CYBERARK \ LABS

Okta Supply Chain Hack

2023 Edition

Lessons Learned and Mitigation Strategies

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- SSCP/CISSP
- GPEN
- Emcee of Dallas Hackers Association
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- Mentor

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Importance of this Discussion

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- Pinpoint gaps in security.

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- Pinpoint gaps in security.
- Don’t let happen to you!

Agenda

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- Downstream attacks.
- Detection, Response, & Disclosure.
- Prevention & mitigation strategies.

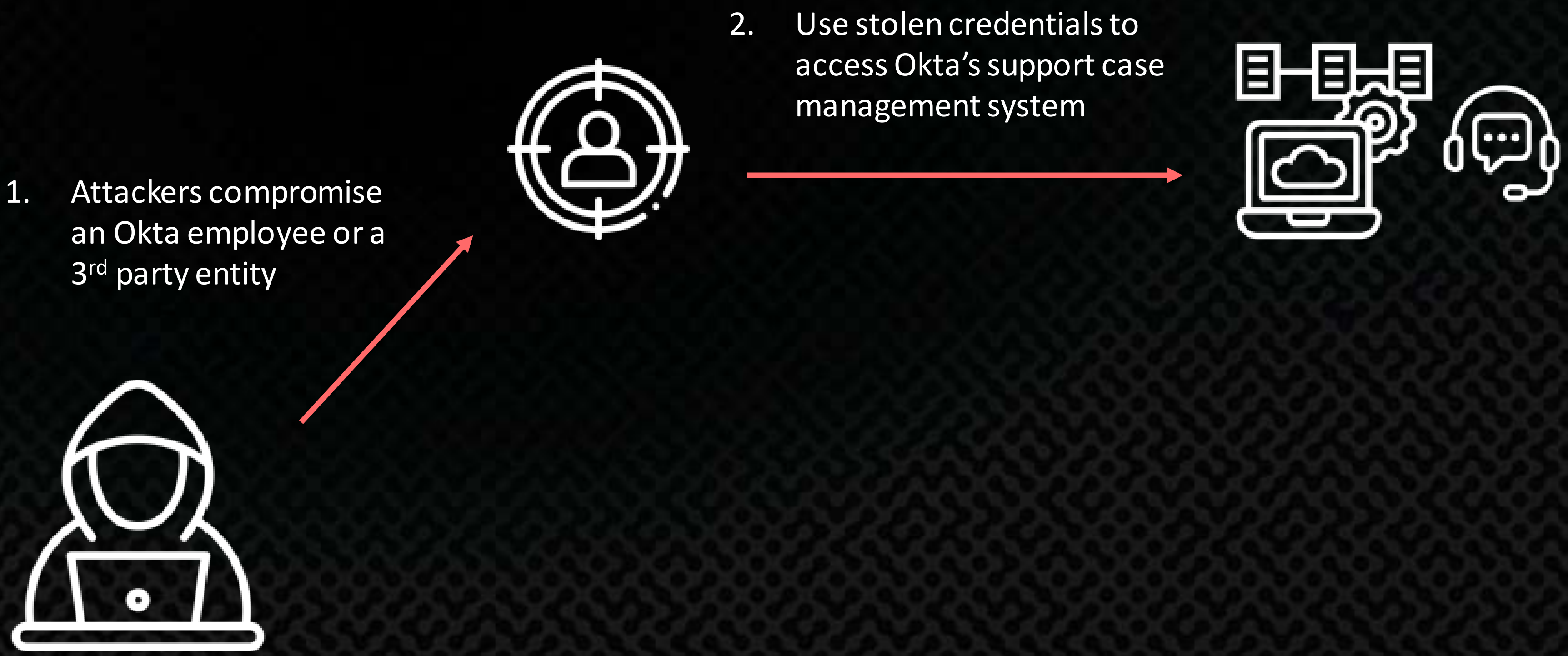
CyberArk Labs Analysis

Okta Breach Flow (November 2023)

1. Attackers compromise an Okta employee or a 3rd party entity

CyberArk Labs Analysis

Okta Breach Flow (November 2023)



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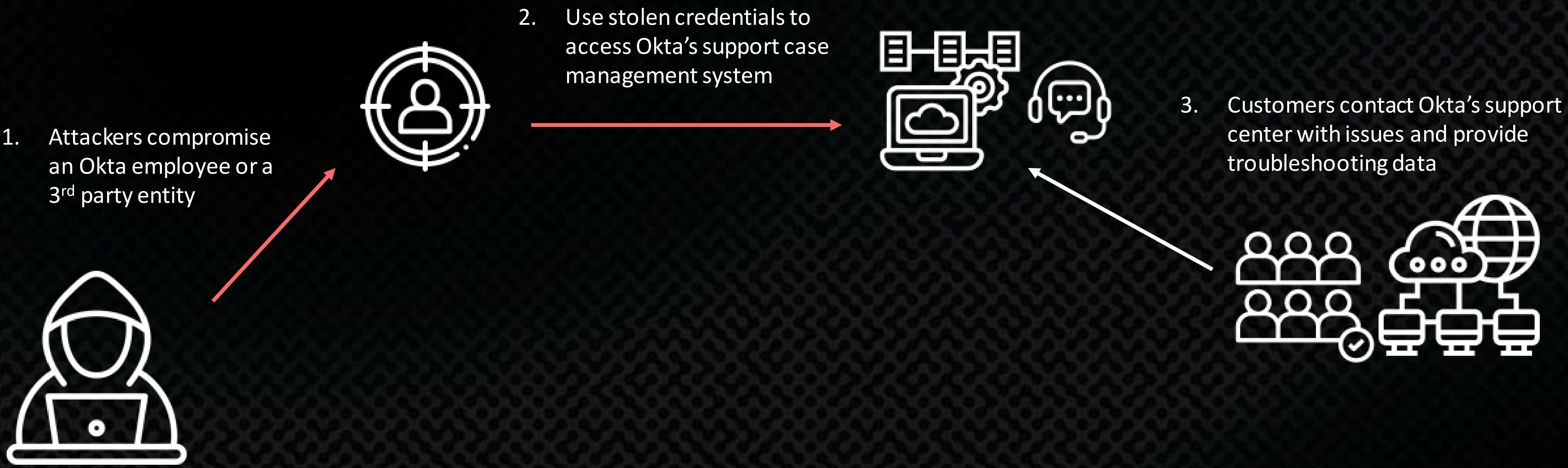

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3. Customers contact Okta's support center with issues and provide troubleshooting data

HTTP Archive (HAR)

- Performance analysis.
- Debugging.
- Security.

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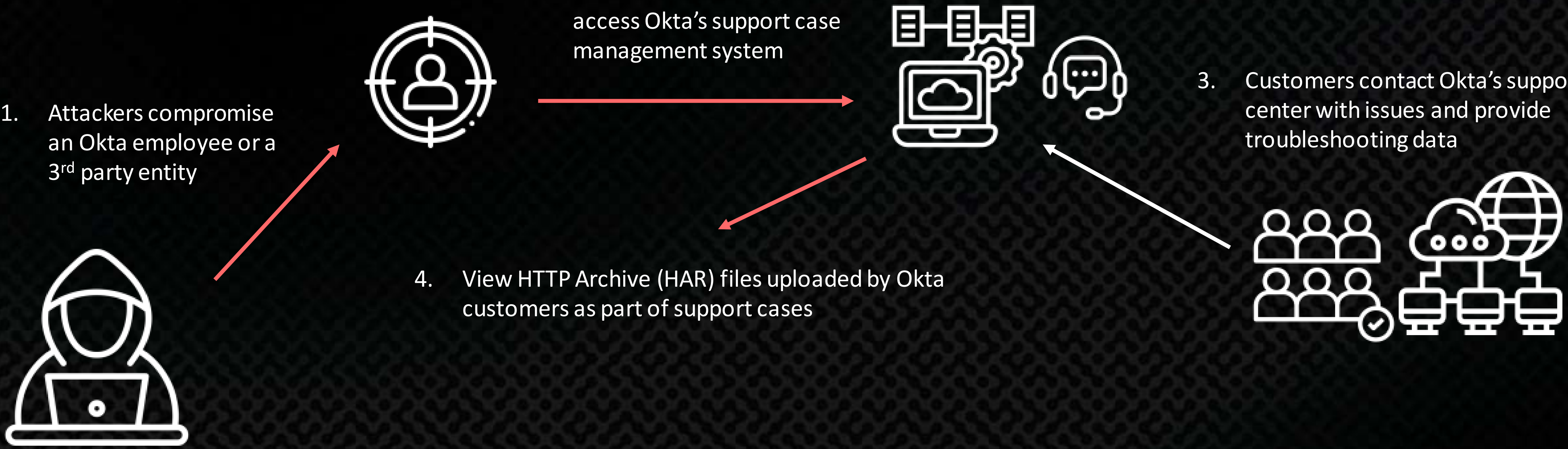

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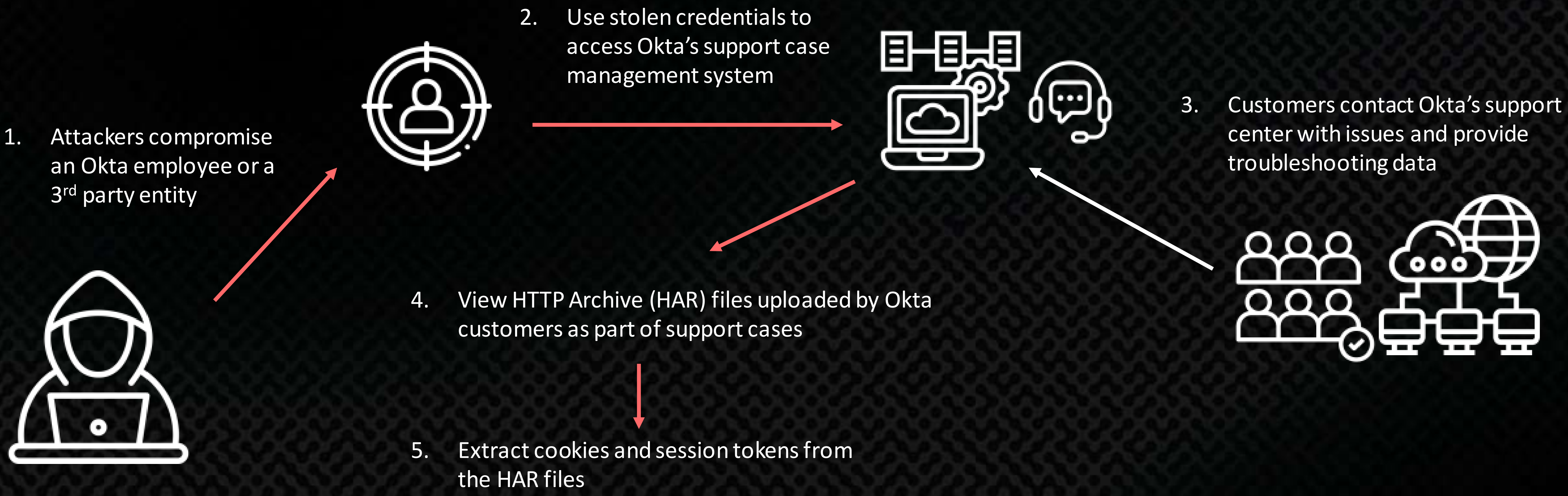

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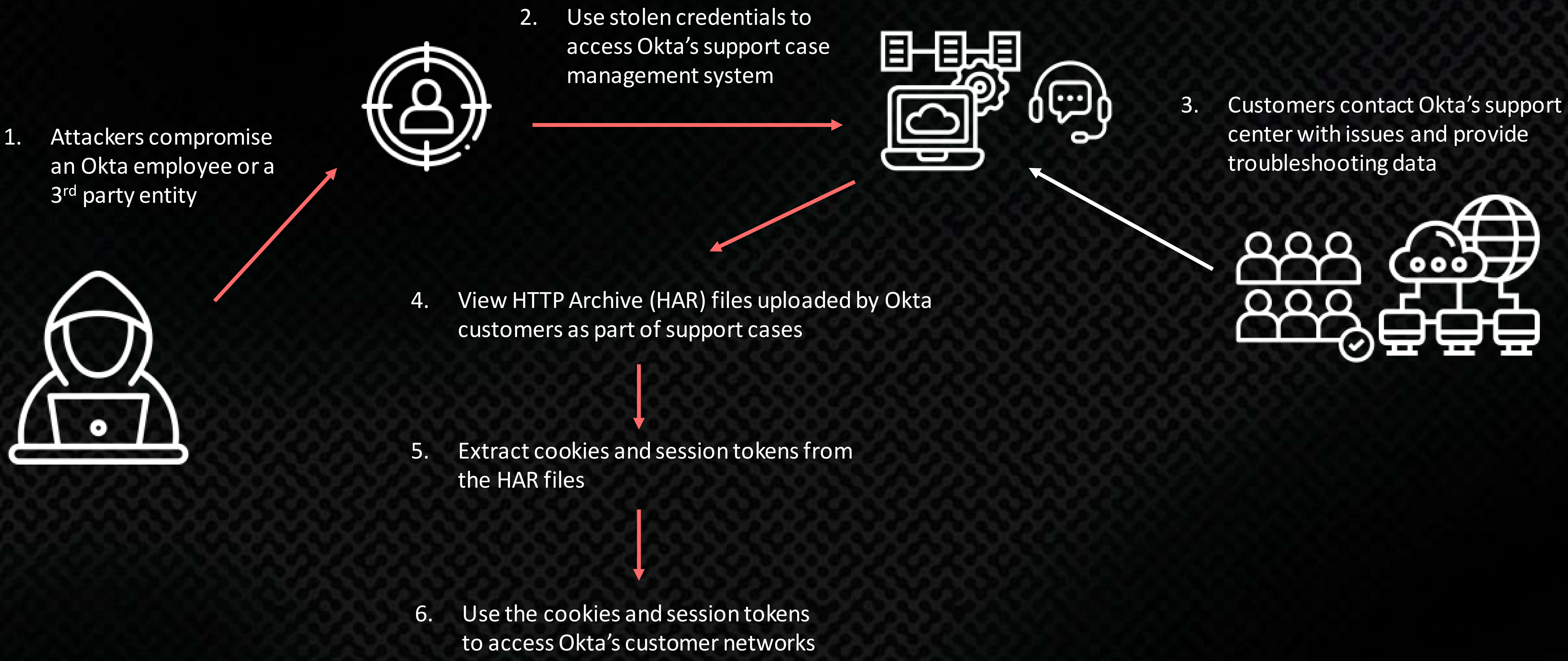

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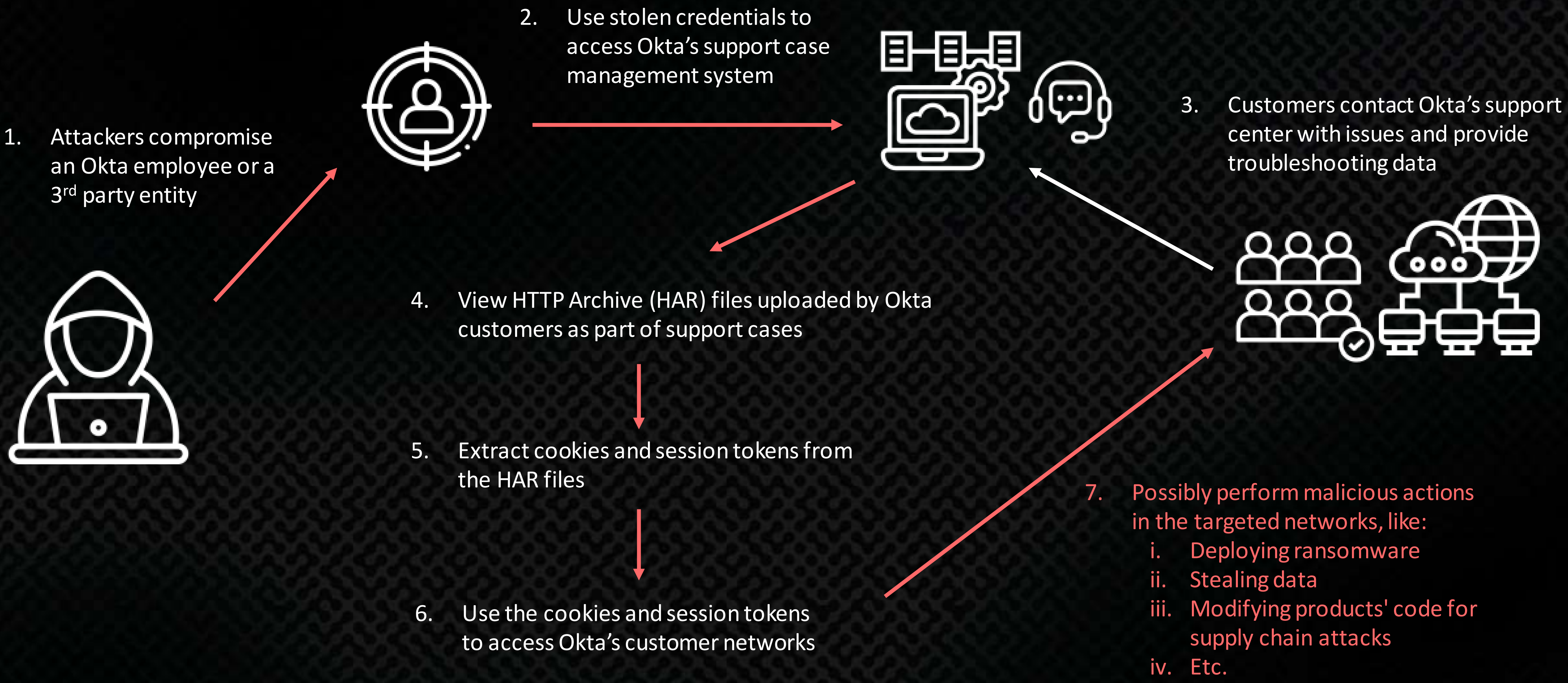

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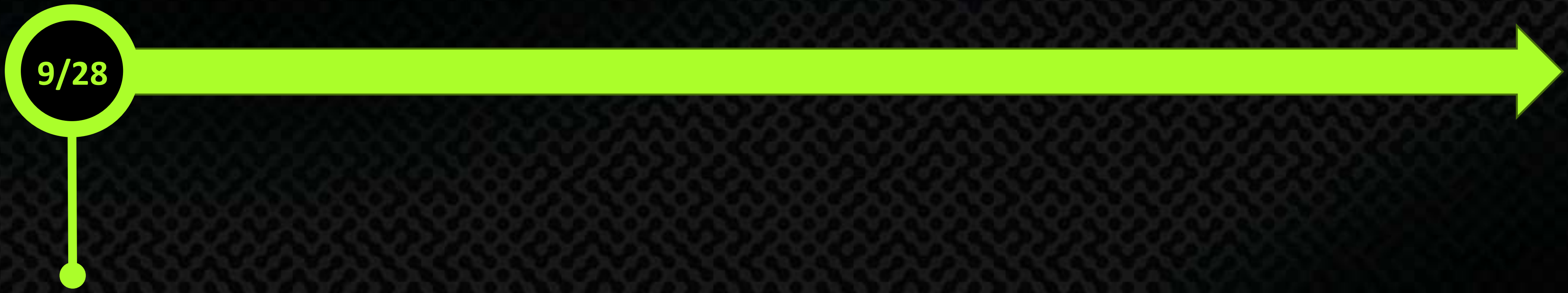
6. Use the cookies and session tokens to access Okta’s customer networks
7. Possibly perform malicious actions in the targeted networks, like:
   i. Deploying ransomware
   ii. Stealing data
   iii. Modifying products' code for supply chain attacks
   iv. Etc.

Breach Timeline



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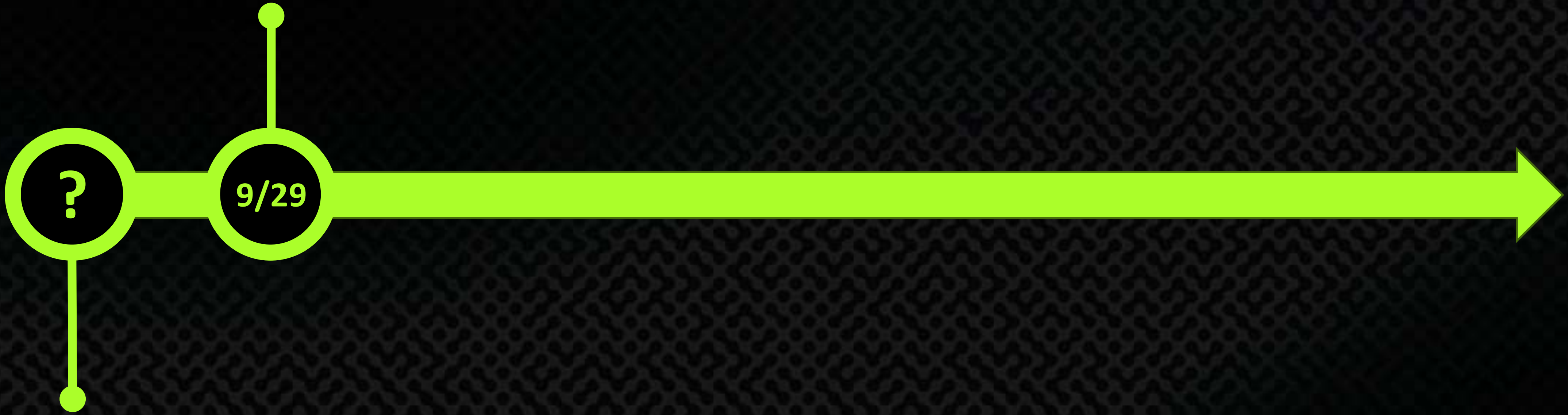
Initial Compromise

Breach Timeline



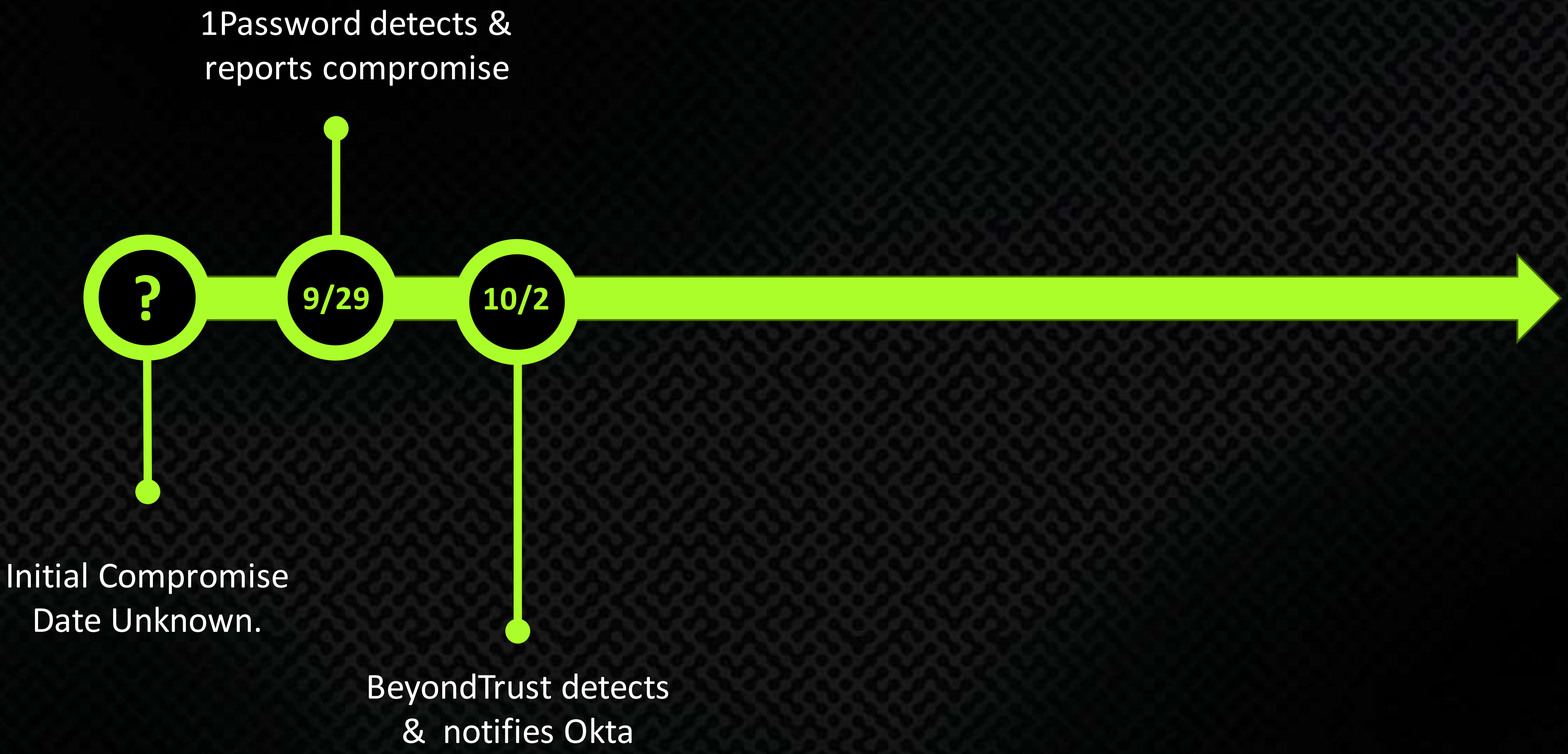
1Password detects & reports compromise

?

9/29

Initial Compromise Date Unknown.

Breach Timeline



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BeyondTrust detects & notifies Okta

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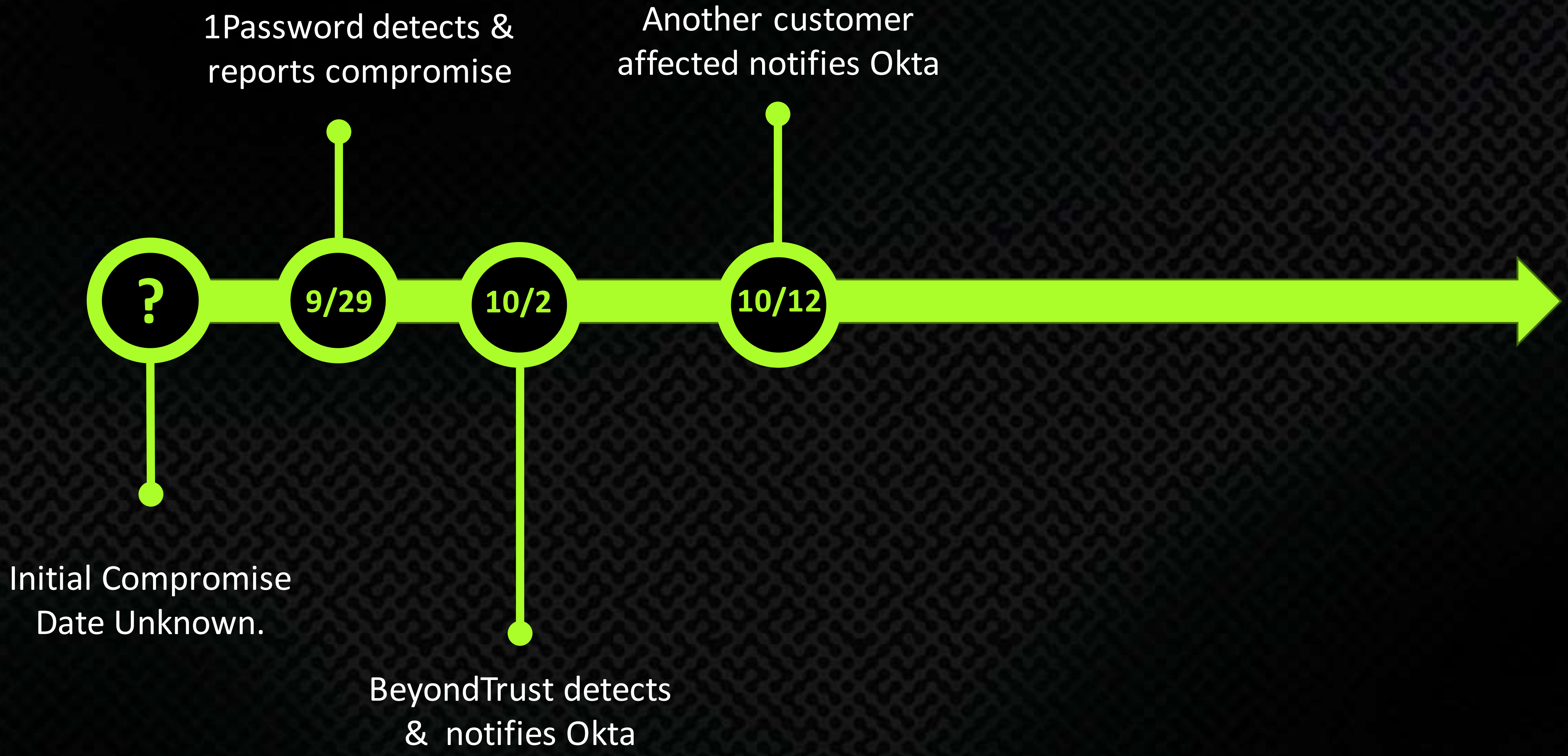

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BeyondTrust detects & notifies Okta

Another customer affected notifies Okta

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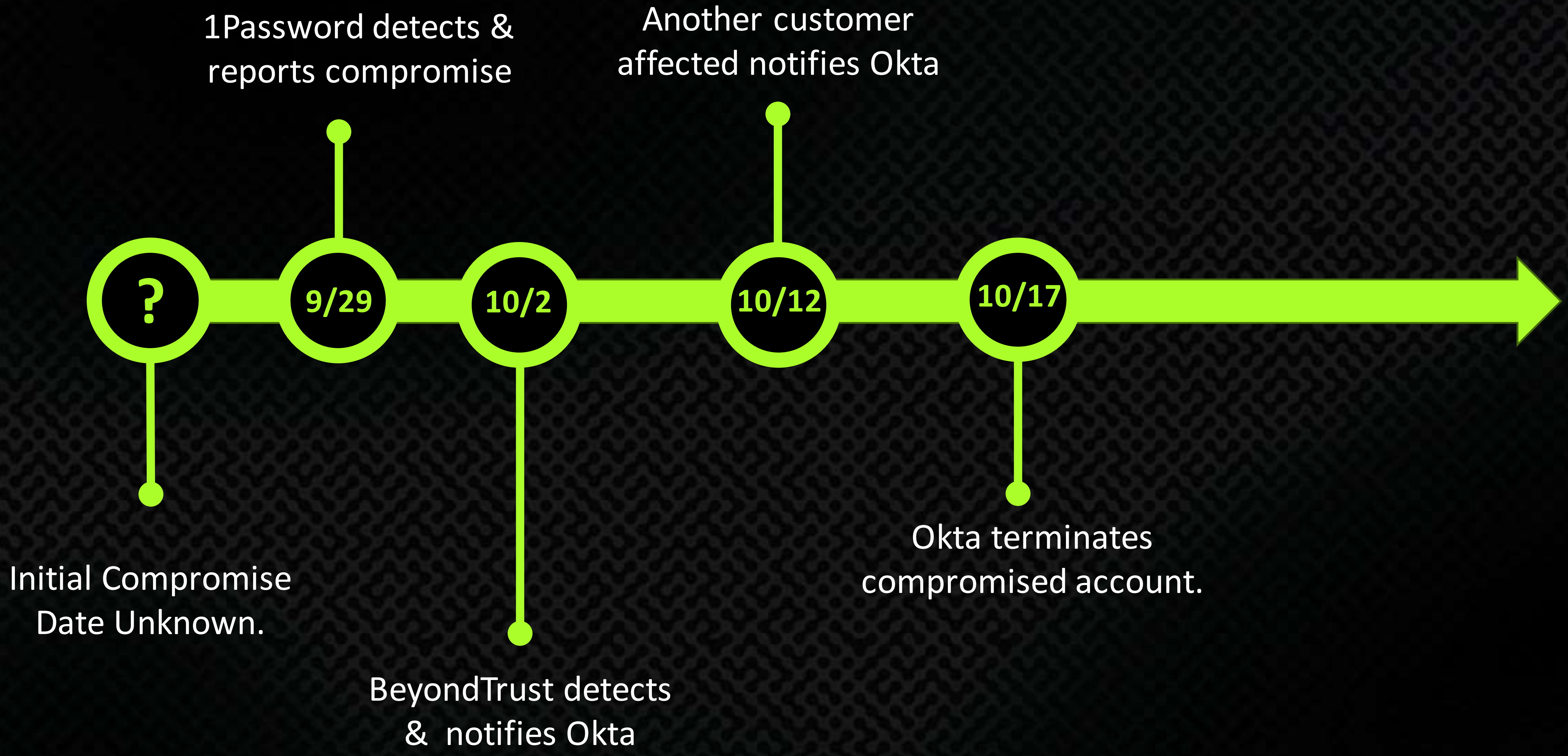

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Initial Compromise
Date Unknown.

9/29

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reports compromise

10/2

BeyondTrust detects
& notifies Okta

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Another customer
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Okta terminates
compromised account.

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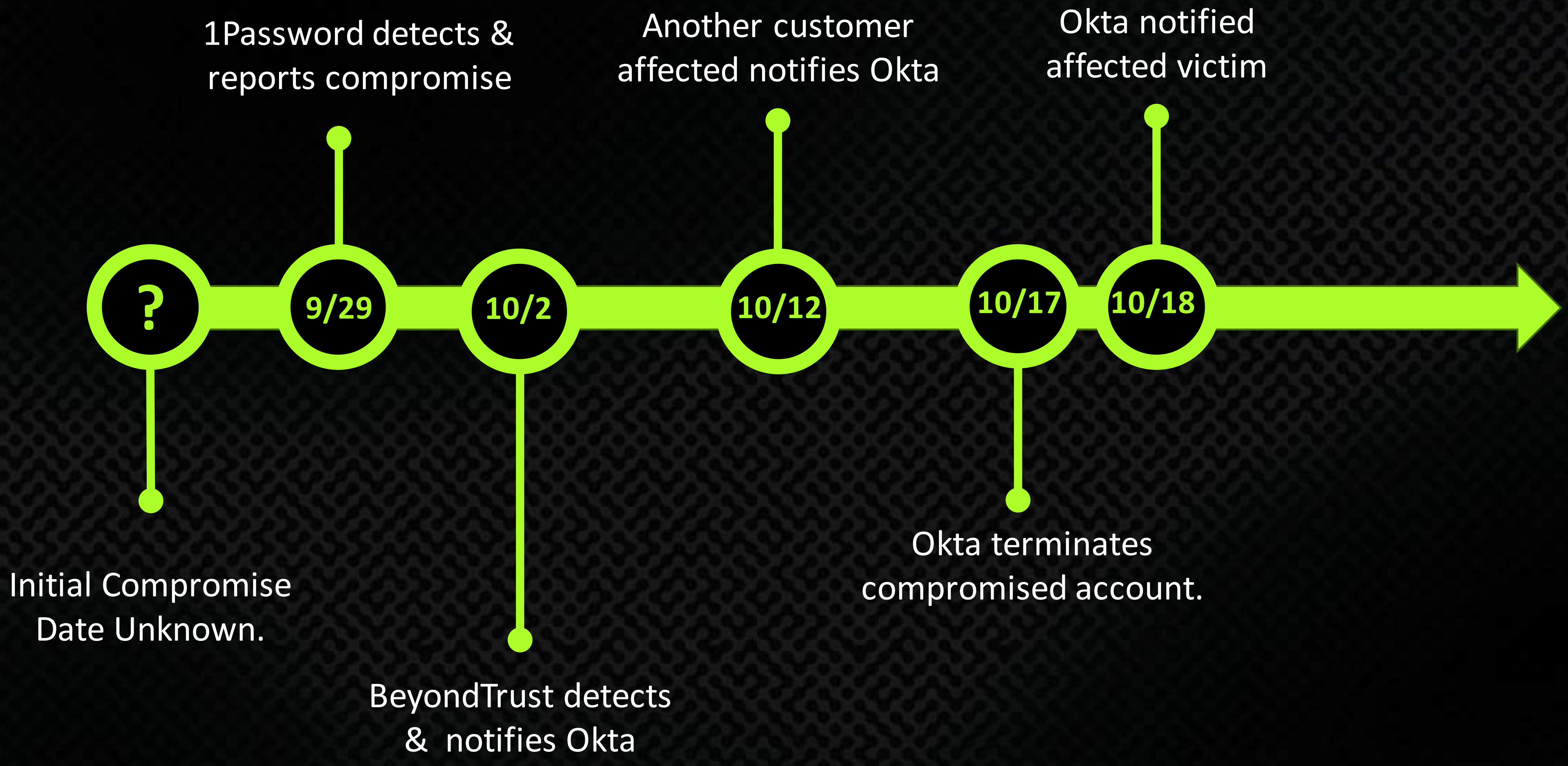

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Okta notified affected victim

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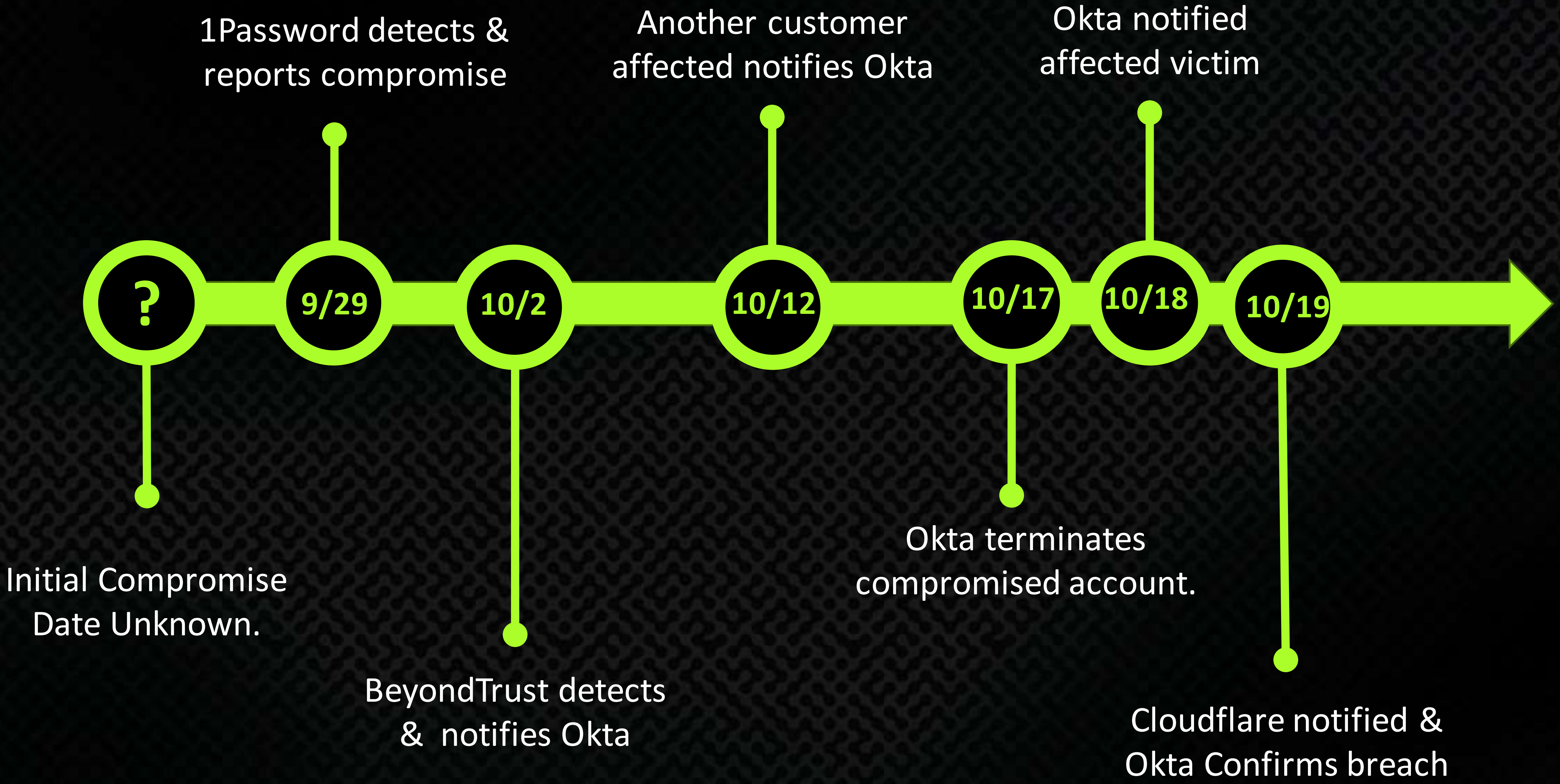

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Okta notified
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Cloudflare notified &
Okta Confirms breach

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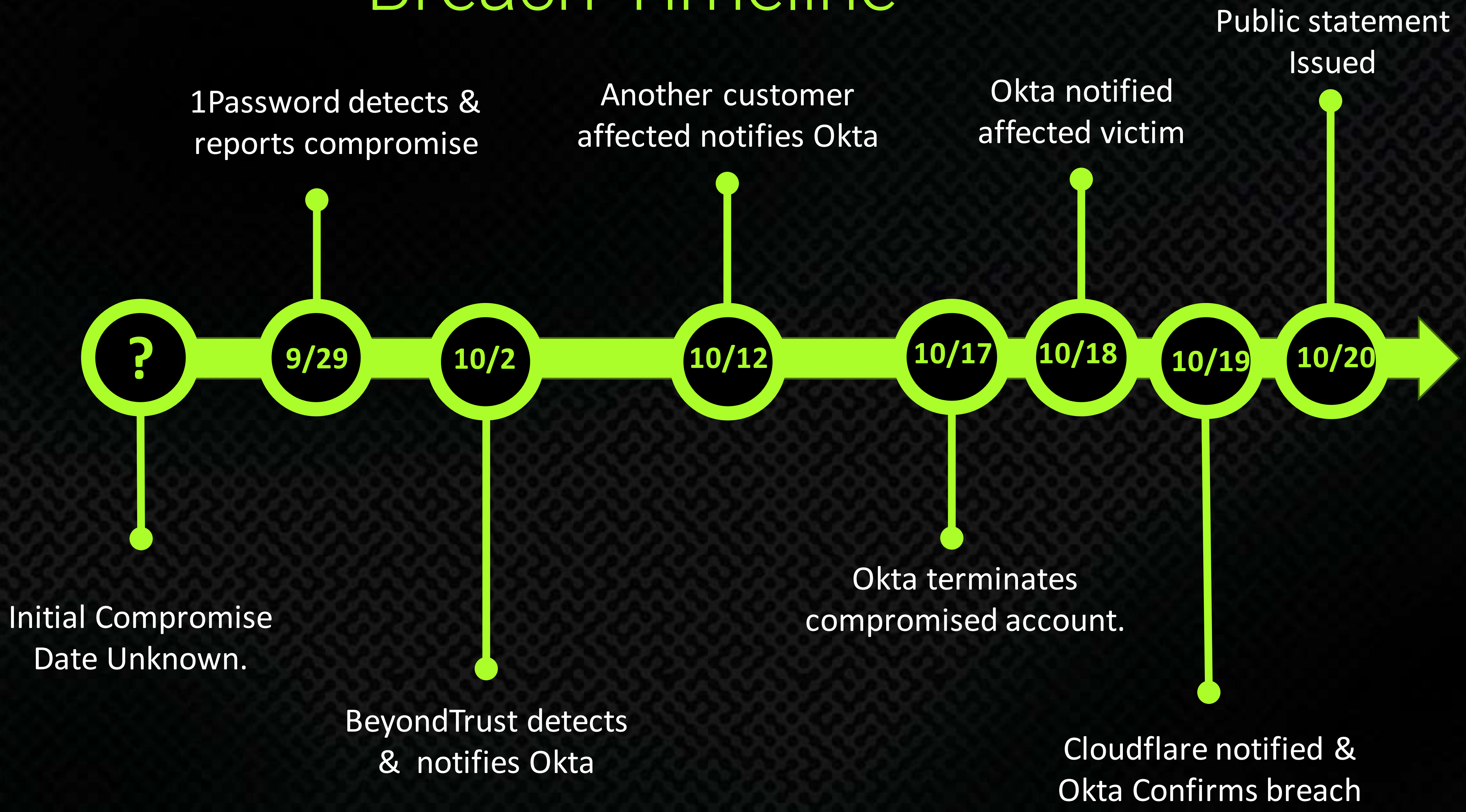

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- Sanitize HAR files
- Secure storage of privileged identities

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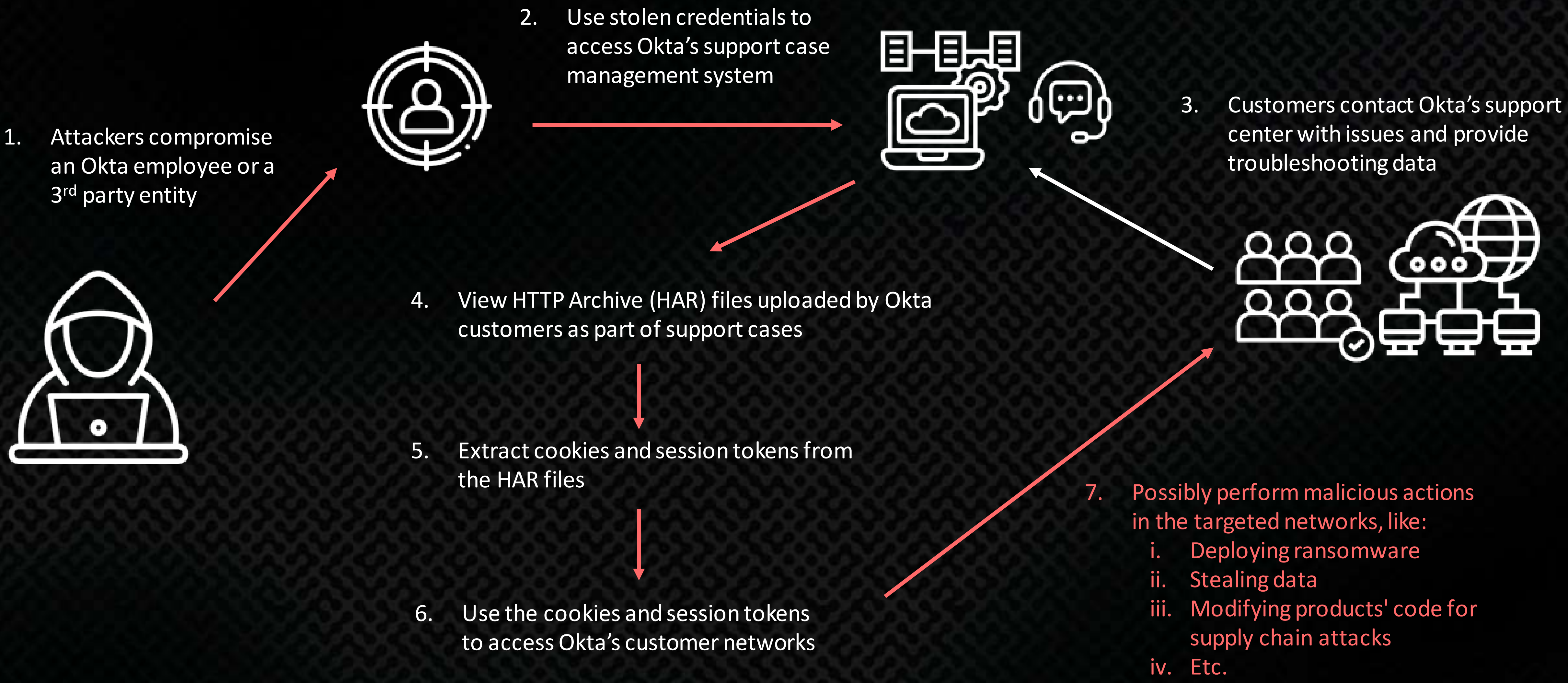

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