

KSI integration with Git

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Task

Sign commits

Verify files upon checkout

Building blocks

Git hooks

Catena DB

KSI Java SDK

Setup

Connection to the internet

Option 1 - one repository

- Add git hooks to project
- Place Java application in project root
- Fill configure.ini

Option 2 - all repositories

- Add git hooks to template
- Add signing application to template
- Fill configure.ini

Sign

1. Git hook activates on every commit
2. Determining the files that need signing
3. Every file is hashed using SHA-256, encoded using base64, sent to Catena DB for signing
4. ID-s are received for every signature
5. ID-s are written to the end of commit message

Verify

1. Git hook activated on checkout
2. Signature ID-s are read from commit message
3. Signatures retrieved from Catena DB
4. Signature base64 string converted to byte array and then to KSI signature
5. KSI signatures are used to verify documents with KSI Java SDK. Verification is performed using calendar-based verification
6. Result is displayed

DEMO

Conclusions/Possible improvements

Possible to integrate our solution with git

Additional ways for verification

Signing time and entity

THANK YOU!