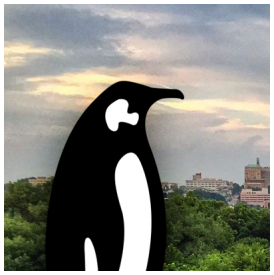

Contribution ID: **182** Type: **not specified**

Encryption for filesystems with advanced features: new fscrypt functionality

Wednesday, 15 November 2023 12:15 (45 minutes)

fscrypt has long been the standard subsystem for filesystems to adopt filesystem-level encryption. Traditionally fscrypt has encrypted data on a per-inode level; however, this made snapshotting or reflinking encrypted data difficult. Over the past two years, btrfs has worked to add per-extent encryption to fscrypt: encrypting on a per-extent level allows reflinking and snapshotting of encrypted data, and potentially other features in the future like changing encryption keys for new data and the use of authenticated encryption for greater security.

This talk will go what your filesystem can do with the new per-extent fscrypt, the tradeoffs of inode vs extent based fscrypt, and challenges encountered in btrfs. Afterward we'll discuss what's coming next, and address questions about whether per-extent fscrypt is suitable for the unique featureset of your filesystem.

Primary author: DORMINY, Sweet Tea (Meta)

Presenter: DORMINY, Sweet Tea (Meta)

Session Classification: LPC Refereed Track

Track Classification: LPC Refereed Track