WELCOME TO THE Jan. 10, 2024 ISOAG MEETING



Information Security Officer's Advisory Group

January 10, 2024



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Agenda	Presenter
Welcome/Opening Remarks	Erica Bland/ VITA
Enterprise Security Data Lake at Scale w/ CrowdStrike	Rob Reynolds/CrowdStrike Logscale Sales Manager
Debut of COV RAMP Dashboard	Richard White/ VITA
KnowBe4 Phishing Lessons Learned	Kathy Bortle / VITA
SEC530 Updates	Amy Braden/ VITA
Workload Management (WM)	John C Del Grosso/VITA
Upcoming Events	Erica Bland/ VITA
Adjourn	





Enterprise Security Data Lake at Scale w/ Crowdstrike

Real-time Observability Is a Challenge





Complexity and unknown unknowns

> Budget Pressures

Traditional Vendors Limited data collected due to cost and lack of scalability

Increase in blindspots

Lack of metrics around MTTD and MTTR

- Regulatory and compliance requirements
- Multi-cloud and cloud native technologies
- Increasing complexity of legacy deployments
- Continual compromises on what to analyze and how long to retain data
- Erosion of value on ingested data; no insights from inaccessible data
- Elastic Heavy index-based approach to log management
- Splunk Compute and resource intensive with no incentive to optimize

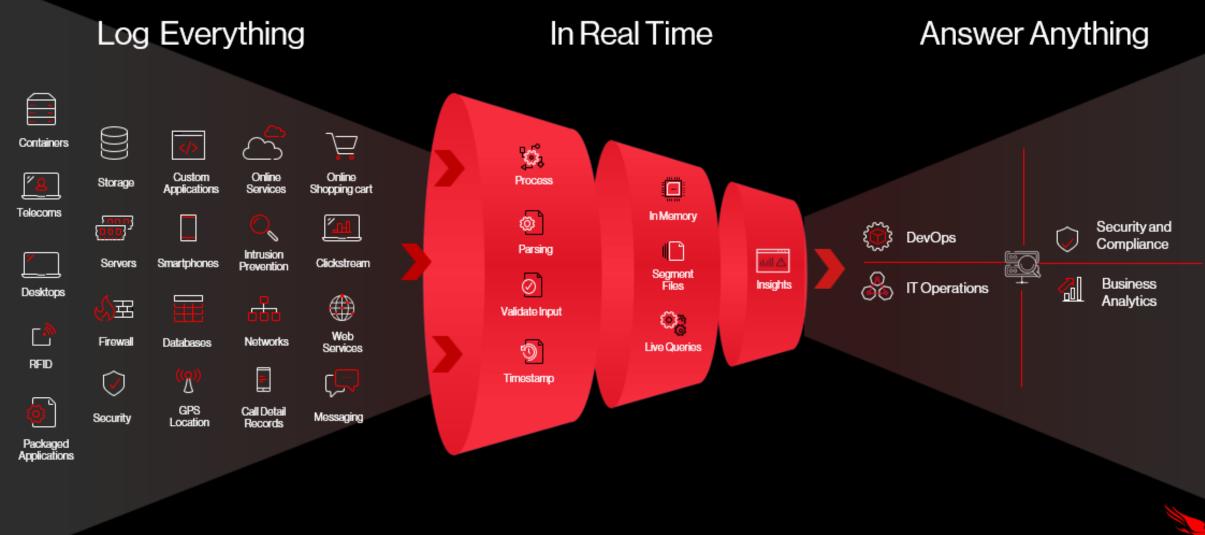


Reactive opposed to proactive incident response

Limited expertise available to maximize on valuable data



Answers Are in the Logs



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STARDUST CHOLLIMA

A prolific North Korean nation-state group

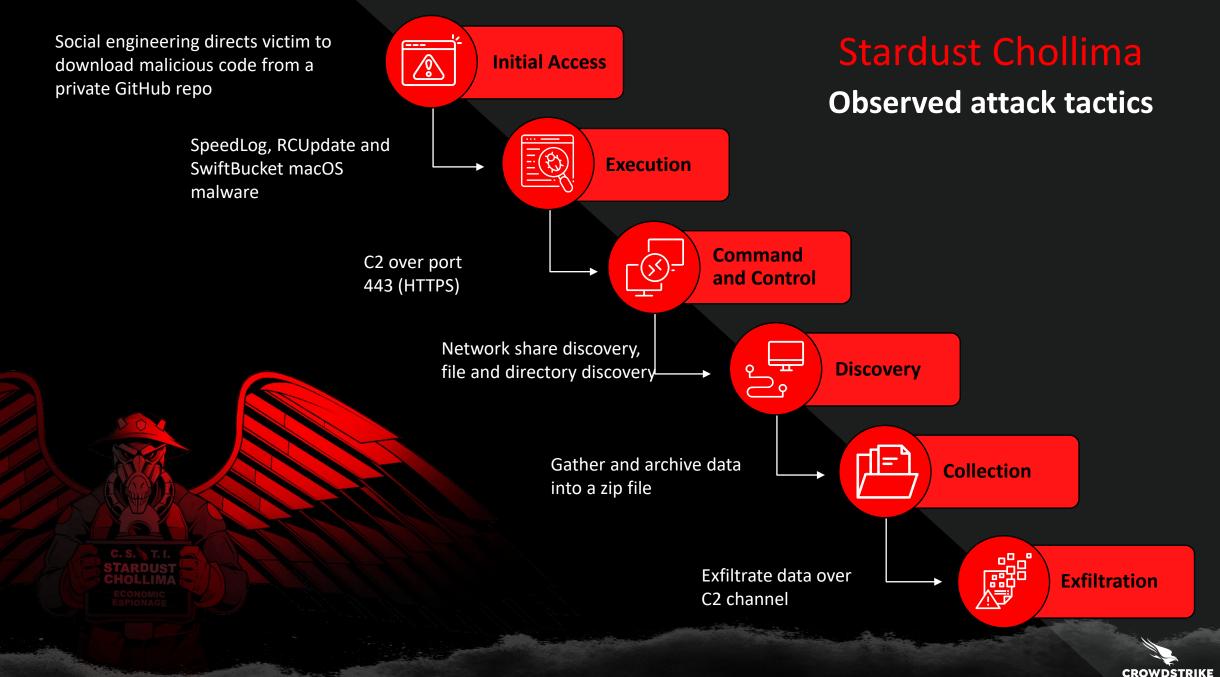
- **Objective:** financial gain
- Targets: Cryptocurrency, financial services, technology, hospitality
- **Notable attacks:** SWIFT network attacks

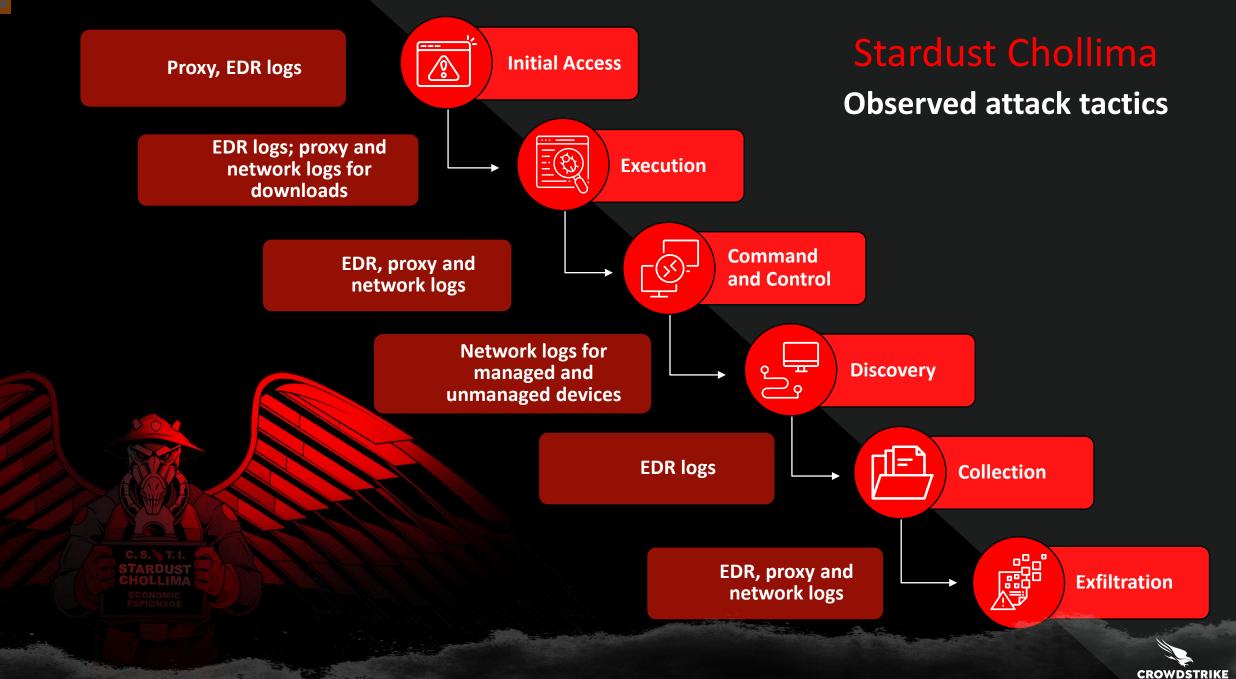
Nov 2015 First observed 6,368¹ Total indicators

Aug 2023 Last observed 224¹

Threat intel reports







Legacy SIEMs can't keep pace with adversaries or data growth

Delayed alerts

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Alerts can take 30+ minutes, increasing the risk of a breach Slow search speed

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Sluggish performance prevents swift investigations Poor scalability and high cost

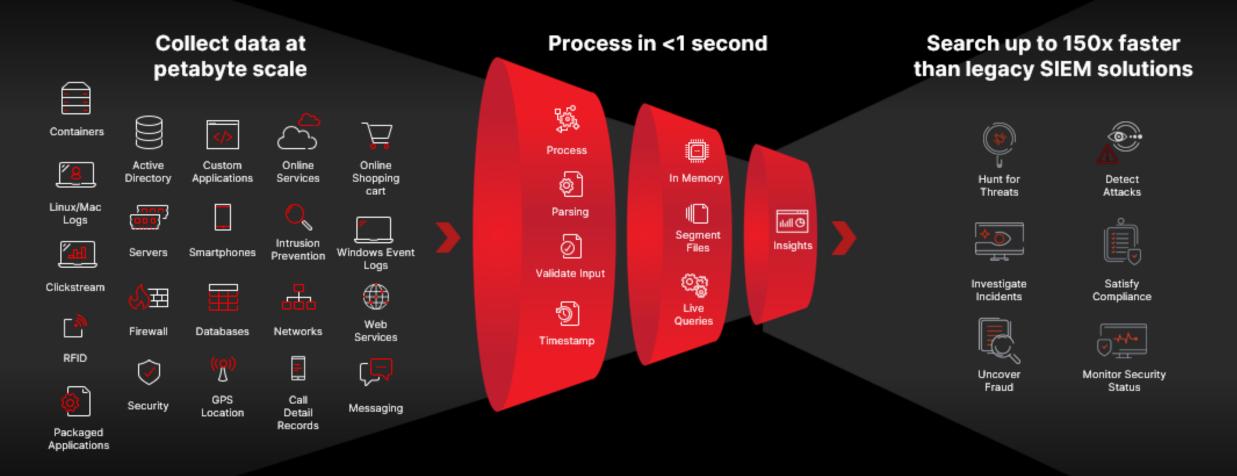
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SecOps teams can't log all data, creating blind spots



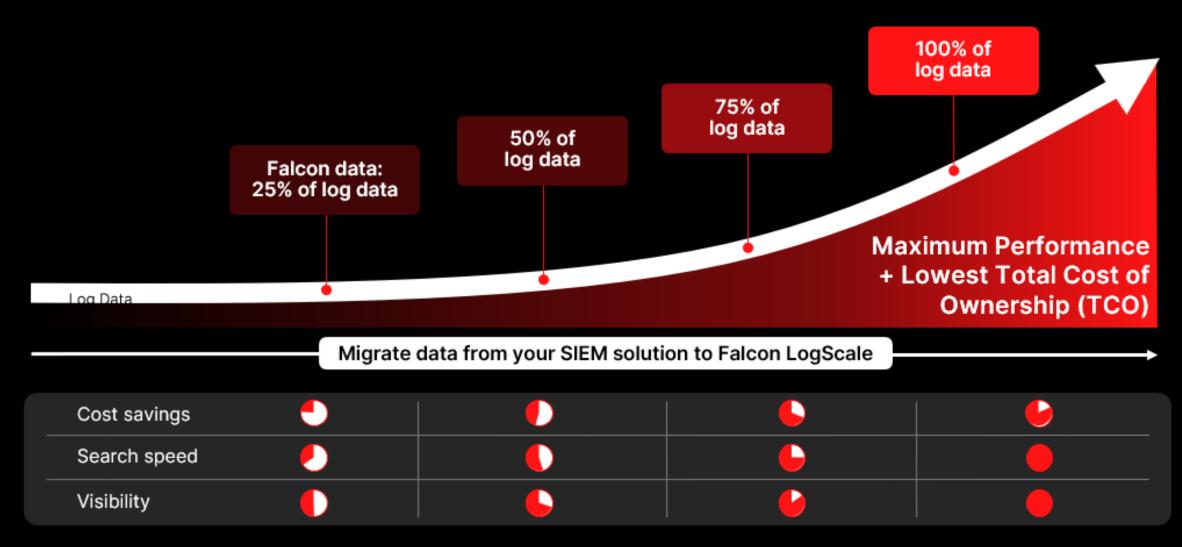
Introducing Falcon LogScale

A modern security operations solution delivering real-time visibility and petabyte scale



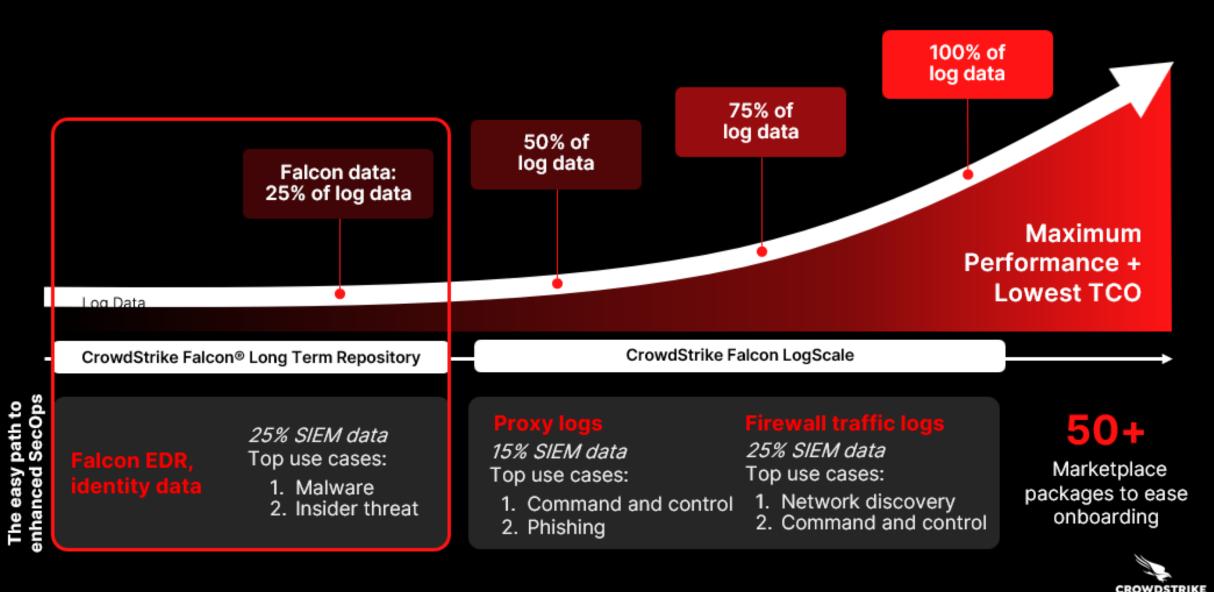


Migrate from a high-cost SIEM to high-speed Falcon LogScale



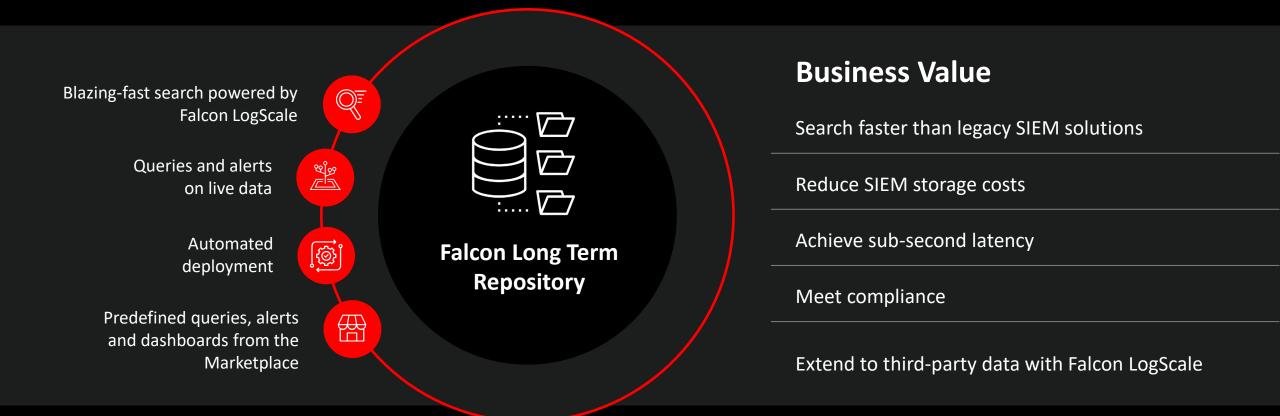


Migrate from a high-cost SIEM to high-speed Falcon LogScale



Start your journey with Falcon Long Term Repository

Extend Falcon data retention to months or years for security and compliance



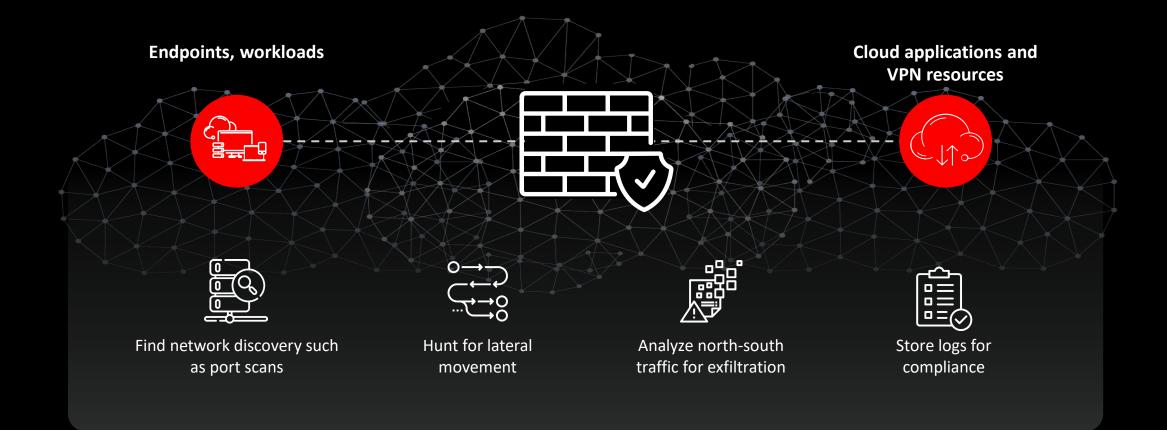
Continue your journey with third-party proxy logs

Move proxy data from your SIEM to Falcon LogScale to increase search speed and cut costs



Cut incident response times by collecting firewall logs

Say goodbye to ingestion bottlenecks and dropped packets with petabyte-scale logging



The Future of the Platform The Raptor Release

Modern data foundation: Upgrades the platform's data collection, search and storage capabilities

Lightning-fast search: Accelerate hunting and investigations across all data sources

Petabyte-scale: Offers data collection and storage that's built for the era of AI

Generative AI and XDR innovations: Fuels Charlotte AI, XDR for All, a new detection experience and Next-Gen SIEM

Falcon Next-Gen SIEM: The Future Of The SOC

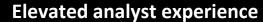




service

complexity

Time to value and reduced



Blazing-fast search to

accelerate threat hunting

Automation-first design

Thank you





Debut of The COV RAMP Dashboard

Richard White

Director of Security Services and Product Management

January 10, 2024

Splunk4Rookies Workshop

January 24, 2024

- Attendee's must register by January 16, 2024 for this lunch and learn opportunity.
 Register here
- Location is at VITA's office at the Boulders; however, seats are limited, and are on a first-come, first-served basis for those who register.
- Please bring your laptop for participation in the workshop.







KNOWBE4 PHISHING LESSONS LEARNED

KATHY BORTLE

Manager, Threat Intelligence & Vulnerability Management

ISOAG MEETING

JAN 10TH, 2024



User Provisioning with ADI-SYNC:

- All Executive Branch agencies that have requested assistance with ADI-Sync have been setup. Any agencies wanting to use ADI-Sync that aren't currently setup, please reach out to us so we can assist you with the setup.
- Any agencies who can't or don't want to use ADI-Sync but would like to have their users updated in KnowBe4 prior to the COV Q1 Phishing Campaign, please let us know.

Lessons Learned:

- Authentication Issues Agencies should be using a service account with a password set to never expire for the ADI-Sync process. The ADI-Sync installation embeds the credentials in the configuration. If the password changes, the configuration utility must be re-run to incorporate the new credentials.
- Account Archiving Issues Any users that do not have a valid email address or whose AD account is disabled will be archived by the ADI-Sync Utility. If these users need to be enabled in KnowBe4, the management of these accounts by ADI-Sync must be disabled. Any users that were archived by mistake, can be re-activated by unarchiving the account. All student records will remain intact.

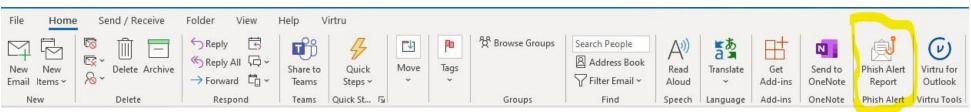




Phishing Alert Button (PAB) -



- PAB Button Availability All agencies should have received the PAB button and should be instructing their users to utilize it when reporting SPAM/Phishing Messages.
- PAB Button Location differs by client -
 - Full Windows Desktop Client the PAB button resides on the ribbon bar.



• Web and Mobile Clients - the PAB button resides in the "More Actions" menu.

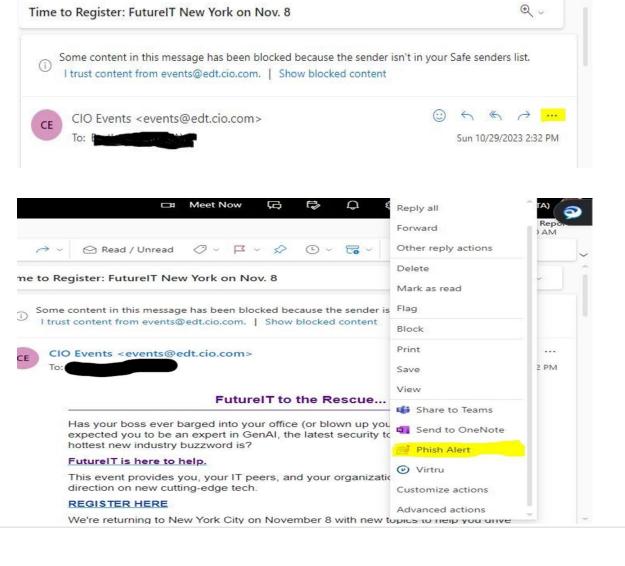


LESSONS LEARNED: PAB BUTTON

Phishing Alert Button (PAB) – More Actions Menu (web and mobile clients)

To access this menu option, you will need to do the following:

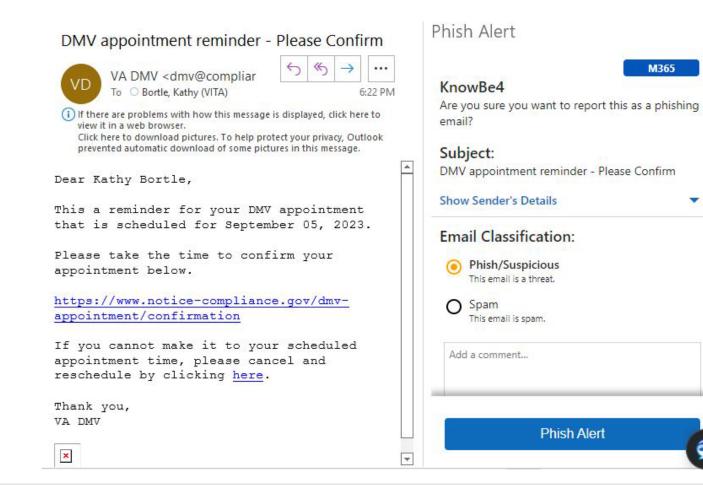
- 1. Open the message
- Click on the three dots next to the sender's name. This launches the More Actions Menu.
- Scroll down the menu until you see ""Phish Alert"
- 4. Click on Phish Alert
- In the Phish Alert window that opens, select "Phishing/Suspicious" or "Spam" then click the button at the bottom of the window to submit.







PAB Button Window





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• PAB Button Terminology ----

Phishing/Suspicious messages are an attempt by the phisher to solicit an action from the user. This may be in multiple ways that does not necessary require a user to click on a link. Here's some example of how attackers can solicit an action from the user:

- Phone Please contact me via phone at (999) 999-9999 to provide the information requested.
- Email Please email me your contact information so we can process your request.
- Link Click Please click on this link below to validate your account.
- Scan QR Code Please scan the QR code to register for your discounted interest rate
- Open document Please open the following attachment to see how much you have received for your Christmas bonus.

Spam messages are normally unwanted emails that the user received. These messages are normally benign in nature and more of a nuisance than a threat. Examples of Spam messages include:

- Marketing literature
- Newsletters
- Advertisements
- Chain letters





• PAB Button Message Processing ----

Campaign Messages reported via PAB --- KnowBe4 keeps track of the messages it sends as part of a phishing campaign. When a user reports one of these messages, it pops up a window "congratulating" the user from passing the phishing test. The window automatically stays open for 30 seconds to give the user a chance to read it. KnowBe4 then records it in the user's security awareness training record that they reported the message. The window closes and no further processing occurs.

Non-Campaign messages reported via PAB -

When the user clicks on the PAB button a window will open asking them if the message that they are reporting is "Phishing/Suspicious" or "Spam".

- Messages reported as SPAM are sent to the <u>incidents@vita.virginia.gov</u> mailbox where the user receives an automated reply thanking them for their submission and instructing them on how to block it in their own mailboxes.
- Messages reported as "Phishing/Suspicious" are sent to the VCCC. The VCCC has an automated process that looks for "Phish Alert" in the message subject. This tells KSE it is a phishing ticket. It automatically creates the KSE ticket and attaches a copy of the email with the headers to the ticket. The ticket is then routed to the SOC for investigation.





PAB Button Automated Processing issues -

While we have automated these processes to minimize the effort involved with running standard phishing campaigns, it appears that we have some issues that have surfaced. They are as follows:

- Calling/Emailing the VCCC instead of using the PAB button to report the message. The VCCC has been instructed to instruct the user to re-submit their request via PAB and then close the ticket as a First Contact Resolution. Since the user circumvented the PAB button process, the automated processing of these tickets cannot occur. All information needed to investigate the report will not be available and the SOC will not be automatically notified of the report.
- 2. Forwarding the messages to the VCCC instead of using PAB Messages that are forwarded to the VCCC, do not include the "Phish Alert" text in the subject. This breaks the automated process that creates the KSE ticket and forward it to the SOC for investigation. In addition, the forwarded message changes the original message headers and may not include everything that is needed to investigate the reported message.

To allow these automated processes to provide a timely response to reported messages, please encourage all users to use the PAB button. If the PAB button is not available, please have the user open a ticket to get their account fixed.



Phishing Campaign

- Phishing Beta Opting into this module prevents an account from participating in a non-beta campaign.
- False Positives false positives are triggered when the message and/or it's links are scanning. Domains must be whitelisted everywhere that the message can be scanned.
- Random Domain selection for sender, links and landing pages KnowBe4 will pick any domain that is available in the console. If a domain has not been whitelisted, it needs to be hidden. Any domain that is not hidden can be used by this feature. If the domains in the list are not whitelisted, it can trigger a false positive for clicks.
- Downloading Pictures in messages the Outlook client is configured to prevent the automatic downloading of
 pictures in the emails. This affects KnowBe4's ability to track whether the message has been opened. The only
 opened stats that are reliable are for those messages where the user clicked the link, opened an attachment or
 submitted data. When the user takes one of these actions, the system automatically marks the message as
 opened. Therefore, opened should not be included in any phishing test reports.







False Positives for Q4 2023 -

When setting up the Q4 campaign, I missed changing the sender's domain on 5 of the 10 messages used. While I tested all the messages to my team's accounts, this was not a sufficient volume for MS Defender to kick in and scan the messages that weren't whitelisted. As a result, when the campaign was launched to 65K users, it triggered MS Defender and caused the false positives. The Q4 campaign will be hidden from your phishing results as to not skew the numbers.

After working with NTTDATA on the false positives, they have asked if we can do another COV wide campaign in January to verify that all our whitelisting is working as required.



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How NOT to create a Phishing Campaign –

Over the past six months we have discovered many ways to create phishing campaigns that were plagued with false positives. Some of which include the following:

- Lack of communication when a large number of phishing messages are reported, this can trigger domains to be blocked. As blocks can be submitted by the SOC, NTTDATA and Area 1, the messaging staff may implement the block request if they are unaware of the authorized phishing campaign.
 - Lesson Leaned notification to the ISOs only is insufficient. In addition to notifying the ISO, CSRM, the MSI and the service towers also need to know that an authorized phishing campaign is being conducted.
- Failure to configure KnowBe4 to hide non-whitelisted domains. KnowBe4 is purchasing new domains on a routine basis. When the domains are purchased, they are automatically added to the KnowBe4 management console.
 - Lesson Learned KnowBe4 will use any active domain as part of a campaign when the Random option is selected. This can cause False positives to occur. To prevent this, the new domains need to be hidden or a specific whitelisted domain must be selected in the template.



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- Failure to change the Sender's domain in KnowBe4 (KB4) templates KB4 templates come with an email address and reply-to address automatically configured in the template. These email addresses can belong to any domain that KnowBe4 owns. Therefore, they may not be using one of the domains that we have whitelisted for our environment.
 - Lesson Learned Testing these messages with a small number of accounts won't trigger Microsoft Defender. However, when sending to the entire COV, there are a sufficient number of messages to trigger Microsoft Defender to scan the messages. The only way to prevent MS Defender from scanning the messages is to use a whitelisted domain for the "Sender and Reply-To" addresses.
- Failure to change the Landing Page's domain KnowBe4 templates also come with a pre-configure Landing Page domain. This domain needs to be changed to one of the whitelisted domains to allow the user to get to the landing page.
 - Lesson Learned Failing to select a whitelisted domain means that the web gateway may block the landing page. KnowBe4 won't know that the access was blocked, it may record the attempt as a false positive.



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How to create a Phishing Campaign -

In order to create a phishing campaign, you must first customize the email templates and landing pages (if desired) that will be used in the campaign.

When an agency creates a phishing campaign, they can select any of the pre-defined email templates and landing pages or they can create their own. These templates come with a pre-defined level of difficulty and default settings However, due to the size and complexity of the COV environment, most of these templates will require modification before use.

There are 5 difficulty levels defined by the number of stars attached to the template. The templates cover many industries, current events, attack types, etc. The ISO should consider all these options when selecting a template for their campaign. Once the template has been selected, the following information should be examined:

- Domain address for the sender's address.
- Domain address for the reply to domain
- Domain address for the landing page





Modifying an email template for use in the COV environment -

Does the email template use one of the whitelisted domains in the sender and reply-to addresses?

- YES no modification is required.
- NO change the sender and reply to addresses to use a whitelisted domain.

The next two slides show where the changes need to be made. These areas are highlighted in yellow to show the part of the addresses that need to be changed.

If you need to refer to the list of whitelisted domains, they can be found on the ISO Knowledge Center SharePoint site

(<u>https://covgov.sharepoint.com/sites/VITASec/ISOKnowledgeSharing/SitePages/Home.aspx</u>)



Modifying sender and reply to email addresses –

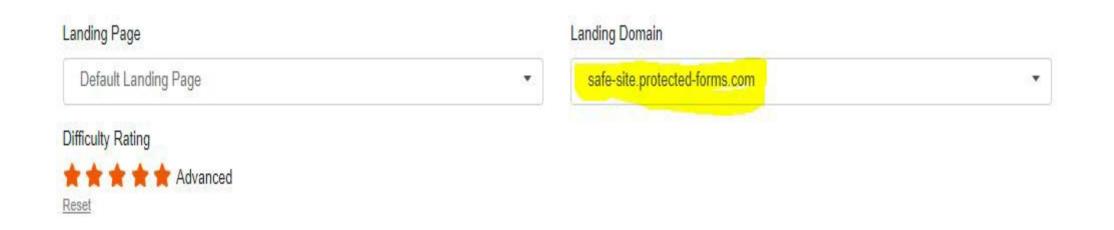
Notice of Traffic Violation (Link)			← Back to Phishing Email Templates	
Language				
English (United States)	÷			
Template Name				
Notice of Traffic Violation (Link)				
Leave this field blank to use the Subject field as the T	emplate Name.			
Sender's Email Address	Sender's Name	Reply-To Email Address	Reply-To Name	
violations@court-cases-online.org	Violations and Fines Office	violations@court-cases-online.org	Violations and Fines Office	
Email domain is strange or suspicious. Clear	Were you expecting an email from this Clear	P Add a Red Flag	P Add a Red Flag	
Subject				
Notice of Traffic Violation				
Do you normally receive this kind of email at work	?		Clear	
Attachment File Name	chment File Name A	Attachment Type		
		Select Option	•	



HOW "TO" CREATE A PHISHING CAMPAIGN

Modifying a landing page's domain address –

Use the down arrow to select one of the address that is in the whitelist.





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Completing your customized templates

When you have finished modifying the template, click the "save" button and save it with a new name.

To Organize the templates for ease of use...

- 1. Click on the Add Button beside "Manage Templates". This will create a new category for your templates.
- 2. Name the template category and save it.
- 3. Check the checkbox next to the template you modified.
- 4. Use the down arrow beside the "Move to Category" field to select the category you want to use.
- 5. Click the "Move" button the place the email template in that category
- 6. The template will be moved to the selected category.

* Note: When creating a phishing campaign, email templates can be selected by "category" . Creating a new category for each campaign will make it easy to select the messages to be used in the campaign.



Phishing Email	+ Create Phishing Template	
Campaigns Email Temp	ates Landing Pages	
System Templates Manager	Templates	
Selected Templates	0	▲ Move to Category – Move
Managed Categories	+ Add All Templates	Limport Search Q
All Templates	16 Template Name	♦ Updated ♦ Difficulty ♦ Category Actions
≡ COV ≡ COV2023	HR: Please update W4 for file (Link) (PDF Attachment) Domain)) (Spoofs 12/15/2023 ★★★★★ COV2023 Q4 @
≡ COV2023 ≡ COV2023 Q4	Notice of Traffic Violation (Link)	12/15/2023 *** * COV2023 Q4 @
	Microsoft Teams: [[manager_name]] is trying to reach y	you (Link) 12/15/2023 ★★★★☆ COV2023 Q4 @
	USPS: You missed your Christmas delivery! (Link)	12/15/2023 ★★☆☆☆ COV2023 Q4 ④



Landing Pages

Landing Pages are web pages that will be displayed when a user takes an action on a phishing campaign message. To customize the landing page, first add it to the category you want to use. If the category doesn't exist, you will need to use the "Add" button to create it.

This works the same way as creating the category for Email templates.

Once the landing pages are added to the categories, they can be modified by clicking on the category name, then the name of the template.

This brings up the Edit Landing Page Window where you can customize the page. When finished click on the "Update" button to save your changes.



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dit Landing	Page						← Back to Landing Pa
itle							
Apple ID Login Page							
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	D? Create yours now.
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Creating a Campaign

Now that you have setup the email templates and the landing pages that you want to use, you are ready to create a campaign.

- 1. Click on the "Phishing" option from the menu bar across the top of the console.
- 2. The "Phishing Overview" page will appear.
- 3. On the Phishing Overview page, click on the "Campaigns" tab.
- 4. This opens the "Phishing Security Test Campaigns" window.
- 5. In the top right corner, there will be a button called "+Create New Campaign".
- 6. Click on the "+Create New Campaign" button.

The "New Phishing Campaign Window" opens with a green banner indicating that the campaign will launch 10 minutes after it is activated or completed.





To create the campaign, you will need to provide the following information:

- Name for the campaign
- Select the users that are to receive the campaign
- Select the frequency for the campaign
- Select the date/time for the campaign to start
- Select the sending period options



HOW "TO" CREATE A PHISHING CAMPAIGN

← Back to Campaigns **New Phishing Campaign** Note: A campaign will start 10 minutes after it is activated or created. Campaign Name All Users Specific Groups 0 Send to • Select one or more groups... 3 Weekly Biweekly Monthly Quarterly Frequency One-time 2:27 AM Start Time 曲 01/09/2024 0 (GMT-05:00) Eastern Time (US & Canada) * Sending Period Send all emails when the campaign starts 3 business days * Send emails over 3 Define Business Days and Hours Using Time Zone: (GMT-05:00) (?) to 9:00 AM 0 5:00 PM 0 🗌 Sun 🗹 Mon 🗹 Tues 🗹 Wed 🗹 Thur 💟 Fri 🗌 Sat





- Select the Tracking time for the campaign (following email delivery)
- To track replies, check the checkbox beside "Track Replies"
- Select the email template category to be used.
- Select the type of randomization of emails to be sent (Full randomization or random email to all users)
- Select the difficulty rating for the messages to be sent.
- Phishing Link Domain -
 - select "Random domain" if you have hidden all non-whitelisted domains
 - Select a specific domain if you have not hidden all non-whitelisted domains
- Landing page-
 - Select "Default Landing Pages" if you want to use the landing page that was created by KnowBe4 for that message.
 - Select a specific landing page if you want to select the landing page that all users will see for any message sent as part of the campaign.





Track Activity	3 days 🔻 after the sendir	ng period ends (?)
	Track Replies to Phishing Emails ?	
Template Categories	Select one or more categories	▼ Full Random (Random email to each user) ▼
	Send Localized Emails (?)	
Difficulty Rating	All Ratings	• ?
Phish Link Domain	Random Domain	• ⑦
Landing Page	Default Landing Pages	- ⑦
Add Clickers to	Select Group	•
	Send an email report to account admin	is after each phishing test
	Hide from Reports (?)	
	Create Campaign	



- Add Clickers To select the group you want to add them to if to want to be able to target them separately.
- Send an email report to the account admins check the box beside the statement to enable this.
- Hide from reports check the box beside the statement to hide the campaign.

Now that all required information has been provided...

Click the "Create Campaign" button at the bottom of the page.

This will queue the campaign creation on the KnowBe4 servers. You will see the status go from pending to complete as you refresh the status screen.





Track Activity	3 days 🔻	after the sending period ends	3
	Track Replies to Phis	shing Emails 🕜	
Template Categories	Select one or more ca	tegories •	Full Random (Random email to each user)
	Send Localized Email	ils 🕐	
Difficulty Rating	All Ratings		0
Phish Link Domain	Random Domain	्र	(?)
Landing Page	Default Landing Page	s 👻	(7)
Add Clickers to	Select Group	•	3
	Send an email report	to account admins after each phi	shing test
	Hide from Reports (Ð	
	Create Campaign		



COV-wide Campaigns will occur the 3rd week of each quarter

A number of ISOs has asked if a schedule of COV-wide Campaigns could be published.

While the Security Standard calls for agencies to complete phishing campaigns once a year, CSRM has been and will continue to provide COV-wide phishing campaigns on a quarterly basis. In reviewing the holiday calendar for 2024, we have selected the third week of the quarter for these campaigns. This will also provide about 5 weeks should a campaign need to be re-scheduled or re-run.

The schedule for 2024 is as follows:

Q1 – week of January 22nd Q2 – week of April 15th Q3 – week of July 15th Q4 – week of October 14th



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QUESTIONS?



VIRGINIA IT AGENCY

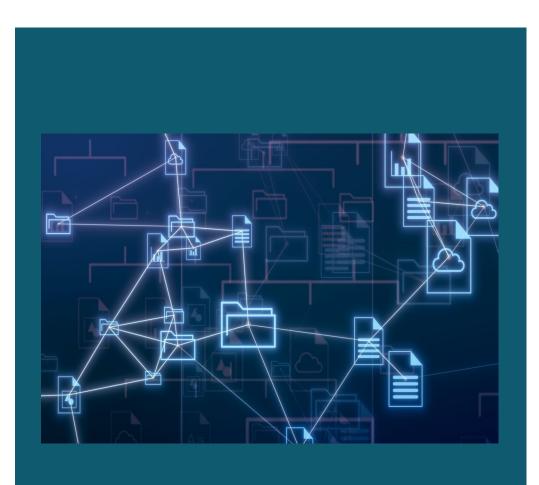
SEC530 Update Announcement

SEC530

Amy Braden

Director, Security Governance

January 10, 2024





Workload Management (WM)

January ISOAG

John C Del Grosso Service Owner, Server Storage and Data Center Services

January 2024

Workload Management (WM): Overview

- Manages cloud servers by using real time and historical data to analyze the demand of resources
- Uses the data provided to make decisions on compute changes to maintain and maximize server and application performance
- Provides suggestions to increase or decrease the compute profile in a monthly report
 - Example suggestion: "Reduce the memory allocation for WAPXXXXX by downsizing to: XGB"
- As of January 2024, WM has 4-8 months of data history. To ensure accuracy, it is recommended for agencies to weigh their actual utilization over a longer term as to capture their server usage during surge and idle periods.



- Example report

Action:

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			Affected		
Agency	ServerName	Data Start	Resource	Action	Recommended Action
VITA	WAP04XXX	2023-10-	memory	decrease	Reduce the memory allocation
		30T00:00:34Z			for WAP04XXX by downsizing to:
					64GB

Agency:Owning agency, derived from comparing the server name to the
configuration management database (CMDB)

ServerName: Server name per CMDB

Data Start: The date the WM started collecting performance data

Affected Resource: This will be virtual random access memory (vRAM) or virtual central processing unit (vCPU)

Decrease or increase the affected resource

<u>Recommended Action:</u> Specific detail of the action



WM: Agency workflow

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- Reports are created monthly and provided to VITA's server storage and data center (SSDC) team
- Reports will be distributed to agency users, customer account managers (CAMs), and business relationship managers (BRMs)
- To request an increase or decrease in a server compute profile, submit a <u>general</u> service request by following the steps documented in the workload management knowledge base article: <u>KB0019508</u>





The next IS Council Meeting will be held on January 17, 2024

The meeting will last from 12-1 pm and will cover information on the progress of the various committees.

If you need a link to attend this meeting, please request an invitation through the Commonwealth Security mailbox.

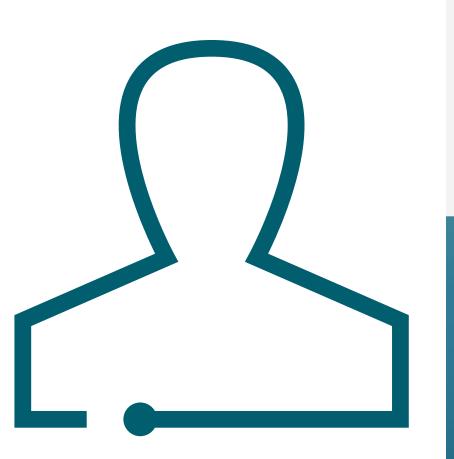


IS Orientation

The next IS Orientation will be held on March 27, 2024

- The Orientation will last two hours and be held remotely via WebEx.
- Please register to attend at:

https://covaconf.webex.com/weblink/register/rd212e769 bb8f06f1b608aebd01be1cd7



IS Orientation



MEETING ADJOURNED

