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Runtime verification for business processes utilizing the Bitcoin blockchain

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Highlights

- Examination of the usage of the (Bitcoin) blockchain technology as means to establish trust and to allow verification of process choreographies. For this, different runtime verification variants are discussed and the properties of existing blockchains regarding their suitability for this task are briefly evaluated.
- Development of a blockchain-based runtime verification approach. A fully-functional prototype which is able to verify running process instances using the Bitcoin blockchain is implemented.
- Evaluation of the capabilities of the developed prototype in a qualitative comparison and a performance analysis.

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