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#### MFA Bypass Techniques: The Evolving Threat

Jamie Tolles ZeroFox

Kamran Salour Lewis Brisbois









#### **Jamie Tolles**

VP Response ZeroFox



#### **Kamran Salour**

Partner Lewis Brisbois

#### Agenda

- MFA Overview
- Bypass methods
  - Social Engineering MFA codes
  - Social Engineering Replacement MFA Devices
  - Phish Kits
  - $\circ$  Infostealers
- Recommendations



#### Bypass methods: MFA Overview



### **Common Forms of MFA:**

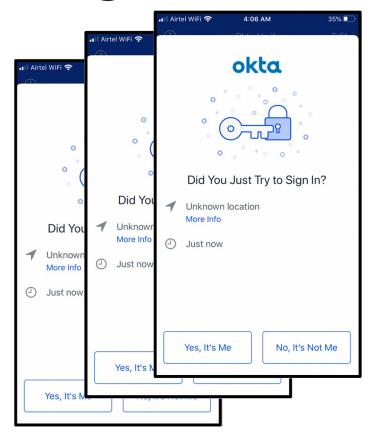
- Push notifications
- SMS
- Authenticator apps/soft tokens
- Voice
- Email
- Hardware token



#### Bypass methods: Social Engineering MFA Codes



#### **MFA Fatigue Attack:**



(I was spamming employee with push auth for over a hour) i then contacted him on WhatsApp and claimed to be from Uber IT, told him if he wants it to stop he must accept it 6:47 PM

And well, he accepted and I added my device  $_{6:47\ PM}$ 

Source: community.arubanetworks.com

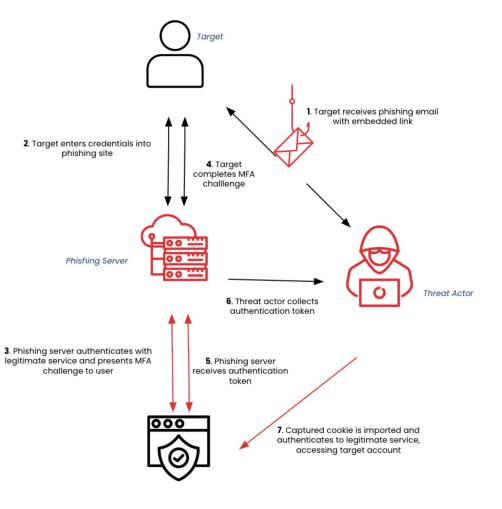
Source: bleepingcomputer.com

#### Bypass methods: Social Engineering MFA Codes



#### **Token theft example:**

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Legitimate Service Source: ZeroFox Intelligence

Source: jeffreyappel.nl

#### Bypass methods: Social Engineering Replacement MFA Devices

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#### Call to help desk

- Broken/lost phone
- Urgent task needing to be done
- Request to enroll new MFA device



#### **EvilGinx Demo**

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## Bypass methods:

Phish Kits (EvilGinx)

#### Bypass methods:

Infostealers (SapphireStealer)

#### **Infostealer Example**

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# Planet Stealer | #1 Affordable, Modern, Effective Infostealer by PlanetStealer Sunday March 3. 2024 is 0.444 PM Image: Stealer Image: Stealer Steale Code of the Stealer of the market, completely made in Go, and has lots of useful features. Image: March 2. 2024 Steals Code of the Stealer on the market, completely made in Go, and has lots of useful features. Image: Stealer is a new info-stealer on the market, completely made in Go, and has lots of useful features. Image: Steale Crypto wallet files both software wallets and browser extension wallets Image: Steale Crypto wallet files both software wallets and browser extension wallets Image: Steale Crypto wallet files for Tox, Signal, Telegram, Steam, Minecraft Launcher config files and also third party launcher config files Image: Steale Code wall Self Deletion Ability Image: Steale Code wall and builder Image: Steale Code wall and builder

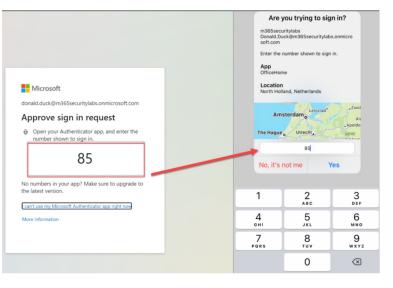
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Source: zerofox.com/blog/stealing-the-show-top-5-infostealer-trends/

#### Recommendations

- 1. Implement MFA using the strongest available method:
  - a. Hardware-based, phishing-resistant MFA (e.g., FIDO/WebAuthn/Passkeys)
  - Mobile app soft tokens (preferably push notification with number matching)
  - c. MFA via SMS or voice (when no other options are possible)
- 2. Disable legacy protocols and leverage conditional access policies
- 3. Managed devices should be required for authentication
- 4. Properly vet MFA enrollment requests. Extra scrutiny for privileged accounts!
- 5. Do not allow credential storage in browsers or allow browsers to sync with non-corporate devices







#### **Questions & Contacts**





#### Jamie Tolles

VP Response, ZeroFox jtolles@zerofox.com



#### Kamran Salour

Partner, Lewis Brisbois Kamran.Salour@lewisbrisbois.com