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Single Sign-On vs. MFA: Do You Know The Difference?

 By Fortified Health Security  June 2, 2020



Username and passwords are the foundation of user authentication, but these factors are not enough to prevent data exposure. As cyber threats become more complex, companies are turning to single sign-on and multi-factor authentication. These solutions can strengthen your

cybersecurity framework without hindering user experience.

What Is Single Sign-On?

Single-sign on (SSO) is a login method in which users have one set of credentials to access applications. The main benefit of SSO is the streamlined approach. Users can access multiple applications without pausing to enter new credentials.

A common example of SSO is Google's set of applications. With one login, users can access their email inbox, calendar, documents, photos, and videos. They can organize a video call and even schedule a meeting through one central login.

There are a few main benefits of SSO. This approach can improve user experience when used externally and boost workflow when used internally. It's also convenient when users are accessing applications from multiple devices.

SSO is more centralized, so it can also make it easier for IT departments to monitor user activity. This centralization may also cut down on the number of weak passwords in the network. Hackers have fewer potential entry points, and the IT team can stop attacks more quickly.

When implementing SSO in your cybersecurity framework, it's important to keep some potential risks in mind. Widespread access through one entry point is one of the main risks of this approach. If an attacker gains entry into an SSO system, they'll have access to all of the applications tied to that login. If the system is compromised, users won't be able to access any of the associated applications. To mitigate this risk, accounts to remember and also maintain, it is often a good idea for an organization using SSO to strengthen the authentication controls by increasing the number of characters required for a password, increasing complexity requirements, account lockout policies and password rotation.

This is where multi-factor authentication comes in.

What Is Multi-Factor Authentication?

Since password guessing and login access are among the top causes of cyber attacks, multi-factor authentication (MFA) is a critical component of a cybersecurity framework.

protection are essential. Multi-factor authentication (MFA) requires users to enter two or more identification factors to access an application. These pieces of information are unique to the user, making them challenging to guess or replicate. The MFA approach makes it more difficult for hackers or unauthorized parties to access sensitive data.

Security experts typically separate MFA credentials into three main categories:

- **Something You Know:** Factors that a user *knows* can include passwords, security question answers, and PIN numbers. These are private login credentials that are difficult for others to guess, especially if they're simply memorized and not stored in an external location.
- **Something You Have:** This type of factor involves another device or object, like a smart card or a mobile phone, for verifying a user. As an example, a user might need to enter a code that they receive as a text message following their password. Other factors that users might *have* include security badges, hardware tokens, apps, or security tokens.
- **Something You Are:** This group of factors generally includes biometrics. Fingerprints, facial recognition, and voice recognition are common sources of verification. Retina scans are also part of this group. These factors are often part of high-level security requirements.

When implementing MFA, organizations typically choose two of the above factors. So, a user might need to enter a password and a Short Message Service (SMS) code. The system might require MFA for all logins or only when users login on a new device. By doing so, users verify their identity and securely access the applications. These authentication layers also make it more challenging for hackers to access applications and networks.

SMS codes, security questions, and pin numbers are the most common types of authentication factors. However, these factors can become more complex when users need more security clearance. For example, an organization might have data that only upper management can access. You might add more authentication factors like security tokens and voice recognition to prevent unauthorized access. Biometric verification factors go even further, creating exclusive access. It's important that an organization chooses appropriate authentication factors based on the data at risk.

Which Is Best For Cyber Security?

Single sign-on and multi-factor authentication aren't mutually exclusive. In fact, organizations benefit from implementing both at the same time. Doing so improves both user experience while making it easier to monitor network activity.

These security layers together can stop hackers in their tracks. If a hacker or malicious party gains access to a user's password, this won't be enough to access your system. Chances are they won't have the answers to a user's security questions as well. It's even less likely that they can access text messages to enter the verification code. This keeps the hacker away from all applications. Authorized users can still enjoy the streamlined experience.

When implementing SSO and MFA, it's important to do so in a way that meets your organization's cyber security needs. A cyber security consulting firm can work with you to effectively add data loss prevention solutions into your framework. An expert can assess whether SSO makes sense for your users and when MFA is necessary. With the right approach, your organization can balance [security](#) and user experience.

Ready to strengthen your cybersecurity framework through MFA and SSO? The team at [Falcon Security](#), based in Franklin, TN, offers comprehensive security solutions. With services like penetration testing, vulnerability threat management, data loss prevention, and managed solutions, our specialists can put together a security strategy based on your organization's needs. We specialize in the healthcare industry, offering HIPAA compliance and medical device solutions as well. Contact us to get started.

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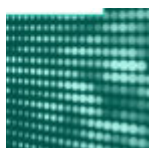
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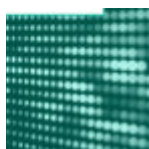
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