Phishing Email Analysis Report

By:

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1. Executive Summary

I thoroughly investigated a dubious email that I had obtained over the business email gateway. After the email was isolated in a sandboxed virtual environment, it was subjected to a variety of multi-layered analytical techniques, including header inspection, URL reputation analysis, and threat intelligence gathering. Based on the results, the email is identified as a phishing attempt, which aims to deceive recipients into clicking on a harmful link.

2. Email Metadata Analysis

2.1: Sender Information

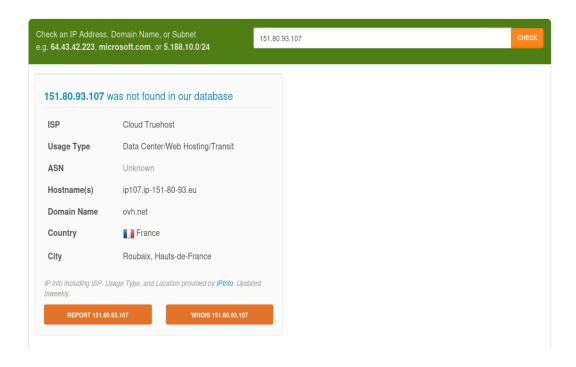
• **Return-Path**: apache@sk.globalexceltrade.xyz

• **Sending Server**: SJ1P223MB0531.NAMP223.PROD.OUTLOOK.COM (::1)

• Sender IP Address: 151.80.93.107

IP Reputation Check (AbuseIPDB): No existing reports were found for this IP address
in the AbuseIPDB database. However, the lack of reports does not indicate safety,
especially given the suspicious context.

AbuseIPDB » 151.80.93.107



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                                                   sample-3502.eml
21 ARC-Authentication-Results: i=2; mx.microsoft.com 1; spf=pass (sender ip is
22 23.83.223.169) smtp.rcpttodomain=hotmail.com smtp.mailfrom=abssmartkraft.no;
23 dmarc=bestguesspass action=none header.from=abssmartkraft.no; dkim=fail
24 (signature did not verify) header.d=abssmartkraft.no; arc=fail (47)
25 Received: from DB3PR08CA0033.eurprd08.prod.outlook.com (2603:10a6:8::46) by
26 PAWPR02MB10323.eurprd02.prod.outlook.com (2603:10a6:102:366::12) with
27 Microsoft SMTP Server (version=TLS1_2,
28 cipher=TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384) id 15.20.7784.16; Mon, 22 Jul
29 2024 09:50:35 +0000
30 Received: from DB1PEPF000509E8.eurprd03.prod.outlook.com
31 (2603:10a6:8:0:cafe::16) by DB3PR08CA0033.outlook.office365.com
32 (2603:10a6:8::46) with Microsoft SMTP Server (version=TLS1_2,
33 cipher=TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384) id 15.20.7784.18 via Frontend
34 Transport; Mon, 22 Jul 2024 09:50:35 +0000
35 Authentication-Results: spf=pass (sender IP is 23.83.223.169)
36 smtp.mailfrom=abssmartkraft.no; dkim=fail (signature did not verify)
37 header.d=abssmartkraft.no;dmarc=bestguesspass action=none
38 header.from=abssmartkraft.no;compauth=pass reason=109
39 Received-SPF: Pass (protection.outlook.com: domain of abssmartkraft.no
40 designates 23.83.223.169 as permitted sender)
41 receiver=protection.outlook.com; client-ip=23.83.223.169;
42 helo=slategray.cherry.relay.mailchannels.net; pr=C
43 Received: from slategray.cherry.relay.mailchannels.net (23.83.223.169) by
44 DB1PEPF000509E8.mail.protection.outlook.com (10.167.242.58) with Microsoft
45 SMTP Server (version=TLS1_3, cipher=TLS_AES_256_GCM_SHA384) id 15.20.7784.11
46 via Frontend Transport; Mon, 22 Jul 2024 09:50:33 +0000
47 X-IncomingTopHeaderMarker:
48 OriginalChecksum:B9AB2540D2A68DDF49549CB12BC0328B1135D06F21FF9E61FD689AF8E2FD0FA6;UpperCasedCh
49 X-Sender-Id: domene|x-authuser|post@abssmartkraft.no
50 Received: from relay.mailchannels.net (localhost [127.0.0.1])
           by relay.mailchannels.net (Postfix) with ESMTP id 22BDE6C3D25;
Mon, 22 Jul 2024 09:50:32 +0000 (UTC)
53 Received: from sol.domene.no (unknown [127.0.0.6])
           (Authenticated sender: domene)
54
55
           by relay.mailchannels.net (Postfix) with ESMTPA id 77A556C4481;
           Mon, 22 Jul 2024 09:50:29 +0000 (UTC)
57 ARC-Seal: i=1; s=arc-2022; d=mailchannels.net; t=1721641831; a=rsa-sha256;
                         ↑ ↓ Match case Match whole word Regular expression 3 matches
```

2.2 Email Authentication Results

- SPF (Sender Policy Framework): PASS
 - The SPF record validated successfully, suggesting that the sending server is authorized to send mail on behalf of the domain. It means the sender's domain has a published SPF record (in DNS). The IP address of the server matches an IP listed on the SPF record. The email passes the SPF check, suggesting it's more likely to be legitimate.

However, SPF alone is not a reliable indicator of legitimacy.

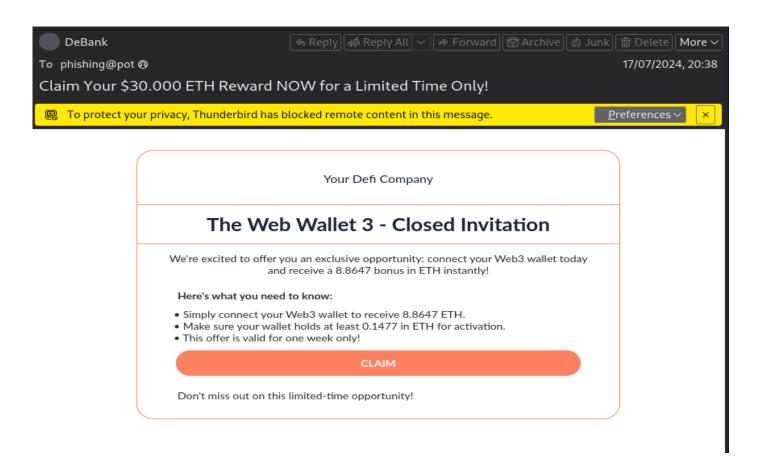
- DKIM (Domain Keys Identified Mail): NONE
 - No DKIM signature was present, indicating the email was not cryptographically signed. This reduces the credibility and makes the email susceptible to spoofing.

- DMARC (Domain-based Message Authentication, Reporting, and Conformance): NONE
 - The domain lacks a DMARC policy, increasing the likelihood of unauthorized use and spoofing.

3. Embedded URL Analysis

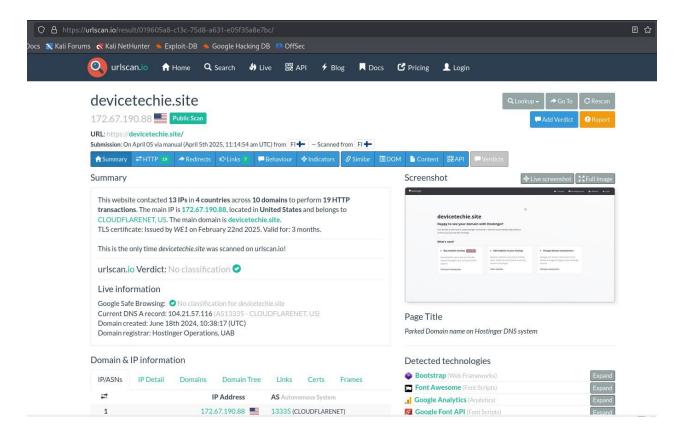
3.1 Suspicious Link

• URL Found in Email: https://devicetechie.site



I extracted the link and performed scans using the following tools:

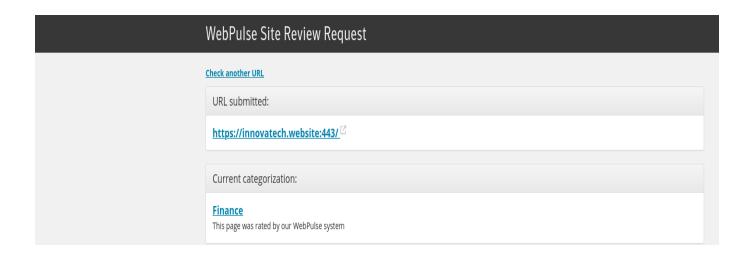
URLScan.io



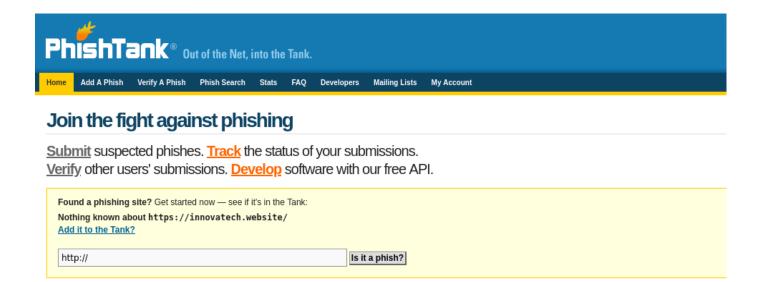
VirusTotal



Bluecoat Site Review



PhishTank SiteReview



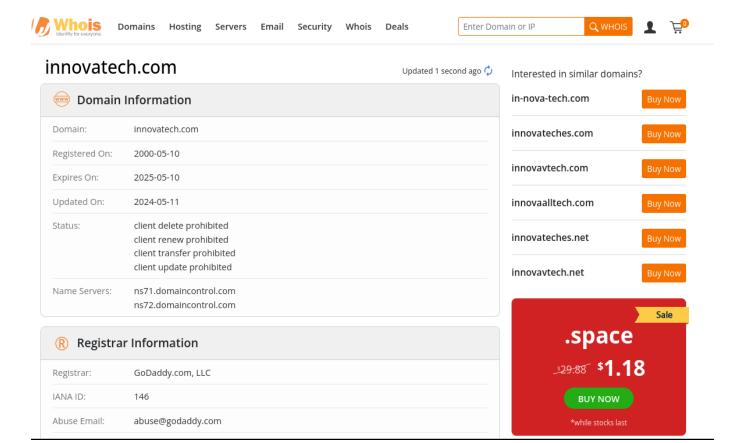
3.2 Threat Intelligence on Domain

Domain: devicetechie.site

A WHOIS lookup revealed

Registrar: GoDaddy.com LLC

Registered On: 2000-05-10



4. Threat Intelligence Analysis

4.1 IP Address Reputation

IP Address: 151.80.93.107

There were no reports on AbuseIPDB for the IP address. However, the lack of previous activity does not necessarily indicate trustworthiness because attackers frequently switch up IPs and domains.

4.2 Indicators of Compromise (IoCs)

- Email Header Anomalies: Missing DKIM/DMARC, mismatched Return-Path and sending server.
- Malicious URL: The URL embedded in the email links to a suspicious domain.
- Unusual Return-Path Domain: post@abssmartkraft.no is a non-standard and suspicious domain name.

5. Conclusion & Recommendations

5.1 Conclusion

I consider this email to be a proven phishing effort based on a thorough examination of the email header, authentication issues, and third-party threat intelligence scans. The purpose of the email was to fool users into clicking on a possibly harmful link that was located on devicetechie.site. There are red flags associated with phishing infrastructure on the domain and IP in question.

5.2 Recommendations

- ✓ **Immediate Quarantine**: Make sure the email is removed from all user inboxes.
- ✓ **Block Indicators**: Add devicetechie.site and 151.80.93.107 to all perimeter security blocklists (firewall, proxy, email gateway).
- ✓ Report to Authorities:
 - Report the phishing attempt to Microsoft via the Security & Compliance Center.
 - Submit indicators to APWG and Google Safe Browsing.
- ✓ Security Awareness Campaign: Notify users about this phishing attempt and reinforce phishing awareness training.
- ✓ Enhance Email Filtering: Strengthen email gateway rules to enforce strict DMARC/DKIM/SPF policies.
- ✓ **Threat Hunting**: Initiate monitoring of internal logs and endpoints for any interaction with the flagged domain/IP.

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