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BITWARDEN SECURITY PERSPECTIVES

Credential lifecycle management

What you need to know

What exactly is credential lifecycle management?

Credential Lifecycle Management refers to the process of creating, deploying, managing, and retiring credentials throughout their lifespan. The idea is to ensure utmost confidentiality, integrity, and availability of sensitive data while minimizing the risk of unauthorized access or misuse.

Mature IAM organizations are **46% less likely to suffer a server or application breach, 51% less likely to experience a database breach, and 63% less likely to face a cloud infrastructure breach.**

Source: InfoSecurity Magazine

How does password management fit in here?

By integrating a strong password management platform into the credential lifecycle, businesses gain a structured, automated solution that continues to evolve over time. Password management can significantly reduce security risks across every stage of the lifecycle. Specific features to look for:

- **Credential creation**: uses automated tools to generate strong and unique passwords that help prevent breaches from reused or weak credentials.
- **Secure storage**: leverages end-to-end AES-256 encryption and zero-knowledge encryption to securely store credentials.
- **Secure credential usage**: defends against phishing attacks by implementing auto-fill protection and domain verification.
- **Easily rotate credential**: credential updates, when needed, automatically sync across users and devices to ensure everyone has the right password.
- **Credential retirement**: safely revokes and archives credentials once they're no longer required (especially important during employee succession or role transitions).
- **Multi-factor authentication (MFA)**: strengthens access control by introducing additional verification layers.
- **Automated onboarding and succession**: streamlines user credential management through integrations with directory services like Active Directory (AD) or SCIM.
- **Audit logs**: maintains detailed activity logs for accountability and compliance.
- **Password health reporting**: identifies weak, reused, or compromised passwords for proactive remediation.
- **Secrets management**: securely manages infrastructure credentials like API keys and cloud tokens. This is essential for DevOps workflows.

In this article

An ideal password management solution will cover the comprehensive management of credentials from creation, deployment, and management to eventual retirement.

How credential lifecycle management keeps today's businesses safer

It's critically important that every organization establish policies and procedures for the secure issuance, storage, and use of credentials. The same guidance applies for monitoring and controlling access to sensitive information. This allows you to:

- **Enhance security**: reducing exposure from weak, reused, or compromised credentials protects against credential-related cyber threats.
- **Prevent insider threats**: immediately revoking access when an employee departs or changes roles helps mitigate many internal security risks.
- **Support regulatory compliance**: comprehensive tracking and reporting facilitates compliance with industry standards like ISO 27001, GDPR, HIPAA, and SOC 2.
- **Improve operational efficiency**: significantly reduce administrative overhead and errors by automating onboarding and succession.
- **Minimize credential sprawl and shadow IT risks**: centralizing credential management helps eliminate unauthorized or unmanaged zombie accounts.
- **Streamline shared credential management**: provides secure and controlled access to shared resources.
- **Protect DevOps environments**: securely manages sensitive development credentials while automating injection into workflows.
- **Reduce human error**: automating secure practices helps prevent common credential management mistakes.
- **Lower IT support costs**: adopting self-service and automated password management decreases the number of password-related support tickets.
- **Ensure business continuity**: establishing emergency access protocols helps ensure that critical operations remain unaffected during unexpected absences.
- **Facilitate scalability**: managing growing volumes of credentials efficiently makes it easier to accommodate organizational growth.

As organizations adopt more cloud services, expand their workforce, and embrace hybrid or remote work environments, effectively managing the credential lifecycle becomes increasingly important.

How Bitwarden supports credential lifecycle management

By addressing each stage of the credential lifecycle—from creation all the way through to succession—Bitwarden ensures that businesses can manage employee, application, and infrastructure credentials with security, efficiency, and scalability. Key benefits include:

- **Strong password creation**: automated generation of highly secure, unique passwords adhering to organizational security standards.
- **Secure, centralized storage**: leveraging AES-256 end-to-end encryption and zero-knowledge principles in a vault that can be centrally managed by IT and security teams ensures comprehensive credential protection.

- **Secure usage features**: include auto-fill protection, MFA integration, and phishing-resistant domain identification.
- **Efficient credential succession**: automatically revoking access upon employee departure.
- **Granular access control**: using Role-Based Access Control and collections to strictly control credential visibility and permissions.
- **Comprehensive audit and compliance tools**: detailed logs and reporting to facilitate compliance audits and forensic analyses.
- **Cross-device access**: providing reliable access to credentials across multiple platforms, helping to ensure business continuity.
- **Emergency access features**: provide emergency credential access without risking security compromises.
- **Advanced secrets management**: securely storing and automating sensitive DevOps credentials, enhancing CI/CD security.

The bottom line

Establishing a healthy, secure credential lifecycle is now an absolute must for every company and organization. This can play a critically important role in enhancing overall cybersecurity posture and operational resilience.

Bitwarden makes it easier than ever to implement a credential lifecycle that meets modern standards and protects against modern threats. Just one more reason Bitwarden is regarded as the most trusted name in password management.

What makes Bitwarden stand out from the pack?

Bitwarden excels where other password managers fall short by offering centralized vault control and treating credentials as dynamic data. This enables flexible credential lifecycle management, bolstering security and enforcing least privilege practices. Key features include:

- Organizational credentials can exist in multiple areas simultaneously, ensuring precise and secure sharing with the appropriate individuals.
- Complete consolidation and control of credentials, for streamlined and secure administration.
- Unlike decentralized models that leave credentials out of administrator oversight while creating security vulnerabilities with orphaned records, Bitwarden uses a centralized approach that enhances security.

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Application and employee-centric credential management

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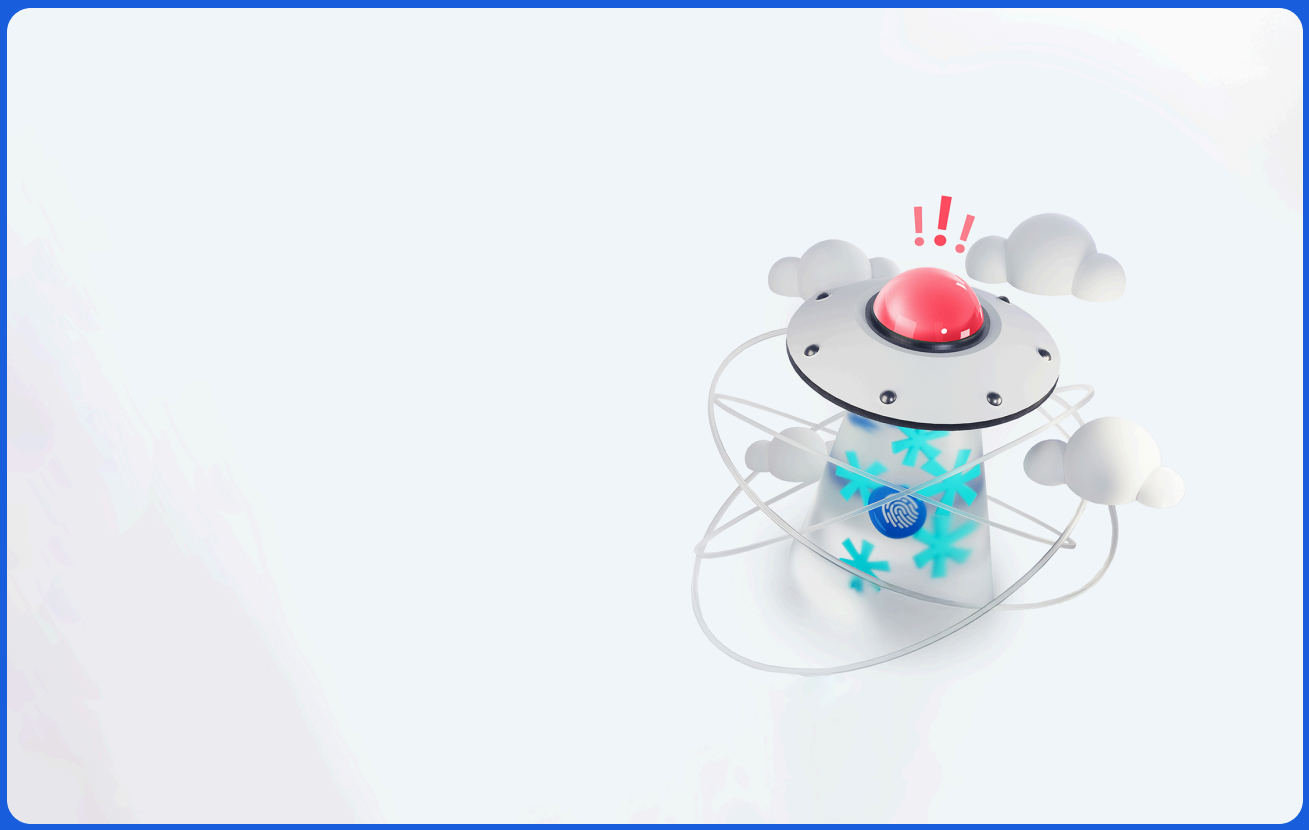

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