

EthOnline 2020

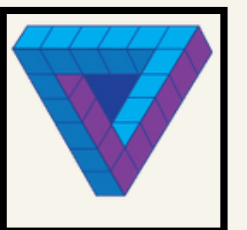
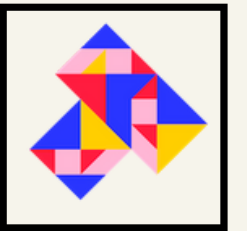
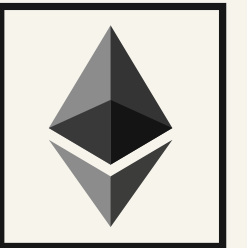
Team Vigil

# Audit Protocol

A VERIFIABLE AUDIT VOUCHING SOLUTION BACKED BY PROOFS ON ETHEREUM AND FILECOIN+IPFS

HACKED TOGETHER BY

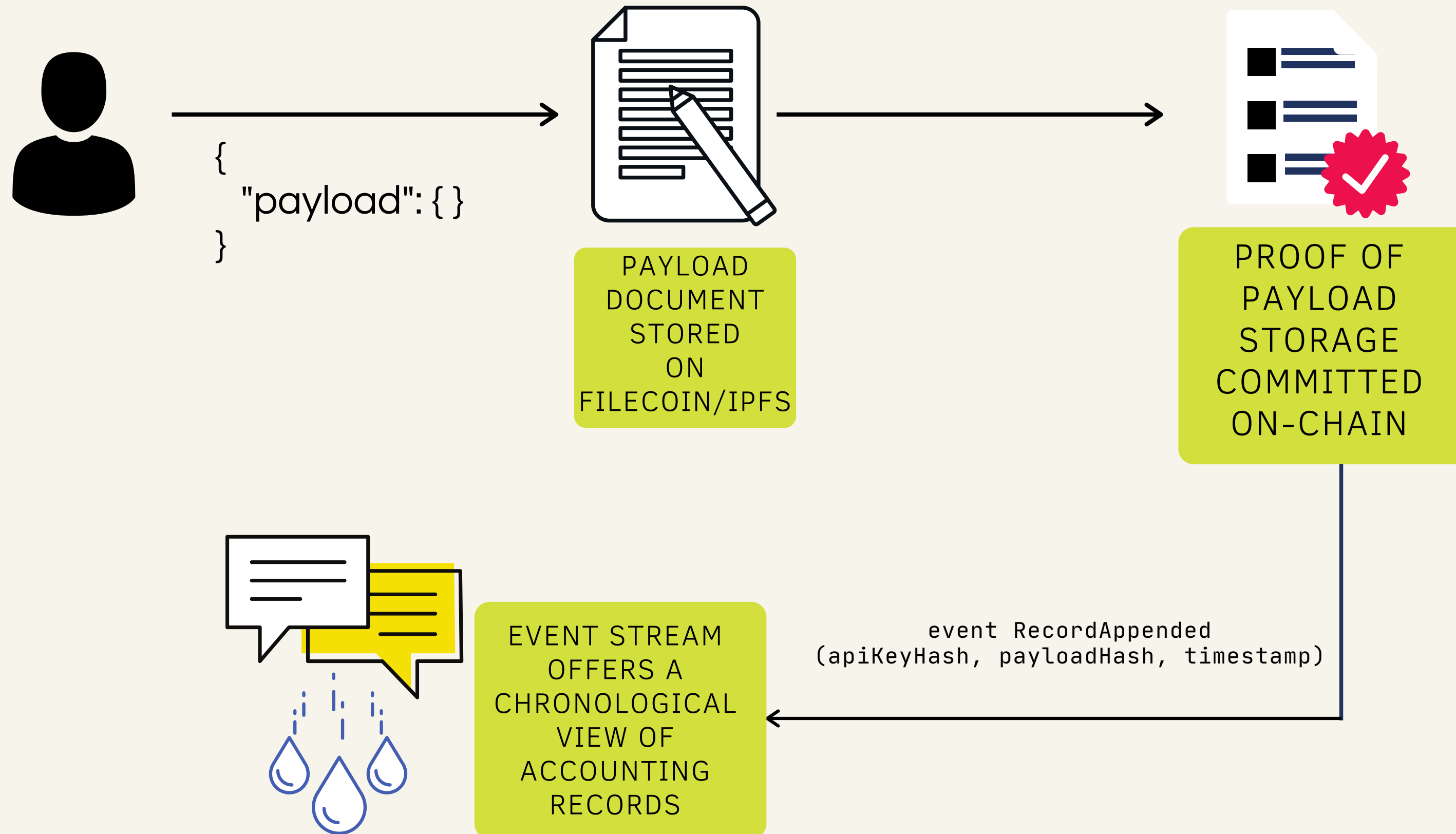
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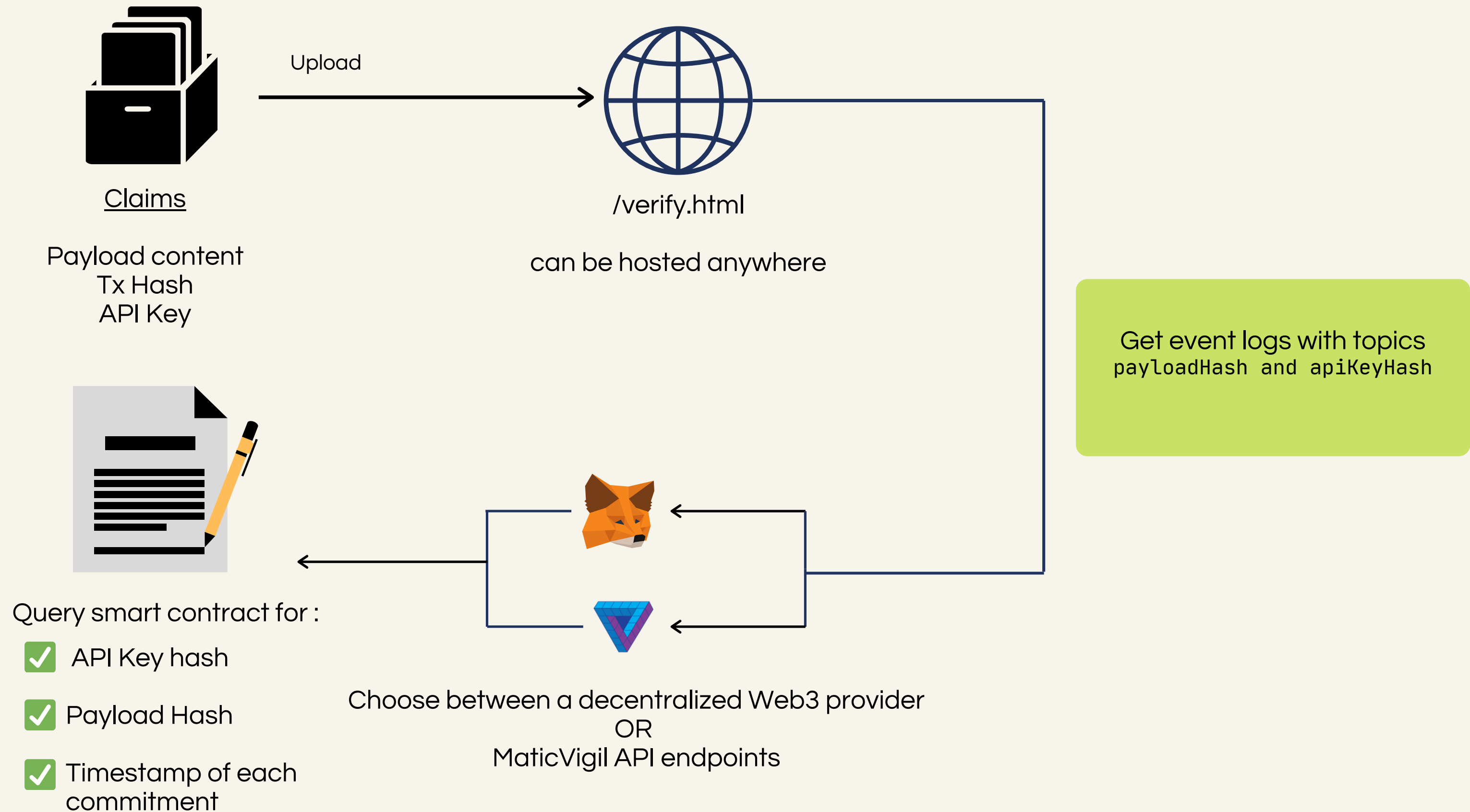
# Under the hood

- Python backend
  - FastAPI server
  - Watcher Microservices
- HTML5 frontend
- BlockVigil API gateway on Matic Mainnet (Layer2 Chain)
  - Tie together the payload accounting and audit lifecycle with transactions, reads and event integrations
  - Storage commitment proofs persisted on Ethereum mainnet via Checkpoint Proofs committed by Matic
- Textile Powergate for managing multi-tiered storage and retrieval of payloads on Filecoin+IPFS

# Accounting workflow



# Vouching workflow



# Future improvements

- Python backend
  - Replace blocking, synchronous code with async equivalents
  - Queue tiny payloads that won't be accepted until payload size matches minimum bound for piece size
  - Support verification of large chunk of payloads at once
- Finer control on IPFS pinning in conjunction with Textile Powergate to beef up 'hot storage' layer
- Expose Content Identifiers from underlying storage that can be verified independently as well on Filecoin/IPFS