



Strong Encryption Has Measurably Improved Device Security

Although some of the most high-profile data breaches in recent years have come at the hands of sophisticated hackers wielding dangerous malware, the biggest cause of data breaches over the last several years has been the compromise of lost and stolen devices. Poorly secured devices allow attackers easy access, not only to data stored on the devices themselves, but also to credentials that enable attackers to penetrate broader networks.

In recent years, however, manufacturers of mobile communications devices have undertaken substantial measures to prevent unauthorized device access, particularly by introducing encryption. The two leading smartphone operating systems, Apple's iOS and Android, have incorporated file-based encryption and, later, full-disk encryption to ensure that only authorized users can access their devices. The results have been clear: stronger device security has led to a sharp decline in the number of data breaches that are due to lost and stolen devices.

Each year, more than 1 million smartphones are stolen in the United States alone; yet, increasingly sophisticated device security mitigates the damage caused by these thefts. Between 2007 and 2017, the number of data breaches due to lost and stolen devices declined by

Lost and Stolen Devices Have Been the Leading Cause of Data Breach (Percent of Data Breaches, 2005–2015)

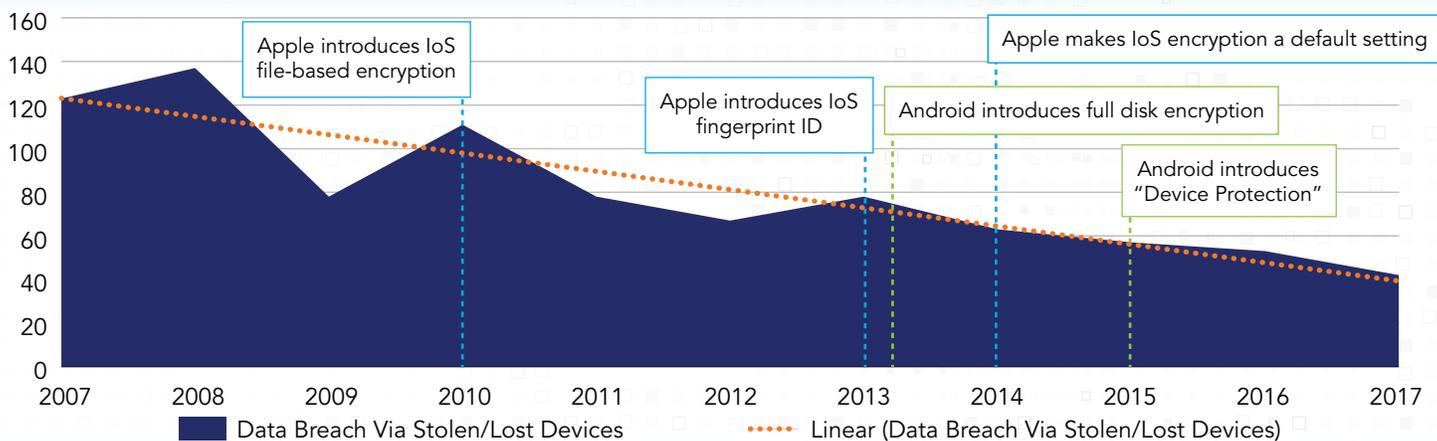


Source: Trend Micro, "Follow the Data: Dissecting Data Breaches and Debunking the Myths" (September 22, 2015), available at <https://www.trendmicro.com/vinfo/us/security/news/cyber-attacks/follow-the-data>.

more than two-thirds.¹ Moreover, device security deters theft: [data](#) indicates that, in the six months after Apple introduced its "Activation Lock" mechanism, iPhone thefts declined by 38 percent in San Francisco, 19 percent in New York, and 24 percent in London.²

Encryption, which enables the strongest device security mechanisms on the market, prevents thousands of data breaches each year, each one posing risks to individuals, businesses, and governments. It is a vital element of strong cybersecurity.

Data Breach Via Stolen/Lost Devices



Source: Adapted from "The Evolution of Data Leaks," *Wired*, November 2017.

¹ "The Evolution of Data Leaks," *Wired*, November 2017.

² Report of Technological Advisory Council (TAC) Subcommittee on Mobile Device Theft Prevention (MDTP) (December 4, 2014), available at <http://transition.fcc.gov/bureaus/oet/tac/tacdocs/meeting12414/TAC-MDTP-Report-v1.0-FINAL-TAC-version.pdf>.