

Cloudy with a Chance of Exposures: Dissecting Web Server Risks Across Top Cloud Providers

Nenad Zaric @ DefCamp 2023

WHOAMI

WHOAMI

Nenad Zaric

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Bug Bounty Hunter (Uber, Twitter, Snapchat,
Spotify, Adobe, GitHub, Yahoo..)
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WHAT IS THE CLOUD?



Cloud computing is the on-demand delivery of IT resources over the Internet with pay-as-you-go pricing.



Cloud computing is the delivery of computing services—including servers, storage, databases, networking, software, analytics, and intelligence.



Cloud computing is the on-demand availability of computing resources (such as storage and infrastructure), as services over the internet.



Cloud computing is the delivery of computing resources as services, meaning that the resources are owned and managed by the cloud provider rather than the end user.



There is no cloud
it's just someone else's computer

**SO, DO YOU THINK
CLOUD IS SECURE?**

CLOUD PROVIDERS DO!



Infrastructure Security

DigitalOcean follows the most up-to-date infrastructure security controls.

[Learn more →](#)

Architected to be the most secure cloud infrastructure

It's secure

Enterprises often ask, What are the security risks of cloud computing? They are considered relatively low.



Security

Many cloud providers offer a broad set of policies, technologies, and controls that strengthen your security posture overall, helping protect your data, apps, and infrastructure from potential threats.



TRICKEST 3.90.96.2

Not S

```
{
  "kind": "PodList",
  "apiVersion": "v1",
  "metadata": {
    "resourceVersion":
  },
  "items": [
    {
      "metadata": {
        "name": "cert-
        "generateName":
        "nameSpace": "

```

Dashboard [Jenkins]

Not Secure

Guest

Dashboard >

PartnerStuff ReportProcess

S	W	Name ↓	Last Success	Last Failure	Last Duration
				7 mo 21 days #13	1 sec
		ablesSync	7 days 23 hr #279	3 mo 8 days #225	17 min
		-For-UserType-Tag	8 hr 37 min #936	N/A	3 min 19 sec
		Backup-Restore-LSHELL	10 mo #70	10 mo #62	3 hr 1 min
		Backup-Restore-LSHELL-To-Test	9 mo 10 days #9	9 mo 10 days #10	13 hr

HACKERS DON'T

Whoops! There was an error.

Not Secure

Guest

ErrorException (E_WARNING)

file_put_contents(): Only 0 of 274 bytes written, possibly out of free disk space

Application frames (1)

All frames (34)

ErrorException

../vendor/laravel/framework/src/Illuminate/Filesystem/Filesystem.php:133

file_put_contents

../vendor/laravel/framework/src/Illuminate/Filesystem/Filesystem.php:133

Illuminate\Filesystem\Filesystem

Environment Variables

APP_NAME "JobUp"

APP_ENV "development"

APP_KEY "base64:5bu5Dp1YjFUMjTA4vHCWbZGE1cVS2RNSheEUSq84ME="

APP_DEBUG "true"

APP_LOG "daily"

LET'S START

GETTING AWS IP RANGES

AWS IP Ranges

```
curl -s https://ip-ranges.amazonaws.com/ip-ranges.json | jq -r '.prefixes[] |  
select(.service=="EC2") | .ip_prefix' | tee out/output.txt
```



GETTING GCP IP RANGES

GCP IP Ranges

```
curl -s https://www.gstatic.com/ipranges/cloud.json | jq -r ".prefixes[].ipv4Prefix"  
| sort -u | grep "/" | tee out/output.txt
```



GETTING AZURE IP RANGES



AZURE IP Ranges

```
#!/bin/bash
```

```
URL="https://www.microsoft.com/en-us/download/confirmation.aspx?id=56519"
```

```
# Fetch the download link of the JSON file from the Azure web page
```

```
DOWNLOAD_LINK=$(curl -s $URL | grep -oP  
'https://download\.microsoft\.com/download/[^"]*\\.json')
```

```
# Fetch the JSON file and parse it to extract IPv4 prefixes
```

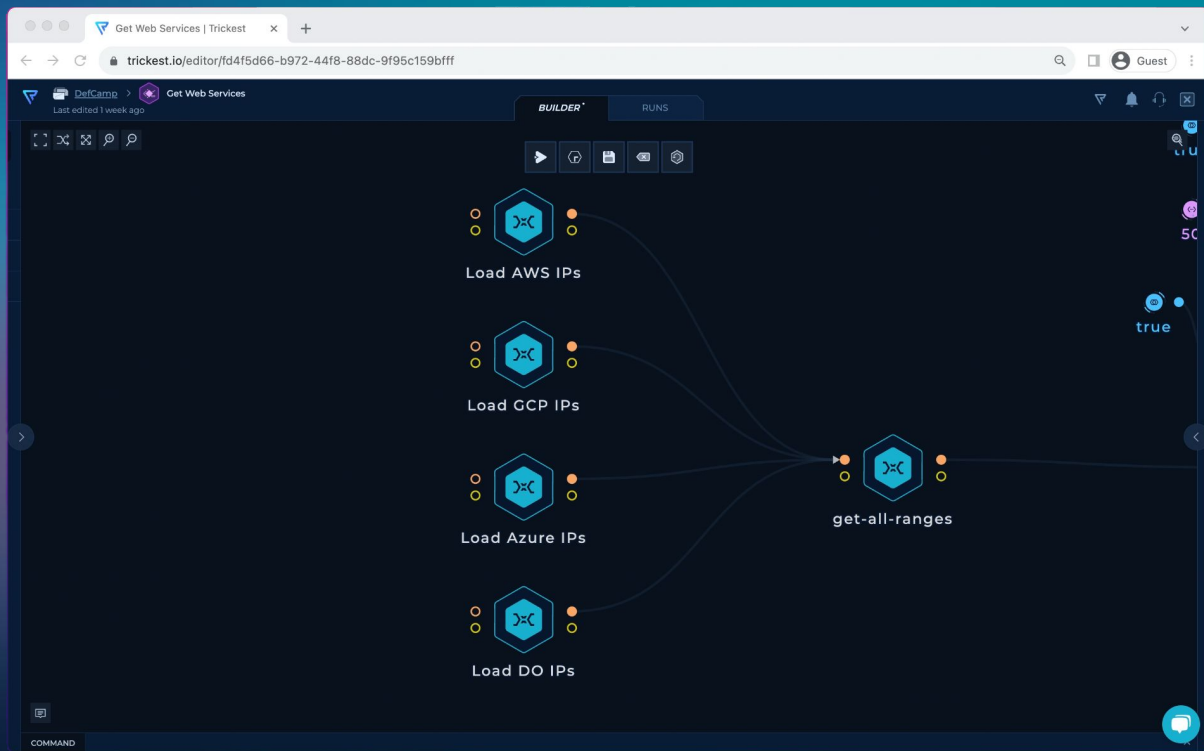
```
curl -s $DOWNLOAD_LINK | jq -r '.values[] | select(.name | contains("AzureCloud")) |  
.properties.addressPrefixes[] | select(test("^[0-9]{1,3}\\.{3}[0-9]{1,3}/"))' >  
out/output.txt
```

GETTING DO IP RANGES

DigitalOcean IP Ranges

```
wget 'https://digitalocean.com/geo/google.csv'  
cat google.csv | awk -F"," '{print $1}' > out/output.txt
```

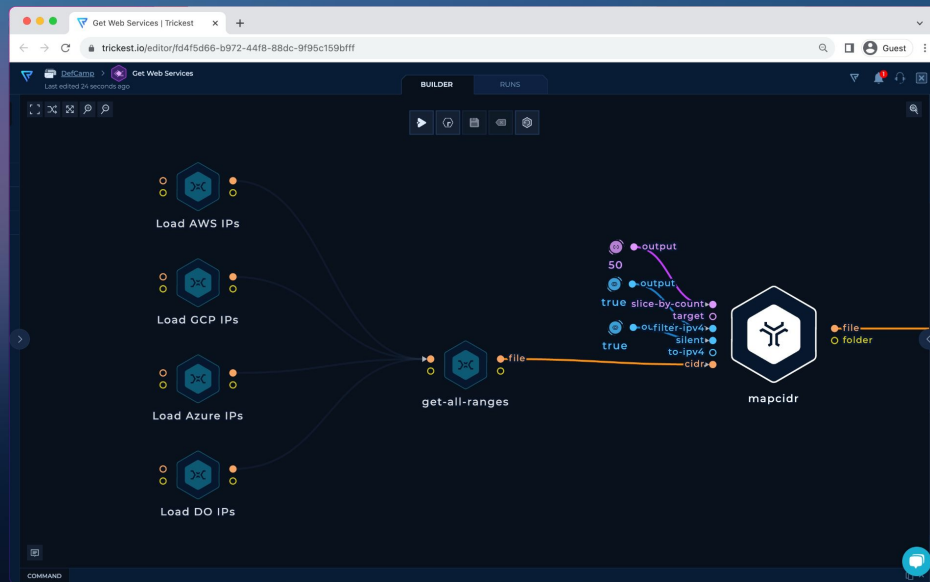
MERGING TOGETHER



MAPCIDR*

Slicing the IP ranges found for to a single list for distribution

```
mapcidr - Slicing the IP Ranges
mapcidr -cldr ip-ranges.txt -silent -filter-ipv4 -sbc 50 -output out/output.txt
```



PORT SCANNER

TOOL RESEARCH - NOT GOOD FIT

Nmap: Detailed but slow for large-scale tasks.

RustScan: Fast but can be inaccurate; not suited for non-threaded batch processing.

Naabu: Adequate but not the quickest for advanced scanning.

Masscan: Extremely fast but lacks accuracy and consistency.

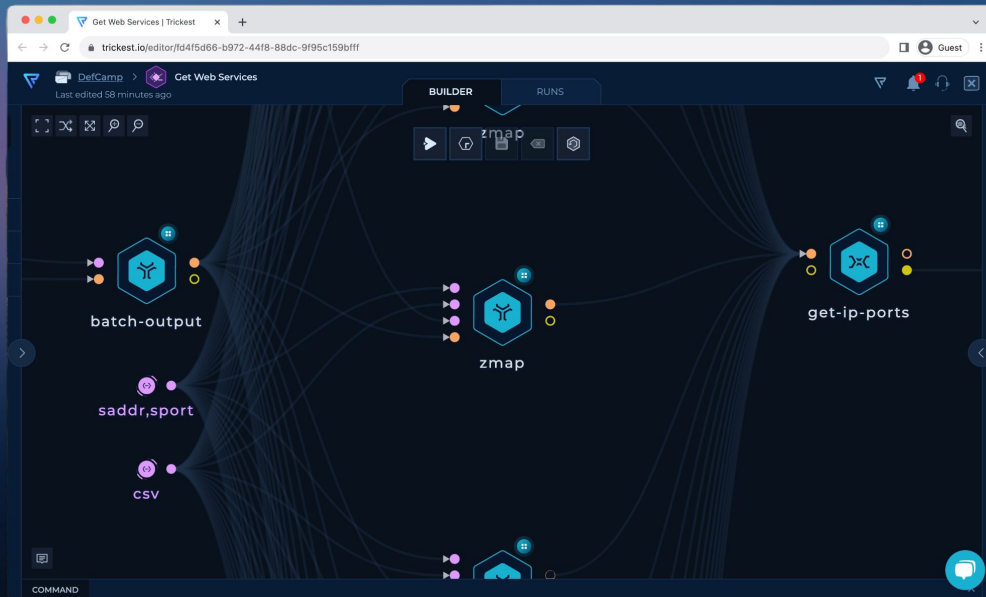
AND THE
WINNER IS...

ZMAP*

ZMap is a fast single packet network scanner designed for Internet-wide network surveys.

```
ZMAP Single Port  
  
zmap --target-port 7443 --output-fields saddr,sport --output-module csv --allowlist-  
file batch.txt --output-file out/zmap/output.txt
```

*<https://github.com/zmap/zmap>



THE WORKFLOW

GET WEB SERVICES

The screenshot displays the DefCamp Builder interface, a tool for creating and managing web services. The top navigation bar shows the current project is 'Trickest' under 'Get Web Services'. The interface is divided into two main tabs: 'BUILDER' and 'RUNS'. The 'BUILDER' tab is active, showing a complex flowchart of interconnected nodes. These nodes represent various operations and data flows within the service. A 'COMMAND' bar is visible at the bottom left. The 'RUNS' tab is also present, suggesting functionality for monitoring or executing the built services. The overall layout is clean and professional, typical of a development or management tool.

```
cat ports.txt
```

80
81
83
84
88
90
264
443
444
554
4443
6443
7443
8000
8080
8081
8443
8888
9090
9200
9443
10000
10250



```
cat ip-ports.txt
```

3.106.156, 213:80
35.187.255, 148:8443
3.149.251, 352:8081
3.231.117, 96:443
3.135.161, 97:10900
3.36.27, 222:8000
18.135.230, 47:80
3.427.0, 40:80
35.190, 74, 119:80
18.168.183, 122:443
3.59.6, 153, 154:80
3.96.85, 81, 141:443
3.36.225, 200:9700
3.6.6, 167:443
20.245, 30, 111:443
115.250, 62, 4:443
35.167, 120, 22:8081
3.4, 110, 152, 157:10080
51.145, 76, 168:443
3.40.80, 69, 36:10250
156.230, 113, 123:954
104.248, 128, 252:443
3.106.172, 122:443
3.4, 110, 152, 252:443
52.4, 5, 68:1443
52.4, 5, 68:1443
5.249, 52, 243:80
3.106, 72, 124:443
20.124, 159, 46:443
35.158, 249, 37:443
3.4, 160, 5, 122:10250
3.111, 174, 36:443
3.233, 191, 122:443
165, 12, 68, 128:8443
128, 190, 159, 87:8081
52.233, 254, 89:443
3.21, 189, 209:443
3.74, 134, 16:443



THE WORKFLOW

IMPORT WEB DATA

GETTING THE WEB SERVERS

Import Web Data | Trickest

trickest.io/editor/1ba1ddd8-fae0-4dba-a3b1-935f52d1c522

DefCamp > Import Web Data

Last edited 1 week ago

BUILDER RUNS

ip-port.txt → get-ip-port-all → generate-line-batches → file-splitter → batch-output → httpx → kubernetes-index

batch-output details:

- User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/113.0.0.0 Safari/537.36 -favicon -retries 3 -threads 450 -timeout 3 -location -tls-grab -csp-probe -web-server -tech-detect -content-type -response-time -content-length -follow-redirects -follow-host-redirects -o out/httpx-1/item/output.txt
- static-defcamp-servers.yml

COMMAND

<-- Command line preview -->

```
httpx -no-color -ip -cdn -json -list in/batch-output-2/output.txt -cname -stats -title -header User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/113.0.0.0 Safari/537.36 -favicon -retries 3 -threads 450 -timeout 3 -location -tls-grab -csp-probe -web-server -tech-detect -content-type -response-time -content-length -follow-redirects -follow-host-redirects -o out/httpx-1/item/output.txt
```

ELASTICSEARCH

Search engine based on the Lucene library. It provides a distributed, multitenant-capable full-text search engine with an HTTP web interface and schema-free JSON documents.

**THERE WAS
NO TOOL OUT
THERE TO
IMPORT THIS
TYPE OF DATA....**



SO WE CREATED ONE

trickest/elasticsearch_index: [x](#) [+](#)

[github.com/trickest/elasticsearch_index](#)

trickest / [elasticsearch_index](#)

[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

[elasticsearch_index](#) [Private](#) [Edit Pins](#) [Watch 2](#) [Fork 0](#) [Star 0](#)

[main](#) [1 branch](#) [0 tags](#) [Go to file](#) [Add file](#) [Code](#)

[mhmdiaa](#) Merge pull request #1 from trickest/fix/add-timeout ... d664944 on Jul 19 12 commits

machinery-integration	Initial commit	9 months ago
LICENSE	Initial commit	9 months ago
README.md	Initial commit	9 months ago
config.yaml	Initial commit	9 months ago
elasticsearch_index.py	Add timeout to elastic client	4 months ago
requirements.txt	Update elasticsearch package	4 months ago

[README.md](#)

Elasticsearch Index

Import security data to elasticsearch

[trickest.com](#)

[web-server](#) [asm](#) [vulnerabilities](#) [threat-intelligence](#) [attack-surface-management](#)

[Readme](#) [MIT license](#) [Activity](#) [0 stars](#) [2 watching](#) [0 forks](#)

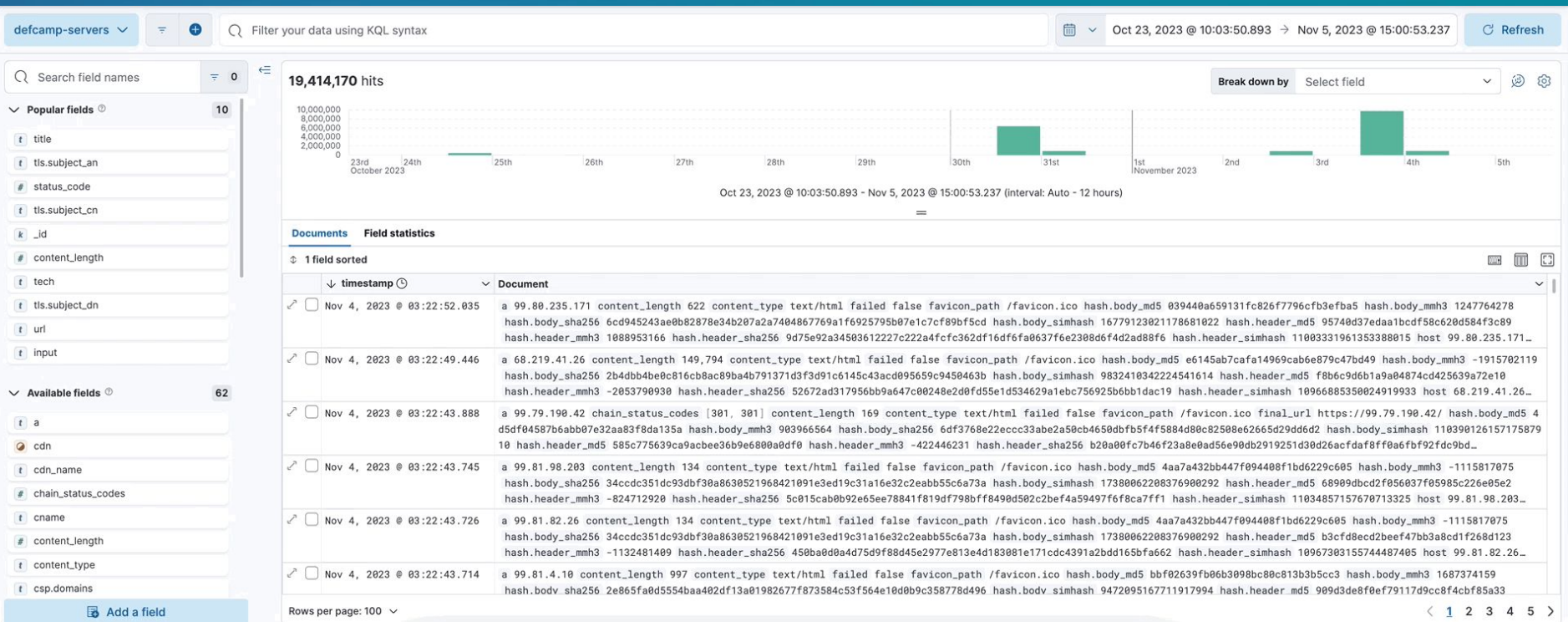
[Releases](#)

ELASTICSEARCH IMPORT

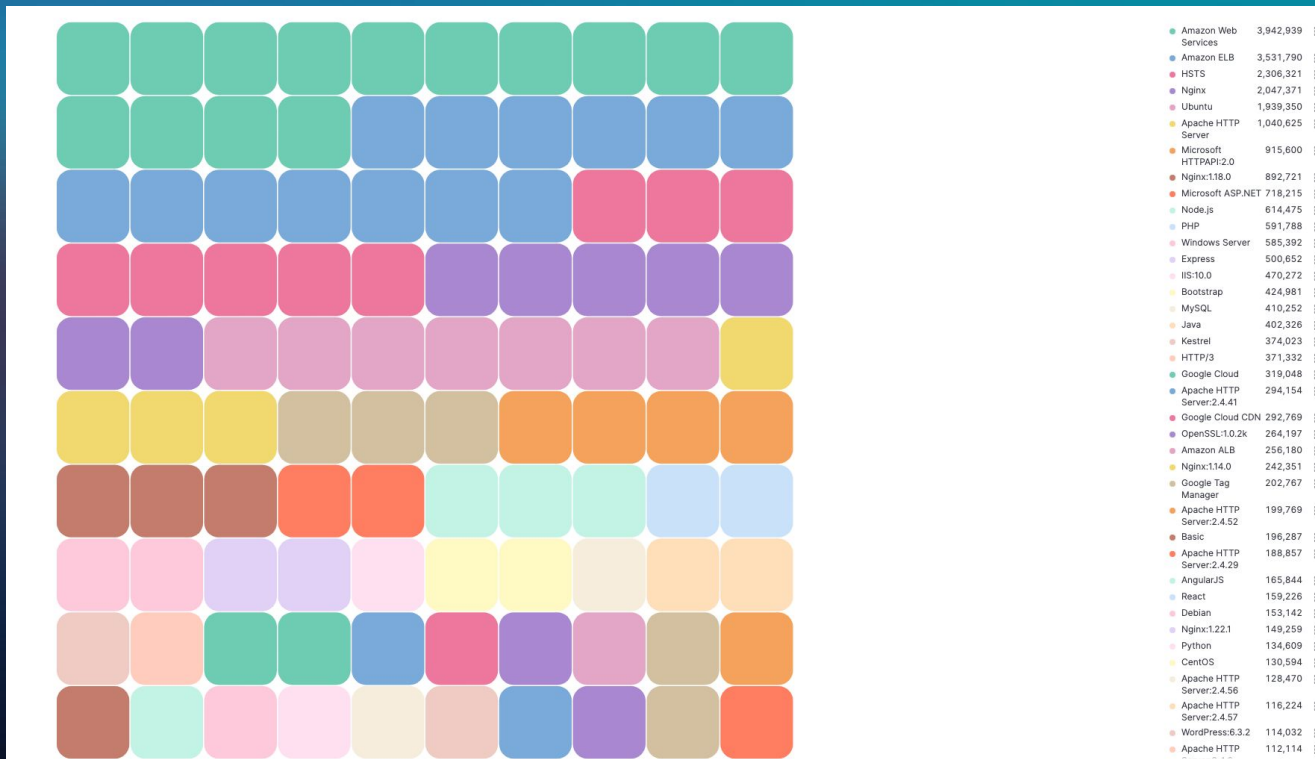
elasticsearch_index

```
python elasticsearch_index.py --file in/httpx-1/output.txt --field url --config  
elastic-defcamp-servers.yml --output out/elasticsearch-index-1/output.txt
```


WEB SERVER DATA



CLOUD TECHNOLOGIES

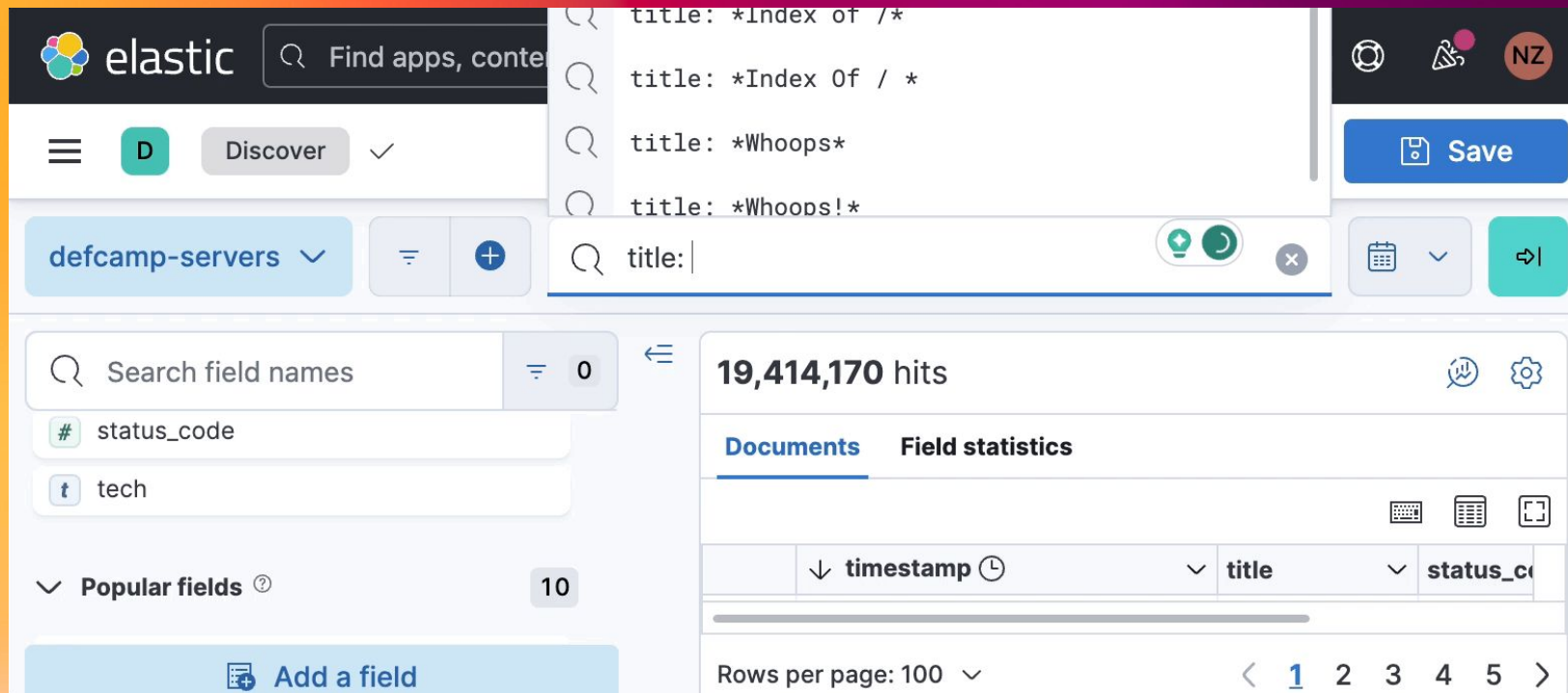


**NOW, THE FUN
STUFF...**

EXPOSURES

**NO ADDITIONAL
SCANS NEEDED...**

HOW TO QUERY?



The screenshot shows the Elastic Search interface. At the top, the Elastic logo is on the left, and a search bar contains 'Find apps, conten'. Below this, there's a navigation bar with a menu icon, a 'D' button, and a 'Discover' button. A dropdown menu is open, showing search suggestions: 'title: *Index of /*', 'title: *Index Of / *', 'title: *Whoops*', and 'title: *Whoops!*'. The main search bar contains 'title:'. To the right of the search bar, there are icons for a lightbulb, a refresh button, and a close button. Below the search bar, there's a 'Save' button. On the left side, there's a 'defcamp-servers' dropdown menu. Below it, there's a search bar for 'Search field names' with a filter icon and a '0' count. Two fields are listed: '# status_code' and 't tech'. Below this, there's a 'Popular fields' section with a '10' count. At the bottom left, there's an 'Add a field' button. On the right side, the search results are displayed. The top part shows '19,414,170 hits'. Below this, there are two tabs: 'Documents' (selected) and 'Field statistics'. The 'Documents' tab shows a table with columns: 'timestamp', 'title', and 'status_code'. The table has a scroll bar. At the bottom, there's a 'Rows per page: 100' dropdown menu and a pagination bar with links for pages 1, 2, 3, 4, 5, and a next page link.

elastic Find apps, conten

Discover

defcamp-servers

Search field names

status_code

t tech

Popular fields 10

Add a field

title: *Index of /*

title: *Index Of / *

title: *Whoops*

title: *Whoops!*

title:

Save

19,414,170 hits

Documents Field statistics

timestamp title status_code

Rows per page: 100

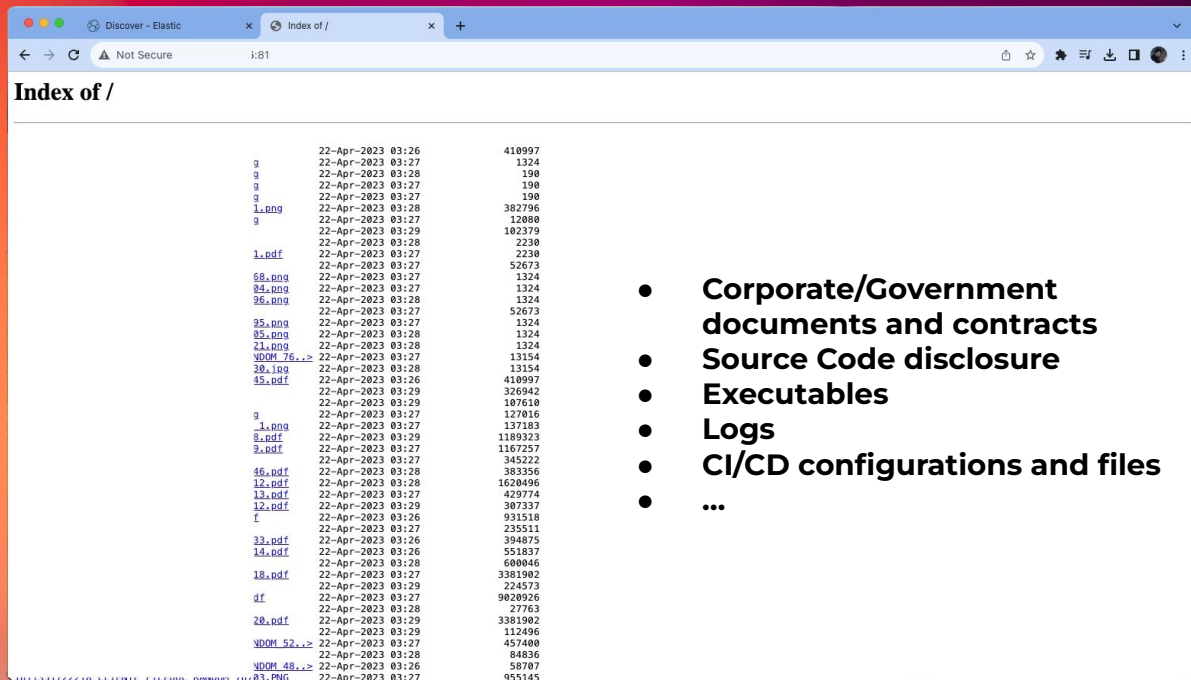
1 2 3 4 5

#1 DIRECTORY LISTING

DIRECTORY LISTING - 41,678 hits

Directory listing is a web server function that displays the directory contents when there is no index file in a specific website directory.

title: "Index of /" OR
title: "title:
Directory /" OR
title: "Directory
Listing"



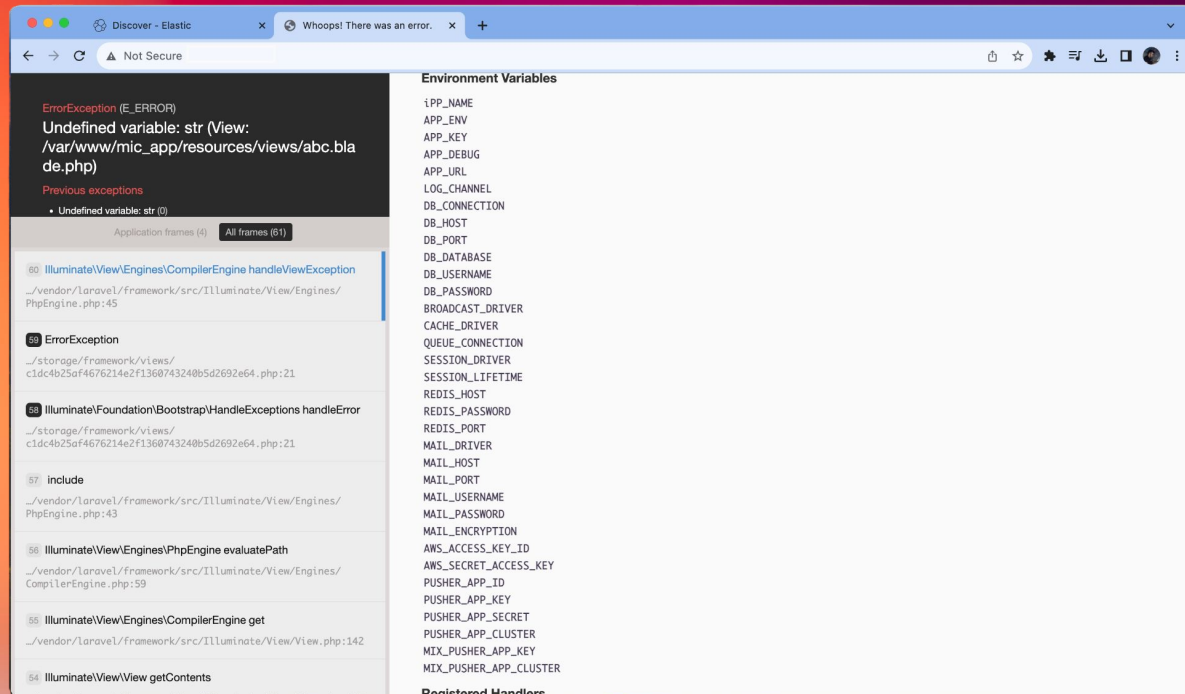
- Corporate/Government documents and contracts
- Source Code disclosure
- Executables
- Logs
- CI/CD configurations and files
- ...

#2 WHOOPS!

WHOOOPS! Something is definitely wrong - 1211 hits

Debug mode enabled
(Laravel) ending in ENV
variables disclosure.

Title: "Whoops"

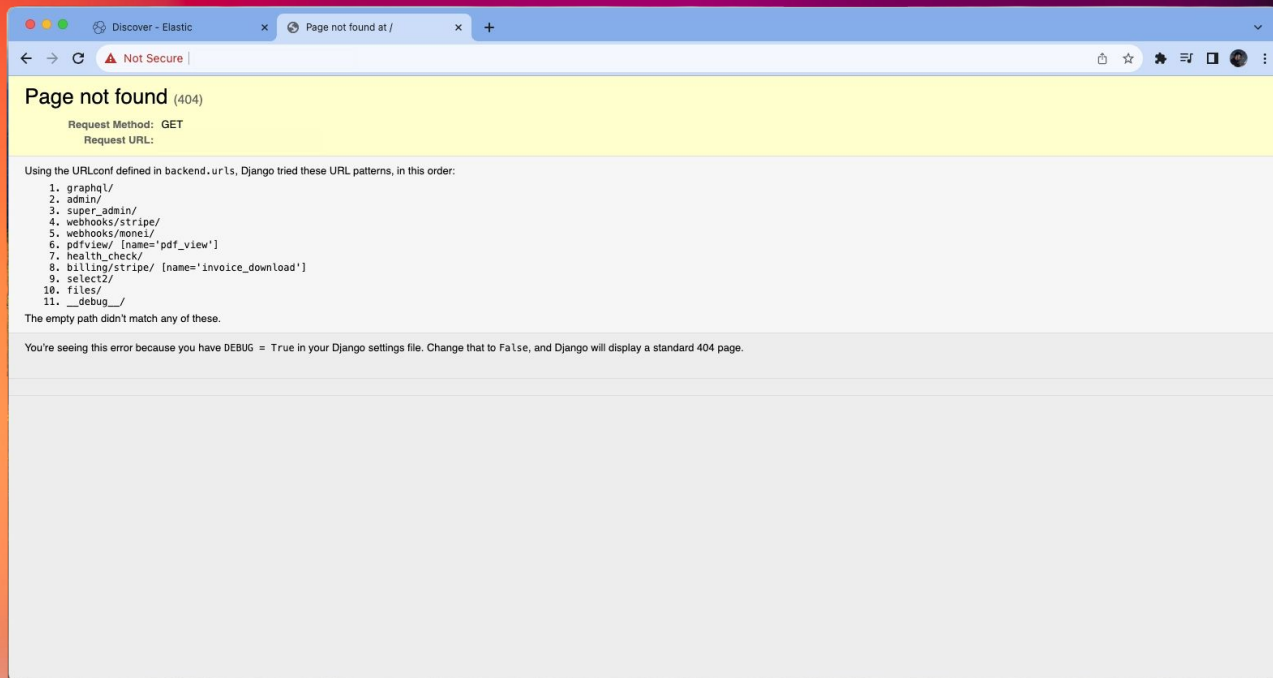


#3 Django

Django - API Endpoints - 17,758 hits

Django Leaks API endpoints if DEBUG mode is enabled and there is no route at /.

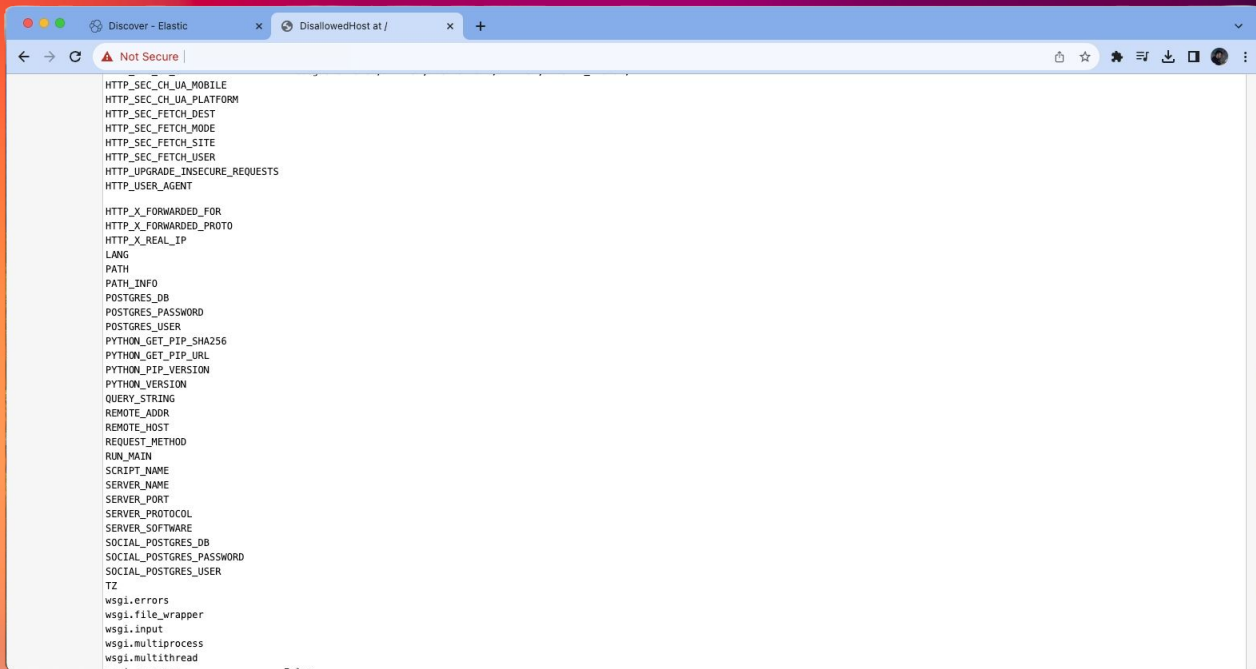
title: "Page not found at /"



Django - Disallowed Hosts ENV Leakage - 14,087 hits

Django Leaks ENV variables endpoints if DEBUG mode is enabled and if sending request to direct IP on /.

title:
"*DisallowedHost*"

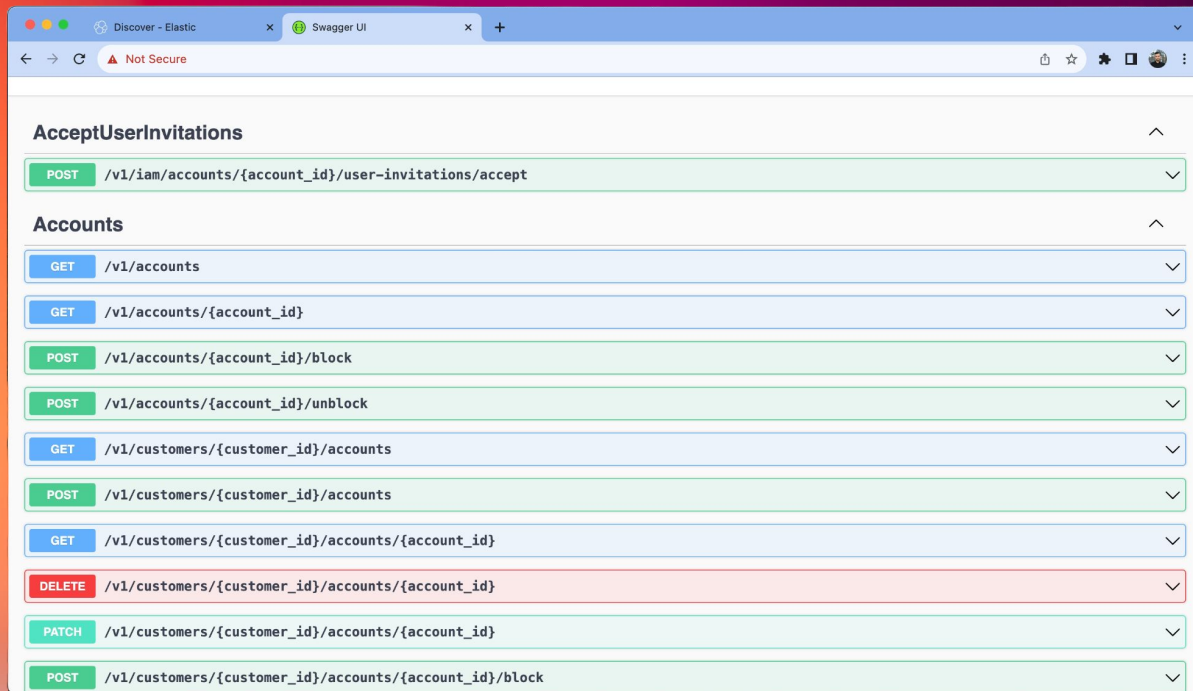


#3 Swagger API

Swagger API Documentation - 5,841 hits

**Swagger API
Documentation disclosed
with OpenAPI API
structure.**

title: *Swagger*



LET'S SEE THE HTTP TITLES

Sorekeep Pexip Infinity Connect Payara Server - Server Running Default Page Welcome to your SWAG instance Performance Marketing Platform NGINX Open Source packaged by Bitnami Traefik Cloudbric | ERROR! | 470 Log In to Canvas Teamportal CMS

DisallowedHost at / default Dataiku RouterOS router configuration page Error: 404 Not Found Error: Unable to display RD Web Access Document Error: Not Found Home Page - My ASP.NET Application FASTPANEL HOSTING CONTROL

3D元素周期表 Ingress Default Backend - 404 Not Found eGain Proudly Managed By ServerAvatar Under construction - Awesome site in the making! Your NodeJS Droplet Graylog Web Interface Menlo Security IIS 10.0 Detailed Error - 403.14 - Forbidden

Your access to this site has been limited by the site owner VMware Cloud Services Test Page for the HTTP Server on Red Hat Enterprise Linux HTTP Status 500 – Internal Server Error loading... 502 Proxy Error

Service cannot be reached ERROR: The request could not be satisfied 2048 404: This page could not be found Test Page for the Apache HTTP Server on Red Hat Enterprise Linux Sonatype Nexus Repository

Oops, Canvas can't find your login page. Auth Access forbidden! Not found Welcome to Amazon Linux 2 WordPress on Google Compute Engine Test Page for the Apache HTTP Server on Red Hat Enterprise Linux Site not found Web Server Components Site Container

Login - FusionPBX ExampleApp Web Page Blocked 412 Precondition Failed PHP Application - AWS Elastic Beanstalk Test Page for the Nginx HTTP Server on Red Hat Enterprise Linux Site not found

Portaal OZmap DNS Update Required Server Unavailable HTTP Server Test Page powered by CentOS-WebPanel.com Node.js packaged by Bitnami Issue Loading This Page Mattermost 405 Method Not Allowed Jupyter Notebook Site Unavailable

LucaNet Welcome to WildFly 10 Harbor PRTG-Login Action Controller: Exception caught Appsmith Test Page for the Nginx HTTP Server on the Amazon Linux AMI 502 - Project Shield Error Internal Server Error 恭喜, 站点创建成功! 500 Proxy Error

Node-RED Error 404 - Not Found Welcome! ERROR: The requested URL could not be retrieved Loading... phpinfo() Hello An Error Occurred: Not Found LAMP packaged by Bitnami Dead End Bitnami Django Nextthink

Website Temporarily Unavailable Redirecting to /s/dashboard Test Page for the Apache HTTP Server on the Amazon Linux AMI user's Blog! – Just another WordPress site user's Blog! – Just another WordPress site

Zabbix ODK Central HTTP Server Test Page powered by CentOS 安全入口校验失败 Gaia Default Site Plesk Obsidian 18.0.56 Admin Log in Streamlit Redirecting to /login The page is temporarily unavailable Simple 404 Error Page

Bitwarden Web Vault Simple PHP App Error 404 Amazon ECS Sample App 400 No required SSL certificate was sent Page not found at / 500 Internal Server Error Powered by CapRover 404 Page Not Found ownCloud ArcGIS Welcome page

AudioCodes OZLOC ISPCConfig User's blog – Just another WordPress site Retool Express Sign in - GitLab RabbitMQ Management Test Page for the Apache HTTP Server Error 404 Not Found HTTP Status 400 – Bad Request Test Page for the Nginx HTTP Server on Fedora Flexa index

Superset Okta - Page Not Found Invalid URL User's blog 400 The plain HTTP request was sent to HTTPS port 401 Unauthorized Apache2 Debian Default Page: It works Welcome to WildFly Test Page for the Nginx HTTP Server on Fedora

EarthRanger IIS Windows Blocked Grafana Unknown Domain Welcome to your Strapi app 403 - Forbidden: Access is denied. 502 Bad Gateway HTTP Status 404 – Not Found IIS7 Elastic Beanstalk Login to Redash CloudPanel | Log In Access Denied Accrisoft

Cloudron - Not Found Login - Adminer WordPress - Error Jitsi Meet InvalidUri No such app 502 404 503 Service Temporarily Unavailable Index of / Authorization required SonarQube Plesk Obsidian 18.0.54 User Portal NICE DCV

mailcow UI 404 - Not Found ログイン Nginx Proxy Manager phpMyAdmin Redirecting... Login Redirect 301 Moved Permanently Service Unavailable Page Not Found Nextcloud Page Redirection JFrog Online Boutique

News Direct CreditLens Redirect Error 403 Forbidden Welcome to CentOS Artboard 502 Server Error UISP 403 ... Object moved x 302 Found Bad Request (400) Bad Request Bitnami: Open Source. Simplified 500 - Internal server error. 308 Permanent Redirect

Kanso 410 Gone FileMaker Secure Website Welcome to Keycloak Metabase Welcome 404 No Such Service Welcome to nginx! login Error GAIA Forbidden Success! Portainer Document Home | My Website cnMaestro™ Silae

Caddy works! 301 Moved Index Certificate Error Welcome to OpenResty! Prituni Web Server's Default Page Microsoft Azure Web App - Error 404 400 Bad Request Argo CD 没有找到站点 SoftEther VPN Server Plesk Obsidian 18.0.34 Yelb

Coming Soon Login Page Site Maintenance Apache Tomcat Website Unavailable This is the default server vhost 3CX Phone System Management Console Home UniFi Network Redireccionar 404 - File or directory not found. Too Early - CDN

Sign in 406 Not Acceptable WebTitan Cloud 493 React App Site Not Configured | 404 Not Found Apache HTTP Server Test Page powered by CentOS Swagger UI 400 Airflow Iccast Streaming Media Server Argo

Unifi SellerRunning Services Runtime Error Welcome to XAMPP FortiGate Loading... Login to Webmin Plesk Obsidian 18.0.55 Document Moved test Web Site Not Found Blackboard Learn Nexus Repository Manager The page is not found pfSense - Login

405 Not Allowed Redireccionar Hello World ServiceNow Airflow - Login - Airflow FileMaker Website Cribl Cookie support required DisallowedHost at / SAP Commerce Cloud - Forbidden Control Room | Automation Anywhere Jupyter Server Home page REDCap

403 Access denied Pulse FASTPANEL Canary 307 Temporary Redirect Test Page for the Nginx HTTP Server on Amazon Linux 登录 Dash The page you were looking for doesn't exist (404) 407 Proxy Authentication Required Workday Domain Default page Human Verification

Signin Matillion ETL for Snowflake Login Sign In - Airflow The resource cannot be found. Test Sign In Seq 401 - Unauthorized: Access is denied due to invalid credentials. Microsoft Internet Information Services 8 Servicios Aspel Inicio

Tagmarshal Netgate pfSense Plus - Login Page not found Prometheus Time Series Collection and Processing Server 404 - Unauthorized: Access is denied due to invalid credentials. Microsoft Internet Information Services 8

Up Application Server Error 503 - Service Unavailable From ThreatX Test Page for the Apache HTTP Server on Amazon Linux AMI Server Error Redmine 404: Not Found We're sorry, but something went wrong (500) Whoops! There was an error. Authorization

Error Page Bitnami NGINX Open Source VMware Horizon Error 404 NOT_FOUND 502 - Web server received an invalid response while acting as a gateway or proxy server. SuccessMaker SentinelOne - Management Console Axonius

Jamf Pro Login Welcome to use OneStack 403 - 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 Dashboard Bitnami Node.js Web Administration Interface Create Next App Logon Error Message Docker Nginx

Directory: / Trellix Page Not Found Currently under maintenance Zimbra Web Client Sign In Directory listing for / Welcome to Azure Container Instances! エラー HTTP Status 401 – Unauthorized Virtualmin Looker Not Found (404) ACME Access Only

atlantis Firewall XTM User Authentication Welcome to nginx on Debian! cAdvisor - / Endpoint Management - Console - Logon HTTP Server Test Page powered by: Rocky Linux LNMP—一键安装包 by Licess Hey, I'm imgproxy! Error 401 Unauthorized

Example Unauthorized TORRES Fetchable - LucaNet An Error Occurred: Internal Server Error Welcome to Symfony! 400 - Bad Request - Qlik Sense Welcome to your Apache target! GlassFish Server - Server Running Users 请使用域名访问 Ivanti Connect Secure Demo

SmartFoxServer - Massive Multiplayer Game Server Requested URL cannot be found Roundcube Webmail :: Welcome to Roundcube Webmail BLOCKED



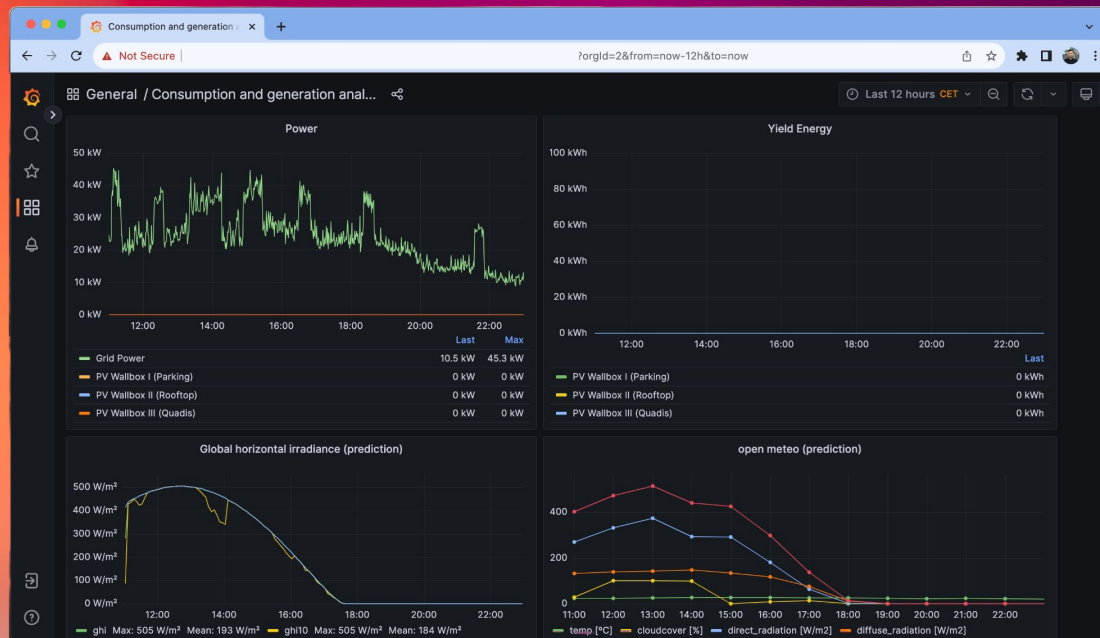


301 Moved Permanently

Grafana Dashboard - 865 hits

Unauthenticated Grafana Dashboards

title: *Grafana* and
not final_url.keyword:
login

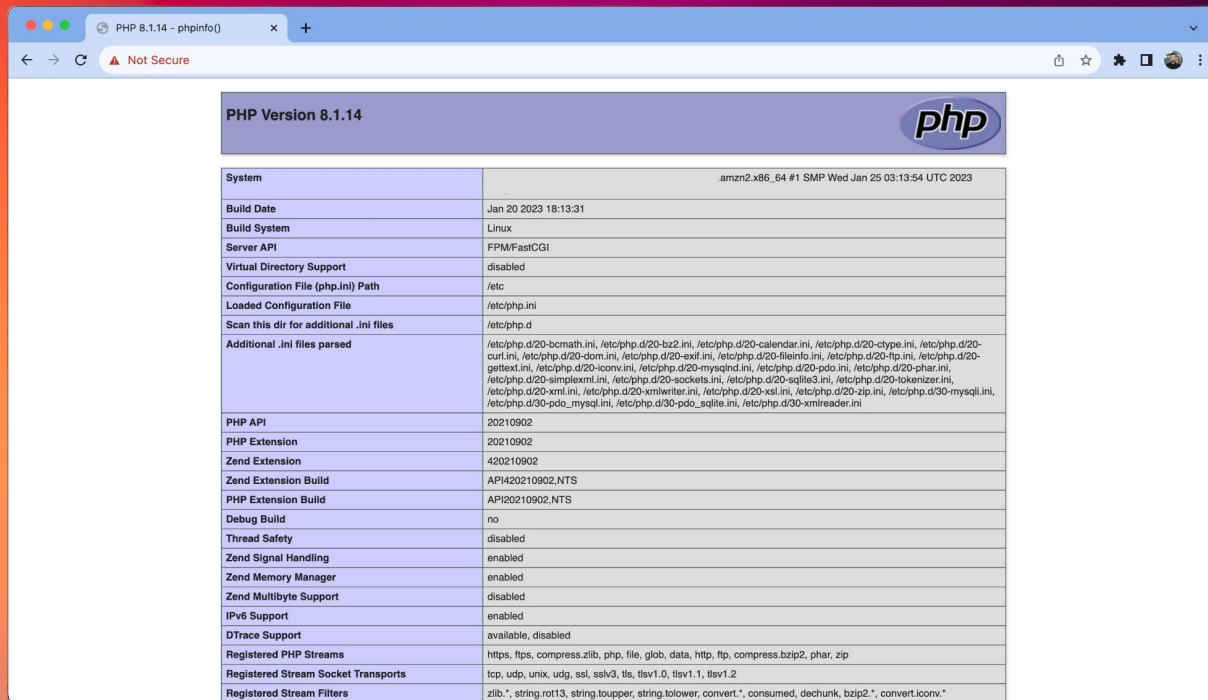




PHP Info Disclosure - 7,972 hits

PHP Info(); function
disclosure on web root (/)

title: *phpinfo*



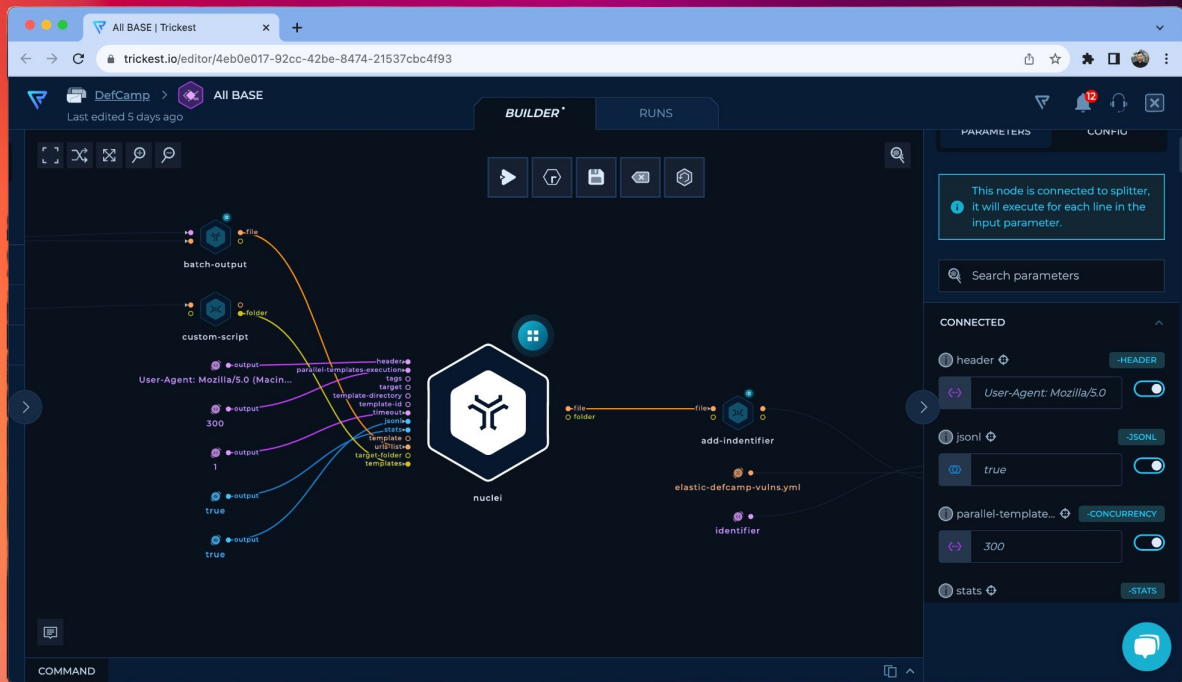
PHP Version 8.1.14	
System	amzn2.x86_64 #1 SMP Wed Jan 25 03:13:54 UTC 2023
Build Date	Jan 20 2023 18:13:31
Build System	Linux
Server API	FPM/FastCGI
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc
Loaded Configuration File	/etc/php.ini
Scan this dir for additional .ini files	/etc/php.d
Additional .ini files parsed	/etc/php.d/20-bcmath.ini, /etc/php.d/20-bz2.ini, /etc/php.d/20-calendar.ini, /etc/php.d/20-ctype.ini, /etc/php.d/20-curl.ini, /etc/php.d/20-dom.ini, /etc/php.d/20-exif.ini, /etc/php.d/20-fileinfo.ini, /etc/php.d/20-ftp.ini, /etc/php.d/20-gettext.ini, /etc/php.d/20-iconv.ini, /etc/php.d/20-mysqld.ini, /etc/php.d/20-pdo.ini, /etc/php.d/20-phar.ini, /etc/php.d/20-simplexml.ini, /etc/php.d/20-sockets.ini, /etc/php.d/20-sqlite3.ini, /etc/php.d/20-tokenizer.ini, /etc/php.d/20-xml.ini, /etc/php.d/20-xmlwriter.ini, /etc/php.d/20-xsl.ini, /etc/php.d/20-zip.ini, /etc/php.d/30-mysqli.ini, /etc/php.d/30-pdo_mysql.ini, /etc/php.d/30-pdo_sqlite.ini, /etc/php.d/30-xmldr.ini
PHP API	20210902
PHP Extension	20210902
Zend Extension	420210902
Zend Extension Build	API420210902.NTS
PHP Extension Build	API20210902.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled
Zend Memory Manager	enabled
Zend Multibyte Support	disabled
IPv6 Support	enabled
DTrace Support	available, disabled
Registered PHP Streams	https, ftps, compress.zlib, php, file, glob, data, http, ftp, compress.bzip2, phar, zip
Registered Stream Socket Transports	tcp, udp, unix, udg, ssl, sslv3, tls, tlsv1.0, tlsv1.1, tlsv1.2
Registered Stream Filters	zlib.*, string.rot13, string.toupper, string.tolower, convert.*, consumed, dechunk, bzip2.*, convert.iconv.*

ACTUAL SCAN FOR EXPOSURES

EXPOSURE SCAN - Step 1

Nuclei Exposures

```
nuclei -no-color -jsonl -stats -header
"User-Agent: Mozilla/5.0 (Macintosh;
Intel Mac OS X x.y; rv:42.0)
Gecko/20100101 Firefox/42.0" -timeout 10
-templates in/custom-script-1/ -list
in/batch-output-1/output.txt -
concurrency 300 -output out/nuclei-
1/output.txt
```



EXPOSURE SCAN - Step 2

```
Nuclei Identifier

import json
import hashlib

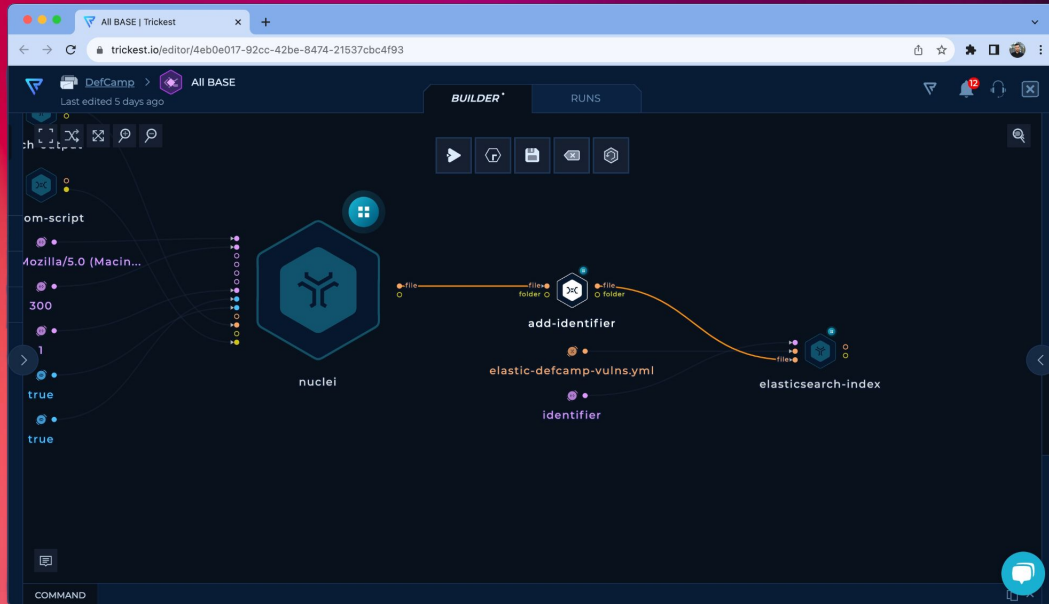
input_file = 'in/nuclei-1/output.txt'
output_file = 'out/output.txt'

with open(input_file, 'r') as infile, open(output_file, 'w') as outfile:
    for line in infile:
        data = json.loads(line)

        # Create identifier and hash it
        identifier_str = data['host'] + "_" + data['template-id'] + "_" +
data['matched-at']
        hash_identifier = hashlib.sha256(identifier_str.encode()).hexdigest()
        data['identifier'] = hash_identifier

        # Delete the response key
        if 'response' in data:
            del data['response']

        # Write the modified data back to the output file
        outfile.write(json.dumps(data) + '\n')
```

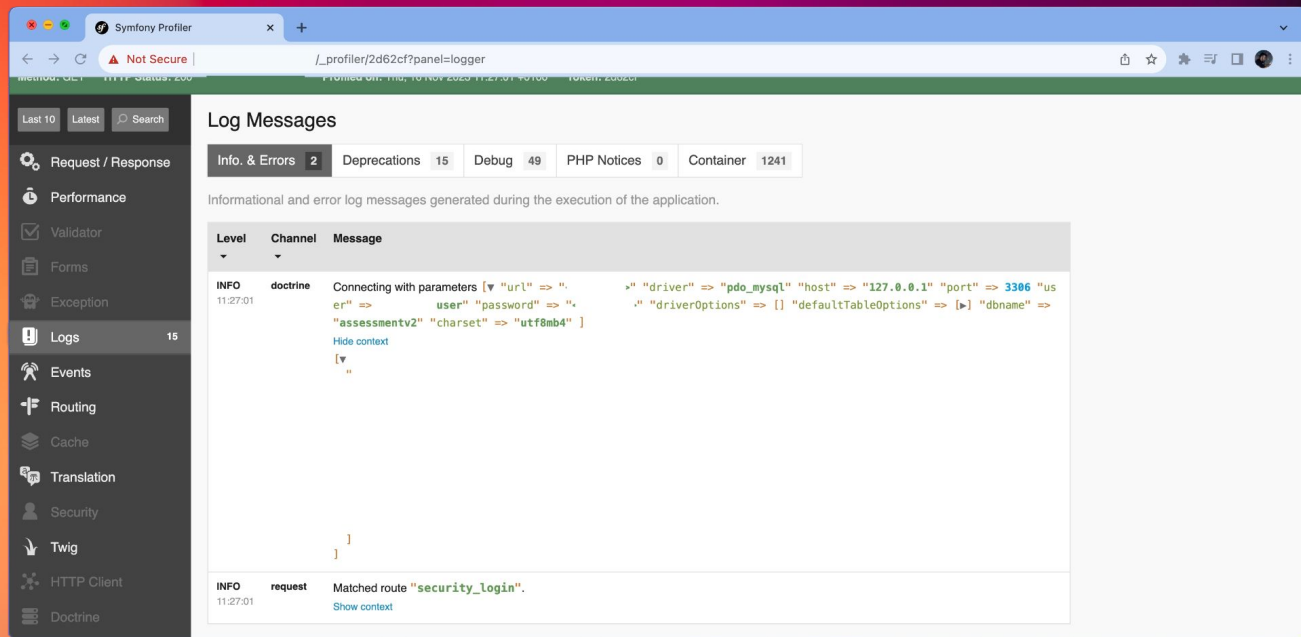


#4 Symfony Debug

Symfony Debug Mode - 1,261 hits

A Symfony installations 'debug' interface is enabled, allowing the disclosure and possible execution of arbitrary code.

template-id: *symfony*



The screenshot shows the Symfony Profiler interface in a web browser. The browser address bar displays the URL `/_profiler/2d62cf?panel=logger`. The interface includes a sidebar on the left with navigation options: Request / Response, Performance, Validator, Forms, Exception, Logs (15), Events, Routing, Cache, Translation, Security, Twig, HTTP Client, and Doctrine. The main panel is titled 'Log Messages' and shows a summary of log messages: Info. & Errors (2), Deprecations (15), Debug (49), PHP Notices (0), and Container (1241). Below this, a table displays log messages with columns for Level, Channel, and Message. The first message is an INFO level message from the doctrine channel, dated 11:27:01, with the message 'Connecting with parameters [url => ..., user => ..., password => ..., assessmentv2 => ..., charset => utf8mb4]'. The second message is an INFO level message from the request channel, dated 11:27:01, with the message 'Matched route "security_login".'

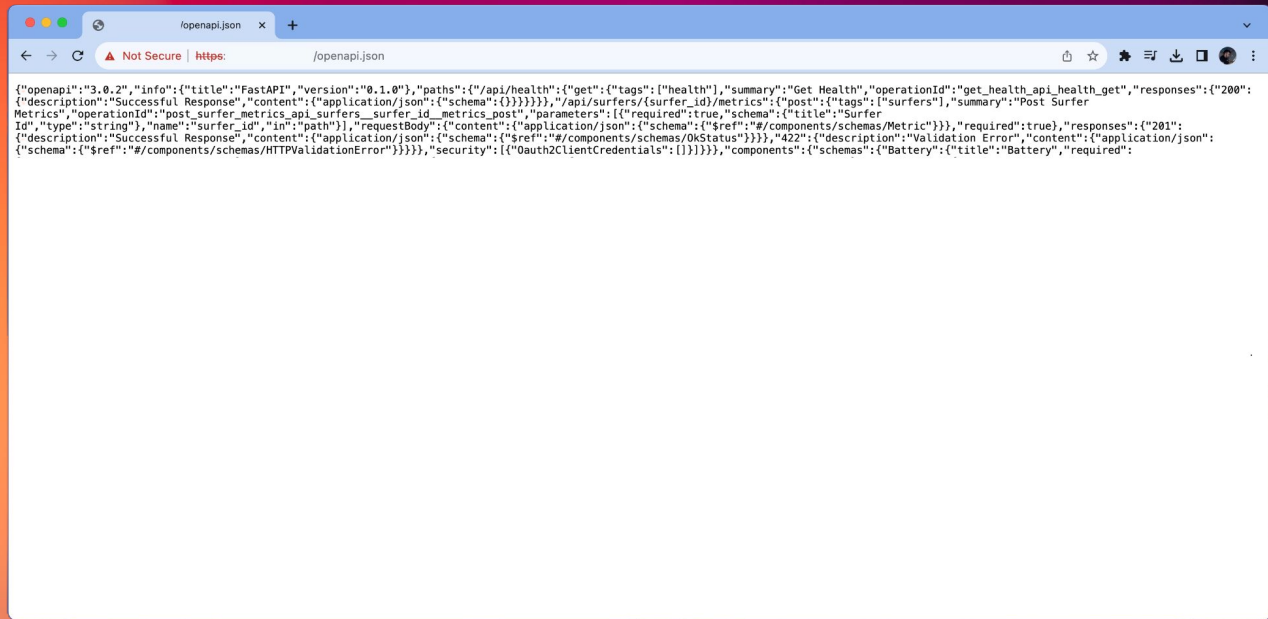
Level	Channel	Message
INFO	doctrine	Connecting with parameters [url => ..., user => ..., password => ..., assessmentv2 => ..., charset => utf8mb4]
INFO	request	Matched route "security_login".

#5 OpenAPI Specification

OpenAPI Specification - 37,426 hits

**Publicly disclosed
OpenAPI specification for
REST API endpoints.**

template-id: *openapi*

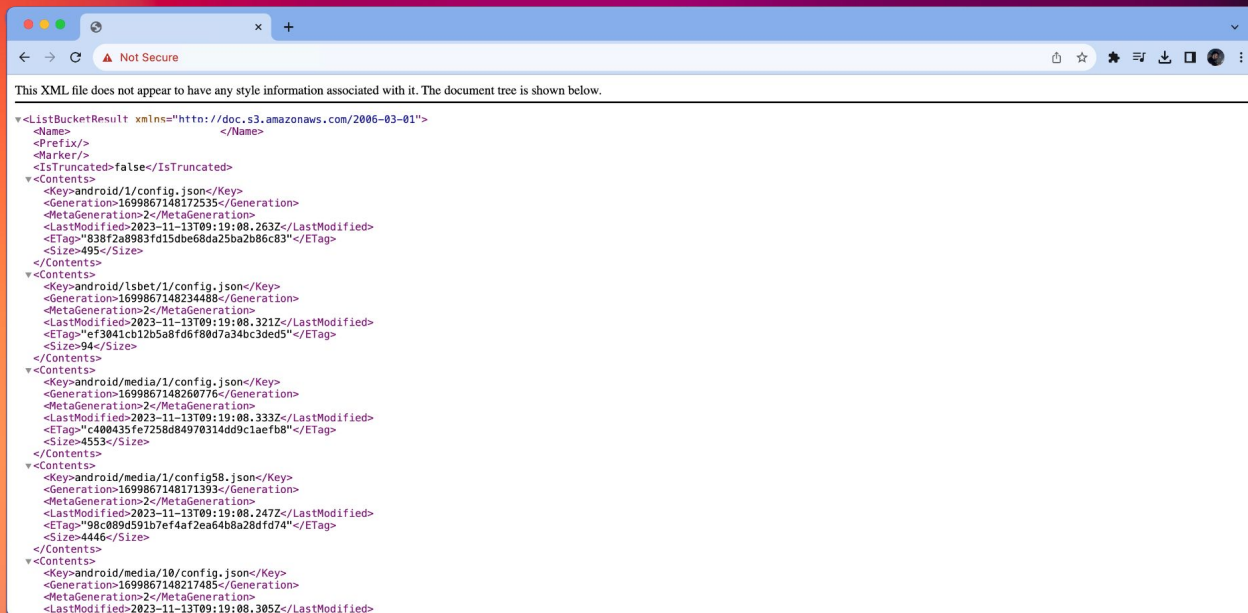


#6 Open AWS Buckets

Open AWS Buckets - 5,547 hits

Publicly available AWS S3
Bucket content with file
listing.

template-id.keyword:
aws-object-listing



The screenshot shows a web browser window with a "Not Secure" warning in the address bar. The page content displays an XML document tree for an AWS S3 bucket listing. The root element is <ListBucketResult>, which contains a <Contents> element. This element lists four objects, each with a <Key>, <Generation>, <MetaGeneration>, <LastModified>, <ETag>, and <Size> attribute. The objects are:

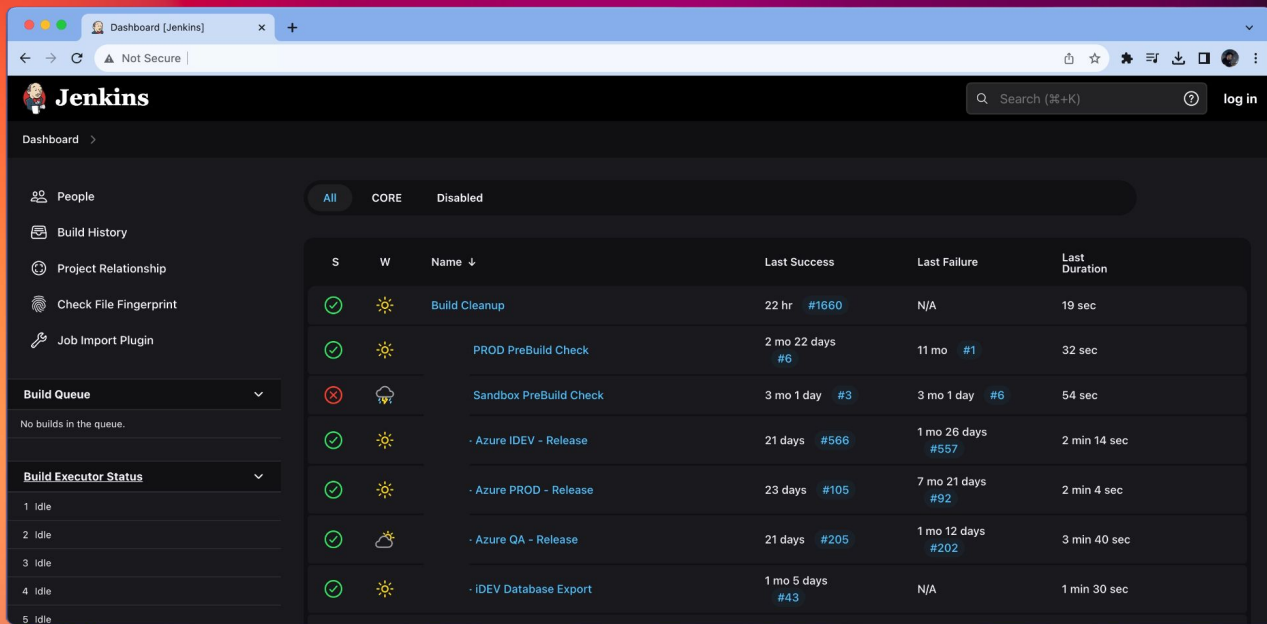
- <Key>android/1/config.json</Key>, <Generation>1699867148172535</Generation>, <MetaGeneration>2</MetaGeneration>, <LastModified>2023-11-13T09:19:08.263Z</LastModified>, <ETag>"638f2a8983fd15dbe68da25ba2b86c83"</ETag>, <Size>495</Size>
- <Key>android/lsbet/1/config.json</Key>, <Generation>1699867148234488</Generation>, <MetaGeneration>2</MetaGeneration>, <LastModified>2023-11-13T09:19:08.321Z</LastModified>, <ETag>"ef3841cb12b5a8f6f6807a34bc3ded5"</ETag>, <Size>94</Size>
- <Key>android/media/1/config.json</Key>, <Generation>1699867148260776</Generation>, <MetaGeneration>2</MetaGeneration>, <LastModified>2023-11-13T09:19:08.333Z</LastModified>, <ETag>"e40435fe7258d84970314d69c1ae7fb8"</ETag>, <Size>4553</Size>
- <Key>android/media/1/config58.json</Key>, <Generation>1699867148171393</Generation>, <MetaGeneration>2</MetaGeneration>, <LastModified>2023-11-13T09:19:08.247Z</LastModified>, <ETag>"98c809d591b7ef4af2ea64b8a28df74"</ETag>, <Size>4446</Size>

#7 Unauth Jenkins Dashboard

Unauth Jenkins Dashboard - 693 hits

Jenkins Dashboard
without authentication
resulting in credential
disclosure, remote code
execution and more.

template-id.keyword:
unauthenticated-jenkins

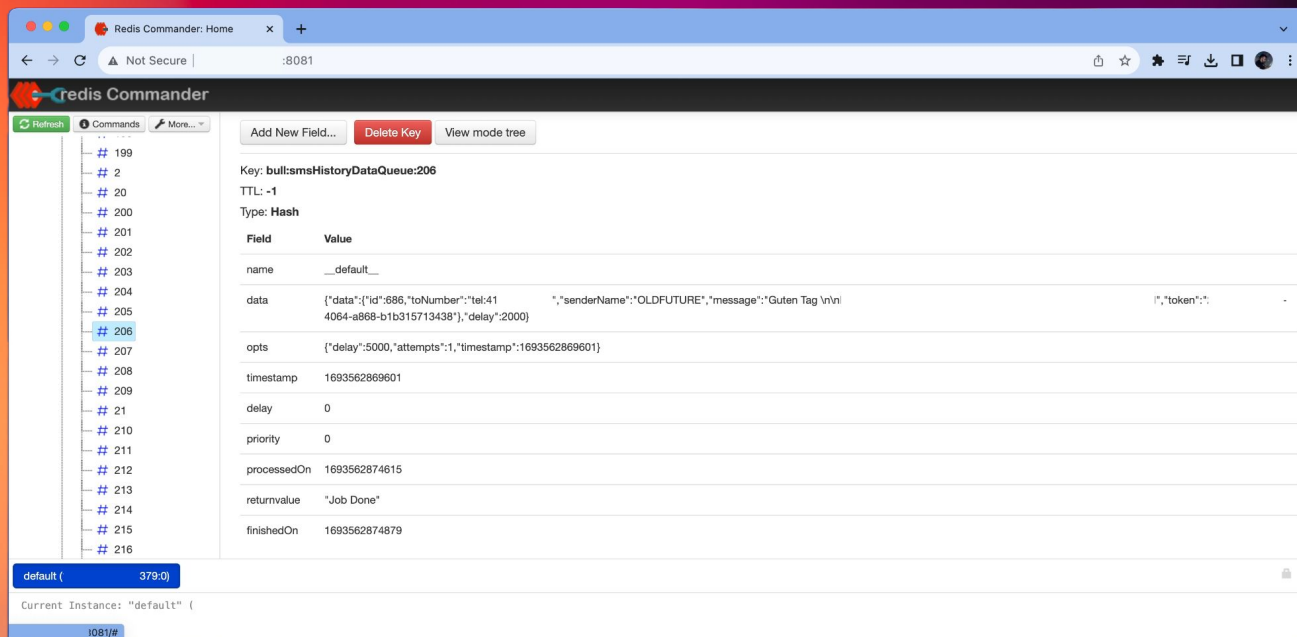


#8 Redis Commander

Redis Commander - 693 hits

Unauthenticated Redis
Commander Panel
resulting in critical
information disclosure.

template-id.keyword:
*redis-commander-expos
ure*

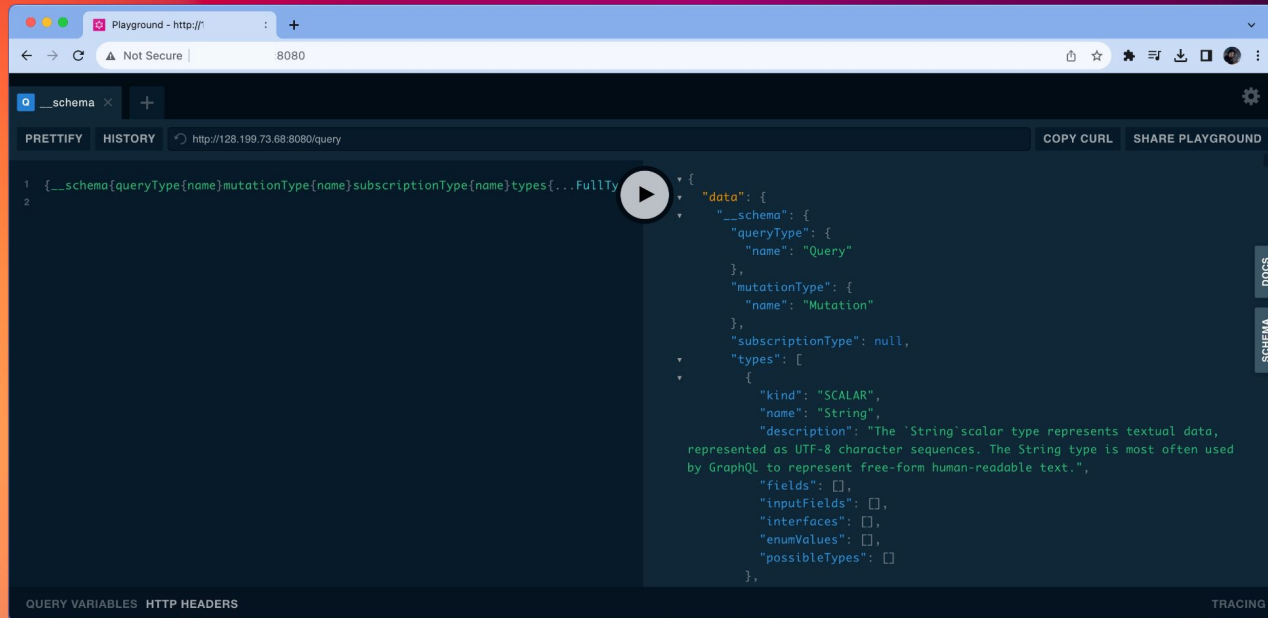


#9 GraphQL Playground

GraphQL Playground - 174 hits

Unauthenticated access
to GraphQL database and
introspection through
GraphQL Playground.

template-id.keyword:
graphql-playground

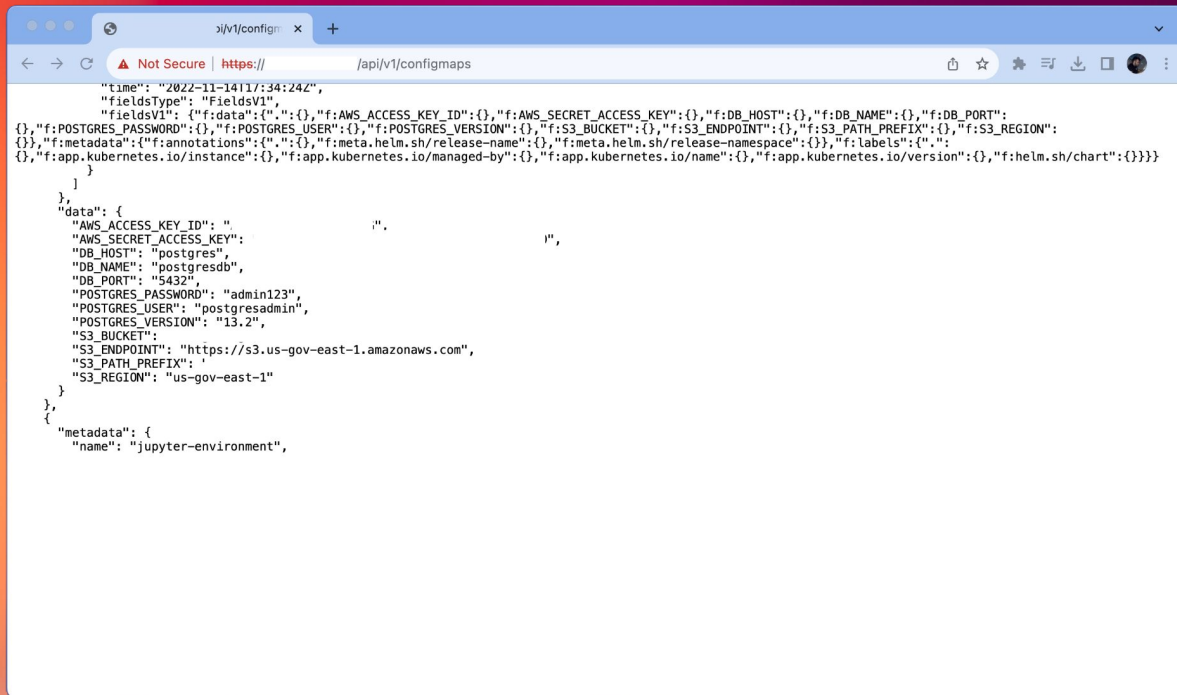


#10 Kubernetes API & RCE

Kubernetes API & RCE - 110 hits

**Unauthenticated access
to Kubernetes API could
lead to credential
disclosure and remote
code execution.**

**template-id.keyword:
*pod***



```

{
  "time": "2022-11-14T11:34:24Z",
  "fieldsType": "FieldsV1",
  "fieldsV1": {
    "f:data": {
      "f:AWS_ACCESS_KEY_ID": {},
      "f:AWS_SECRET_ACCESS_KEY": {},
      "f:DB_HOST": {},
      "f:DB_NAME": {},
      "f:DB_PORT": {},
      "f:POSTGRES_PASSWORD": {},
      "f:POSTGRES_USER": {},
      "f:POSTGRES_VERSION": {},
      "f:S3_BUCKET": {},
      "f:S3_ENDPOINT": {},
      "f:S3_PATH_PREFIX": {},
      "f:S3_REGION": {}
    },
    "f:metadata": {
      "f:annotations": {
        "f:meta.helm.sh/release-name": {},
        "f:meta.helm.sh/release-namespace": {}
      },
      "f:labels": {}
    },
    "f:app.kubernetes.io/instance": {},
    "f:app.kubernetes.io/managed-by": {},
    "f:app.kubernetes.io/name": {},
    "f:app.kubernetes.io/version": {},
    "f:helm.sh/chart": {}
  }
},
{
  "data": {
    "AWS_ACCESS_KEY_ID": " ",
    "AWS_SECRET_ACCESS_KEY": " ",
    "DB_HOST": "postgres",
    "DB_NAME": "postgresdb",
    "DB_PORT": "5432",
    "POSTGRES_PASSWORD": "admin123",
    "POSTGRES_USER": "postgresadmin",
    "POSTGRES_VERSION": "13.2",
    "S3_BUCKET": " ",
    "S3_ENDPOINT": "https://s3.us-gov-east-1.amazonaws.com",
    "S3_PATH_PREFIX": " ",
    "S3_REGION": "us-gov-east-1"
  },
  "metadata": {
    "name": "jupyter-environment",
  }
}
```

CREDENTIAL EXPOSURES

credentials-disclosure
google-api-key

flutterwave-publickey segment-public-token alibaba-accesskey-id
newrelic-pixie-api-key grafana-serviceaccount-token
zendesk-key bittrex-accesskey aws-session-token shopify-public-token gitlab-pipeline-token
npm-access-token clojars-token telegram-bot-token zoho-webhook-token github-personal-access droneci-accesstoken
discord-clientid discord-clientsecret facebook-token azure-apim-secretkey microsoft-teams-webhook atlassian-token shopify-legacy-token
sonarqube-token google-calendar-link razorpay-clientid-disclosure grafana-key nuget-api-key github-oauth-access
stackhawk-api google-oauth-prefixed slack-webhook-token stripe-secret-key loqate-api-key cloudfare-credentials digital-ocean-personal-token
dynatrace-api-token artifactory-api-token algolia-api-key picatic-api-key fcm-server-key postman-key
facebook-access-token discord-webhook aws-account-id openai-api-key newrelic-insights-key finicity-clientsecret
asana-client-id mapbox-token-disclosure aws-sns-topic jwt-token generic-tokens aws-access-key-value slack-user-token beamer-token
airtable-api-key age-secret-key stripe-restricted-key amazon-sns-topic google-client-id bitly-secret-key turnkey-openvpn databricks-token pypi-upload-token
easypost-token github-app zenscraper-api-key gitlab-personal-token aws-api-key artifactory-api-password jdbc-connection-string newrelic-rest-api-key finnhub-accesstoken
confluent-secretkey dropbox-token slack-bot-token sendgrid-api-key mailchimp-access-key-value amazon-mws-auth-token hashicorp-token easypost-testtoken
figma-personal-token crates-api-key shoppable-token contentful-token google-oauth-access-key newrelic-synthetics-location-key etsy-accesstoken
flickr-accesstoken azure-connection cipher-secret-key google-oauth-access-key newrelic-admin-api-key shopify-customapp-token github-refresh
dropbox-long-token age-public-key jotform-api-key square-access adobe-oauth-secret datadog-accesstoken mailgun-api-token grafana-cloud-token
gitlab-runner-token sauce-token square-oauth-secret-token digitalocean-refresh jenkins-crumb-token
rubygems-api-key newrelic-pixie-deploy-key

**ONLY REQUEST
AT /**

Google Client ID - 5,786 hits

A Google Client ID is a unique identifier for an application using Google's APIs or services. It authenticates the app and specifies its permissions.

```
Google Client ID

cat google-client-id.csv

"549169329035-<redacted>.apps.googleusercontent.com"
"586080311605-<redacted>.apps.googleusercontent.com"
"319186166024-<redacted>.apps.googleusercontent.com"
"7793828242-<redacted>.apps.googleusercontent.com"
"106968069354-<redacted>.apps.googleusercontent.com"
"1201327674725-<redacted>.apps.googleusercontent.com"
"773535741227-<redacted>.apps.googleusercontent.com"
"1201327674725-<redacted>.apps.googleusercontent.com"
```

Artifactory API Key - 272 hits

JFrog Artifactory is a universal repository manager that supports software packages from various programming languages and technologies. An Artifactory API Key is a unique token assigned to a user or service account, used for secure authentication when accessing Artifactory's repositories and services via its API.

```
Artifactory API Password

cat artifactory-api-password.csv

AP2ZBU8zvo<redacted>X5uv8aCUgR7
AP4hQ5sKZKvV<redacted>naI4wI4PD
AP6QNvBgX0GX05pwgt<redacted>lX
APA04Xe3o1ugVV2<redacted>0p08cl
APCpaXaVCyq<redacted>jHrIS0DnPP
```

Stripe Secret Key - 162 hits

Stripe is a technology company that provides payment processing software and application programming interfaces (APIs) for e-commerce websites and mobile applications. A Stripe Secret Key is a secure, confidential token used by businesses to authenticate and perform transactions via Stripe's API, ensuring safe and private financial operations.

```
Stripe Secret Key

cat stripe-secret-key.csv

[sk_live_rpqymfie<redacted>eofwaink, sk_test_jHzp<redacted>yALc7lKd0g3]
[sk_test_jHTrtCzp<redacted>c7lKd0g3, sk_live_rpqy<redacted>yeofwaink]
[sk_test_51H9ZPN<redacted>FQTZLYjo, sk_live_51H9Z<redacted>EFhL4yc1j]
```

Zapier Webhook Token - 127 hits

Zapier is an online automation tool that connects your favorite apps, such as Gmail, Slack, and over 2,000 more. A Zapier Webhook Token is a unique security key used to authenticate and secure communications or data transfers between Zapier and other services via webhooks. This token ensures that the data exchanged is from a trusted source.



Zapier Webhook Token

```
cat zapier-webhook-token.csv
```

```
https://hooks.zapier.com/hooks/catch/268<redacted>/btc<redacted>/  
https://hooks.zapier.com/hooks/catch/499<redacted>/odh<redacted>/  
https://hooks.zapier.com/hooks/catch/402<redacted>/3o5<redacted>/  
https://hooks.zapier.com/hooks/catch/173<redacted>/oh1<redacted>/
```

OpenAI API Key - 111 hits

OpenAI is an artificial intelligence research lab that develops advanced AI models and offers them through an API. An OpenAI API Key is a unique identifier used to authenticate and authorize access to OpenAI's API, enabling users to securely interact with AI models like GPT-3 and DALL-E.



OpenAI API Keys

```
cat openai-api-keys.csv
```

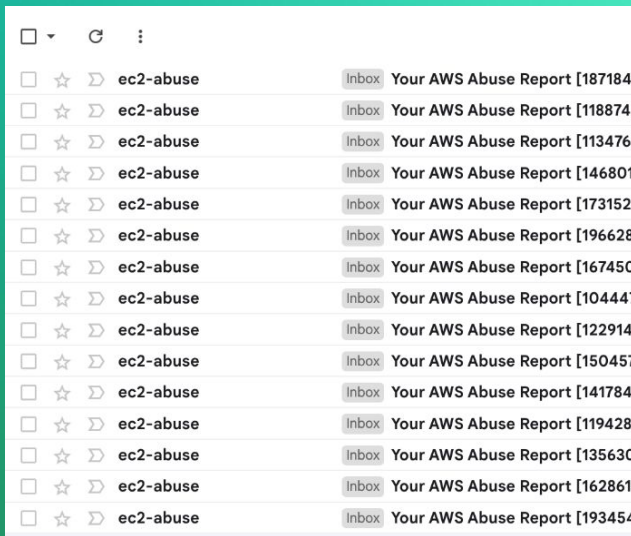
```
sk-A01Ud1t9J7j1jcquASz<redacted>BU7xLRocr5BQYnu9L3  
sk-wMj8hhVHBzrWq3XNbeS<redacted>R77TQNILsuTZsPDlqsi  
sk-db226a05d77f8061c84<redacted>2f9e91f03e962e154f8  
sk-0f4d83661b3d4ad2837<redacted>545a89e1706a3281385  
sk-070c570cbeda72eb3d6<redacted>a240acd75ff210748f8
```

WHAT ABOUT .ENV?

JUST, NO...

<input type="checkbox"/> ▾			301-350 of 29,680	
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [18718460753]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [11887424916]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [11347603770]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [14680178933]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [17315242942]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [19662837952]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [16745085604]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [10444761658]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [12291466914]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [15045786199]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [14178459470]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [11942829778]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [13563000173]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [16286139555]
<input type="checkbox"/>	☆	» ec2-abuse	Inbox	Your AWS Abuse Report [19345470166]
- Amazon Web Services Account ID: 817816825499 Account contact email: nenad.zaric@trickest.com Security contact: - Security co...				
Amazon Web Services Account ID: 817816825499 Account contact email: nenad.zaric@trickest.com Security contact: - Security con...				
- Amazon Web Services Account ID: 817816825499 Account contact email: nenad.zaric@trickest.com Security contact: - Security co...				
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- Amazon Web Services Account ID: 817816825499 Account contact email: nenad.zaric@trickest.com Security contact: - Security co...				
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- Amazon Web Services Account ID: 817816825499 Account contact email: nenad.zaric@trickest.com Security contact: - Security co...				

JUST, NO...



<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [187184]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [118874]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [113476]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [146801]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [173152]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [196628]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [167450]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [104441]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [122914]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [150457]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [141784]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [119428]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [135630]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [162861]
<input type="checkbox"/>	<input type="star"/>	<input type="reply"/>	ec2-abuse	Inbox	Your AWS Abuse Report [193454]



Remove
the
.env file

Send
ABUSE
request to AWS

301-350 of 29,680

9 Account contact email: nenad.zaric@trickest.com Security contact: - Security co...

9 Account contact email: nenad.zaric@trickest.com Security contact: - Security con...

9 Account contact email: nenad.zaric@trickest.com Security contact: - Security co...

9 Account contact email: nenad.zaric@trickest.com Security contact: - Security con...

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9 Account contact email: nenad.zaric@trickest.com Security contact: - Security co...

9 Account contact email: nenad.zaric@trickest.com Security contact: - Security co...

Abuse request are being sent even though .env file that caused the report leaked AWS Access and Secret keys.



WHICH LEFT ME THINKING...

**WHY DON'T WE TAKE
OFFENSIVE SECURITY MORE
SERIOUSLY?**

THANKS!

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<https://twitter.com/ZaricNenad>

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