Acceptto®

A SecureAuth Company

Next Generation Authentication Is Streaming!
Passwordless Continuous Auth.

Agenda

- Authentication A Single Event Or A Continuum?
  - Binary Auth Is Like a Bad Habit
  - All Evil Happens Post-Authorization
- Overview of the limitations of conventional binary authentication
  - MFA Fatigue
  - Where Is Your Enteprise On Authentication Spectrum
- Discuss the trifecta of benefits of Next Generation Continuous Authentication
  - Lower Cost
  - Lower Friction
  - Passwordless: Higher Security
- Behavioral-Based Authentication Architecture Overview
- Team Discussion: “We have seen a thing or two”:

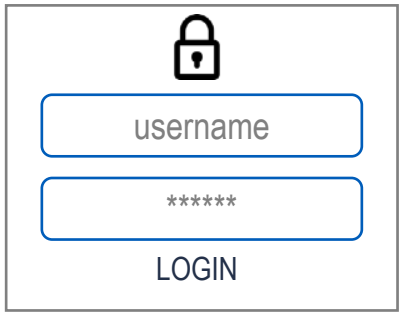
Copyright © 2020 Acceptto Corporation. All rights reserved.

Authentication Is Not A Single Event, With A Password And A Binary MFA

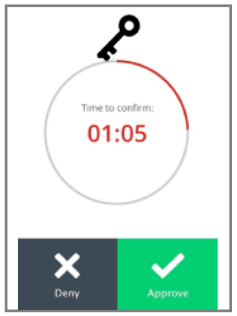
But A Continuum

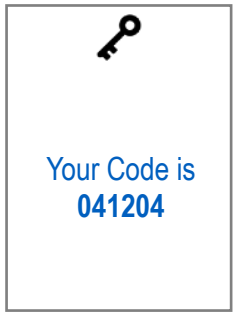
Copyright © 2021 Acceptto Corporation. All rights reserved.

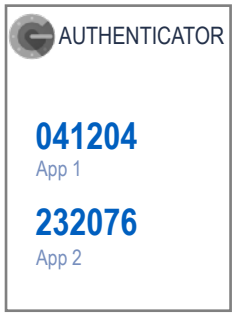
USING LEGACY AUTHENTICATION TECHNOLOGIES WHICH FALL SHORT IS HIGH RISK!



Passwords present **friction**
Inherently **insecure** and could be **stolen**
Costly to maintain and reset

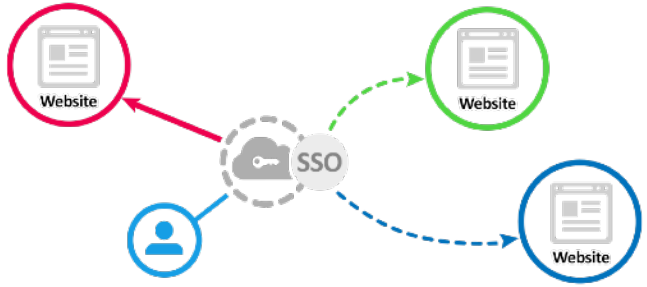






2nd factor token adds **friction**
Does not protect user from **stolen device, SIM-swapping**

Password managers only help with ”forgot passwords”
Require individual adoption



SSO reduces friction
Does not increase security or protection

Copyright © 2021 Acceptto Corporation. All rights reserved.

Binary Auth Is Like A Bad Habit

Unlearning Bad Habits Is Hard

Psychologists have simple trick to advanced models to enable learninIg good habits and unlearning bad habits: For any activity, our brain comprehends it as "trigger, behavior, reward". Idea is to continuously develop multiple triggers to perform the same activity securely. And we detect and recognize it to a point we recognize anomalies when faked.

Should Access and Control become smarter and do the same?

Copyright © 2021 Acceptto Corporation. All rights reserved.

And All **Evil** happens
Post-Authorization

81% of all data breaches are caused by passwords

$8.2M average cost of a data breach in the US

1/3 of data breach costs continued after 1yr post breach

Resetting passwords could cost up to $50 per user per incident

Copyright © 2021 Acceptto Corporation. All rights reserved.

11Factor

https://dev.11factor.com

11Factor

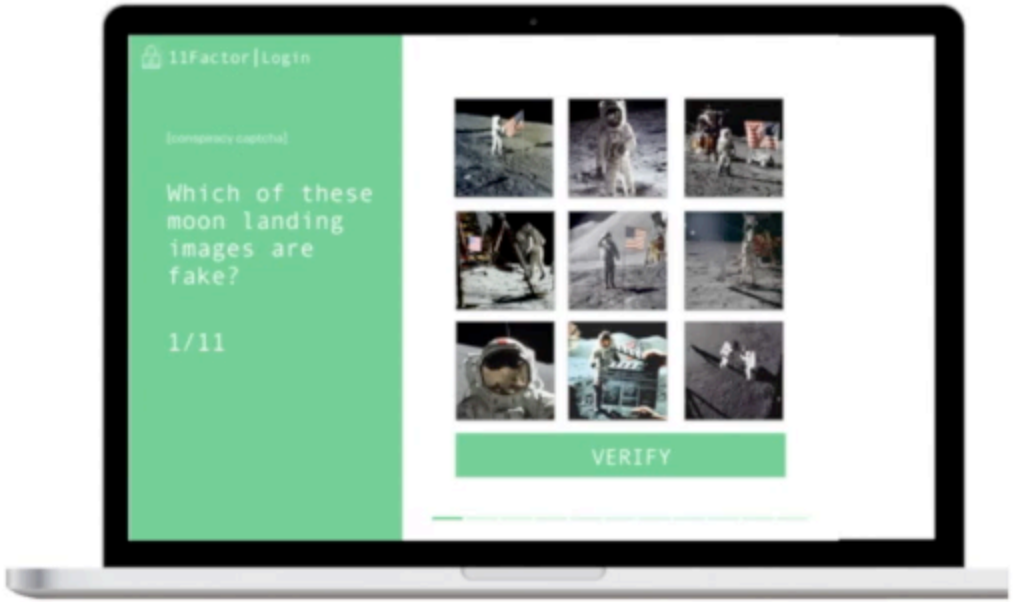
Log In | Create Account

WATCH & SAY NO TO CRAZY SOLUTIONS LIKE THIS!

The most secure, friction-filled password manager of all time.

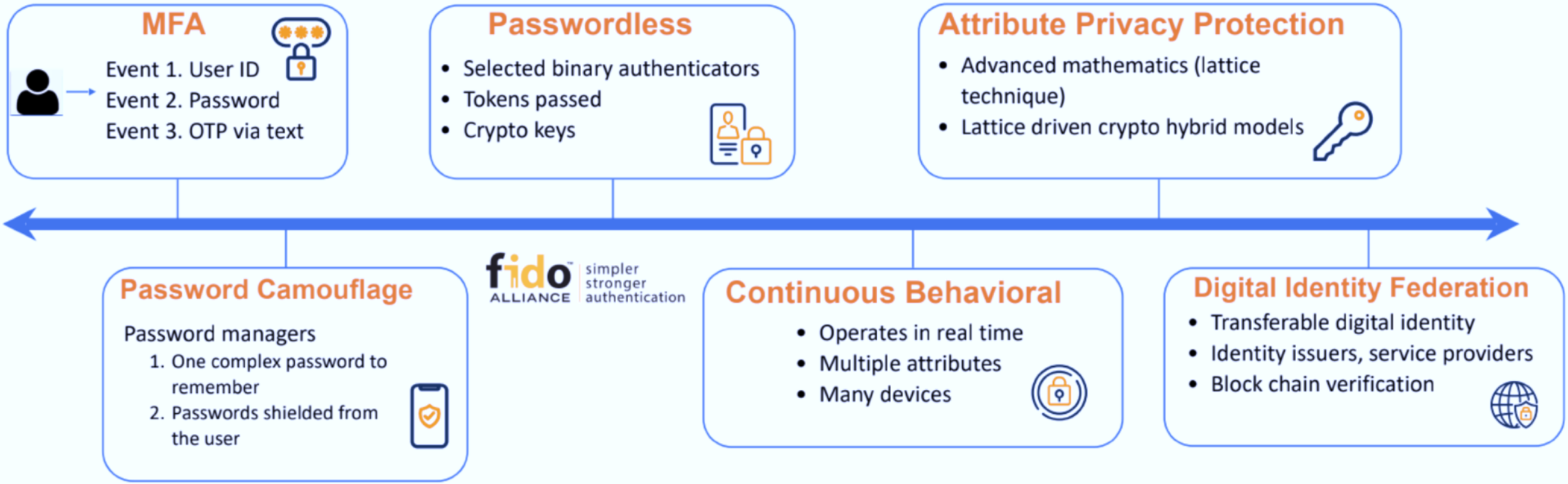
11 Factor remembers all your passwords for you, and then makes it basically **impossible for anyone (including you) to retrieve them**.

LEARN MORE | Get Started



Authentication Spectrum:

What Assets Your Enterprise Has Today vs. Needs To Acquire In The Next 1-5 Years?

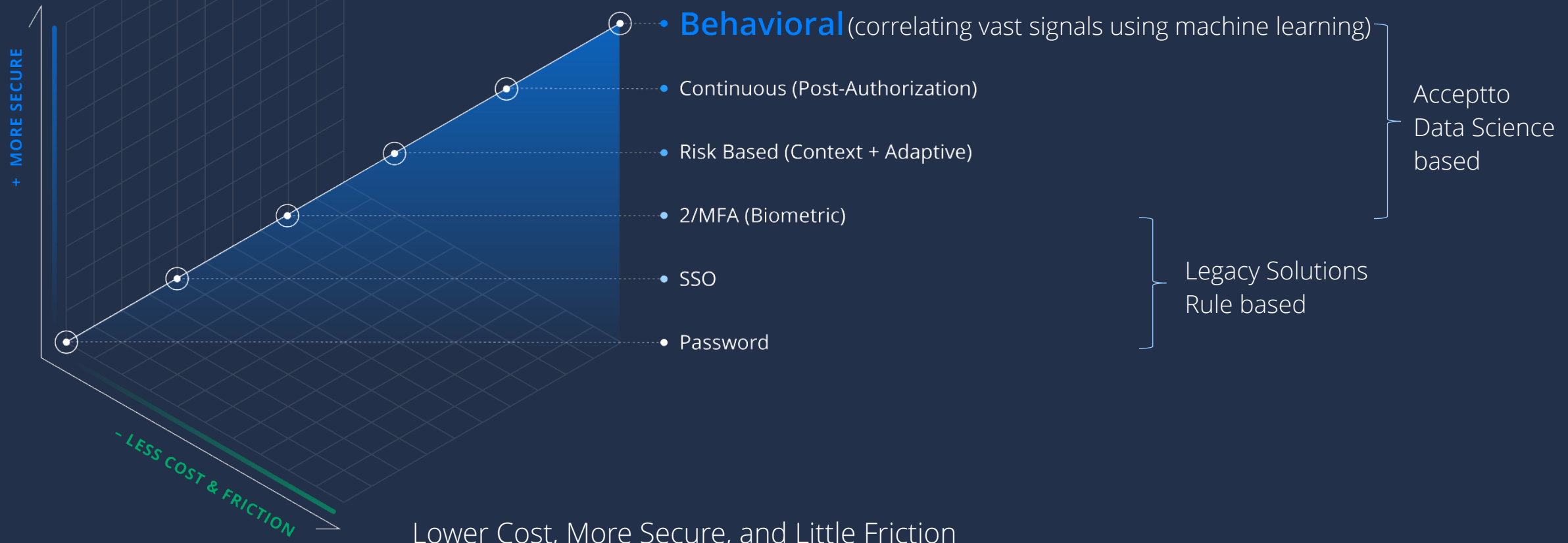


*Credit: Jim Routh

TRIFECTA OF LOWER COST, LOWER FRICTION AND HIGHER SECURITY:

DATA SCIENCE IS THE HOLY GRAIL OF NEXT GENERATION AUTHENTICATION

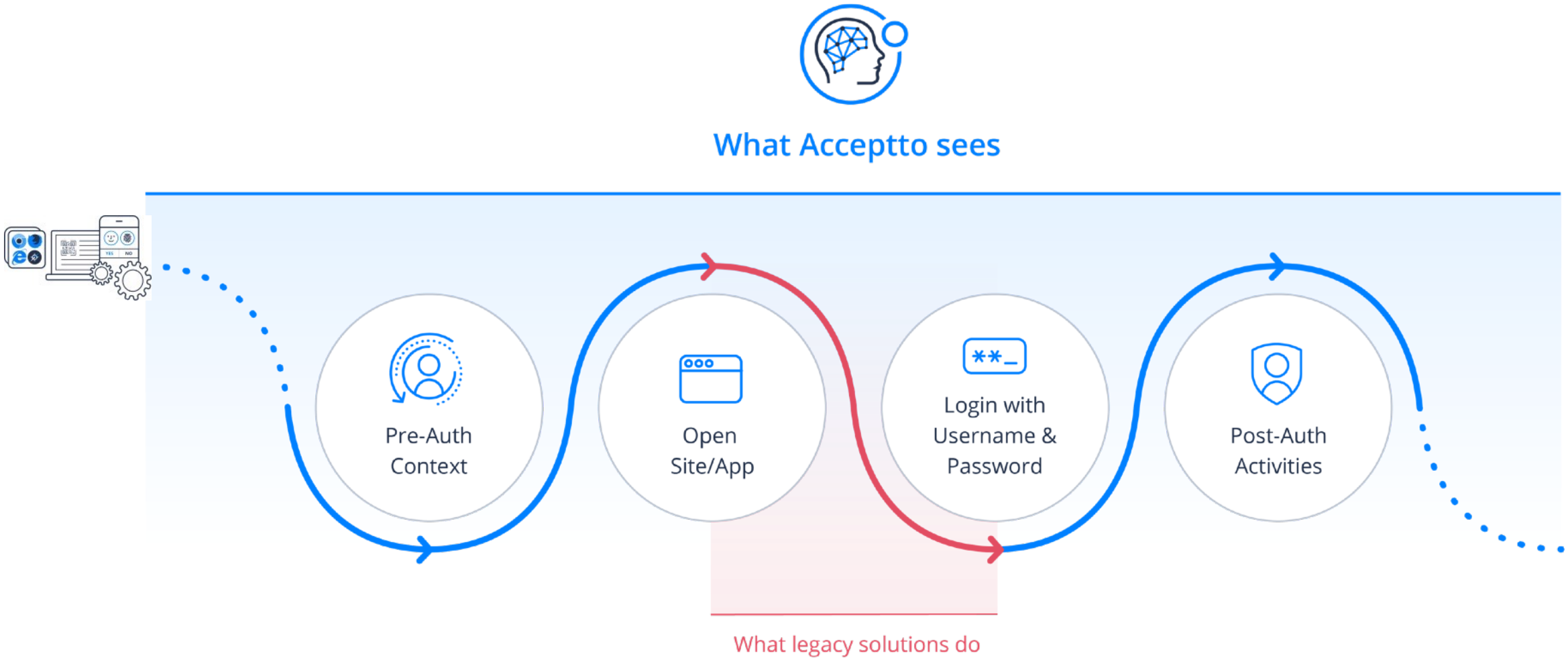
Security Maturity Model



Lower Cost, More Secure, and Little Friction

Copyright © 2021 Acceptto Corporation. All rights reserved.

AIML DELIVERS UNMATCHED VISIBILITY vs LEGACY BINARY APPROACH?



Copyright © 2021 Acceptto Corporation. All rights reserved.

CONTINUOUS AUTHENTICATION:
CROSSING LOGICAL & PHYSICAL BOUNDARIES

People + Devices, Applications, Browsers & IoT + Context & Behavior = Continuous Authentication @Runtime

Patent-backed machine learning algorithms that enrich authentication perpetually

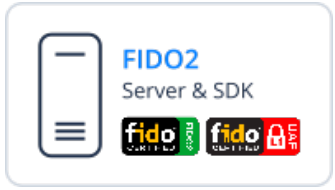
Copyright © 2021 Acceptto Corporation. All rights reserved.

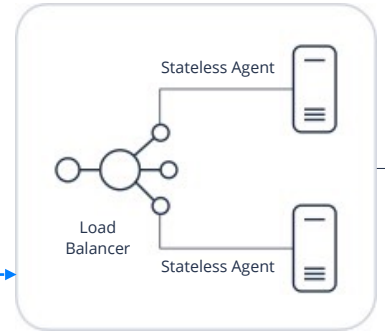
Core Technology

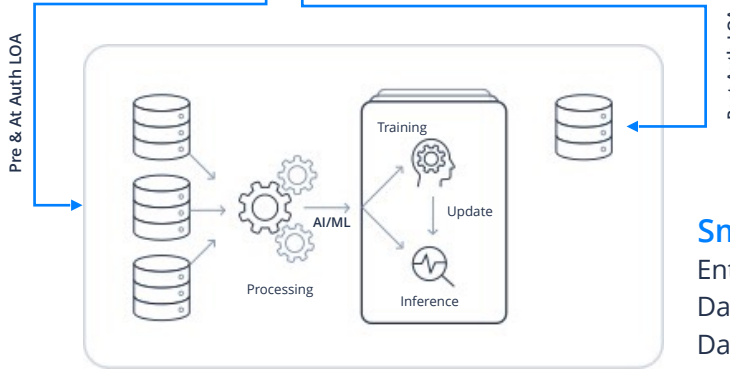
Modular Building Blocks

Device ID.
Device Trust & Telemetry
Web, Mobile & Workstation

Low Friction Smart MFA







Integration & Extensibility
Enterprise AD/User Dir.
REST API, Call Center Integration
Smart MFA & PACS(HID et al)

Smart Data Hub
Enterprise & 3rd Party Data Exchange
Data Intelligence and Identity Analytics

Copyright © 2021 Acceptto Corporation. All rights reserved.

Next Gen Authentication Checklist:

Passwordless Continuous Authentication: Zero Trust + Frictionless + Privacy + Compliance & Audit

- **Continuous derived credentials**
  - Binded mobile devices, browsers and workstations
  - Behavioral analytics
  - Edge biometrics
- **Data Science approach for both streaming and batch analysis**
  - Pluggable 3rd-party ML risk engines
  - Omni data sources - Acceptto, enterprise, 3rd-party
- **User device management - agents, APIs / SDKs**
- **Interoperability / future-proofing (e.g. FIDO-WebAuthn)**
- **Enterprise signal-to-noise ratio configurability (friction vs. control)**
  - Zero False Positive (single false positive means breach)
  - Throttle false negatives: 0.0005%-0.002% (False Negatives = Unwarranted Step-Up”
  - Dynamic Level of Assurance (DLOA) Is Key
- **Embedded Policy Orchestration**

Copyright © 2020 Acceptto Corporation. All rights reserved.

How Easy Is It To Transition From Password to Passwordless?

```
demo_app > __init__.py > ...
1   MFA_ON = True
2   PASSWORDLESS = True
3
```

templates > login.html > form#login-form

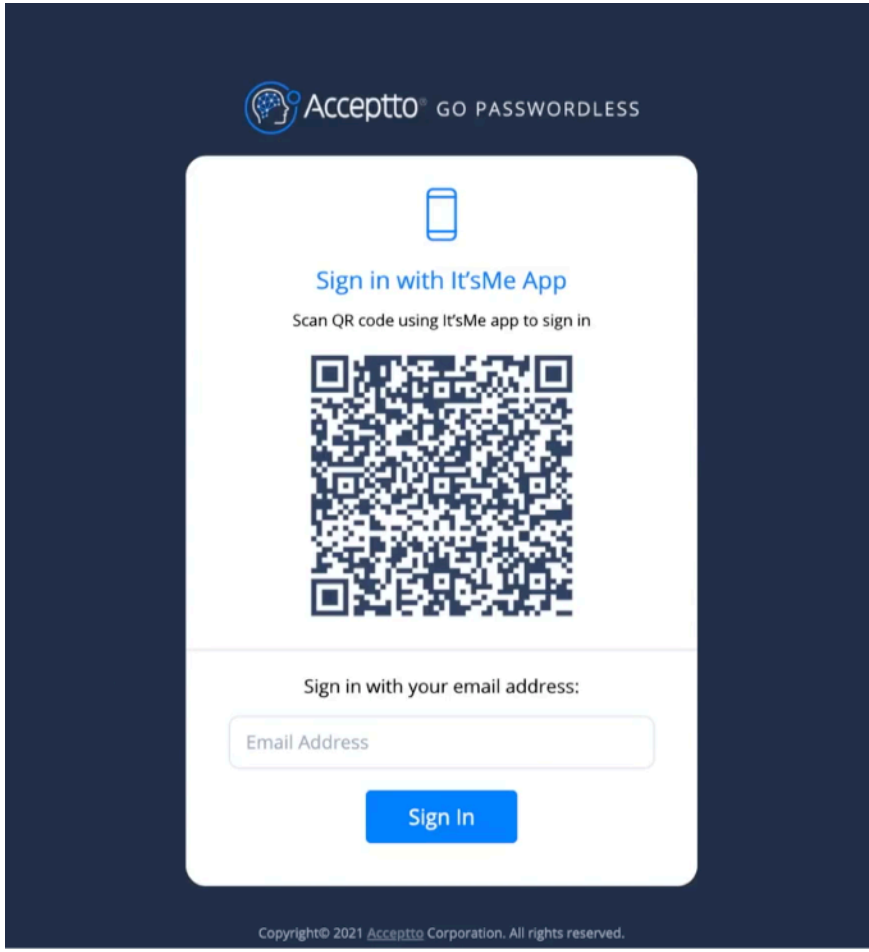
```
{% extends "login-template.html" %}
{% load i18n %}
{{ form.media }}
{% block content %}
 <form action="{{ app_path }}"  method="post" id="login-form"> {% csrf_token %}
   <!-- <div class="w-full text-center mt-2 overflow-hidden">
     <img  src='/static/images/phone-icon.svg' class='mx-auto my-4 w-10 h-10' alt="phone">
     <h3 class="blue text-lg mb-2">Sign in with It'sMe App</h3>
     <p class="text-xs">Scan QR code using It'sMe app to sign in</p>
     <img id="login_qrcode" src='/static/images/chart.jpg'  class='text-center  my-0 rounded-lg mx-auto' alt="qrcode">
   </div>
   <hr class="mb-2 mt-2 border-t"  /> -->
   <div class="mb-4 text-left pb-2 px-4 sm:px-8 ">
       {% for message in messages %}
           <div class="border-l-4 {{ message.tags }} text-left text-xs py-2 px-2" role="alert">
       {{ message }}
           </div>
       {% endfor %}
         <p class="text-center text-sm mt-4 mb-2" >Sign in with your email address:</p>
         <div class="text-center relative">
           {{ form.username }}
           {{ form.password }}
           <button class='btn border-none text-white object-cover px-8 mt-4 rounded'  type="submit"  name="submit">Sign In</butt
         </div>
       </div>
 </form>

<script type="text/javascript">
$(() => {

   let uid =  "{{app_uid}}";
   let callbackUrl = "{{url}}"
   let faye = new Faye.Client("https://faye.acceptto.com/faye");
   let hex1 = Math.floor(Math.random()*16777215).toString(16);
   let hex2 = Math.floor(Math.random()*16777215).toString(16);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL 1: Python

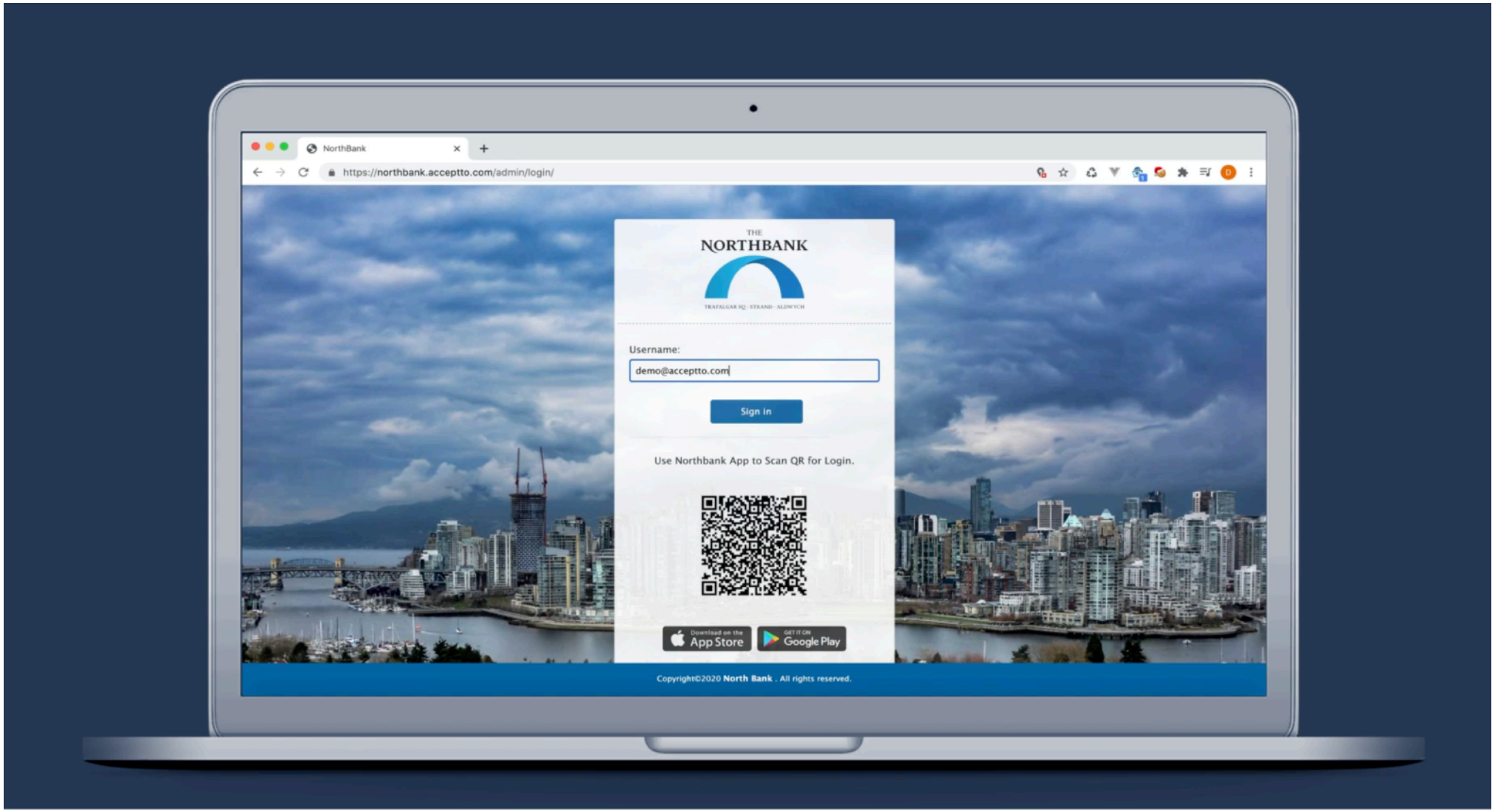
```
[22/Jun/2021 01:24:22] "POST / HTTP/1.1" 302 0
[22/Jun/2021 01:24:22] "GET /mfa HTTP/1.1" 301 0
pending
[22/Jun/2021 01:24:23] "GET /mfa/ HTTP/1.1" 200 6427
approved
[22/Jun/2021 01:24:28] "GET /mfa/ HTTP/1.1" 302 0
[22/Jun/2021 01:24:28] "GET /dashboard HTTP/1.1" 301 0
[22/Jun/2021 01:24:28] "GET /dashboard/ HTTP/1.1" 200 23250
```



[Easy Configuration : Go Passwordless Web In 3 Mins]

Copyright © 2020 Acceptto Corporation. All rights reserved.

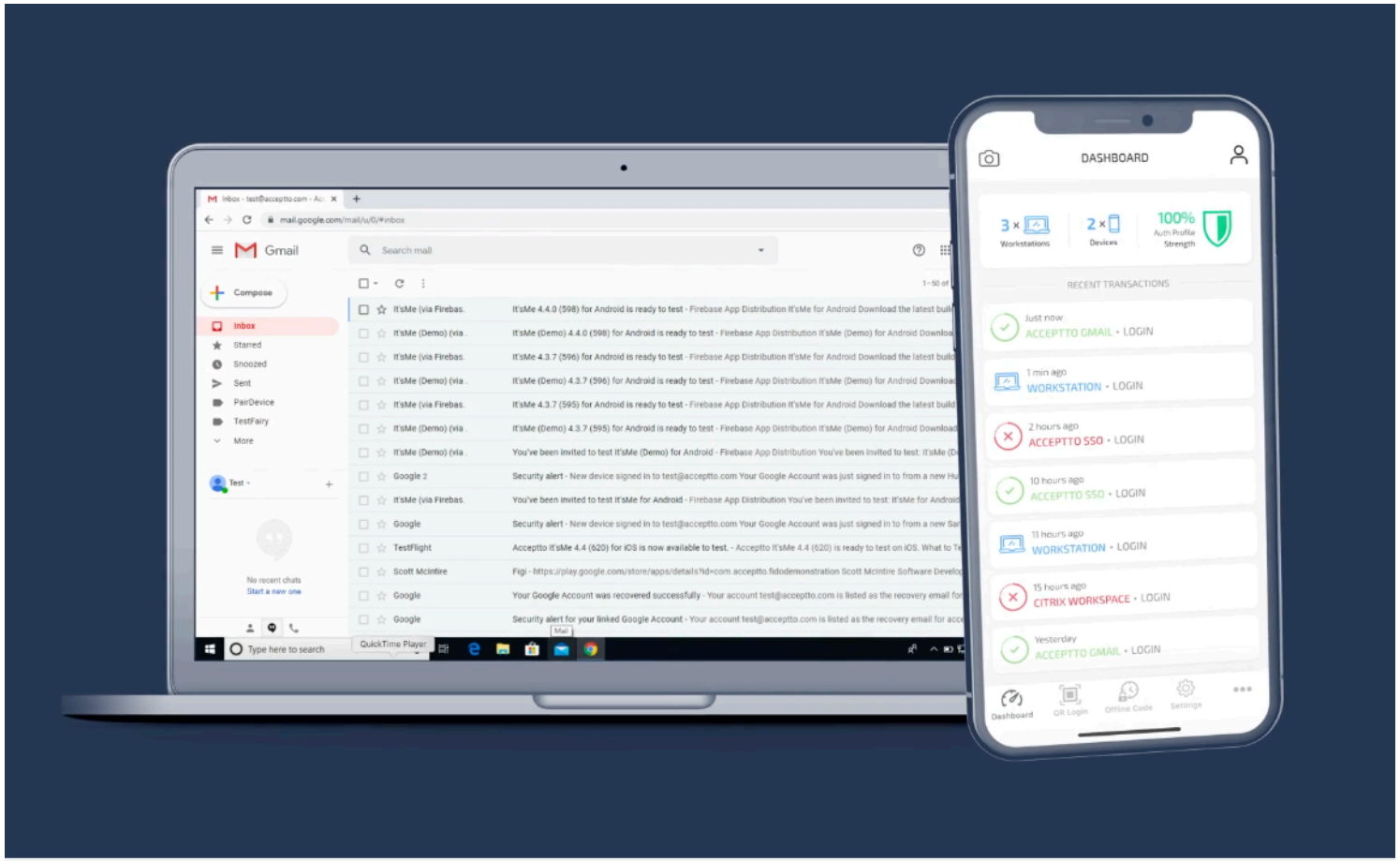
Passwordless With Intelligent MFA UI/UX

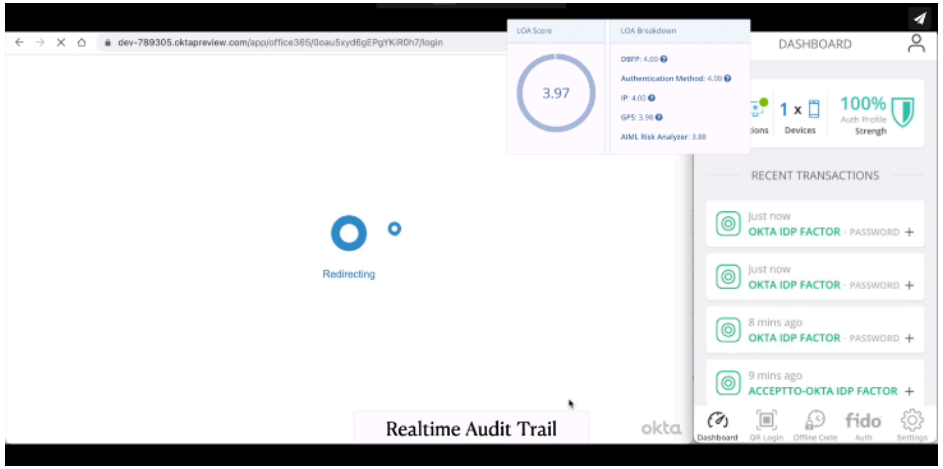


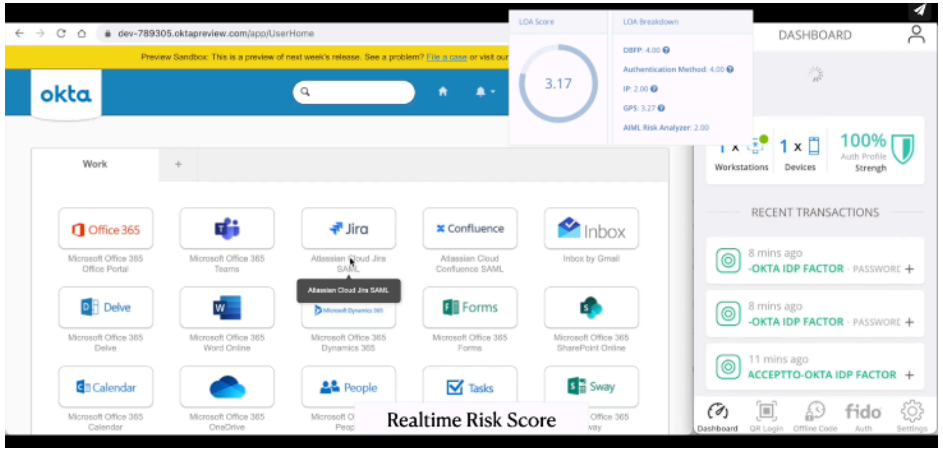
[Passwordless Context-Aware Web Login]

Copyright © 2020 Acceptto Corporation. All rights reserved.

Realtime Risk Score & Audit From End-Point To SaaS App!



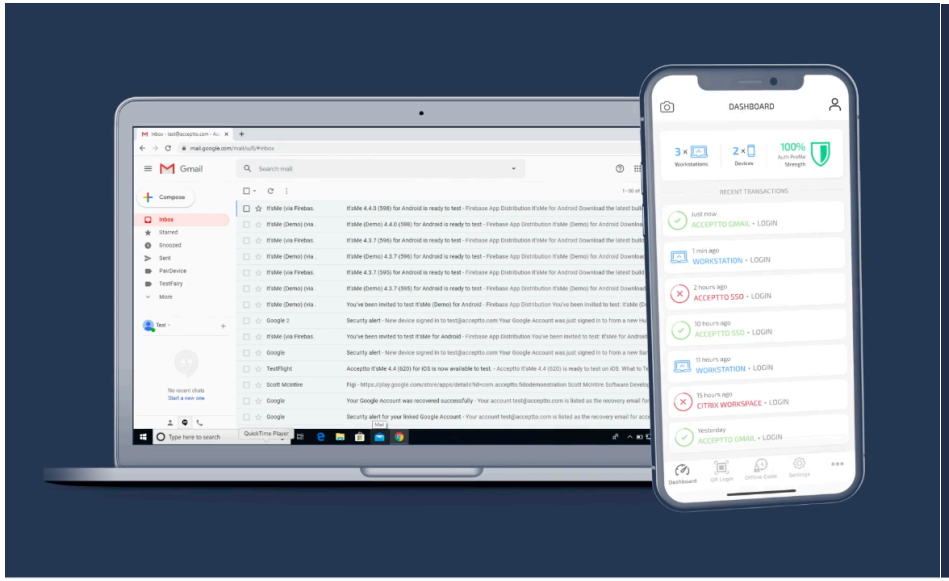


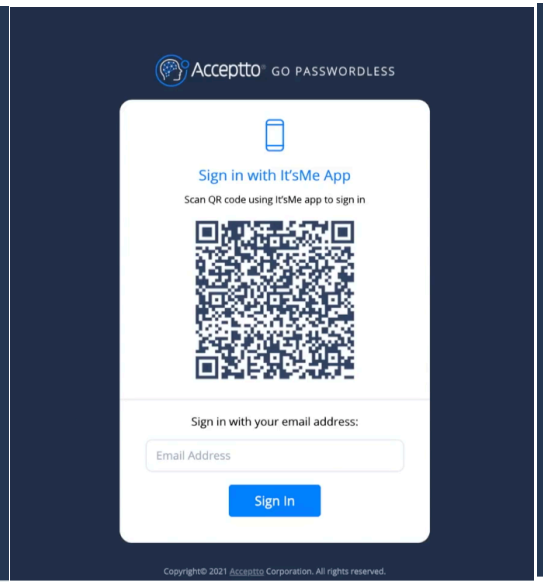


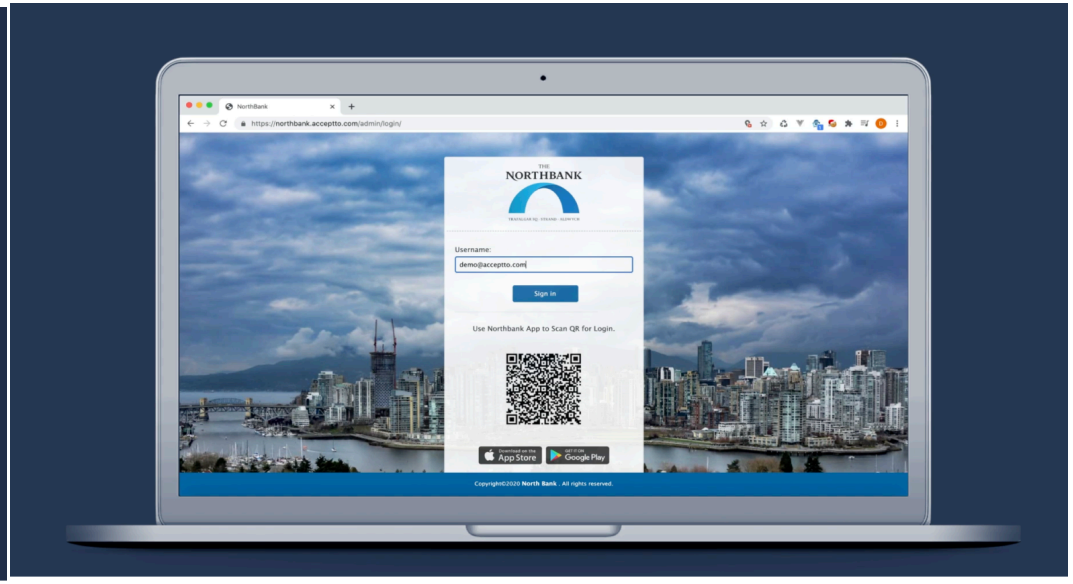
Workforce Passwordless Continuous Auth + Passwordless SSO including 3rd Party SSO, with 3rd Party-Dynamic Risk Score .Easy 3RD Pary Integration. Sim Swap detection

Copyright © 2020 Acceptto Corporation. All rights reserved.

Can I go Passwordless everywhere (Mobile, Web, Workstation, SSO,...)







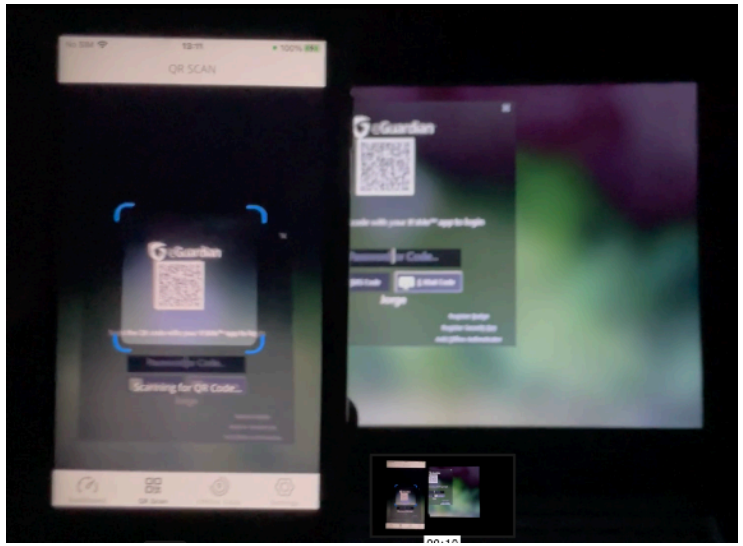
Workforce Passwordless Continuous Auth + Passwordless SSO

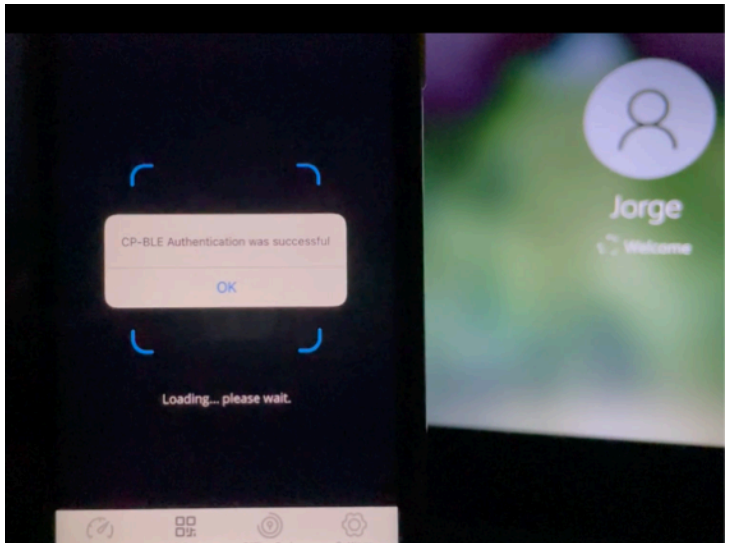
Easy Configuration : Go Passwordless Web In 3 Mins

CIAM: Passwordless Context-Aware Web Login

Copyright © 2020 Acceptto Corporation. All rights reserved.

How Does Continuous Auth Work For Offline/Prox Logins?





Passwordless Login to SAMLed app (e.g. Citrix) using QR + WebAuthn (Biometric, Ble, Security Key).

Passwordless QR Scan+Ble_Auth login to any workstations (Note QR factor can be replaced with any other factors, e.g. Push to initiate the Ble Proximity check)

Risk-Based Factor Sequencing to unlock Workstation QRE+BLE+Hello+Password/Passphrase

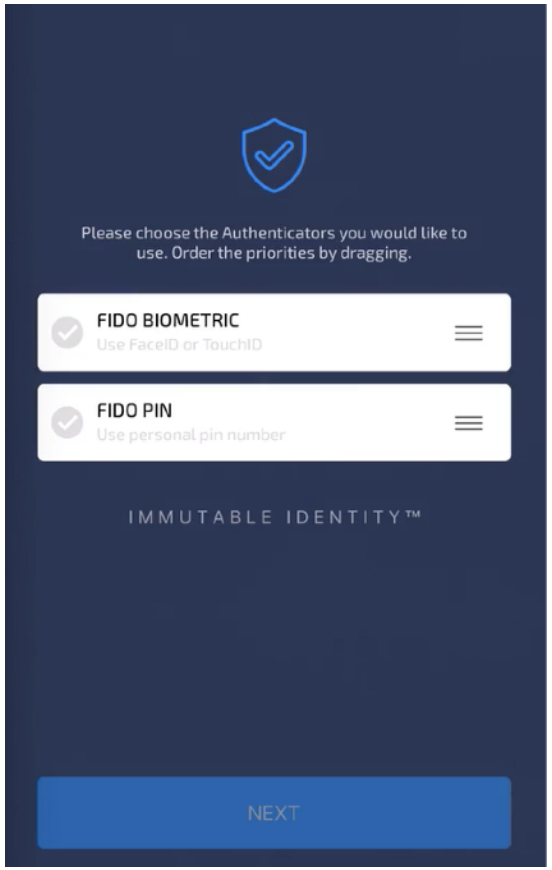
Risk-Based **Factor Sequencing** to unlock Workstation and subsequent login to SAMLed app (e.g. Citrix) using QR-Ble + Hello + Password Auth.

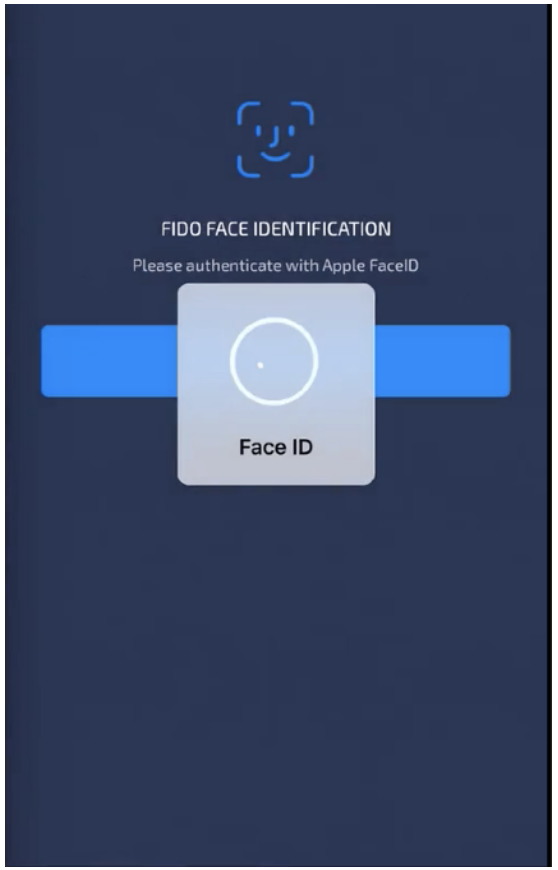
Copyright © 2020 Acceptto Corporation. All rights reserved.

How easy is it for users to enable Passwordless Mobile?

Origin Auth Starting Point	Authenticators *Something You Are*	Implementation Method
Mobile App	PIN *Something You Know*	Mobile app with Acceptto FIDO2 SDK
	Phone Biometric *Something You Are*	

- SDK & FIDO Servers are FIDO WebAuthn Certified
- SDK Manager Supports Easy App Integration
  - Key management with secure storage
  - Authenticator user preferences & ordering
  - Registration/Authentication selection
- One-call solution
  - Full registration/authentication process, yet fully customizable

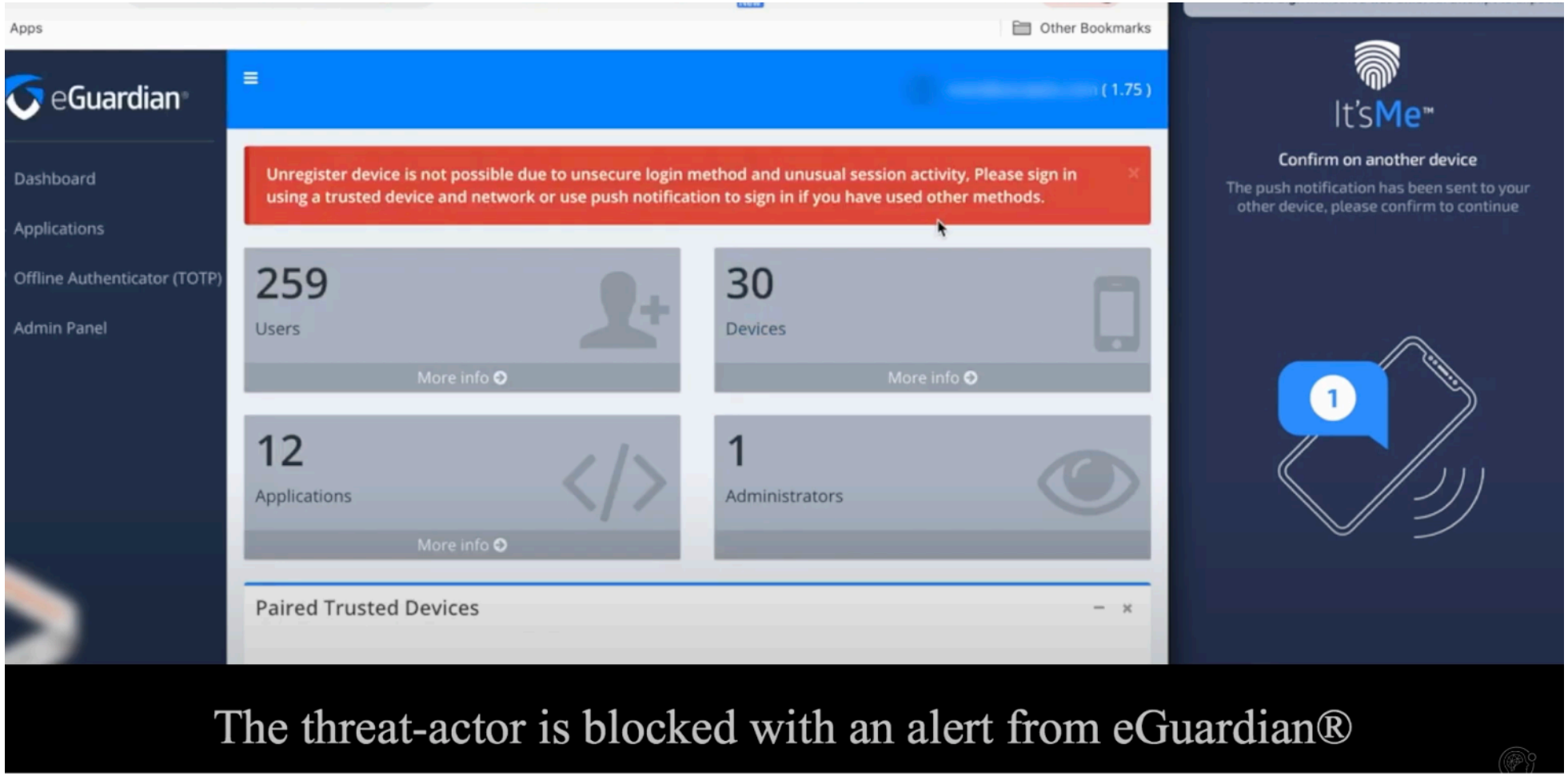




[FIDO SDK Integration Demo App]

Copyright © 2020 Acceptto Corporation. All rights reserved.

SMS has a set of vulnerabilities including the ultimate ATO via SIM-SWAP? Do you protect against SIM-SWAP?

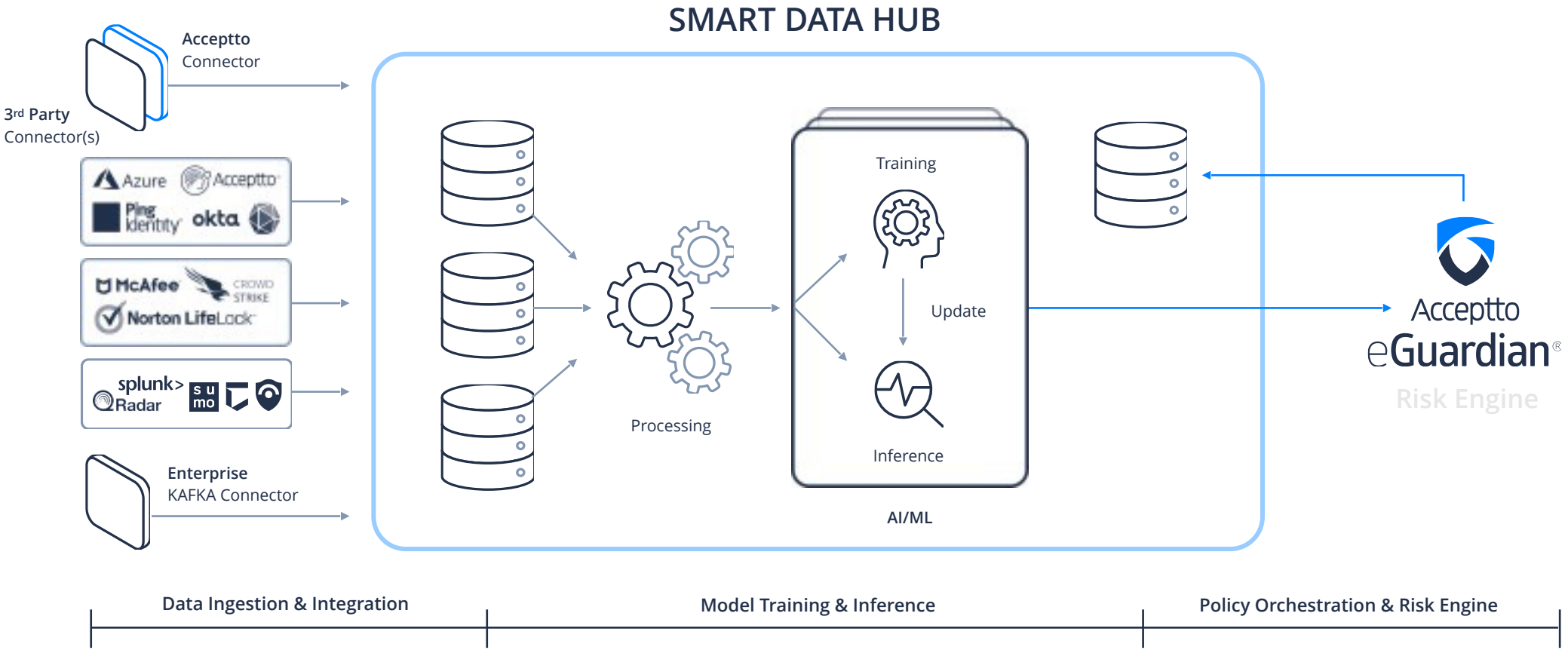


Sim Swap detection

Copyright © 2020 Acceptto Corporation. All rights reserved.

Backup

Smart Data Hub | Anomaly Detection → Authentication

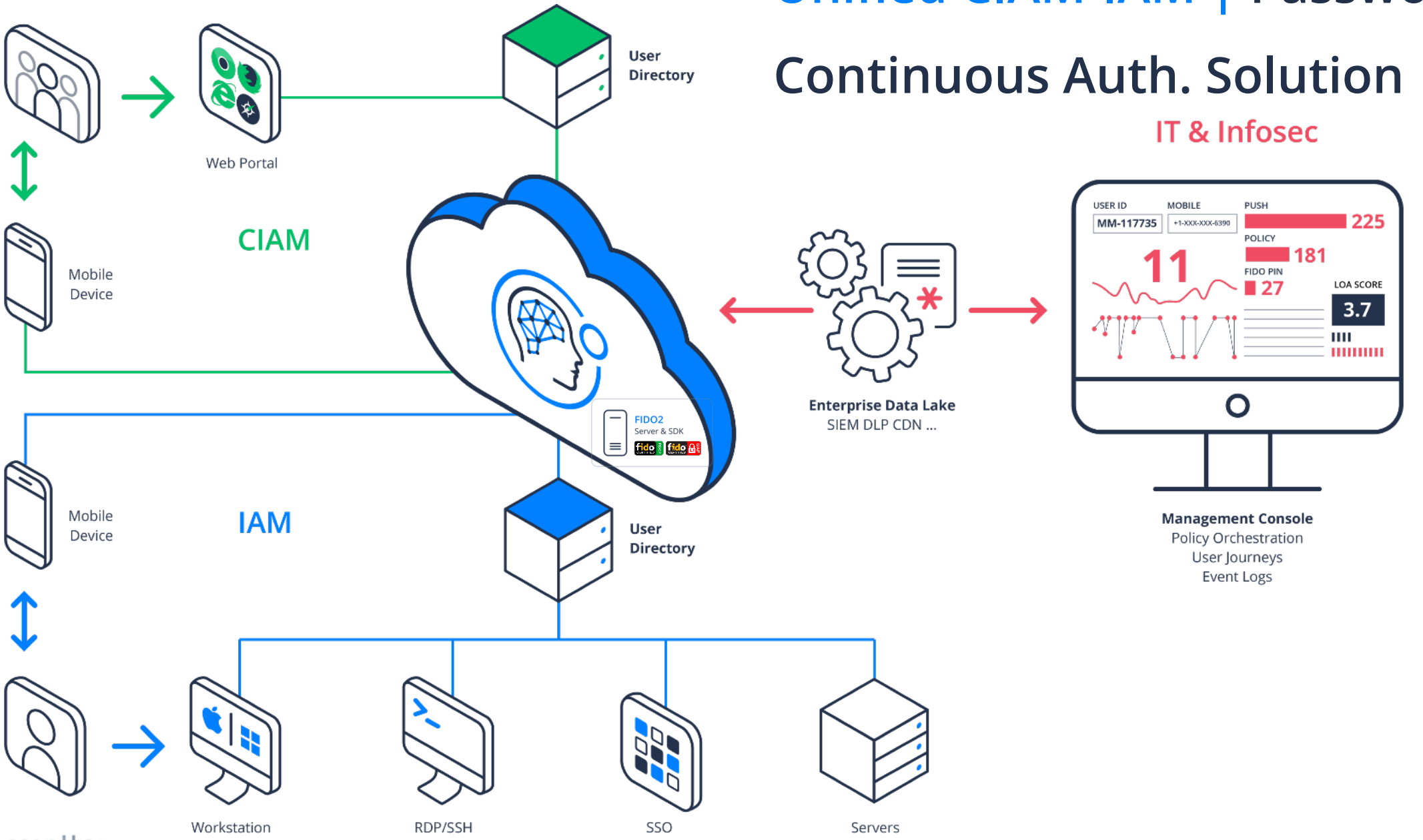


Ingesting Data From Various Security Tools, Infer & Detect Anomalies:
Insightful At-Auth & Post-Authorization Actions

Copyright © 2021 Acceptto Corporation. All rights reserved.

Unified CIAM-IAM | Passwordless

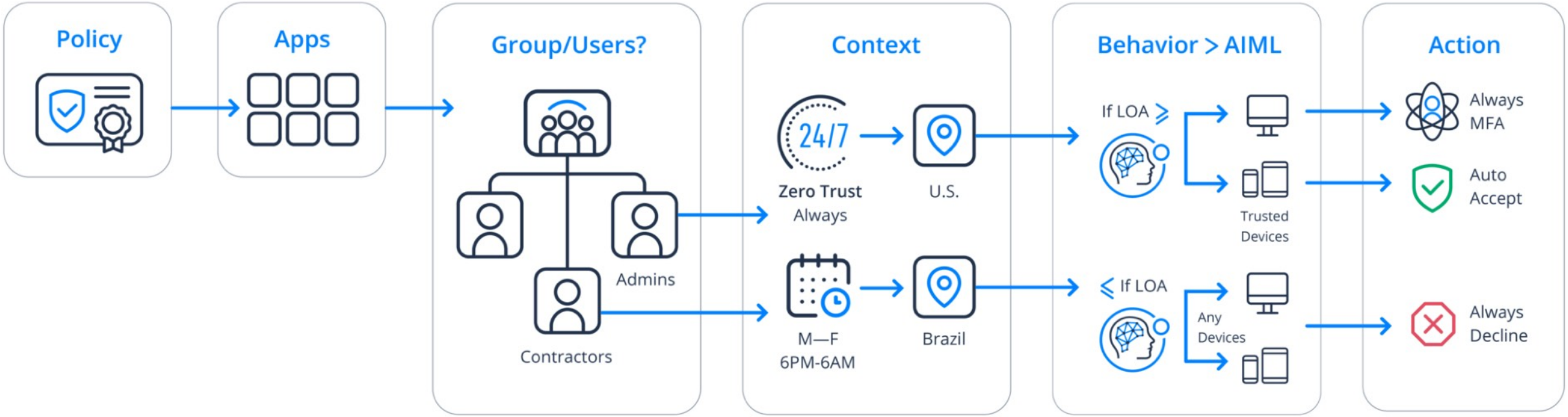
Continuous Auth. Solution



Copyright © 2021 Acceptto Corporation. All rights reserved.

POLICY ORCHESTRATION: Standard → Advanced → Custom

Acceptto's Policy Engine allows rule-based customization at the user directory level, device level, browser and application (On-Prem or SaaS) level to further adapt to specific needs of each organization and division.



Copyright © 2021 Acceptto Corporation. All rights reserved.

Passwordless Continuous Authentication Journey

1 Enrollment & Life Cycle Management

Dev. Pairing & LCM

It'sMe Mobile & FIDO & ID Proofing SDKs

Your Mobile App Go PASSWORDLESS IN 1MIN

Webauthn Sign-In via Win Biometric or TouchID

Webauthn Sign-In via YubiKey

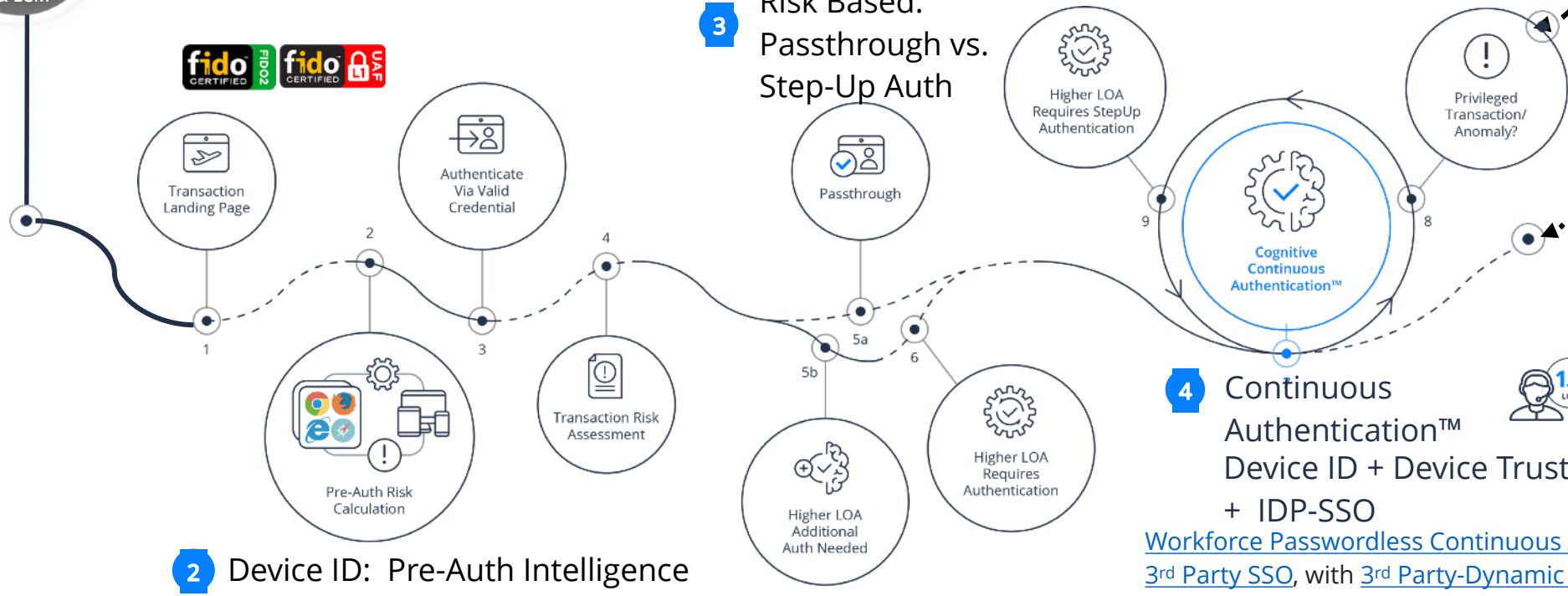
Webauthn Sign-In via Password or PIN of Mac/Win

Passwordless Context-Aware Web Login

Easy Configuration : Go Passwordless Web In 3 Mins

5 Smart Data Hub + Other

3 Risk Based: Passthrough vs. Step-Up Auth



2 Device ID: Pre-Auth Intelligence

Dynamic measuring of endpoint risk/health (e.g. Firewall or Bitlocker on-off)

4 Continuous Authentication™ Device ID + Device Trust + IDP-SSO

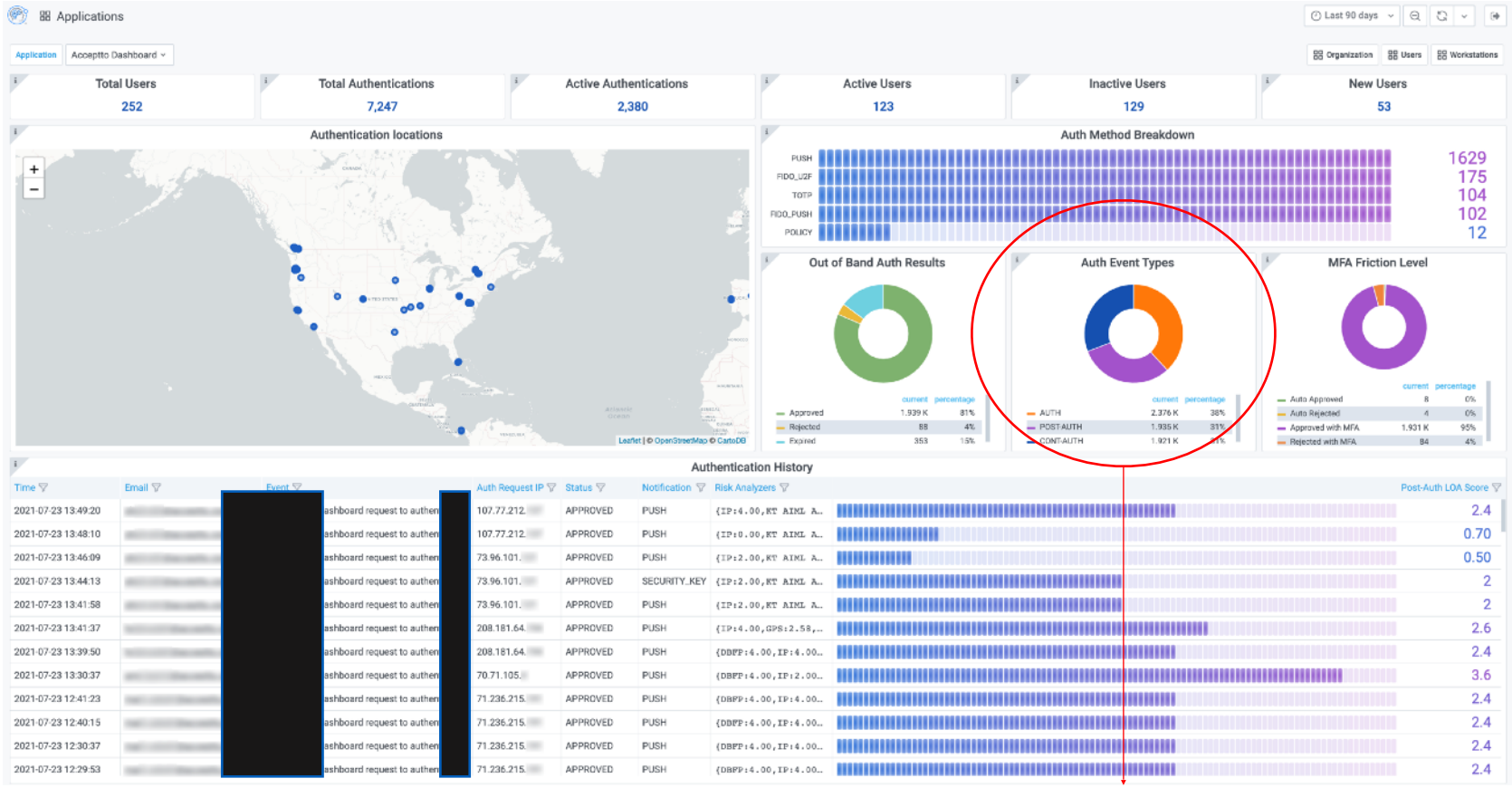
1.6 LOA Call Center Auth. APIs

Workforce Passwordless Continuous Auth + Passwordless SSO including 3rd Party SSO, with 3rd Party-Dynamic Risk Score .Easy 3RD Pary Integration. Sim Swap detection

Copyright © 2021 Acceptto Corporation. All rights reserved.

Configurable Realtime Dashboard

- Single Pane Of Glass
  - ❑ Zero Trust
  - ❑ Patented Dynamic Level Of Assurance (DLOA)
  - ❑ Policy orchestrated & AIML powered
- Full access lifecycle management
- Insightful actions in realtime
  - ❑ Risk Based
  - ❑ Continuously
  - ❑ Including Post-Authorization

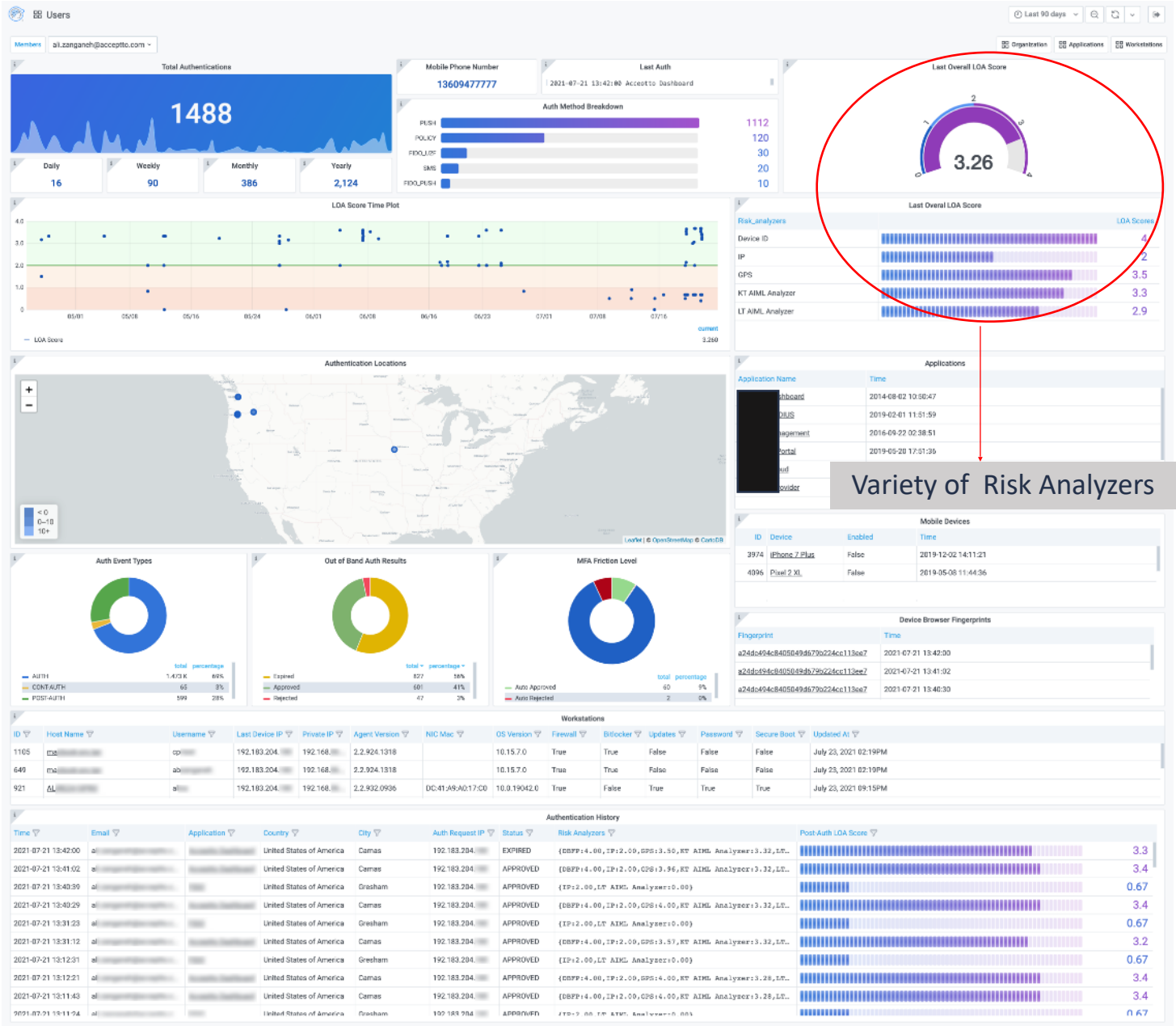


Patent-backed machine learning algorithms that Enrich the authentication perpetually!

Copyright © 2021 Acceptto Corporation. All rights reserved.

Configurable Realtime Dashboard

- Per user & per app LOA Score
- Device Trust (Mac/Win/Terminal Server)
  - ❑ Risk Analytics
  - ❑ Hygiene
  - ❑ Posture change through the session
- Variety Of Risk Analyzer
  - ❑ Expandable to enterprise's custom analyzers
  - ❑ Integration with 3rd party Risk Analyzers



Copyright © 2021 Acceptto Corporation. All rights reserved.

Immutable Audit Logs: Bringing SIEM & Device Hygiene to the edge

It'sMe™

Workstation Status

Quickly check if any of your workstations is Unlocked

Color with Reason

Your audit colors will clearly show you what's going on

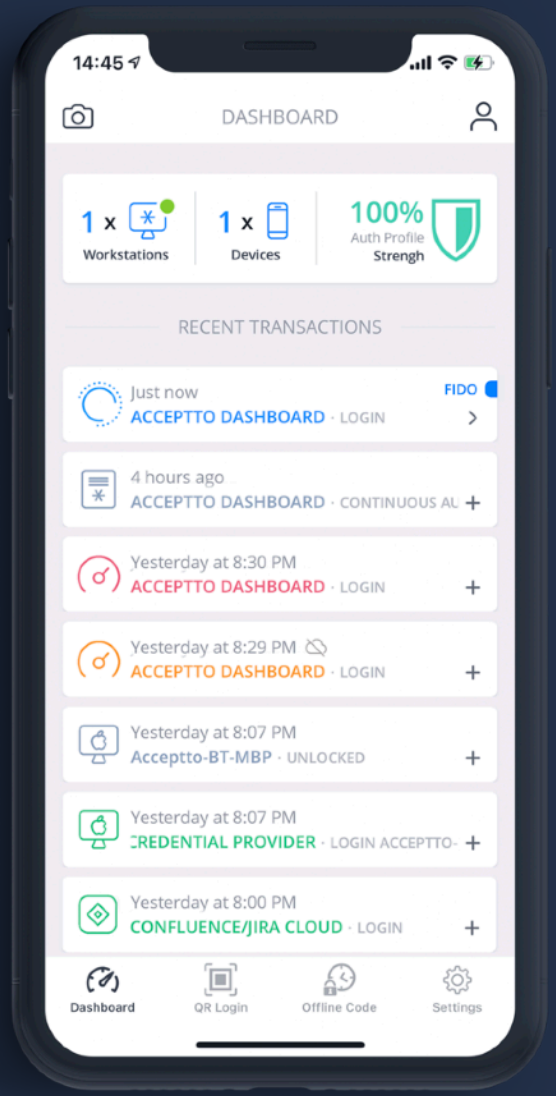
Pending | Accepted | Rejected | Expired | Log

Icons Revised

Distinct icons will provide accurate and fast visual information on what kind of Audit you're checking

Animations

Simplified and lightning fast animations to visually aid any Pending transactions



Logs

New and versatile logs, providing extra information and increasing your audit trails

Sub-Types

Quickly identify special case transactions for your FIDO or HID interactions.

Transaction

New Transaction screen will show you all the information you need, using a clean and simple design

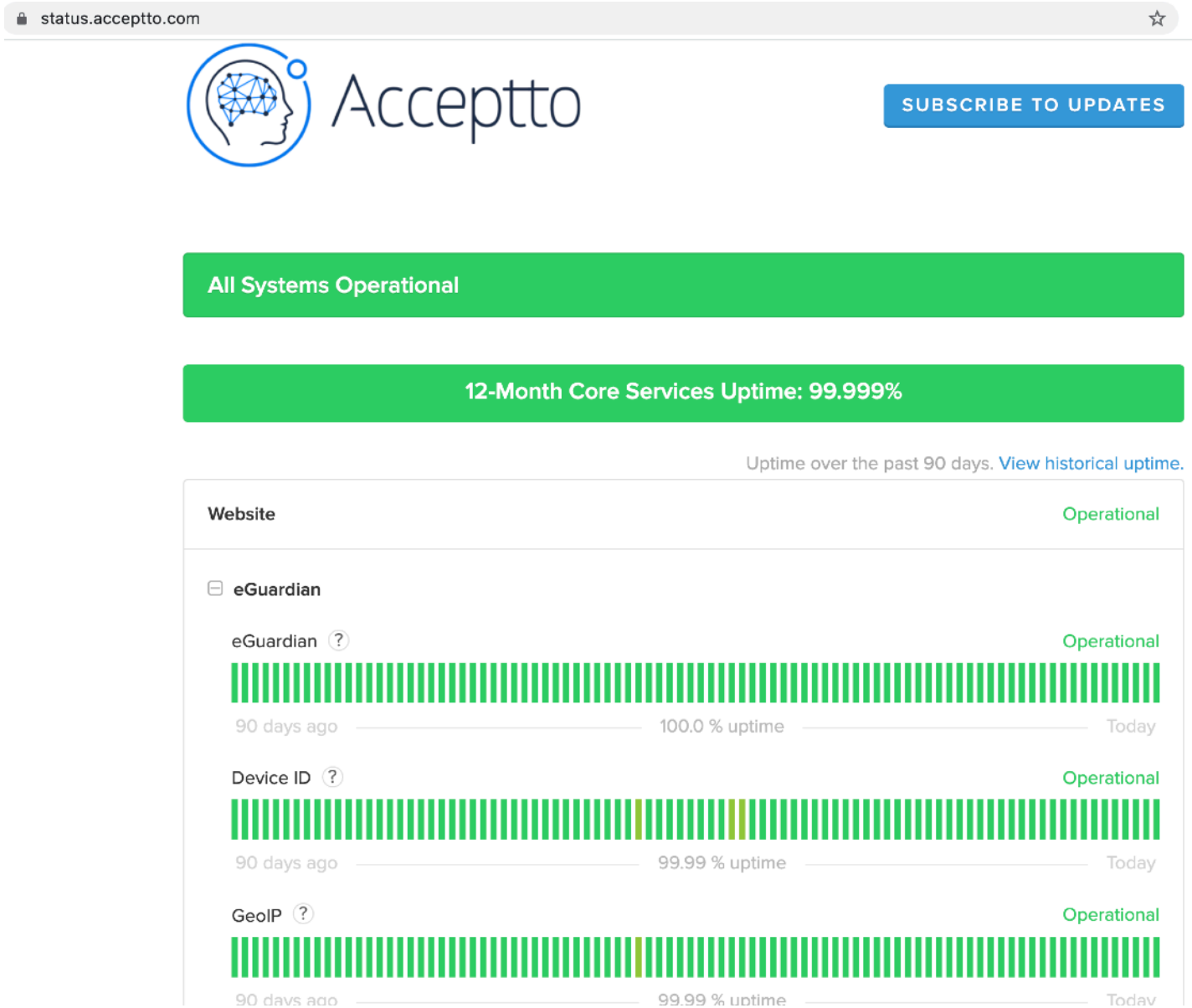
Offline

Easily check if a Transaction was made online or offline

Copyright © 2021 Acceptto Corporation. All rights reserved.

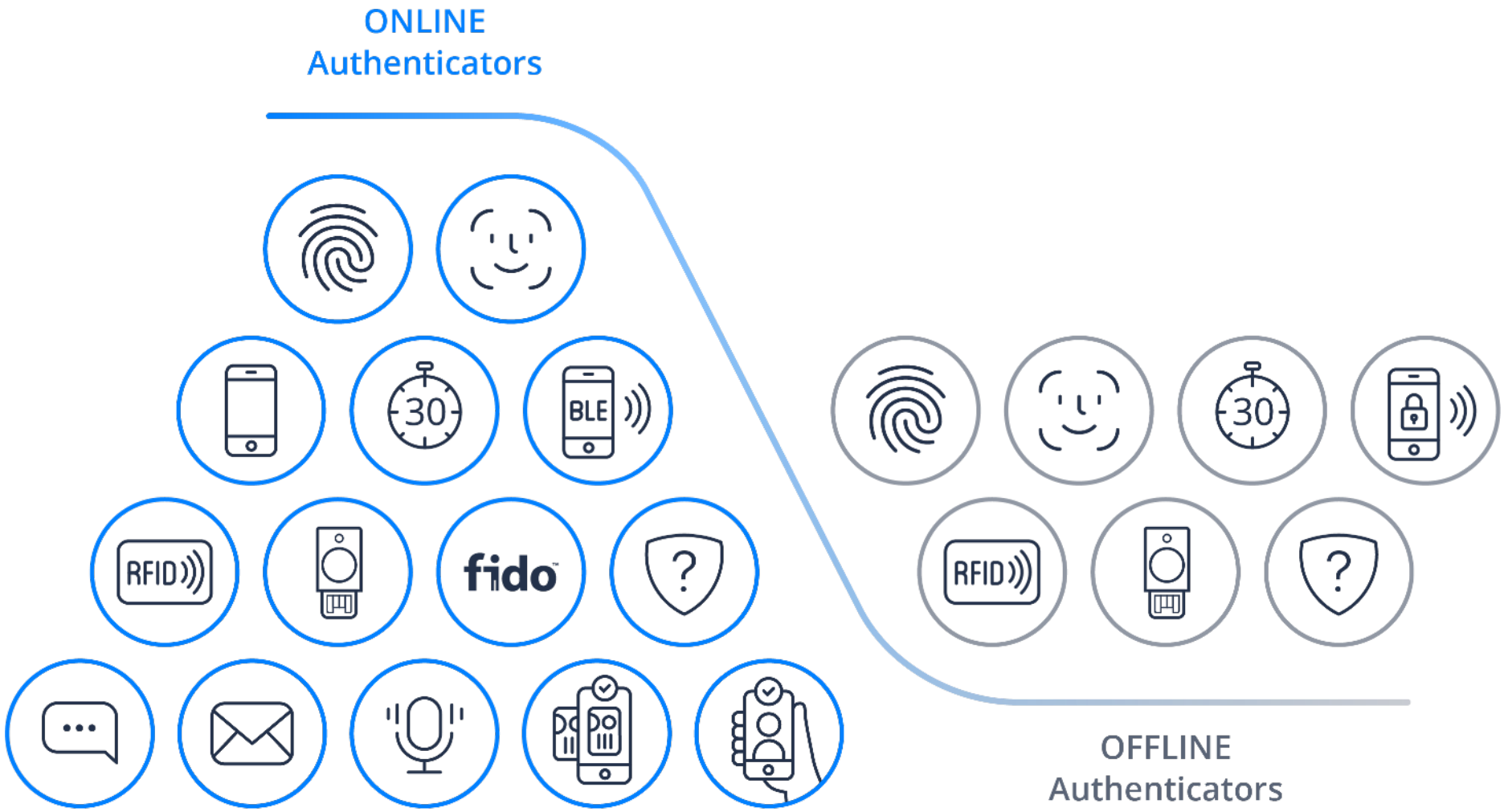
Multi Region

- 5 9’s



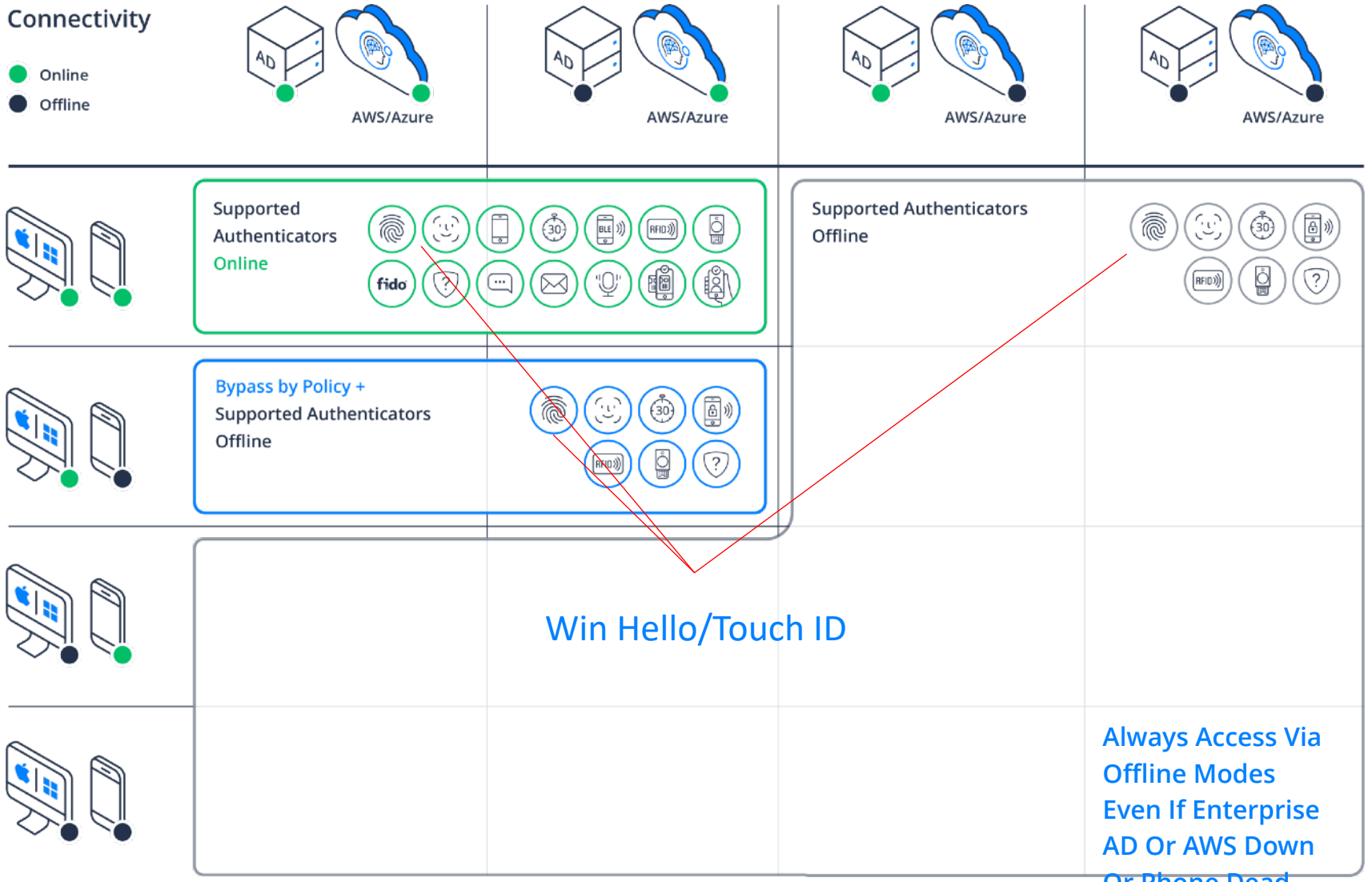
Copyright © 2021 Acceptto Corporation. All rights reserved.

Rich Online/Offline Authenticators



Copyright © 2021 Acceptto Corporation. All rights reserved.

Online/Offline Authenticators Map



Acceptto Copyright © 2019 Acceptto Corporation. All rights reserved.

CUSTOMER TESTIMONIALS

"Leveraging the Acceptto Authentication Risk Engine, we were able to achieve and sustain 98% reductions in customer Account TakeOver (ATO) fraud losses."

— **Brian Heemsoth**
Executive Director of Global Security

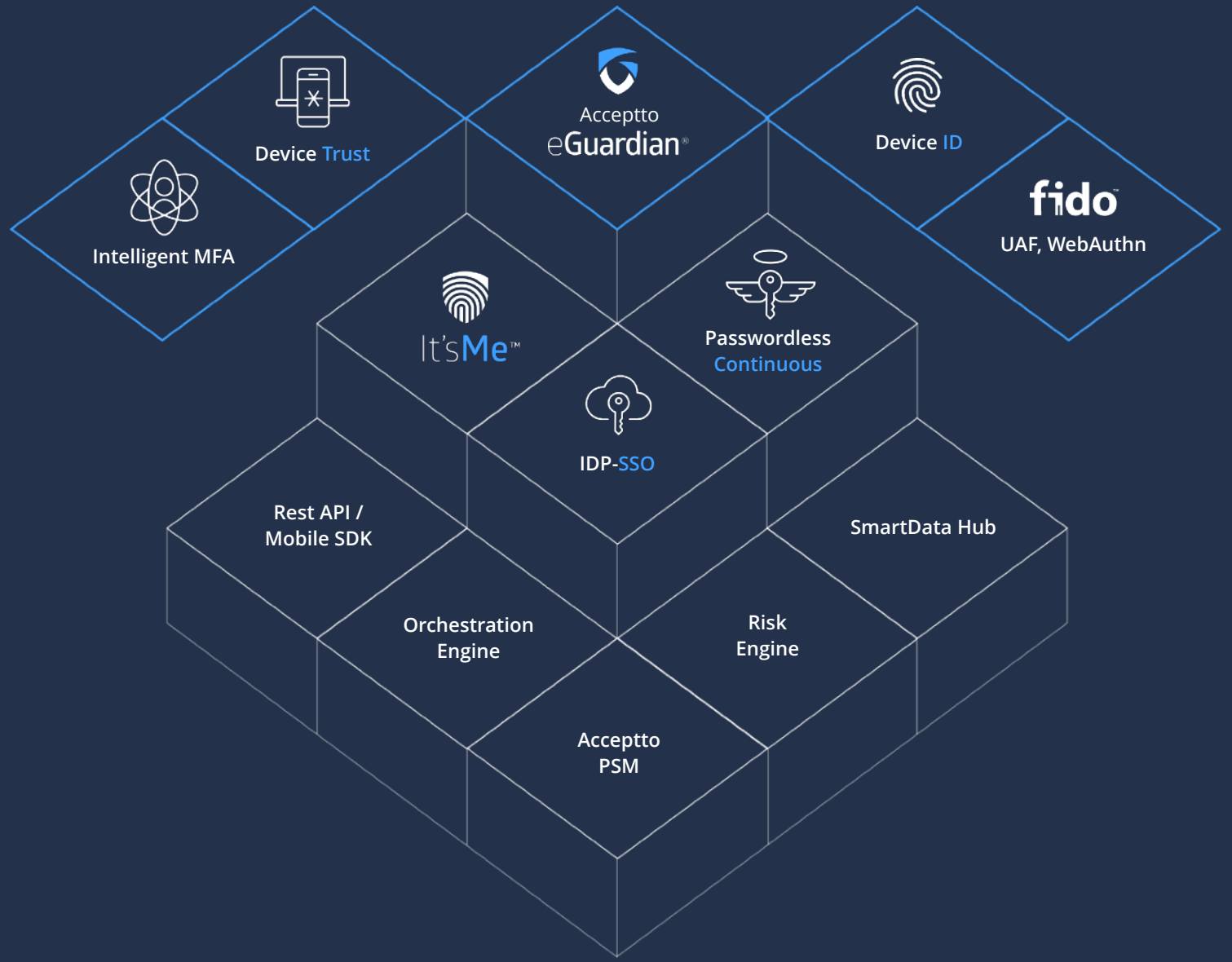
"Behavioral-based continuous authentication uses data science as a foundation for advancements in improving the consumer and employee digital experience, removing friction and eliminating the potential to misuse credentials.
This is the future of digital authentication as passwords continue to grow in obsolescence, and Acceptto has a platform to provide enterprises with this capability today that offers an effective implementation approach for every modern enterprise "

— **Jim Routh**
Former CISO MassMutual, CVS, Aetna, DTCC & American Express and cyber industry luminary. Current board member Acceptto.

"Acceptto has
- detected and protected against multiple breach incidents in real-time
- made the sensitive admin passwords completely benign over the last 3 years"

— **John Moore**
CXO at Wauna Credit Union

Copyright © 2020 Acceptto Corporation. All rights reserved.


Device Trust
Acceptto
eGuardian
Device ID
Intelligent MFA
fido
UAF, WebAuthn
It'sMe
Passwordless
Continuous
IDP-SSO
Rest API /
Mobile SDK
SmartData Hub
Orchestration
Engine
Risk
Engine
Acceptto
PSM

Acceptto®

Thank You!

Passwordless Continuous Authentication

@Acceptto

www.acceptto.com

info@acceptto.com

Copyright © 2020 Acceptto Corporation. All rights reserved.