1Password

1Password: Industry-leading security and privacy

Feature	Why it's so important	1Password	LastPass	Keeper	Bitwarden	Dashlane
Two Secret Key Derivation (Account Passsword = Security)	• Account password is combined with the user's 128-bit Secret Key, making data held by 1Password absolutely infeasible to crack. • The Secret Key means that nobody who gets a hold of the data on our servers could ever be able to crack it to decrypt anyone's data. • This protects anyone, insider or out, who obtains data from our systems.	✓	X	X	X	X
Secure remote password (SRP)	• SRP protocol authenticates your credentials without sending any secrets over the network and encrypts all traffic sent to our server. • Instead of sending a secret (which could be intercepted or stored by the server) during sign-in, 1Password sign-in has both the server and the client prove to each other that they hold secrets without ever revealing those secrets. • This prevents anyone from stealing your credentials or reading any non-secret information sent to the server.	✓	X	X	X	X
Vault encryption	• Vaults contain all the items that you store and save within your password manager. • Encrypting vaults/folders protects the very items you expect your password manager to safeguard. • The vaults and data you save within 1Password is kept safe byAES-GCM-256 authentication encryption and effectively impossible to decrypt.1Password: Industry-leading security and privacy.	✓	✓	✓	✓	✓

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URL encryption	• Stored URLs frequently contain important paramaters, which can include sensitive information, tokens, or even functioning password reset links. Anyone with access to the URLs could not only learn more about your online behavior (what websites you frequent and have accounts), but could use that to create customized/targeted phishing attempts. • Encrypting URLs prevents an attacker from gaining access to the websites a user frequents and eliminates the potential of targeted phishing attempts.	✓	X	✓	✓	✓
Item Title encryption	• Item titles could contain sensitive information, such as names of confidential projects, personally identifiable information, or other information you'd like to keep secret, even from other people in your organization. • Encrypting item names means neither your password manager nor an attacker could glean anything from the names of your items.	✓	X	✓	✓	✓
Vault Title encryption	• Vault or folder titles could contain sensitive information, such as names of confidential projects, company infrastructure, personally identifiable information, or other information you'd like to keep secret, even from other people in your organization. • Encrypting vault names means neither your password manager nor an attacker could glean anything from the names of your vaults.	✓	X	✓	✓	✓

Sources:

LastPass Security Model Snapshot, LastPass Security: What You Need To Know, LastPass Technical and Organizational Measures, LastPass Security Model, LastPass - Notice of Security Incident, Keeper: Zero-Knowledge Encryption. Why it Matters., Keeper Security, Keeper Encryption Model, Bitwarden Security White Paper, Bitwarden Vault Data, What data does LastPass encrypt?