

# Phishing Email Analysis Report

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## 1. Executive Summary

This report analyses a phishing email detected that attempted to steal user credentials through a spoofed sender and malicious link. The targeted employee did not engage with the email and reported it immediately, allowing the security team to block the sender, domain, and related indicators before any compromise occurred.

The incident underscores phishing as a persistent threat and highlights the importance of user awareness, effective email filtering, and continuous monitoring. While the response was successful, the organization should further strengthen controls through enhanced scanning rules and regular phishing awareness training.

## 2. Email Metadata Analysis

Email metadata provides critical information about the origin, path, and technical characteristics of an email. Analysing these details helps determine whether a message is legitimate, spoofed, or part of a malicious campaign. Key metadata fields examined include header information, sender authentication results, routing paths, and message integrity indicators.

### a. Sender Information

- **From:** CH3P223MB1035.NAMP223.PROD.OUTLOOK.COM
- **Return-Path:** 0107018bed9eeb2f-721eeefd-d340-43f8-ac59-2a06e7b63702-000000@eu-central-1.amazonses.com
- **Sender IP Address:** 69.169.224.13

A screenshot of a terminal window titled "~/.phishing\_pot/email/sample-1983.eml - Mousepad". The window displays the raw text of an email header. Several fields are highlighted with red boxes: "CH3P223MB1035.NAMP223.PROD.OUTLOOK.COM" in line 1, "spf=pass (sender IP is 69.169.224.13)" in line 14, "dkim=pass (signature was verified)" in line 15, and "dmarc=pass action=None" in line 16. The email appears to be received by "eng.goldbelly.com" from "protection.outlook.com". The bottom of the terminal shows a search bar with "dkim|" entered and options for "Match case" and "Match whole word".

~/phishing\_pot/email/sample-1983.eml - Mousepad

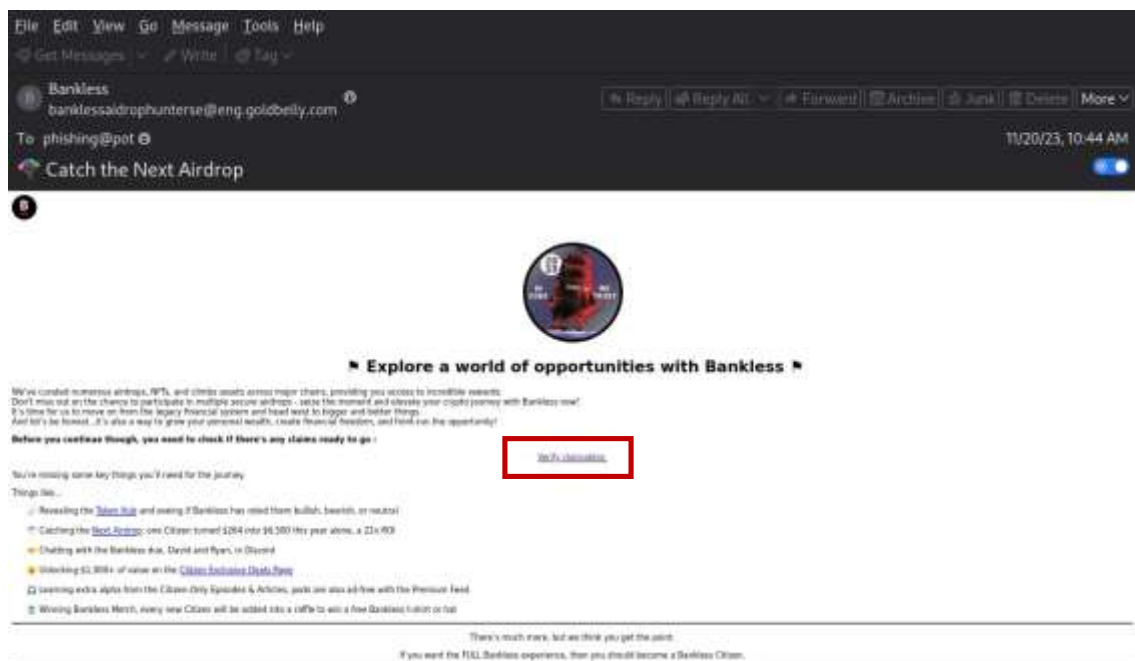
File Edit Search View Document Help

1 Received: from CH3P223MB1035.NAMP223.PROD.OUTLOOK.COM  
(2603:10b6:610:1b9::6)  
2 by LV3P223MB0968.NAMP223.PROD.OUTLOOK.COM with HTTPS; Mon, 20 Nov 2023  
3 16:44:59 +0000  
4 Received: from GVX0EPF000013D3.SWEP280.PROD.OUTLOOK.COM  
(2603:10a6:144:1::11)  
5 by CH3P223MB1035.NAMP223.PROD.OUTLOOK.COM (2603:10b6:610:1b9::6) with  
6 Microsoft SMTP Server (version=TLS1\_2,  
7 cipher=TLS\_ECDHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384) id 15.20.7002.27; Mon, 20  
Nov  
8 2023 16:44:58 +0000  
9 Received: from HE1EUR01FT095.eop-EUR01.prod.protection.outlook.com  
10 (2a01:111:f400:7e1f::200) by GVX0EPF000013D3.outlook.office365.com  
11 (2603:1026:900:2::3) with Microsoft SMTP Server (version=TLS1\_2,  
12 cipher=TLS\_ECDHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384) id 15.20.7002.27 via  
Frontend  
13 Transport; Mon, 20 Nov 2023 16:44:57 +0000  
14 Authentication-Results: spf=pass (sender IP is 69.169.224.13)  
15 smtp.mailfrom=eu-central-1.amazonses.com; dkim=pass (signature was  
verified)  
16 header.d=eng.goldbelly.com; dmarc=pass action=None  
17 header.from=eng.goldbelly.com; compauth=pass reason=100  
18 Received-SPF: Pass (protection.outlook.com: domain of  
19 eu-central-1.amazonses.com designates 69.169.224.13 as permitted sender)  
20 receiver=protection.outlook.com; client-ip=69.169.224.13;

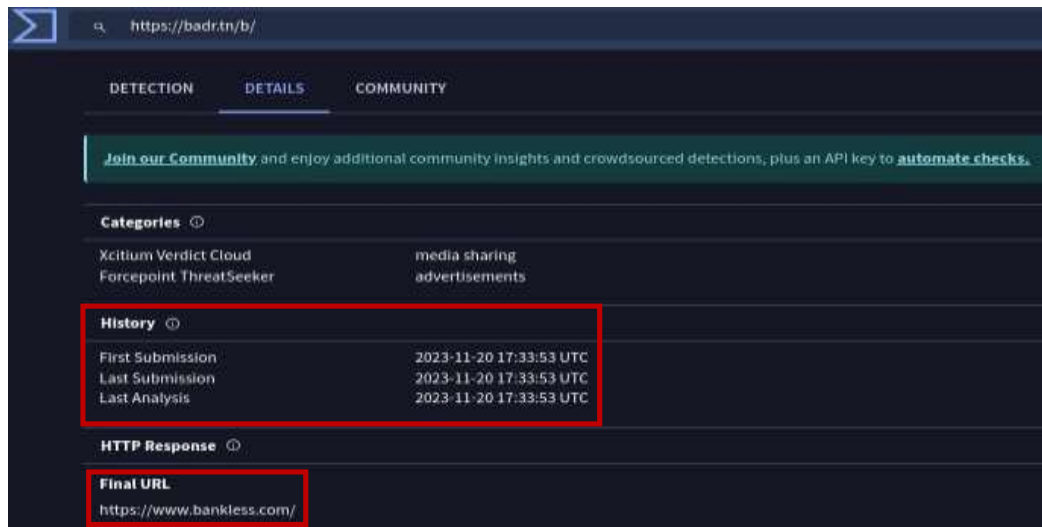
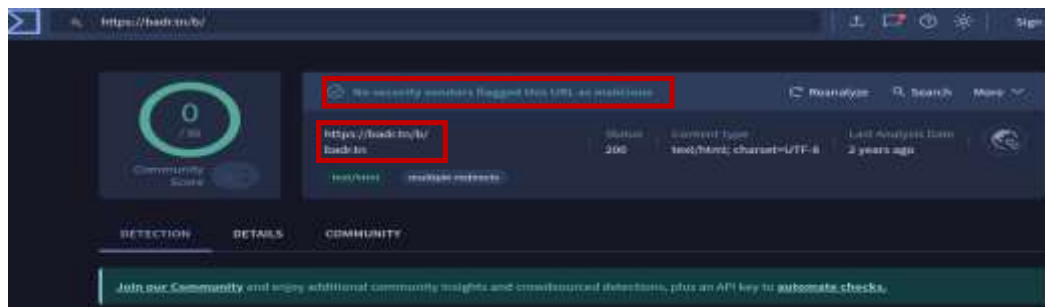
x dkim| ↑ ↓ ☐ Match case ☐ Match whole word

- ### 3. URL Analysis

- URL found in email: <https://badr.tn/b/>



- I extracted the link and performed scans using the VirusTotal:



## 4. Threat Intelligence Analysis

### 1. IP Address Reputation

- **IP Address:** 69.169.224.13
- The IP address returned 54 times reports from 25 distinct sources on AbuseIPDB. The categories of the reported times are Email Spam, Phishing Email spam, Hacking, Spoofing.

### 2. Indicator of Compromise (IoC)

- **Email Header Anomalies:** DKIM/DMARC aren't missing, mismatched Return-Path and sending server.
- **Malicious URL:** The URL is embedded in email links to an unavailable domain.
- **Unusual Return-Path Domain:** eu-central-1.amazonses.com is a suspicious domain name.

## 5. Conclusion

Email metadata analysis is a vital component of phishing detection and forensic investigations. By reviewing routing paths, authentication results, and technical attributes, analysts can accurately determine whether an email is legitimate or malicious—even before examining its content.

Based on comprehensive email header inspection, and IP address reports, I assess this email to be a **confirmed phishing attempt**. The email was crafted to trick recipients into clicking a potentially malicious link hosted at <https://badr.tn/b/>. The domain and IP involved exhibit red flags consistent with phishing infrastructure.

## 6. Recommendations

- **Immediate Quarantine:** Ensure the email is removed from all user inboxes.
- **Block Indicators:** Add <https://badr.tn/b/> and 69.169.224.13 to all perimeter security block lists (firewall, proxy, email gateway).
- **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.
- **Report to Authorities:**
  - Report the phishing attempt to Microsoft via the Security & Compliance Center.
  - Submit indicators to APWG and Google Safe Browsing.

