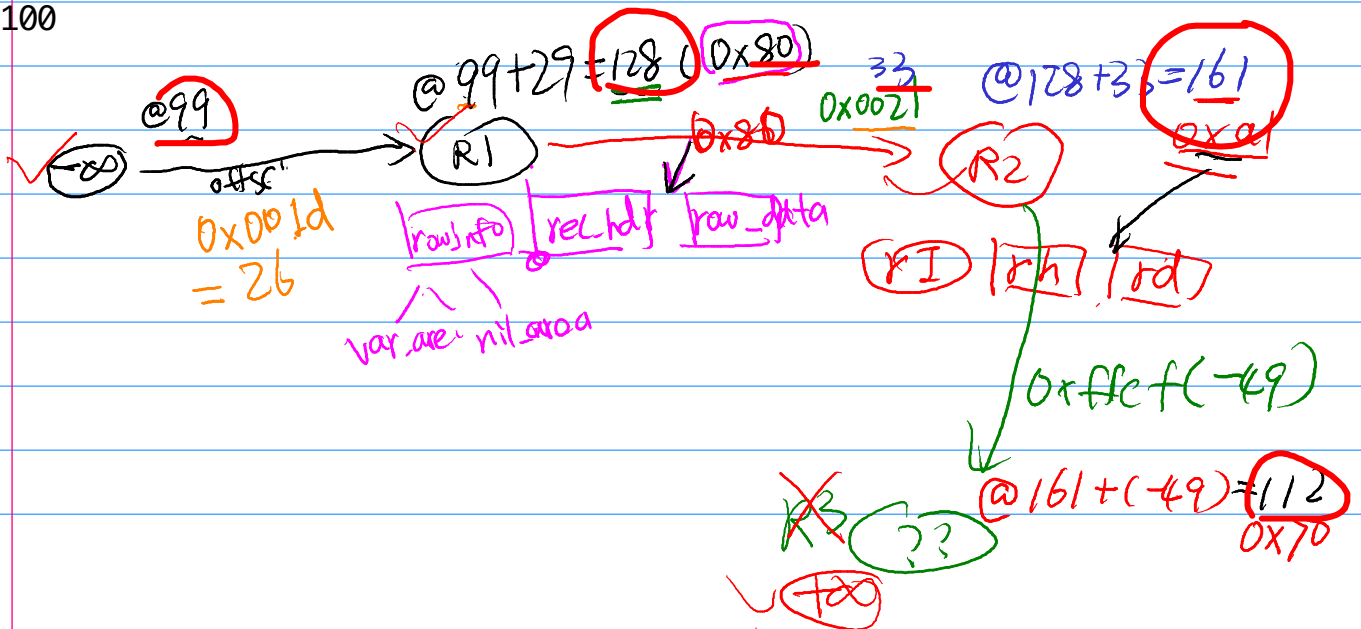
```

00010000  92 ed d9 cd 00 00 00 04 ff ff ff ff ff ff ff ff |.....|
00010010  00 00 00 00 1a 28 94 2c 45 bf 00 00 00 00 00 00 |.....(.,E.....|
00010020  00 00 00 00 00 00 45 00 02 00 ba 80 04 00 00 00 00 |.....E.....|
00010030  00 a1 00 02 00 01 00 02 00 00 00 00 00 00 00 00 |.....|
00010040  00 00 00 00 00 00 00 00 00 fa 00 00 00 45 00 00 |.....E..|
00010050  00 02 02 72 00 00 00 45 00 00 02 01 b2 01 00 00 |...r...E.....|
00010060  02 00 1d 69 6e 66 69 6d 75 6d 00 03 00 0b 00 00 |...infimum.....|
00010070  73 75 70 72 65 6d 75 6d 04 04 00 00 10 00 21 00 |supremum.....!|
00010080  80 00 00 01 00 00 00 00 f6 28 82 00 00 01 0c 01 |.....(.....|
00010090  10 72 31 63 31 72 31 63 32 04 04 00 00 00 18 ff |.r1c1r1c2.....|
000100a0  cf 80 00 00 02 00 00 00 00 f6 29 81 00 00 01 10 |.....).....|
000100b0  01 10 72 32 63 31 72 32 63 32 00 00 00 00 00 00 |..r2c1r2c2.....|
000100c0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 |.....|

```

*

00010100

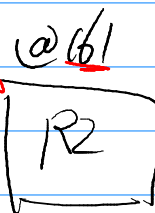
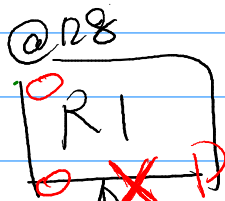
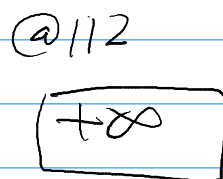
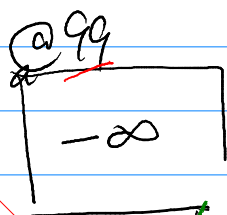
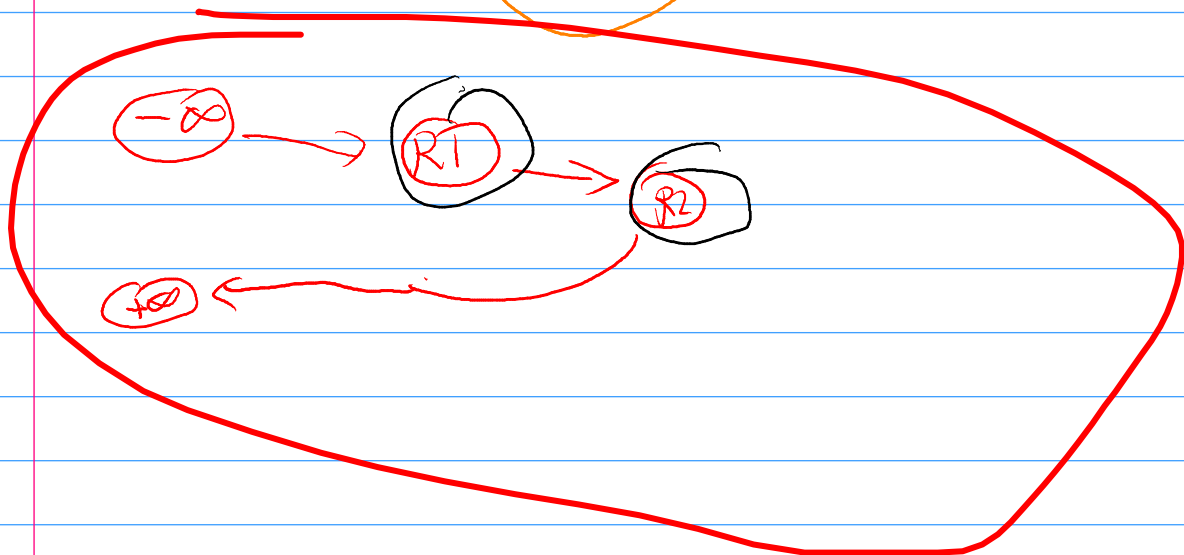


最小值 ~~$-\infty$~~ inf

$R1(1, r1c1, r1c2)$

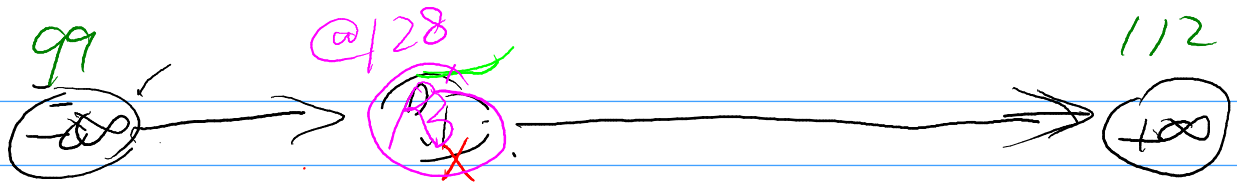
最大值 ~~$+\infty$~~ sup

$R2(2, r2c1, r2c2)$



index-hdr

page_free=128
page_garbage=33



(page free = 0 (null)

$$\text{garbage} = \underline{66} = 33 + 33$$

66

up

R3

