

Using the Blockchain for DevOps

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Why?

- Reduce trusted computing base

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- Have clear upgrade paths for keys and software

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- Have clear upgrade paths for keys and software
- Decouple from “centralized” services

Challenges

- Public-key distribution and revocation

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Key Insights

- Blockchain is trustworthy “control plane”

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- Blockchain is trustworthy “control plane”
- Cloud storage is untrusted “data plane”

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Key Insights

- Blockchain is trustworthy “control plane”
- Cloud storage is untrusted “data plane”

Solution: **Blockstore**

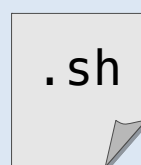
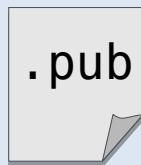


Trusted Networks

Untrusted Networks



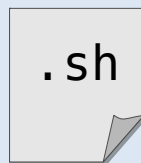
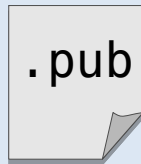
Trusted Networks



???



login: jude



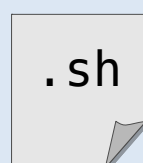
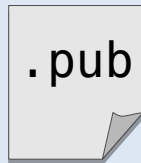
???

**Cloud
Storage**

**Blockchain
P2P Network**

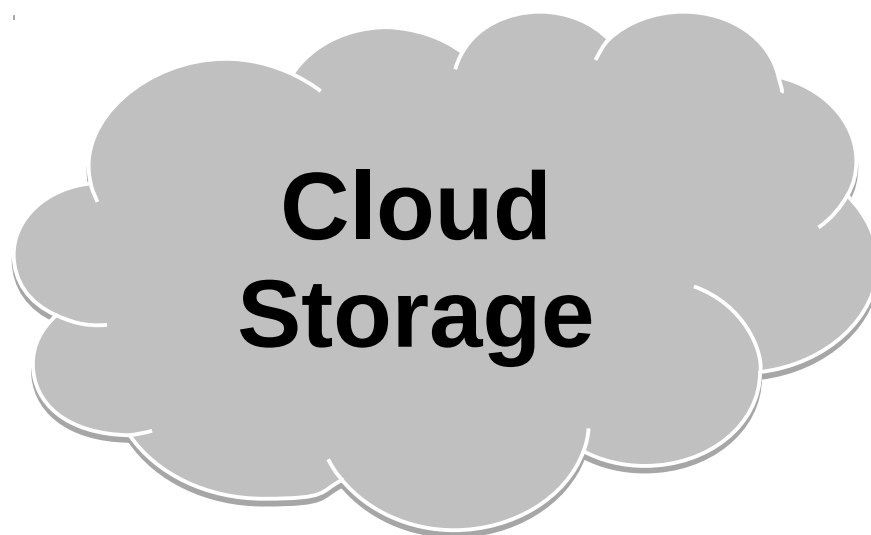


login: jude



???

Block-
chain
Peer

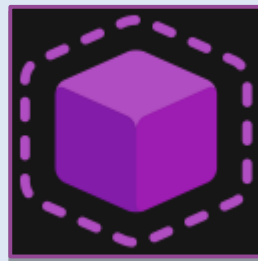


login: jude

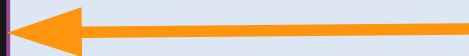
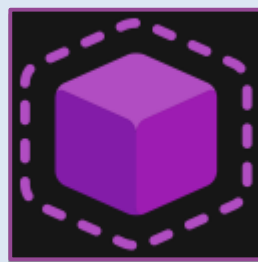
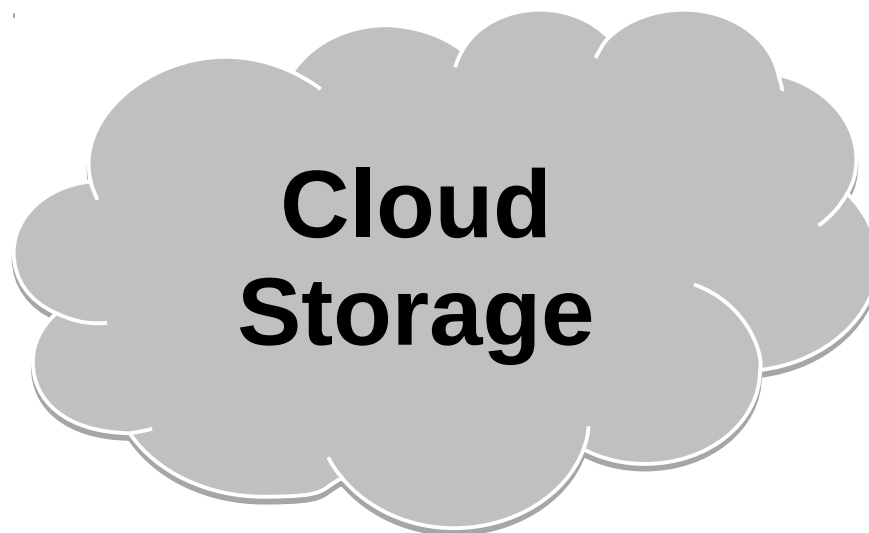
Block-
chain
Peer



.pub
.3



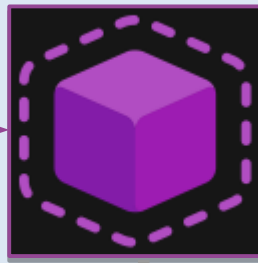
**Block-
chain
Peer**



**Block-
chain
Peer**

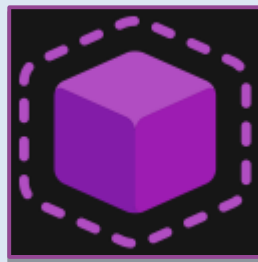
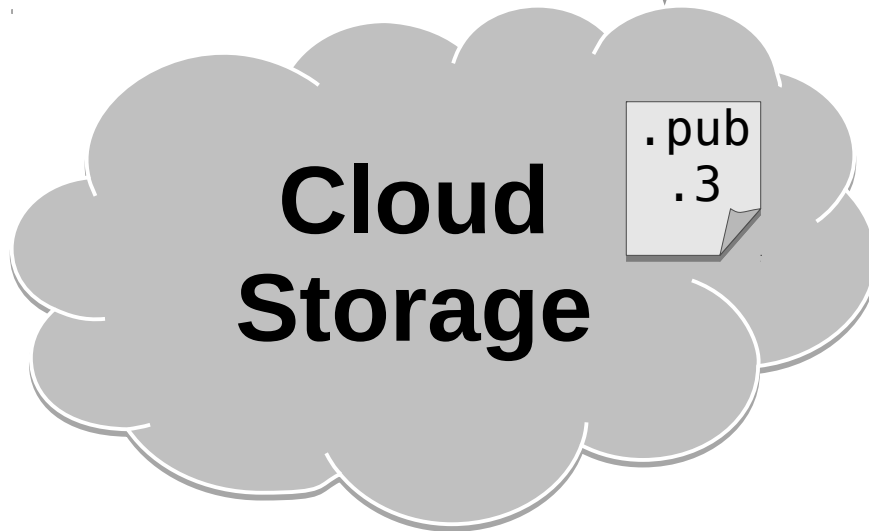


.pub
.3

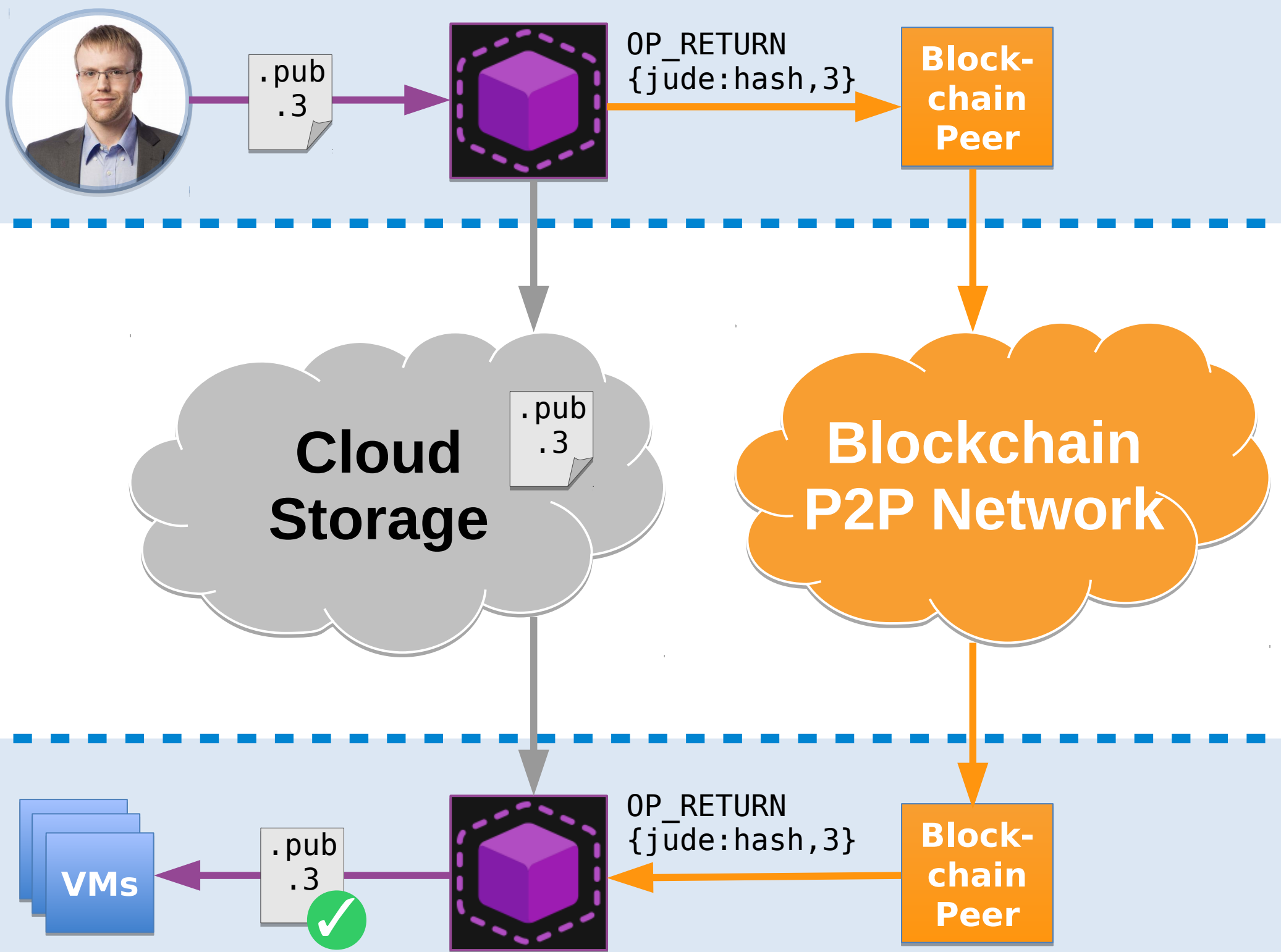


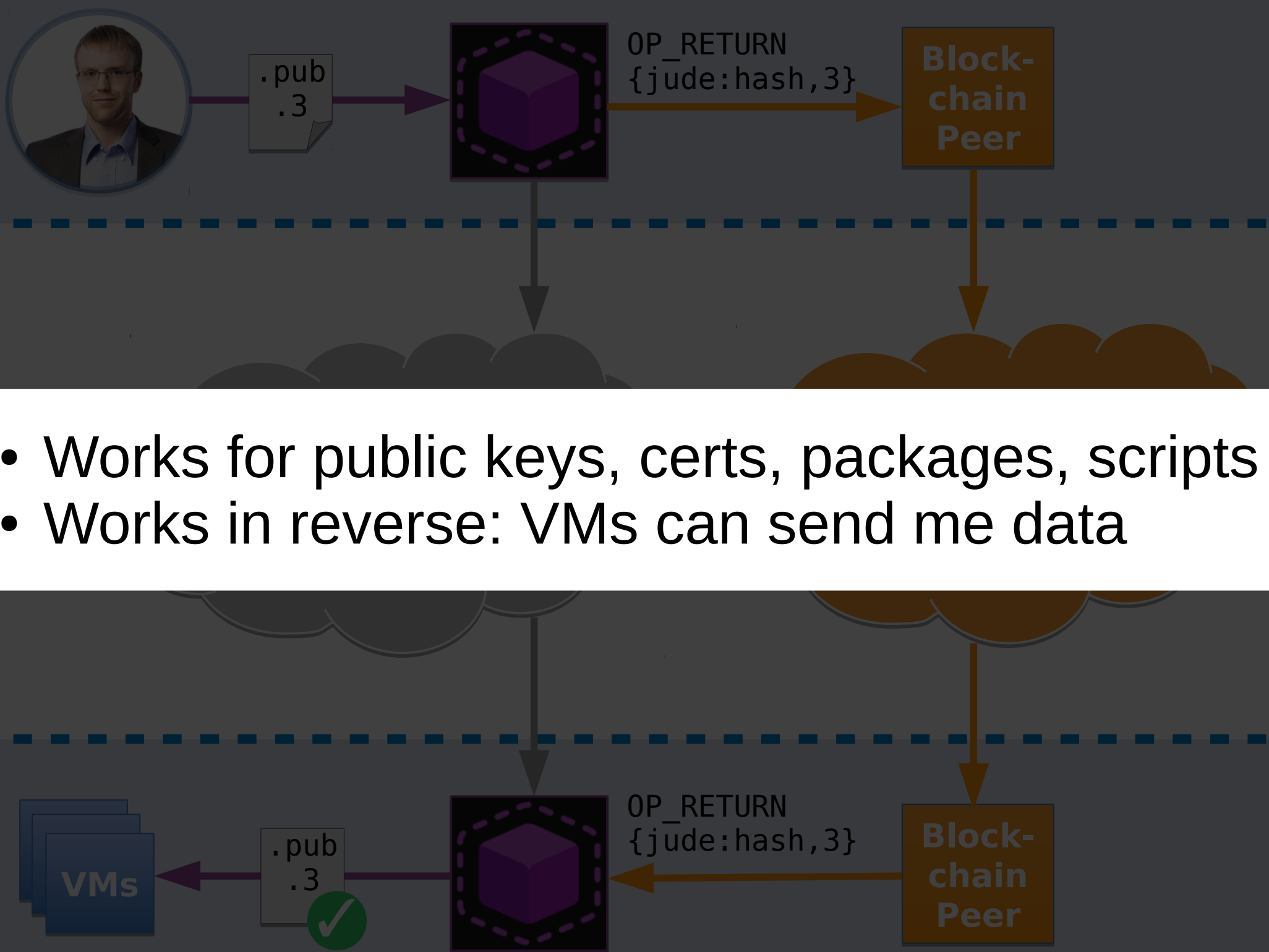
OP_RETURN
{jude:hash,3}

Block-
chain
Peer



Block-
chain
Peer





Blockrunner

- Send commands to VMs

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- Simple language to:
 - Put files
 - Remove files
 - Run scripts

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- Send commands to VMs
- Simple language to:
 - Put files
 - Remove files
 - Run scripts
- Fetch data from cloud storage
- Verify authenticity, freshness via blockchain

github.com/blockstack/blockstore

Demo upon Request

Thank You