Phishing-resistant MFA for Pharmaceuticals
Secure data, technology, and people with YubiKey

The pharmaceutical industry faces a more complicated threat landscape than ever before. In 2021, the average cost of a data breach in the pharmaceutical industry was $5.04 million, just behind healthcare and financial services industries.¹ Cyber espionage attacks have long targeted pharma’s valuable IP and research assets, but COVID-19 pandemic exacerbated the vulnerability of this data. Digital transformation accelerated almost overnight as enterprises were forced to switch to a remote work model in order to keep critical business operations and research on track. Since then, digital innovation and data availability have rapidly outpaced data security, resulting in a threat gap that is being actively exploited by nation states and cyber criminals in the form of ransomware attacks, spear phishing attacks and more, where users are tricked into revealing their corporate credentials, giving attackers a doorway to critical applications and data. The ideal end state is to eliminate passwords altogether and move to passwordless, but a first step on that journey is to deploy phishing-resistant multi-factor authentication (MFA).

Legacy authentication leaves you vulnerable
While any form of MFA is better than no MFA, not all forms of MFA are created equal. Legacy authentication such as usernames and passwords can be easily hacked, and mobile-based authentication such as SMS, OTP codes, and push notifications are highly susceptible to modern phishing attacks, malware, SIM swaps, and man-in-the-middle attacks.

In addition to security, it’s also important to consider usability, portability, and scalability, as key requirements across OT environments. Poor user experiences, low portability, and lack of scalability can result in MFA gaps, low user adoption, and an increased risk of a breach.

YubiKey: Maximize security with phishing-resistant MFA, and bridge to passwordless
The YubiKey is a hardware security key that provides phishing-resistant, two-factor, multi-factor, and passwordless authentication. The YubiKey is FIPS 140-2 validated and impersonation resistant, making it highly suitable for regulated environments such as the pharmaceutical industry.

With the YubiKey, pharmaceutical companies can deploy highest-assurance security for their data, technology, and people.

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The 2021 ransomware risk pulse: pharmaceutical manufacturing²

- **$31.1M**: Pharmaceutical companies’ annual cyber attack risk averages $31.1 million
- **10%**: Nearly 10% of pharmaceutical manufacturers are highly susceptible to ransomware
- **1,000**: Almost half of all pharmaceutical companies have over 1,000 leaked employee credentials on the deep web
- **$6.2M**: Data management vendors pose the most significant annual financial risk in the supply chain

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¹ IBM, Cost of a Data Breach Report 2021
² Black Kite, The 2021 Ransomware Risk Pulse: Pharmaceutical Manufacturing
YubiKeys offer proven security
In addition to being affordable and easy to use, YubiKeys are the only solution proven to eliminate account takeovers in independent research.3 This enables pharmaceutical companies to confidently move toward a future that is far less vulnerable to phishing attacks and credential theft.

With the YubiKey, pharmaceutical companies can deploy highest-assurance security for their data, technology, and people.

Easily procure and distribute YubiKeys at scale
Yubico helps organizations easily procure and distribute YubiKeys to employees wherever they work, anywhere in the world—at the office, in the lab, or even at home.

With YubiEnterprise Subscription, organizations receive a service-based and affordable model for purchasing YubiKeys. This enables customers to rapidly procure the latest YubiKeys in a way that meets their technology and budget requirements. This service also makes it easy to choose form factors, access customer support, and more.

With YubiEnterprise Delivery, organizations receive turnkey service with shipping, tracking, and returns processing of Yubico products, all securely handled by logistics experts. This allows pharmaceutical organizations to worry less about security management and focus more on researching and getting new drugs to market.

Choose the trusted authentication leader
Yubico is the principal inventor of the WebAuthn/FIDO2 and U2F authentication standards adopted by the FIDO alliance. Yubico is also the first company to produce the U2F security key and a multiprotocol FIDO2 authenticator.

YubiKeys are produced in the USA and Sweden, which ensures a high level of security and quality control over the entire manufacturing process.

\[\text{YubiKeys unite security and digital transformation}\]
YubiKeys help close the threat gap across growing pharmaceutical organizations, uniting security and digital transformation. A single YubiKey can be used across a variety of modern and legacy applications, services and devices, with multi-protocol support for SmartCard, OTP, OpenPGP, FIDO U2F and FIDO2/WebAuthn. Not only are YubiKeys easy to deploy, they are incredibly easy to use as well. To authenticate, users simply tap or touch the YubiKey. And, because the YubiKey offers USB, NFC, and Lightning form factors, authenticating to modern devices such as mobile and tablets is simple. Additionally, YubiKeys with NFC capability can be combined with wearables for fast and easy authentication that meets clean room safety standards.

3 Google, How effective is basic account hygiene at preventing account takeovers

Risk of account takeovers

<table>
<thead>
<tr>
<th>Method</th>
<th>Risk of Account Takeovers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security key (YubiKey)</td>
<td>0%</td>
</tr>
<tr>
<td>On-device prompt</td>
<td>10%</td>
</tr>
<tr>
<td>SMS code</td>
<td>24%</td>
</tr>
<tr>
<td>Secondary email</td>
<td>21%</td>
</tr>
<tr>
<td>Phone number</td>
<td>50%</td>
</tr>
</tbody>
</table>

Research by Google, NYU, and UCSD based on 350,000 real-world hijacking attempts. Results displayed are for targeted attacks.

YubiKeys 5 FIPS Series
From left to right: YubiKey 5 NFC FIPS, YubiKey 5C NFC FIPS, YubiKey 5Ci FIPS, YubiKey 5C FIPS, YubiKey 5 Nano FIPS and YubiKey 5C Nano FIPS

YubiKeys 5 Series
From left to right: YubiKey 5 NFC, YubiKey 5C NFC, YubiKey 5Ci, YubiKey 5C, YubiKey 5 Nano and YubiKey 5C Nano

About Yubico
As the inventor of the YubiKey, Yubico makes secure login easy. As a leader in setting global standards for secure access to computers, mobile devices, and more, Yubico is also a creator and core contributor to the FIDO2, WebAuthn, and FIDO Universal 2nd Factor (U2F), and open authentication standards. For more information, please visit: www.yubico.com.

Yubico AB
Kungsgatan 44
2nd floor
SE-111 35 Stockholm
Sweden

Yubico Inc.
530 Lytton Avenue, Suite 301
Palo Alto, CA 94301 USA
844-205-6787 (toll free)
650-285-0088