

DSE Final Project

An incentive-compatible decentralized file storage

Main goals

{01}

Extend Peerster to
make it feasible for
private files

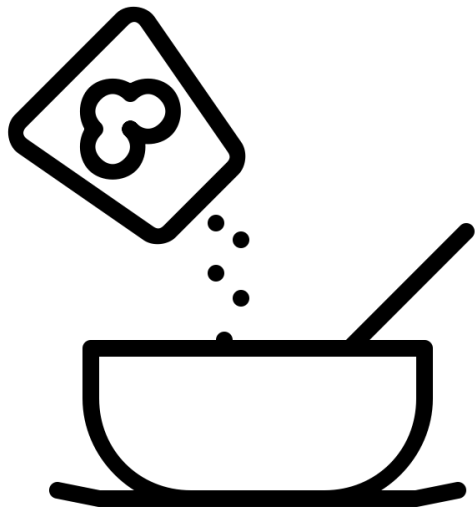
{02}

Tolerate temporary
node failures while
maintaining **file
availability**

{03}

Ensure **incentive-
compatibility**

Ingredients

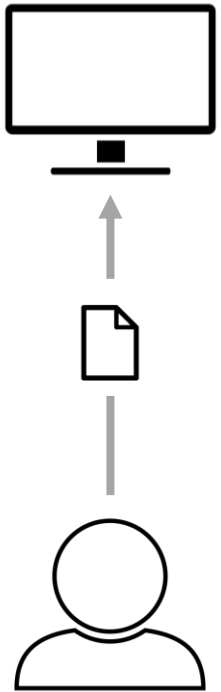


Symmetric encryption → AES

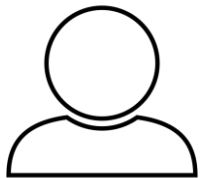
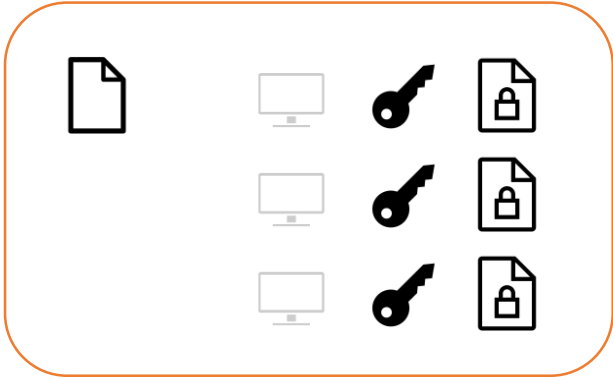
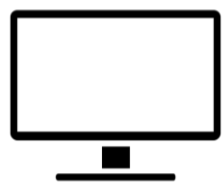
Public and private key encryption → RSA

Cryptographic hash function → SHA

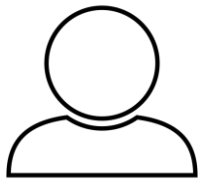
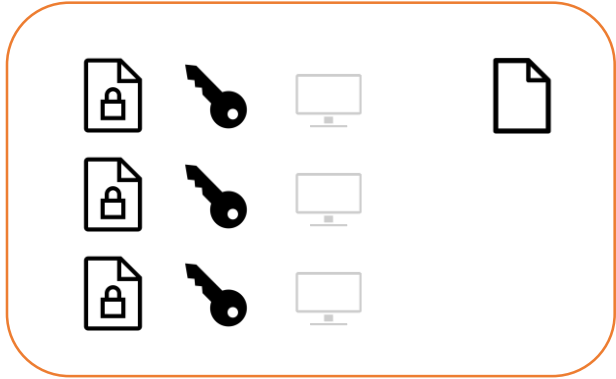
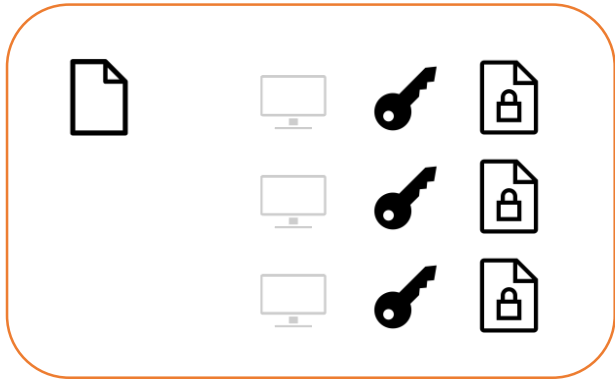
Architecture



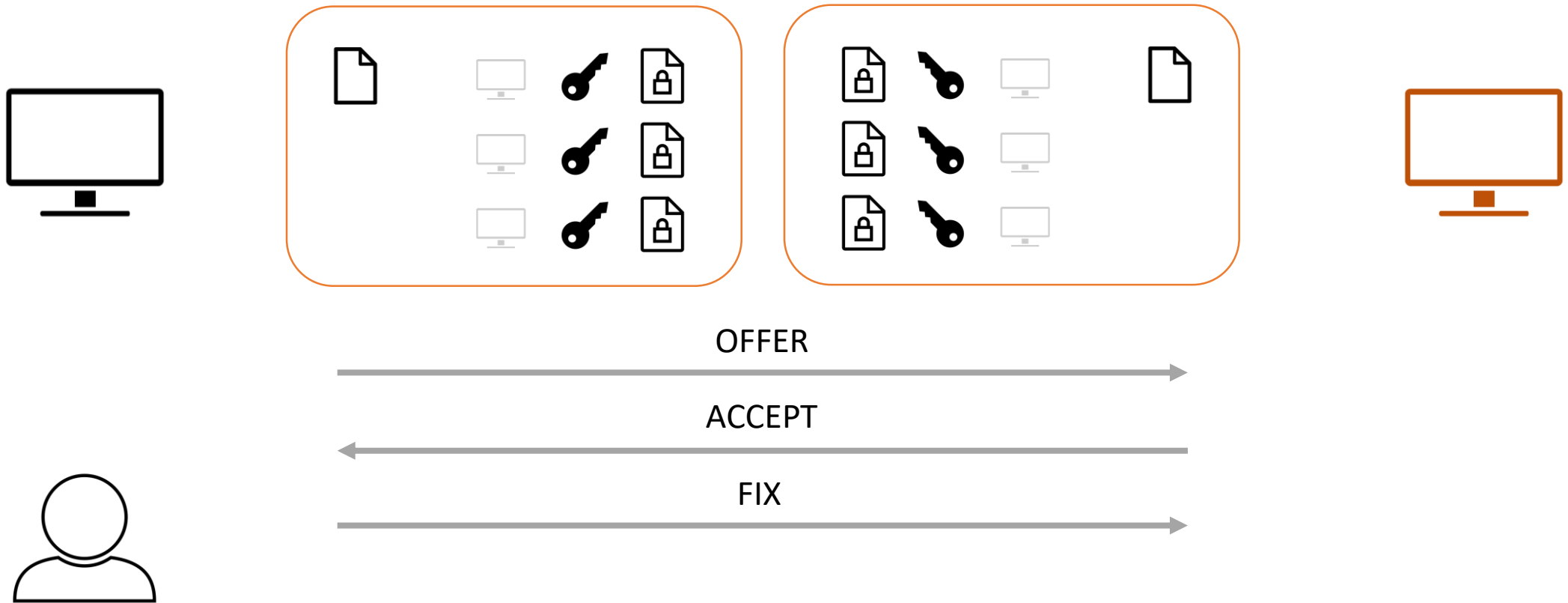
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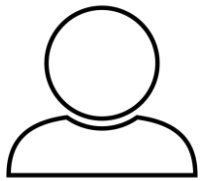
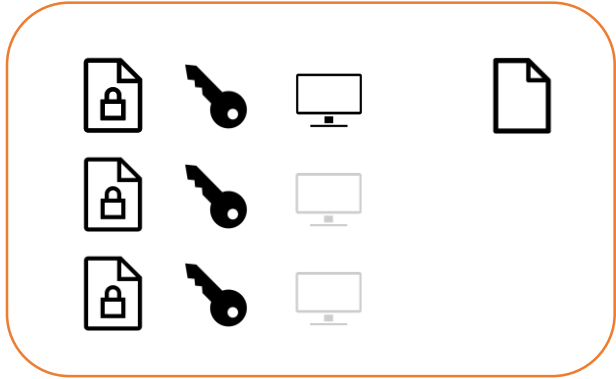
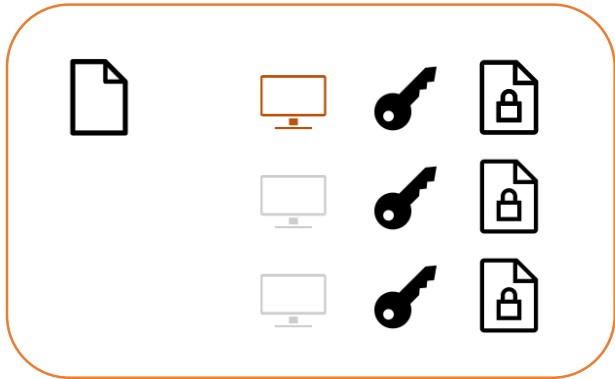
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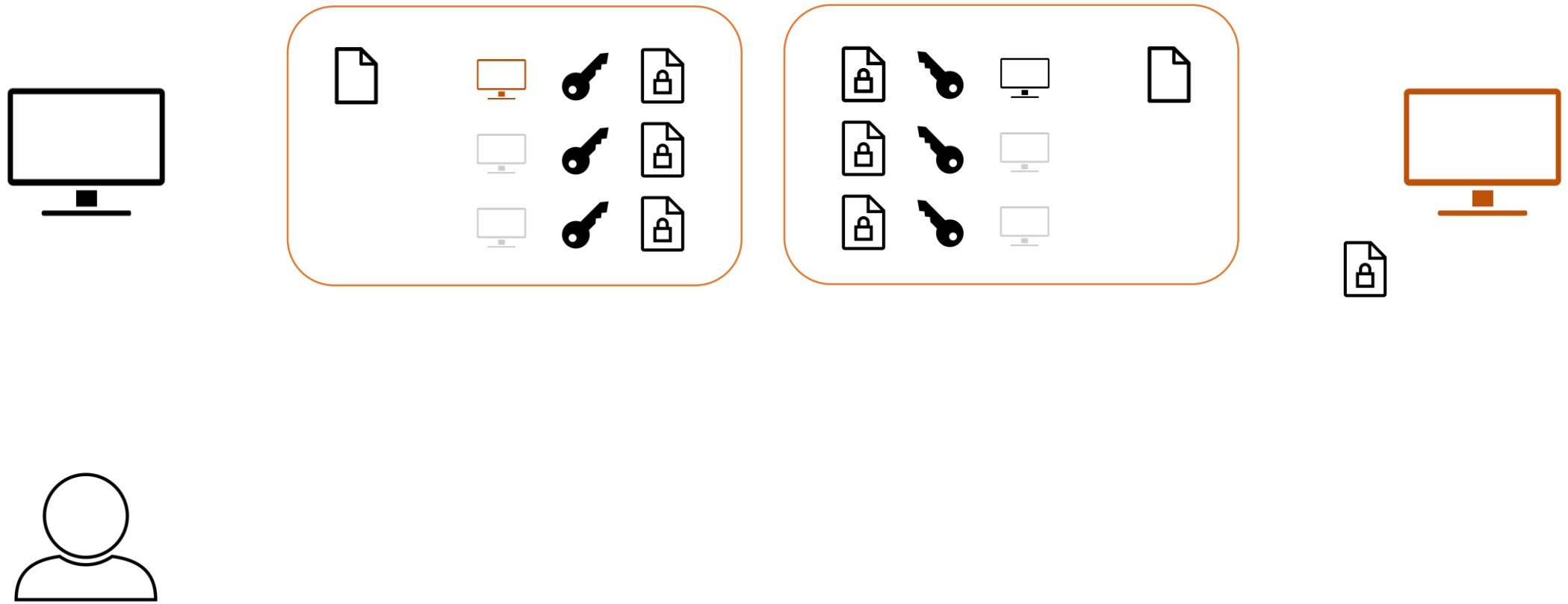
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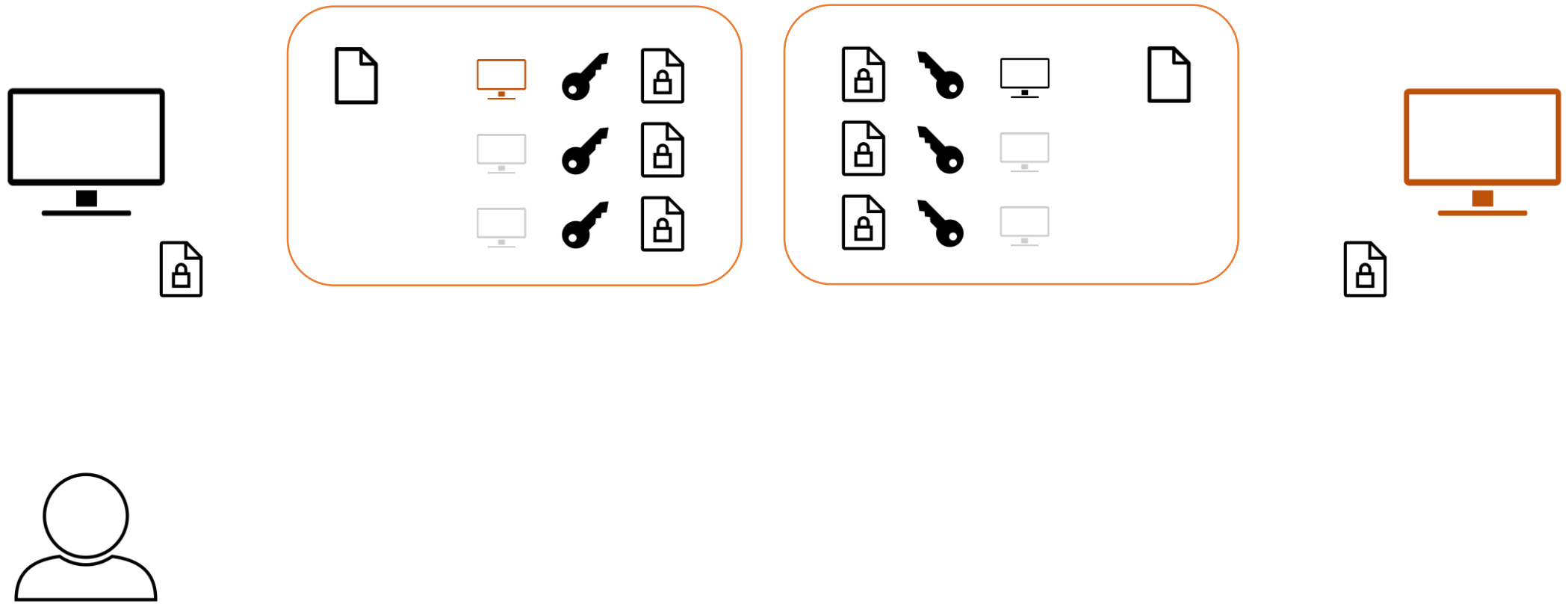
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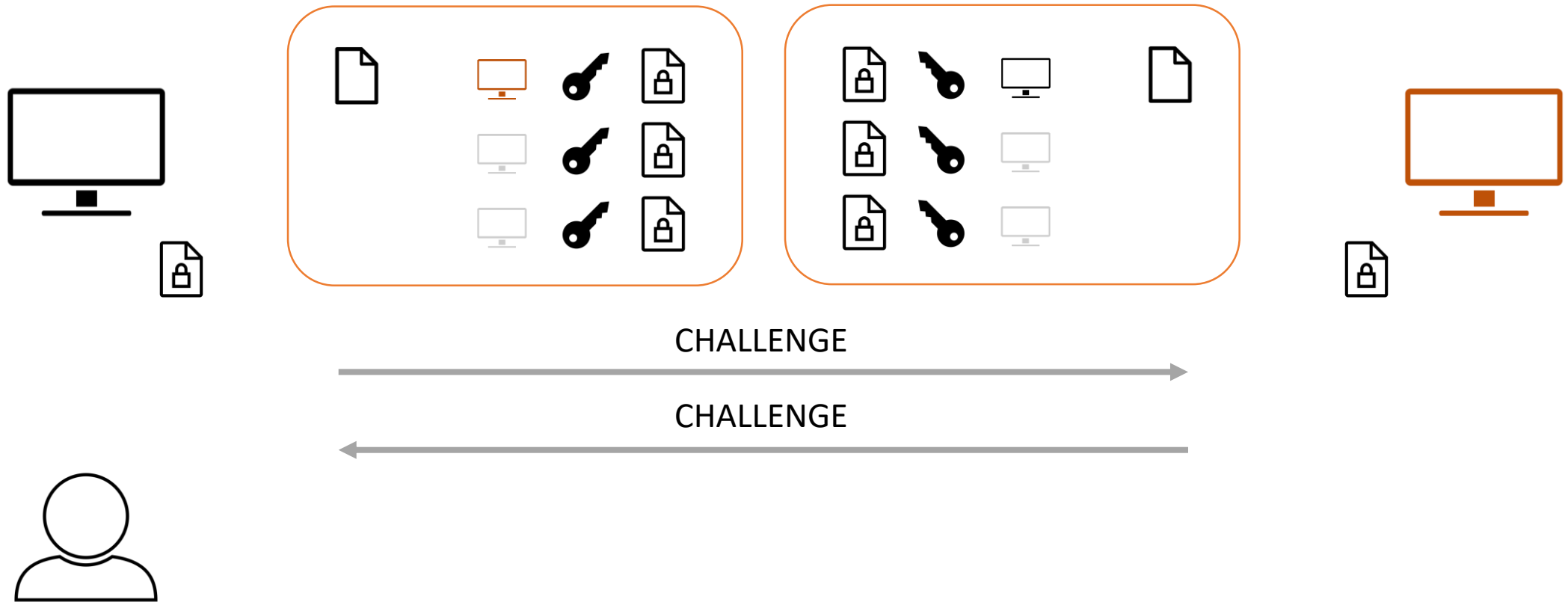
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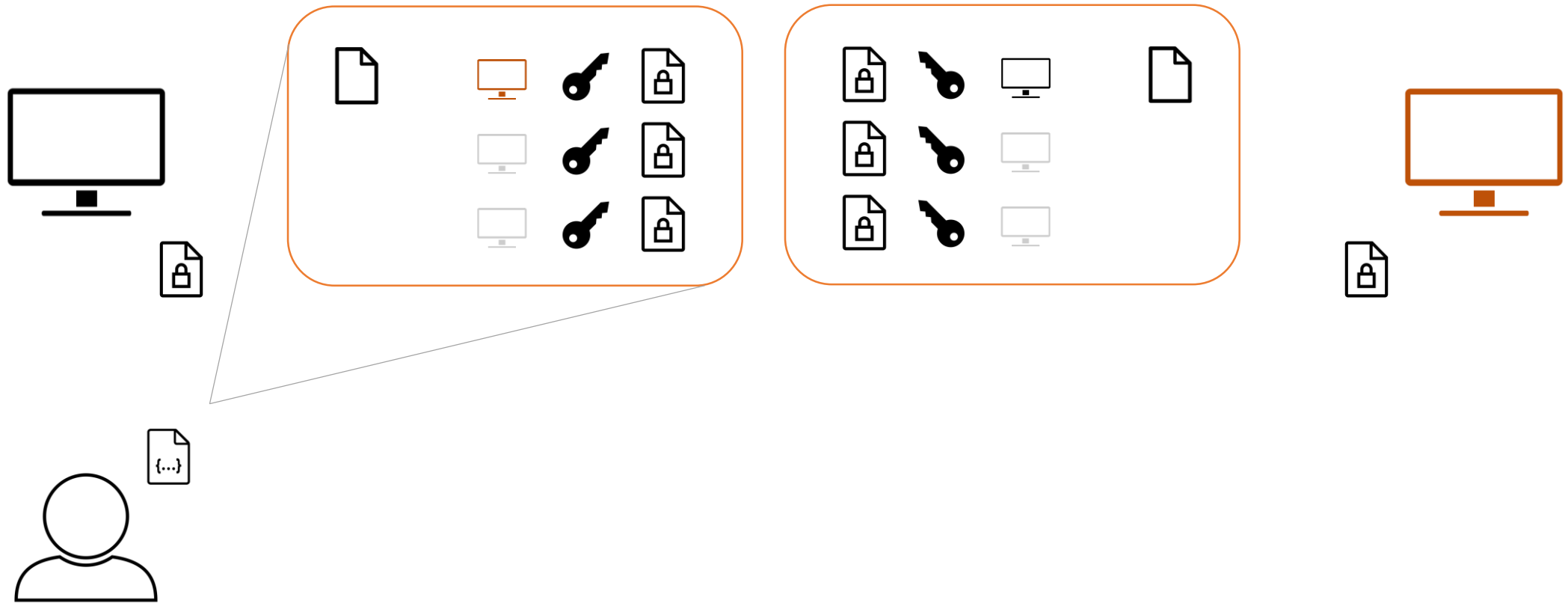
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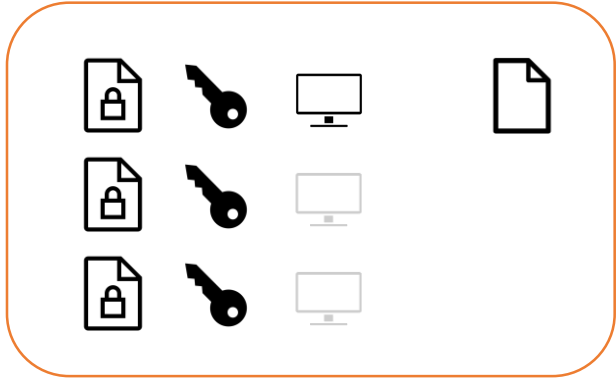
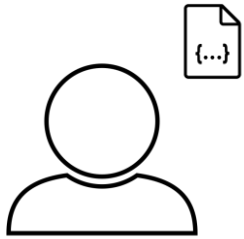
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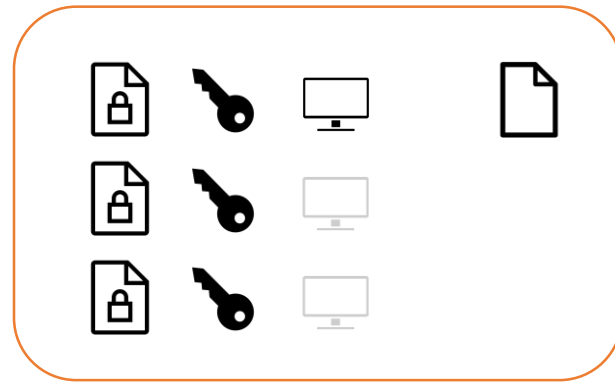
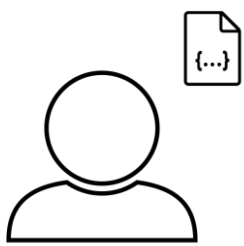
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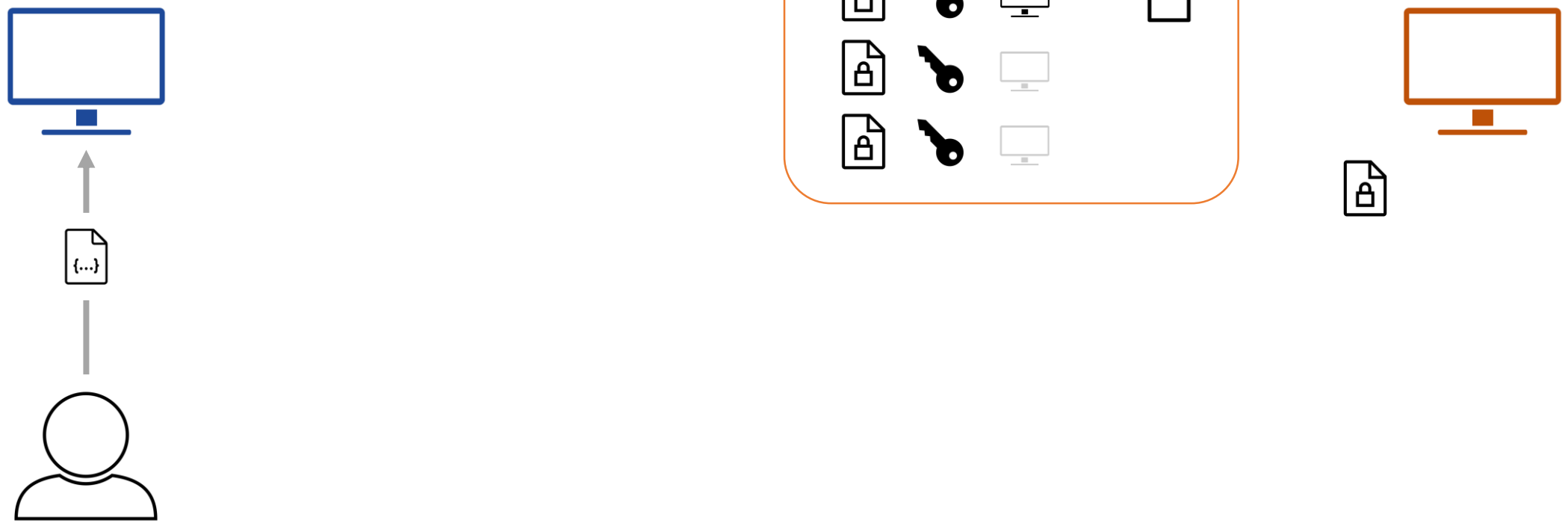
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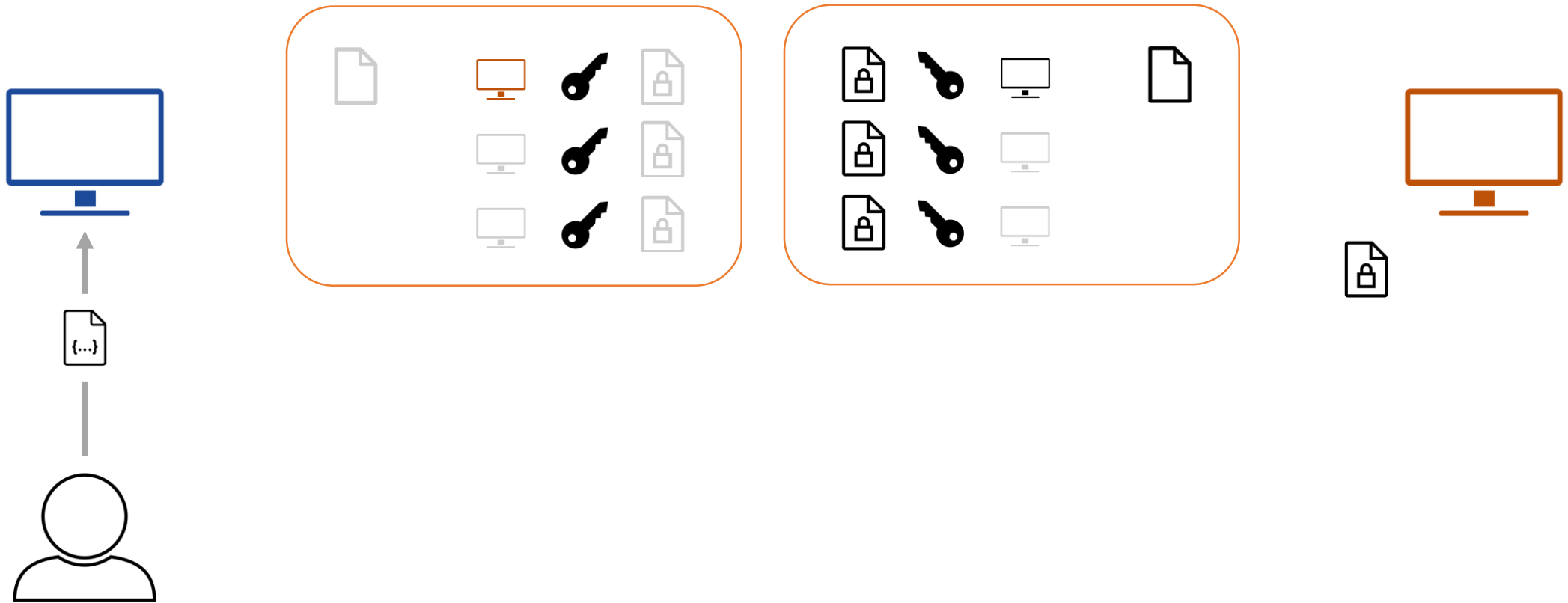
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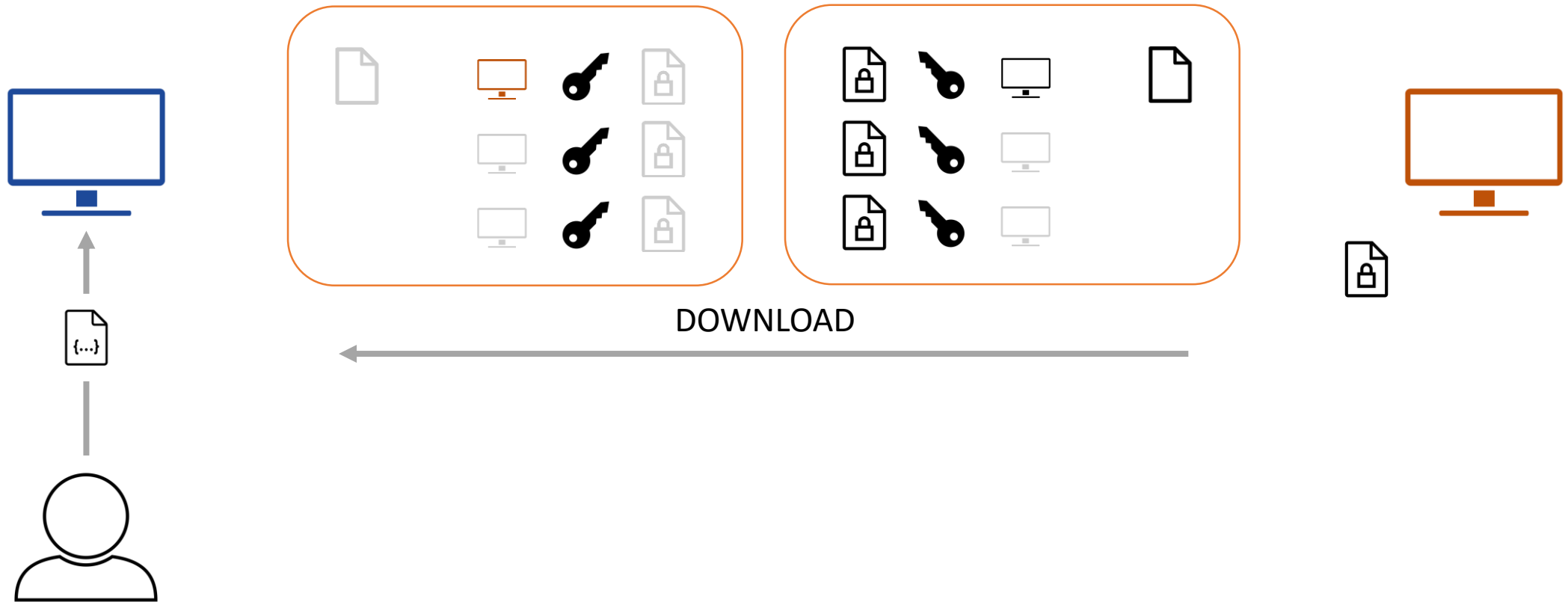
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Architecture



Architecture



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Demo Video

[Access video \(with EPFL account\)](#)