1. Unencrypted communications

Summary

•	Severity:	Low
	Confidence:	Certain
	Host:	http://testphp.vulnweb.com
	Path:	I

Issue description

The application allows users to connect to it over unencrypted connections. An attacker suitably positioned to view a legitimate user's network traffic could record and monitor their interactions with the application and obtain any information the user supplies. Furthermore, an attacker able to modify traffic could use the application as a platform for attacks against its users and third-party websites. Unencrypted connections have been exploited by ISPs and governments to track users, and to inject adverts and malicious JavaScript. Due to these concerns, web browser vendors are planning to visually flag unencrypted connections as hazardous.

To exploit this vulnerability, an attacker must be suitably positioned to eavesdrop on the victim's network traffic. This scenario typically occurs when a client communicates with the server over an insecure connection such as public Wi-Fi, or a corporate or home network that is shared with a compromised computer. Common defenses such as switched networks are not sufficient to prevent this. An attacker situated in the user's ISP or the application's hosting infrastructure could also perform this attack. Note that an advanced adversary could potentially target any connection made over the Internet's core infrastructure.

Please note that using a mixture of encrypted and unencrypted communications is an ineffective defense against active attackers, because they can easily remove references to encrypted resources when these references are transmitted over an unencrypted connection.

Issue remediation

Applications should use transport-level encryption (SSL/TLS) to protect all communications passing between the client and the server. The Strict-Transport-Security HTTP header should be used to ensure that clients refuse to access the server over an insecure connection.

References

- Marking HTTP as non-secure
- Configuring Server-Side SSL/TLS
- HTTP Strict Transport Security

Vulnerability classifications

• CWE-326: Inadequate Encryption Strength

2.Blind SQL

Issue Background

SQL injection is a code injection technique, used to attack data-driven applications, in which malicious SQL statements are inserted into an entry field for execution (e.g. to dump the database contents to the attacker).[1] SQL injection must exploit a security vulnerability in an application's software, for example, when user input is either incorrectly filtered for string literal escape characters embedded in SQL statements or user input is not strongly typed and unexpectedly executed. SQL injection is mostly known as an attack vector for websites but can be used to attack any type of SQL database.

Request

```
GET /product.php?pic=1' HTTP/1.1

Host: testphp.vulnweb.com

Accept-Encoding: gzip, deflate

Accept: */*

Accept-Language: en-US,en-GB;q=0.9,en;q=0.8

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.150 Safari/537.36

Connection: close

Cache-Control: max-age=0

Referer: http://testphp.vulnweb.com/listproducts.php?cat=1
```

Response

