

Prove You Are You... In a Zero Trust World



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Technical Evangelist / Whitehat / BioHacker

CyberArk

Who Are You?



- How do you prove it?
 - Documentation
 - ID/Passport
 - Biometrics
 - Historical Data
- What State?
 - Physical
 - Digital

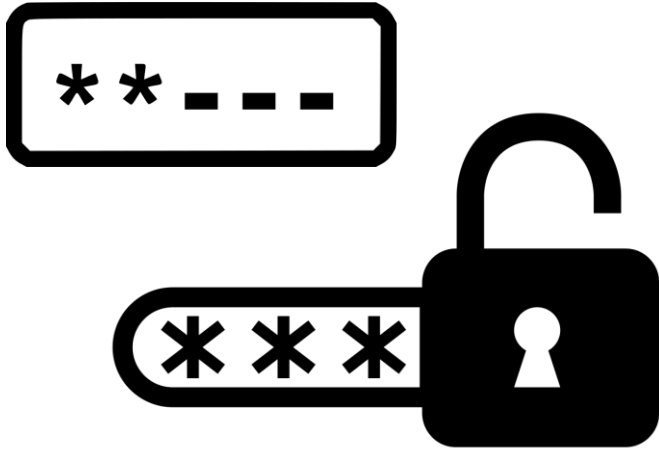
Zero Trust

Trust, but verify ...



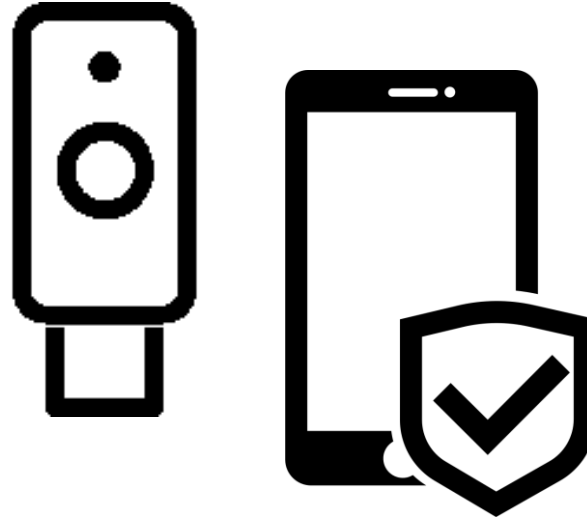
- Validate The User
- Validate The Device
- Intelligently Limit Access

What is MFA?



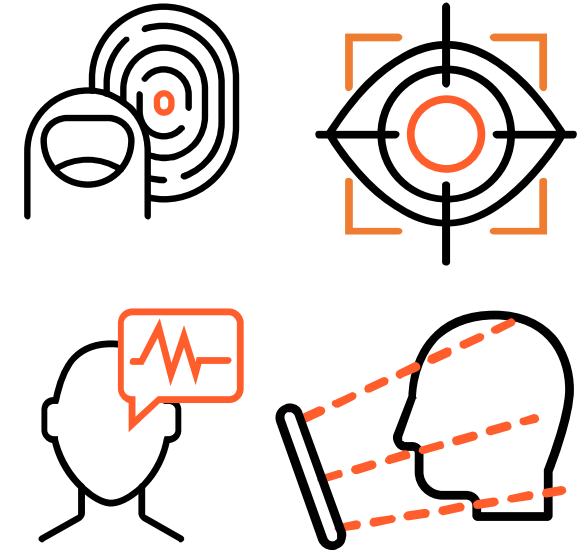
Something You Know

- Username
- Password/Passcode



Something You Have

- USB Key (Yubi, Piv, CAC)
- Mobile Device
- Implant.



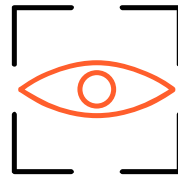
Something You Are

- Fingerprint
- Retinal / Iris Scan
- Facial Recognition

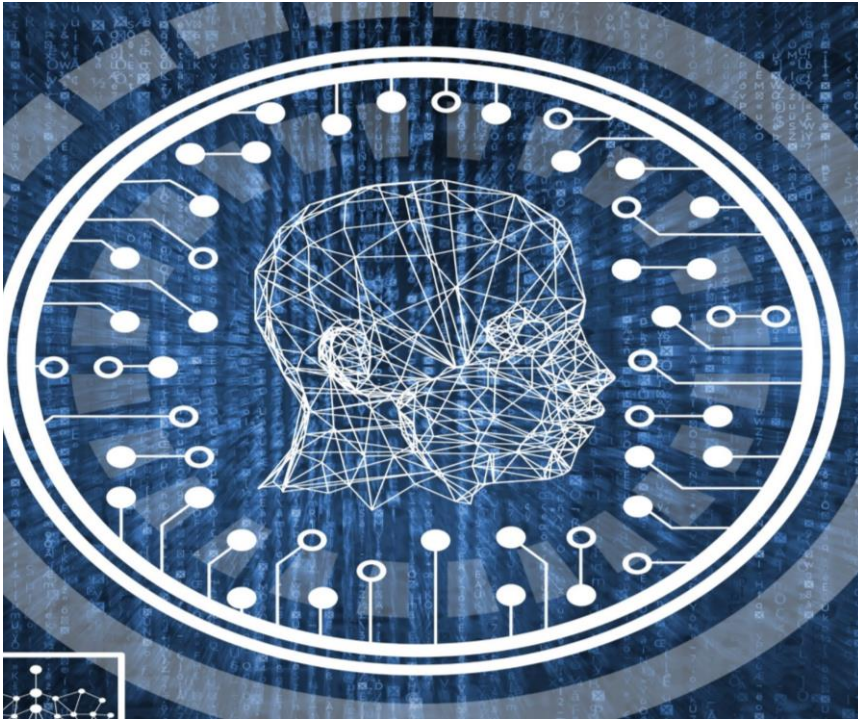
Biometrics

- Current Biometric Authentications

- Fingerprints
- Facial Recognition
- Eye Scans
- Voice Print



Biometrics & MFA



Most consumers were introduced to Biometrics via the mobile market

Biometric MFA Bypass

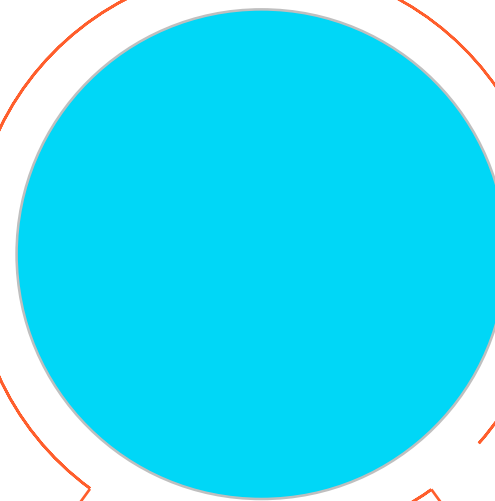


Retinal Scans

- High Res Photos
- Contact Lenses

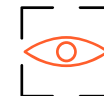
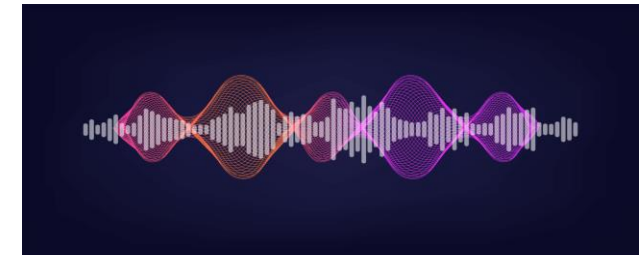


Now What



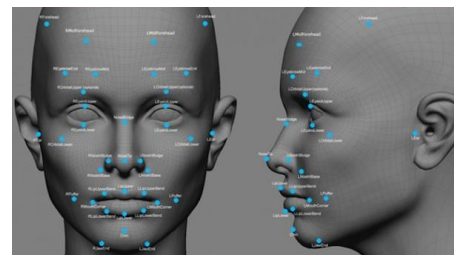
Voice Print

- Deep Fake



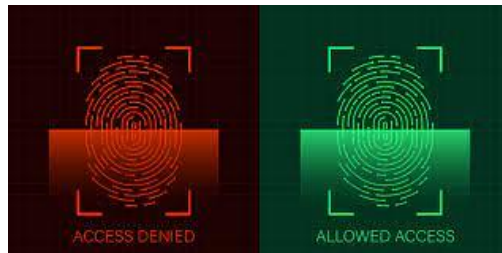
Facial Recognition

- Deep Fake
- AI/Machine Learning



Fingerprint Scan

- Digital Photo



Biometric Data Collection



- Attribute
 - Biometric Template
- Storage
 - On Device Storage
 - Server Storage
- Format
 - Portable Token
 - Distributed Data Storage
 - Biometric & Blockchain Data Storage
 - Tokenized Biometric Data

Data Models / Deep Fake / AI



Deep Fake Threat



A Deep Faked Elon Musk is Scamming People on YouTube

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BY ALICE HEARING

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Identity Value



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Price Usd

US

19

2

2021-08-27 18:25:54

2021-09-02 16:08:51

71.191...

Windows 10 Home

17.00

6.3 | 19.0

1 fingerprints

Browsers for Genesis Security:

Last update info: 2021-09-02 16:08:51

C401B4177825109E5F8150FF882AEEEE

edge

chrome

Cookies 408 (2021-08-27 18:56:18)

Cookies 47 (2021-08-27 18:56:18)

Configs 1:

Version Chrome 92 (Chrome 92.0.4515.159)

Config Update 2021-09-02 14:58:16

User Agent Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/92.0.4515.159 Safari/537.36

IP 66.176...

Resources: 19 = 1 18

Know resources: 11

Live 4 Amazon 2 Google 2 Netflix 1 Alibaba 1 Facebook 1

Other resources: 8

evoload.io 1 www.encuentra24.com 1 mls.foreclosure.com 1 learn.canvas.net 1

www.puntosreales.com 1 puntosreales.com 1 id.tigo.com 1 micuenta.tigo.com.ni 1

Last update Saved Logins: 2021-08-27 19:06:55

Last update Form Parser: 2021-08-30 07:34:10

Last update Inject Script: 1970-01-01 00:00:00

Source Of Truth



Additional Factors

- Add Heuristics
- Blockchain



Transhuman

- Bio Implants



New Industry

- IVAAS

Future Solution

- Make use of what we have today
 - Adaptive MFA
 - PKI / FIDO
 - IDS
 - Analytics
 - Next Generation Firewalls
 - PAM
 - Security Orchestration



Conclusion

We Are NOT Special Snowflakes

- Layered Security Approach
- Defense In Depth





THANK YOU!