

Password meters

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Abstract

This summary is about password meters and the effectiveness of them. We will look into the details of how one of the current best meters (zxcvbn [2]) work and what characteristics such a meter needs. The effect of the present of a meter of the password choosing behaviour [1]. In the paper

1 Introduction

Passwords are still the main authentication mechanism on all kinds of systems and according to the leading tech guys they will be with us for at least 10 years. The security and privacy of all our data relies on a human generated string of characters and numbers. This rich structure makes them a target of guessing attacks.

2 Comparison

In this section we will compare some password meters from commonly know websites. We will explane briefly how all of them work internally.

3 Zxcvbn

Zxcvbn is the open sourced password meter developed from Dropbox inc. It checks for common keyboard patterns, and also performs a dictionary check with the rockYou password set.

4 Effect of password meters

In this section we will take a look at the effect of password meters. In the paper “Does My Password Go Up to Eleven?: The Impact of Password Meters on Password Selection” [1] they showed that the presence of a password meter has an effect on the password strength. However this holds only for sites which the users rated as important. For lower risk websites (sites which store no personal information about the user) the password strength is not higher when a password meter is present.

References

- [1] Serge Egelman et al. “Does My Password Go Up to Eleven?: The Impact of Password Meters on Password Selection”. In: *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. CHI '13. Paris, France: ACM, 2013, pp. 2379–2388. ISBN: 978-1-4503-1899-0. DOI: 10.1145/2470654.2481329. URL: <http://doi.acm.org/10.1145/2470654.2481329>.
- [2] Daniel Lowe Wheeler. “zxcvbn: Low-Budget Password Strength Estimation”. In: *25th USENIX Security Symposium (USENIX Security 16)*. Austin, TX: USENIX Association, 2016, pp. 157–173. ISBN: 978-1-931971-32-4. URL: <https://www.usenix.org/conference/usenixsecurity16/technical-sessions/presentation/wheeler>.