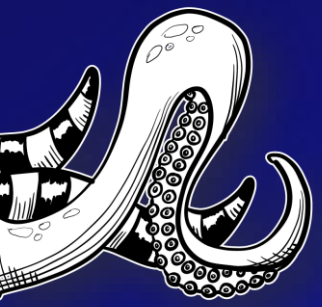
DYNAMICS MINDS

Microsoft Dynamics 365 and Power Platform Conference

Pre-Day: MAY 26, 2024

MAY 27 - 29, 2024

Portorož, Slovenia, Europe



Exploring Zero Trust Security for Power Platform

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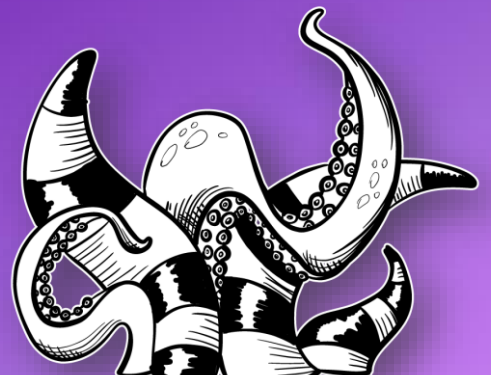

Who am I?

Microsoft Bizapps MVP

Power Platform & DevOps Enthusiast

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Why bother with security for Power Platform?

Introduction

Understand the risks

Why Zero Trust?

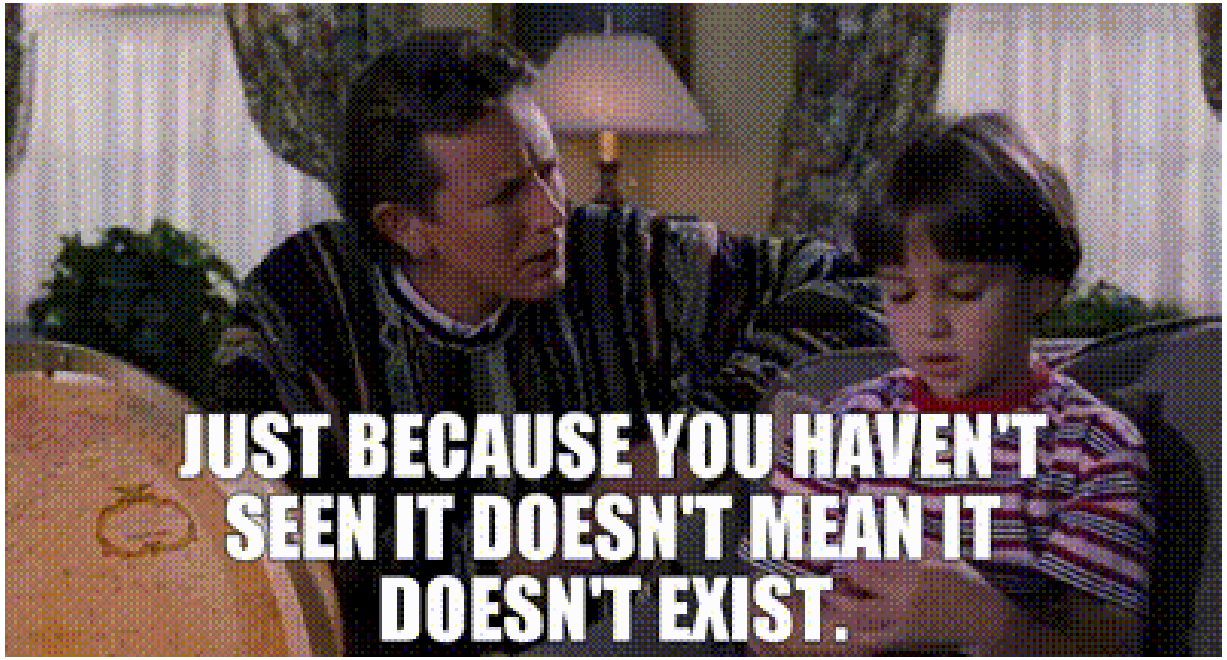
Generation 1:
Castle & Moat

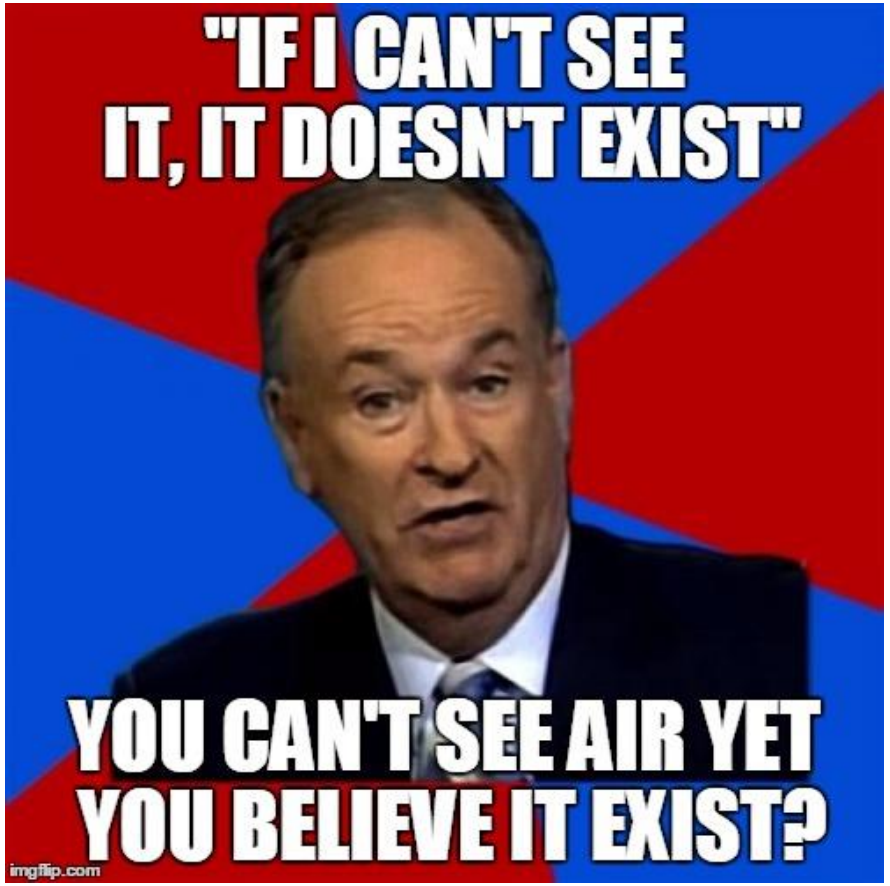
Generation 2:
Virtualized Functions

Generation 3:
Zero Trust Network

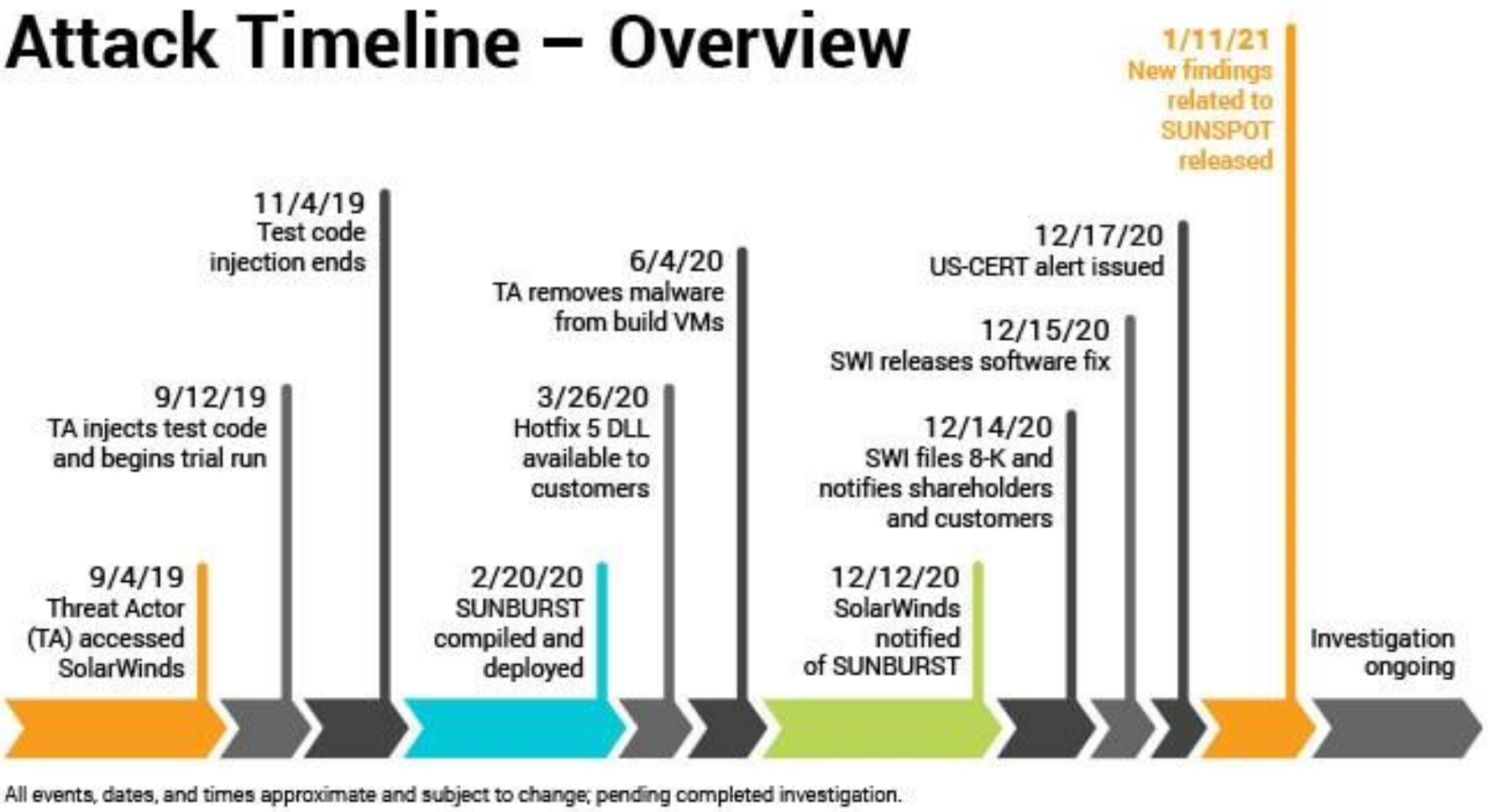
What are the Zero Trust principles?

Assume breach!

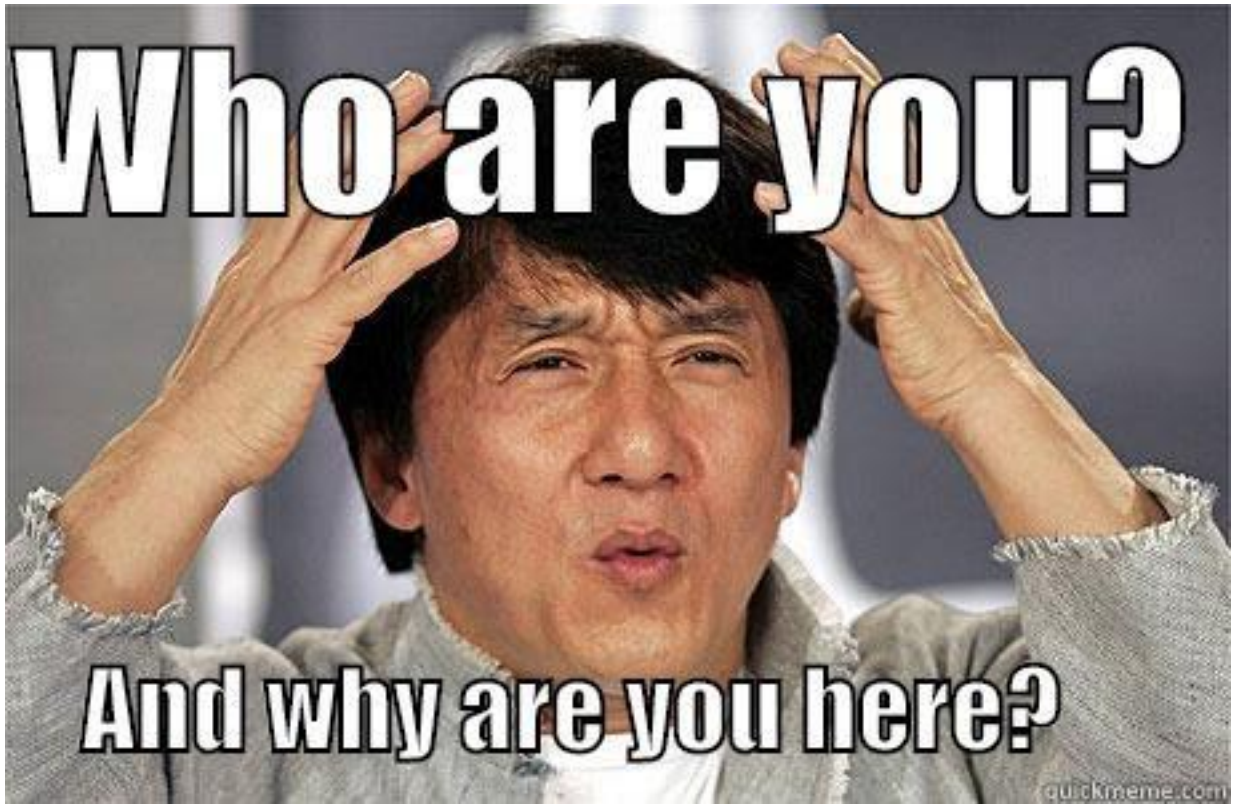




Assume breach!



Verify explicitly!



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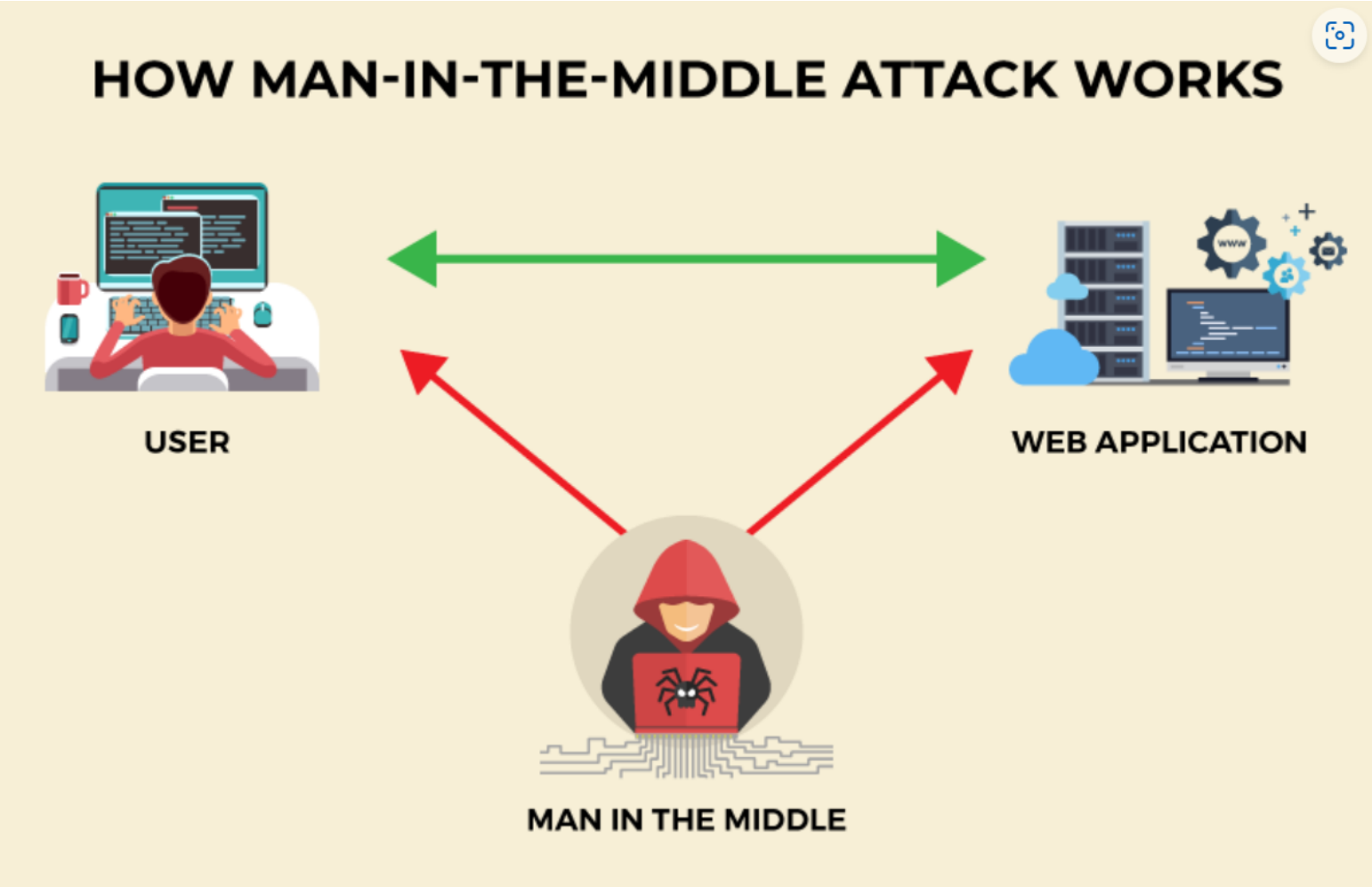
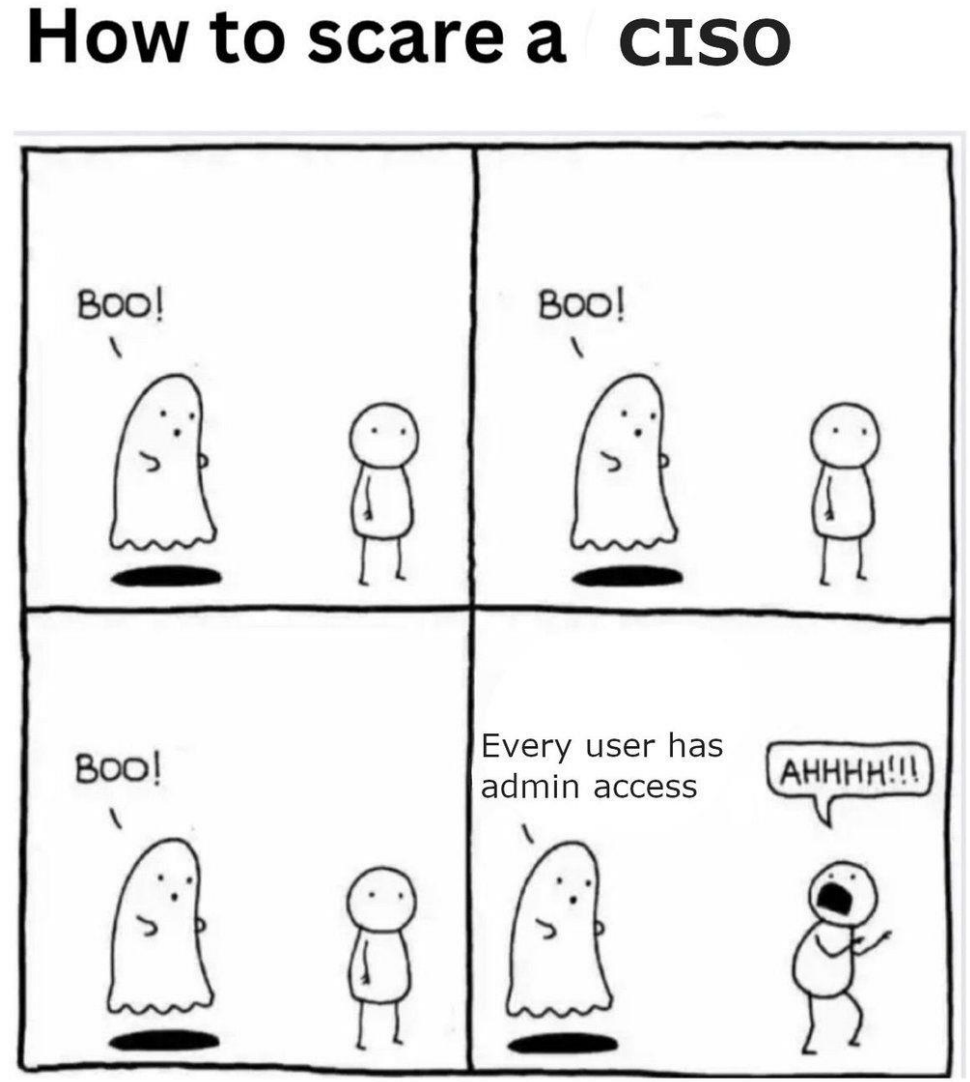
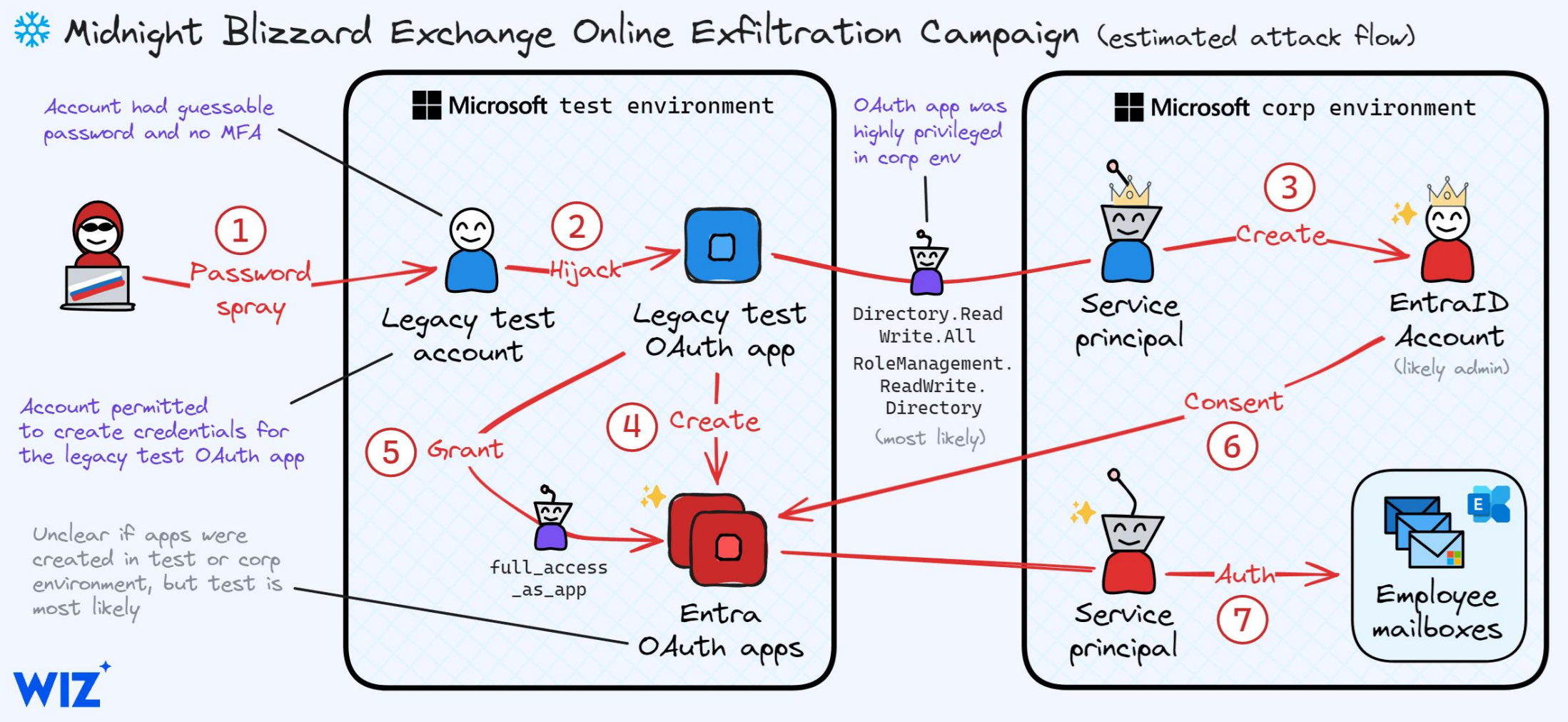


Use least privileged access!



Use least privileged access!



What can you do?

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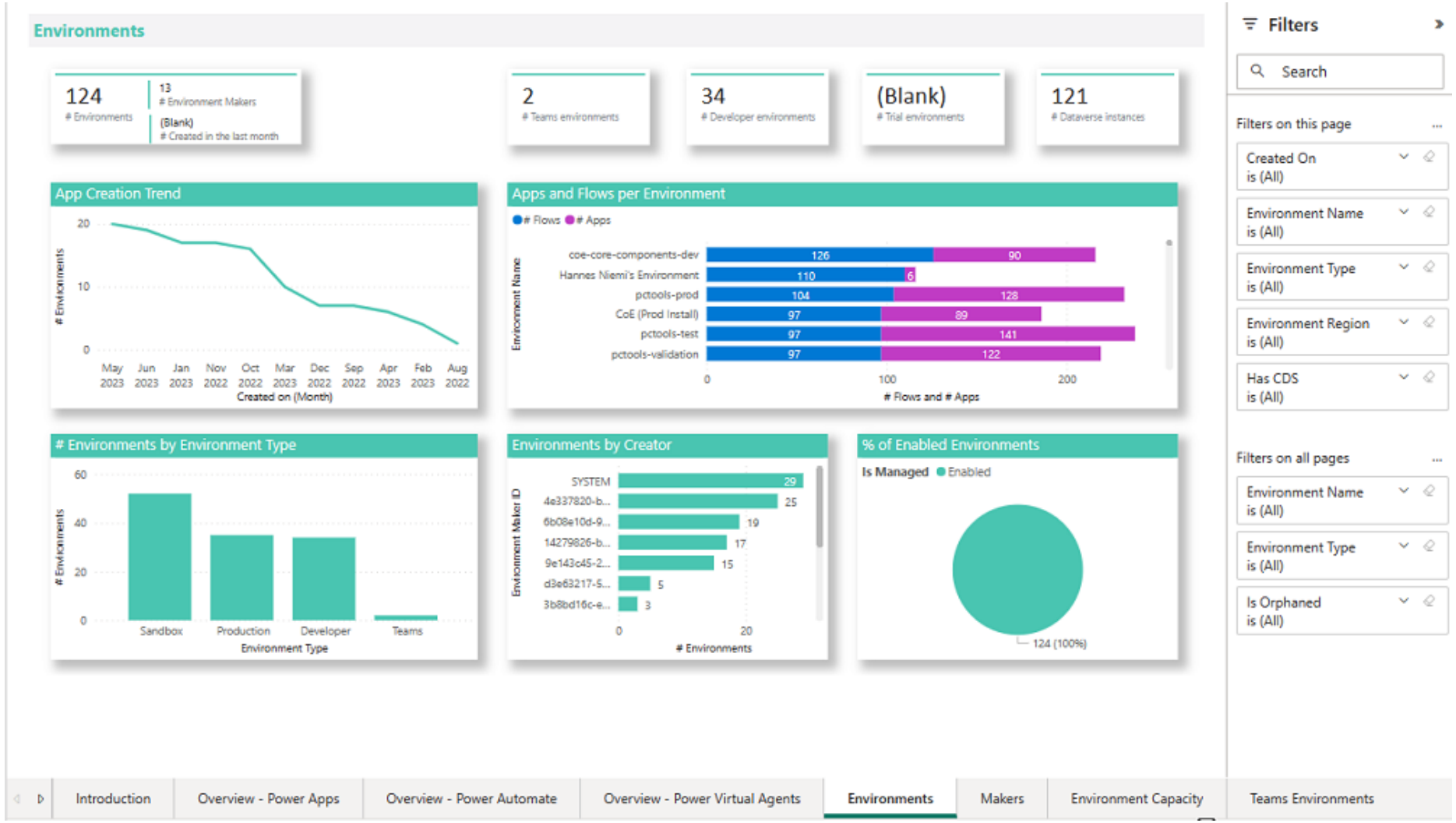
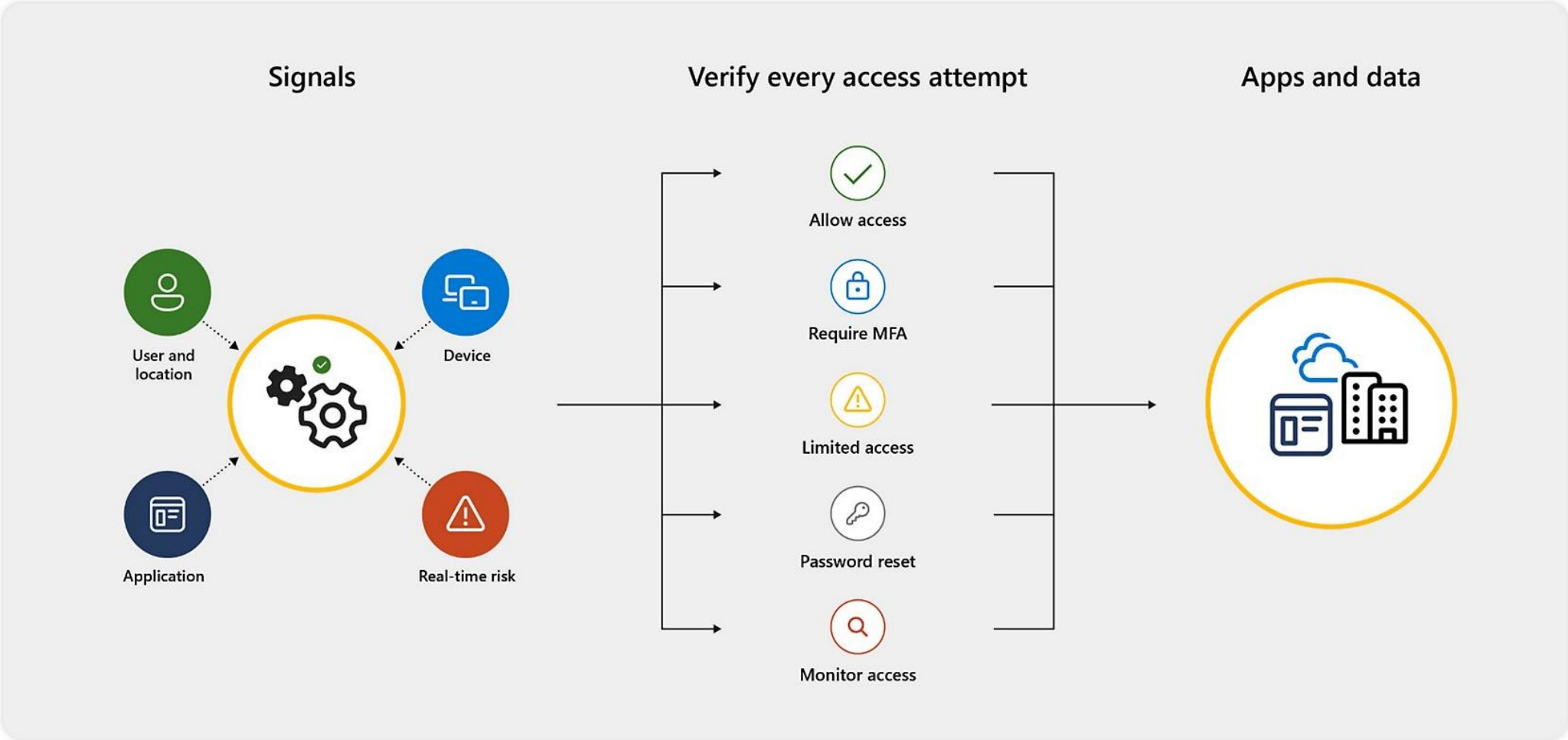
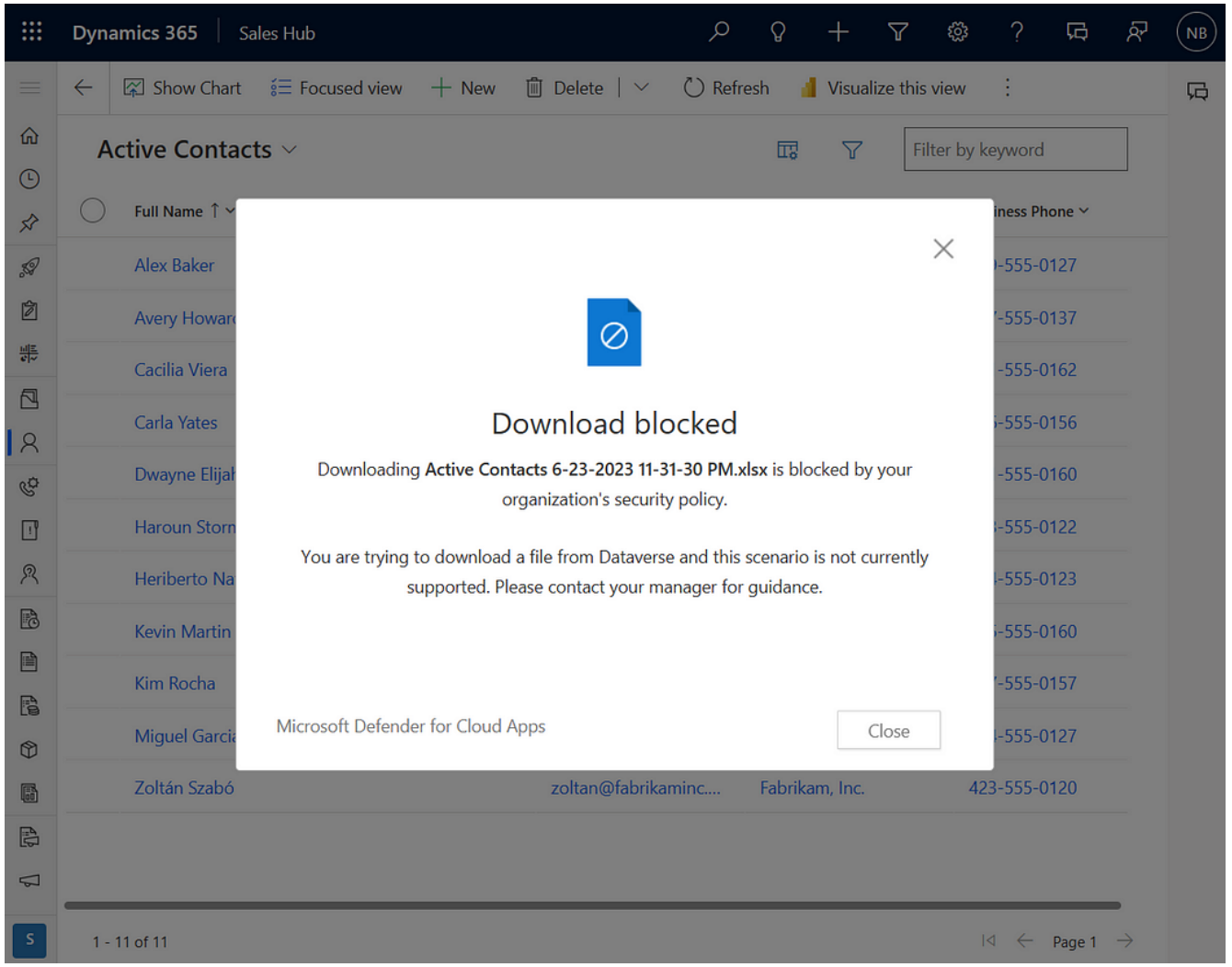
Risk analysis – Monitor with the CoE Starter Kit



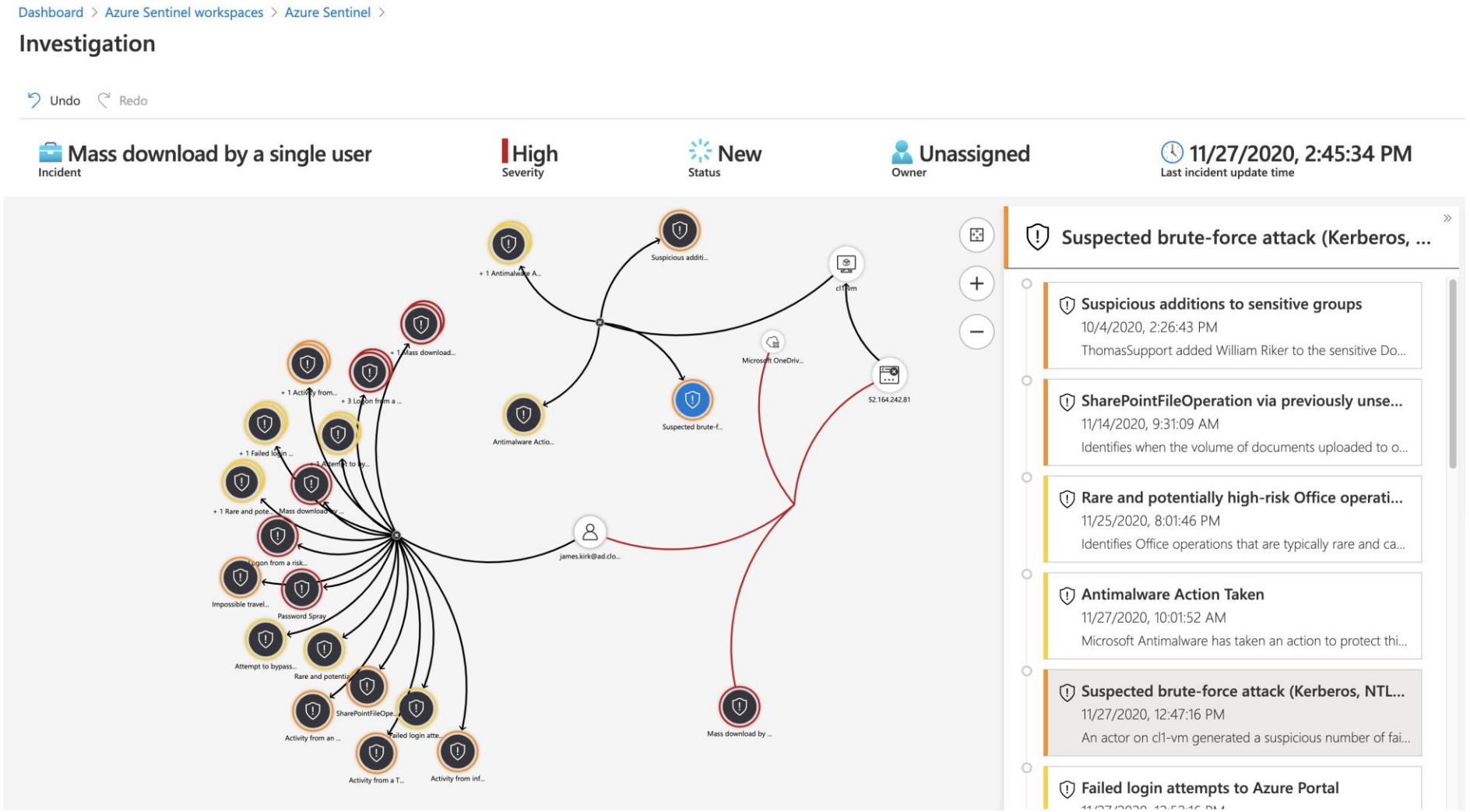
Verify explicitly - From authentication...



Verify explicitly - ... to authorization ...



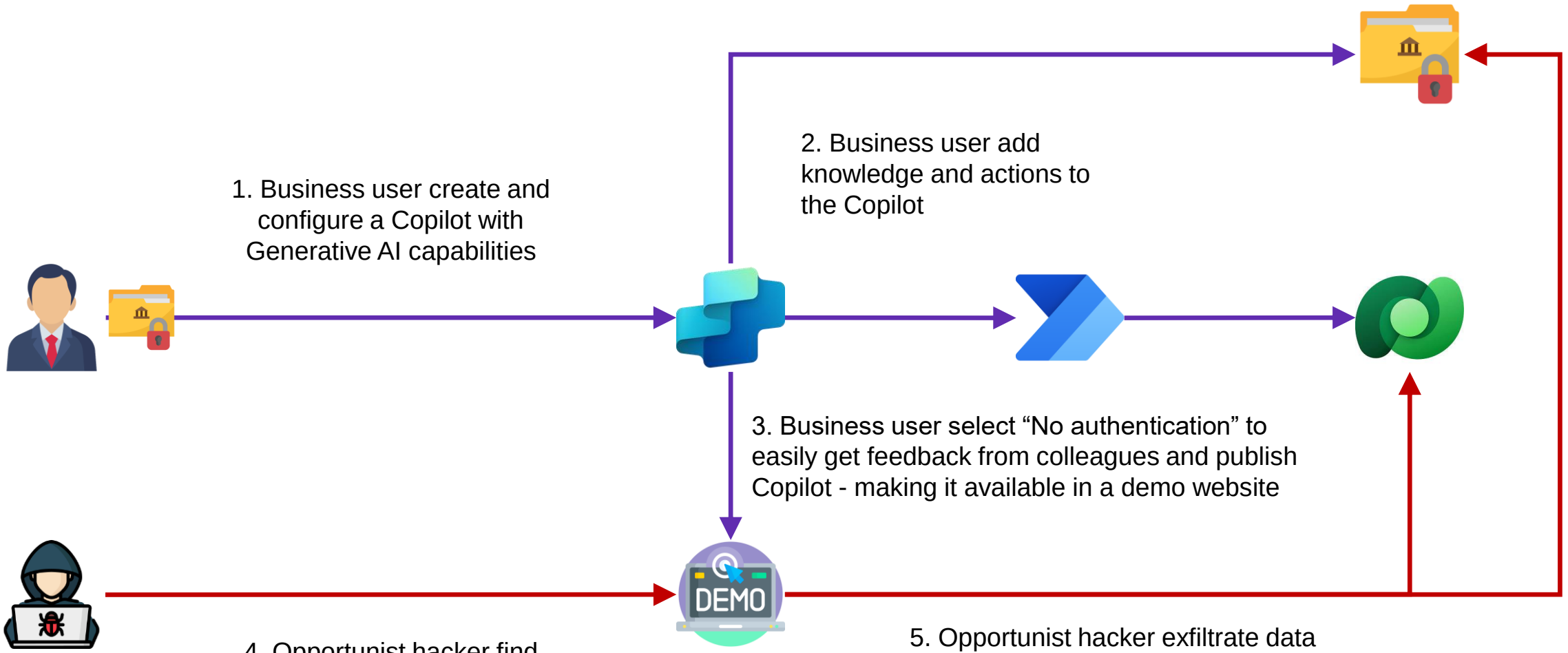
Verify explicitly - ... and beyond



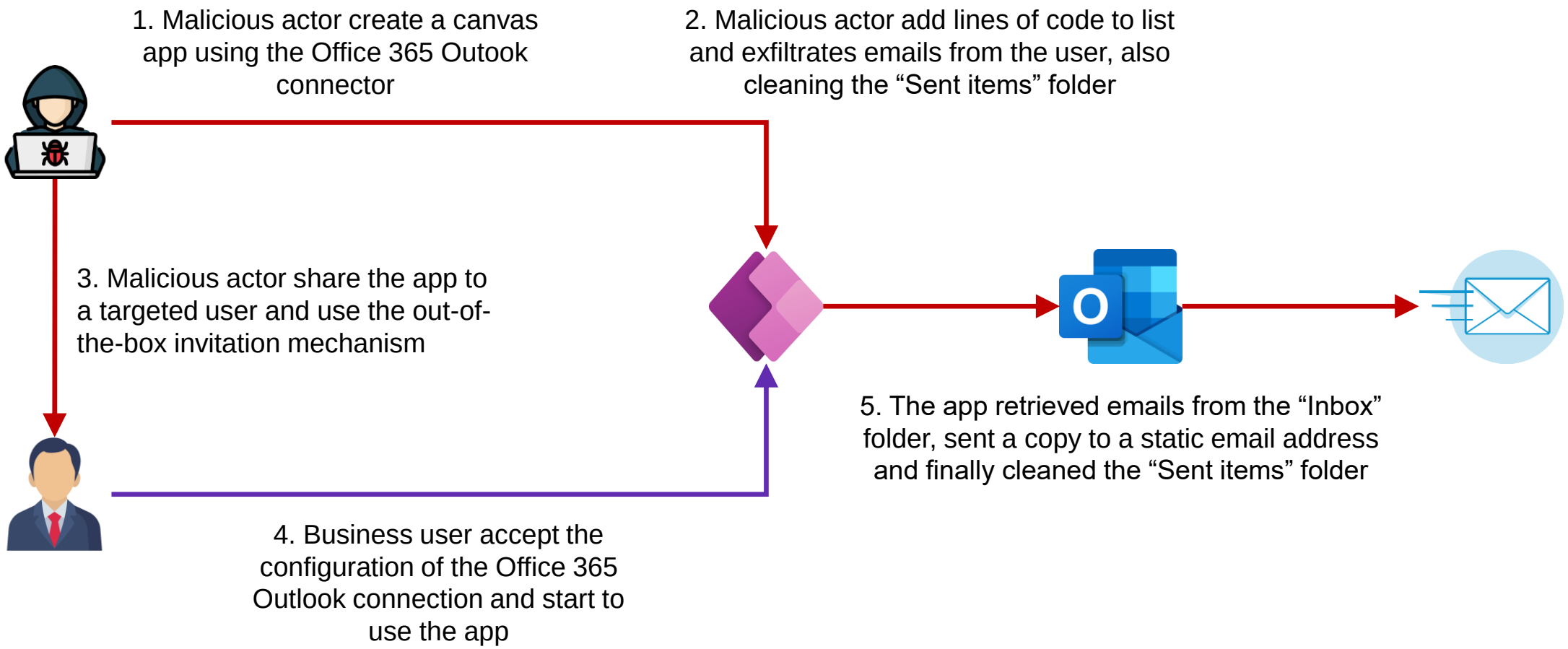
Scenarios

That could potentially happen in real life…
(most likely in tenant not well configured)

Data leak from a misconfigured Copilot



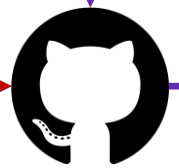
Phishing attack through a canvas app



Repository hijack for Dataverse data exfiltration

1. Developer configure a GitHub repository with secrets for the management of solutions*

* To be able to deploy solutions, the considered application user (*application registration in Entra ID*) will need to have full privileges in the considered Dataverse environments (*"System Administrator" security role*)

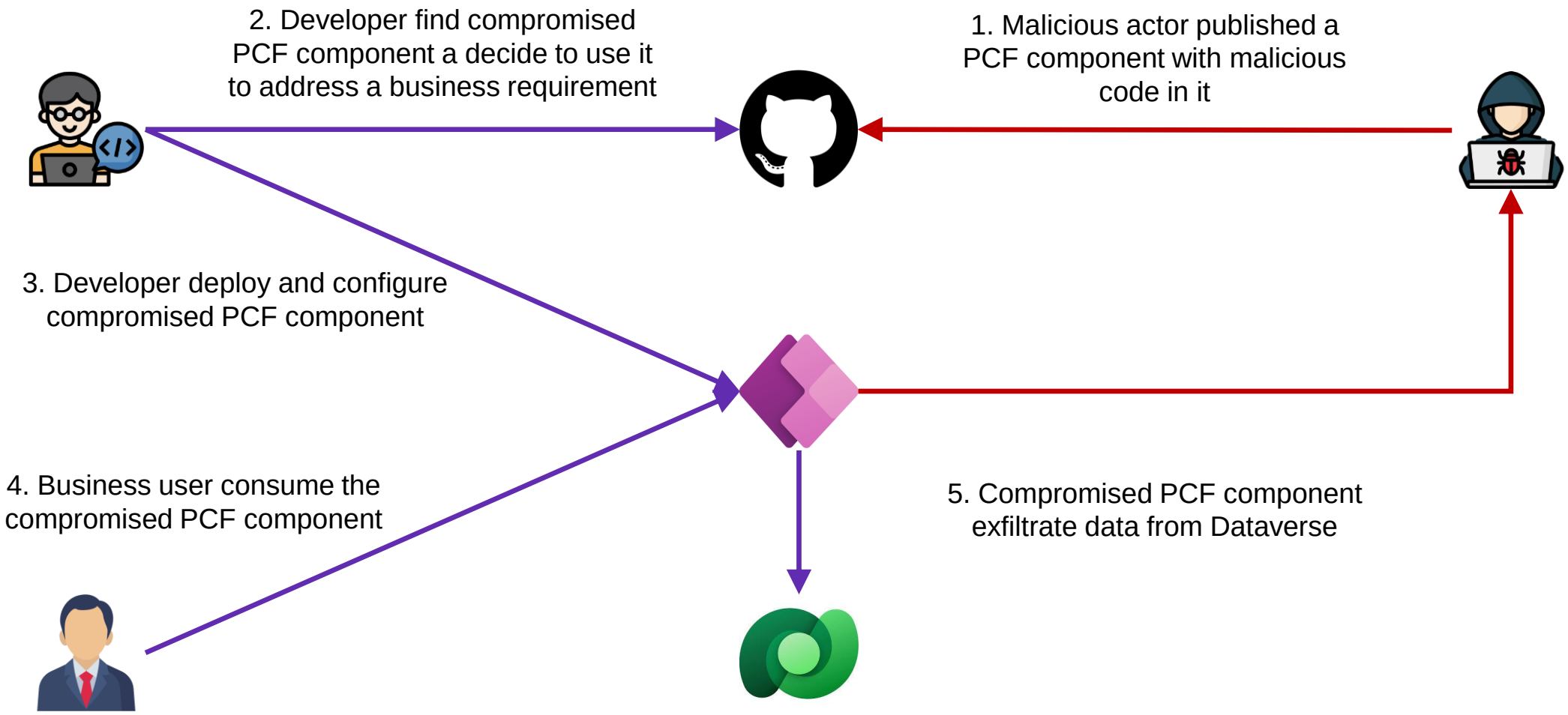


2. GitHub workflows can successfully interact with related Dataverse environments (*like Production*)

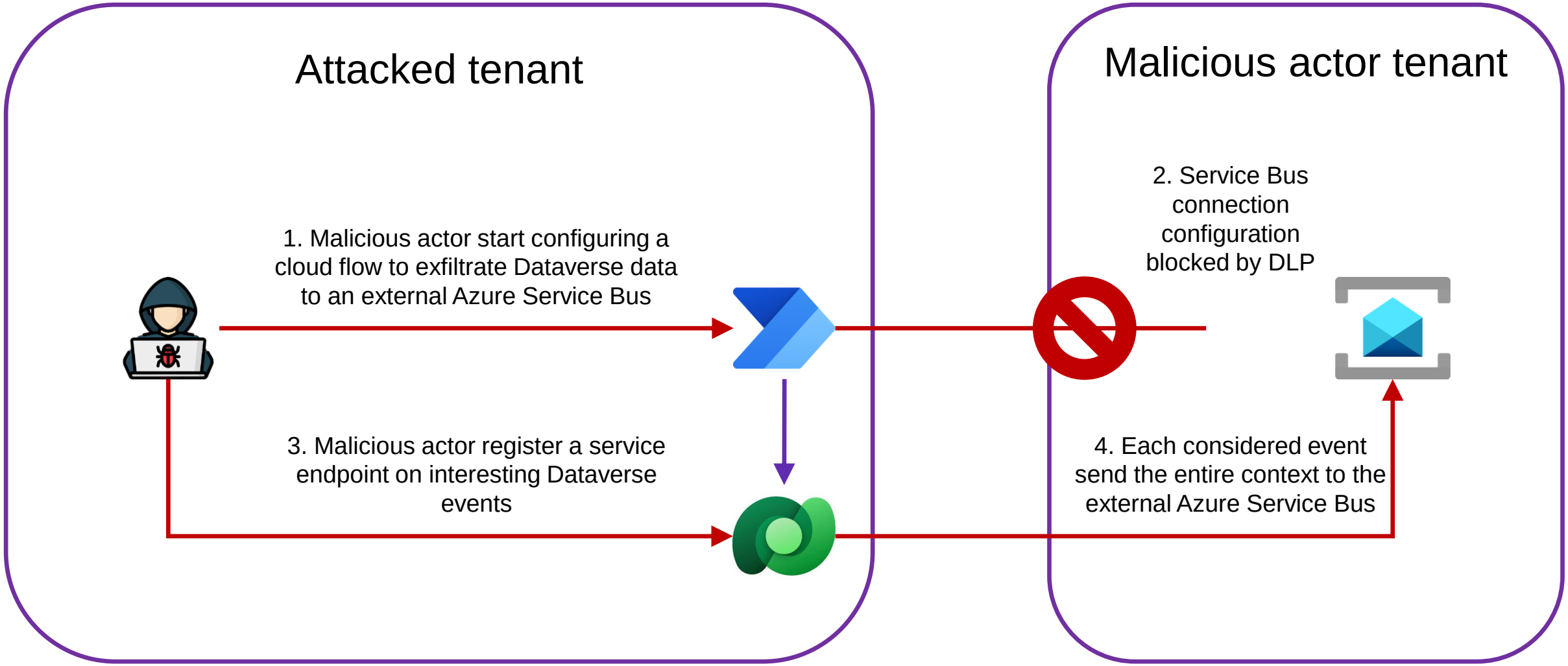
3. Malicious actor gain access to a user account with contribution permissions to the GitHub repository

4. Malicious actor used the compromised user account to configure a branch with code and automation to exfiltrate data

Supply chain attack



If you can't block it, monitor it!



Let’s wrap up!

A few recommendations before the end

Identity Management

- Enable MFA for all your users if possible
- Use Privileged Identity Management (PIM) for just-in-time high privilege elevation for specific administration tasks
- Use Conditional Access Policies to take user's context into consideration during the authentication phase

A few recommendations before the end

Power Platform

- Disable the “Share with everyone” tenant setting
- Use Tenant isolation to control the traffic with other tenants
- DLP policies are not foolproof, but well configured there could limit the attack surface and lateral movements
- Managed Environments capabilities, like IP address-based cookie binding or IP firewall, should be considered in your cyber defense arsenal
- Upcoming network capabilities, like VNet integration, will help avoiding to put at risk resources in your network

A few recommendations before the end

Monitoring

- Purview Compliance provide a great visibility regarding what is going on in Power Platform, but to protect the data in Dataverse you will need to conscientiously configure the audit
- Microsoft Sentinel is a great tool to consider, it combines multiple signals from your entire information system to add another layer of protection for Power Platform
- The governance of the data in Dataverse can be achieve using the Microsoft Purview integration and it can help you identify your most critical environments

Other Resources

- OWASP Low-Code/No-Code Top 10 | OWASP Foundation
- "Protect and Manage Your Enterprise Data Effectively at Scale" with Mihaela Blendea and Jocelyn Panchal (*from Microsoft*)
- Power Platform security FAQs - Power Platform | Microsoft Learn (*including sections related to "OWASP top 10"*)
- Microsoft Power Platform security and governance documentation - Power Platform | Microsoft Learn
- Enterprise security with Power Platform - Power Platform | Microsoft Learn (*white paper*)
- Power Pwn - An offensive and defensive security toolset for Microsoft 365 Power Platform

Thank you very much for your participation!