



Certificate of Blockchain Proof

hh-understanding-decentralization-
whitepaper_1626359238378.pdf

Hedera Hashgraph (email user: docusign@hedera.com)

This certificate constitutes proof that a document has been anchored to a Blockchain using the Ethereum Protocol as of [Thu, 15 Jul 2021 14:31:17 GMT](#) thereby proving that the document existed in its current form on the date at which the Blockchain entry was created.

You can use this proof to attest that:

- (a) the document has not been altered in any way.
- (b) the document existed in its current form on the specified date.



An online version of this proof can be found at:

<https://app.provendb.com/app/document/share/4b339cbda578d1ea90c0f0bcf43d20fa1efcdc585deed34fb61a1436d613154771e0bbe296696c2358195ede0bbf8b5e1f3929b4af98242faa6290da859a79e44bc12d840f399e01a927f88fcffa2e6398485bfc9532948e59e7b10a20f00dfa771fe715c76fffb13c865edc733796b9ec42157e5ecd69121f096a1530a80c0ae8a6f7e242b0af874e9ce792cc1a140543fdd3/compliance>



Details of the document being proved

The document was uploaded by Hedera Hashgraph (email user: docusign@hedera.com) at [Thu, 15 Jul 2021 14:27:10 GMT](#)

The document name when hashed was "*hh-understanding-decentralization-whitepaper_1626359238378.pdf*"

You can view a copy of this document [here](#)
(permissions may be required to view the document)

The cryptographic hash of the document is:
9035461515a2f897e12720e878786fe9c5ae7bf87733142a3fd2a01a7d083a9e

See Schedule 1 for details of the hashing algorithm employed.

Blockchain proof details

The document hash was included within the [Ethereum](#) proof at
<https://rinkeby.etherscan.io/tx/0xc9dbde4b02c28014f3c20fe73432c7a1ed57da9720ef4a67e305681c3cfb6c9d>

See Schedule 2 for a detailed cryptographic proof.

The Ethereum proof was anchored to the Blockchain in transaction
[c9dbde4b02c28014f3c20fe73432c7a1ed57da9720ef4a67e305681c3cfb6c9d](https://rinkeby.etherscan.io/tx/0xc9dbde4b02c28014f3c20fe73432c7a1ed57da9720ef4a67e305681c3cfb6c9d) at: [Thu, 15 Jul 2021 14:31:17 GMT](#)

Summary

The document *hh-understanding-decentralization-whitepaper_1626359238378.pdf* with hash value *9035461515a2f897e12720e878786fe9c5ae7bf87733142a3fd2a01a7d083a9e* was anchored to the Ethereum Blockchain by Hedera Hashgraph (email user: docusign@hedera.com) at: [Thu, 15 Jul 2021 14:31:17 GMT](#). Providing that the document continues to hash to that value, you can be certain that the document existed in its current form on or before that date.

Schedule 1: Document hashing

The document hash of `9035461515a2f897e12720e878786fe9c5ae7bf87733142a3fd2a01a7d083a9e` was obtained by performing a [SHA-2 256 bit](#) hash on the document [here](#) (permission may be required to view this document).

The hash was calculated on the document and its metadata as stored in the ProvenDB system.

You can download a copy of the document and its metadata (permissions required) [here](#). You can independently validate the document proof by using the open source validation tool at <https://app.provendb.com/homepage/downloads>.

Schedule 2: Ethereum proof

The Ethereum proof uses a Trie structure for linking data to the public Blockchain. It aggregates multiple hash values into a single

hash value which is then placed on the Blockchain. The following Ethereum proof proves that the hash value of `9035461515a2f897e12720e878786fe9c5ae7bf87733142a3fd2a01a7d083a9e` is associated with the root hash placed on the Ethereum Blockchain in transaction [c9dbde4b02c28014f3c20fe73432c7a1ed57da9720ef4a67e305681c3cfb6c9d](#)

This proof can be downloaded (permissions required) [here](#)

Below is a binary representation of the Blockchain proof

```
eJyKIE+uW0UTxb9VfCtg6ri7uquqO6MnsQVGTKz6G1t6vGvZTIIDDwIRp2AEkKAEhRsCQfVhiMcvhSjCYgLTev8qo66z/
n69en5Pn78eCu7u/2yuzu93spxe76ZpWGnihUFckyOCgwIBg8eIDENJVhzMLdW00hLBylV2MtoMuOnC2az883d4nH
+yKvAM7SVjYmrWmOupEGuQEACXM2i/3YvOT7Vz3anUzwoN3L6BQRUVeFVxU9qf9zq48qfvsfbcviX+lvyn/Bv9SB3to3jn19+fysatz/vXTe
+20bhx6tlf/zjf/9/8e3t+QZjIqYBCejgOqDUZPdeumdYEUedJlQnJxpGkVZndaehOgizvvhu2b85bmUFSPdAy156R0fxzMYTB0qCiaGxGsdgAxmCATpc
gqIMKDJAzLELlysg5Wyu5Kn6UibXktiuMrkCenF6rDaPXq68eQxWZXUgXqQtrgCTimUdeZQmM4znCnYieqcheqkoGwCgTUlu010H41tUCgRDPkb8
HC+gTZKIZR0xi5FKbIKq2ijRGSIHQCUEUUrq6IAInah789Yio+oV0MuU7GJeq45iVauqwkysBSG8dxoE3A11TmrSsQ2YnaPPB/KV5RbexZIUwzy6TCb0C
mqUhB0xJUwbnmmUQHw6NVMUyq5mQdex4jQlUCNUc6A1IK8ZXnSiYgxCvfg1m8VxzkEmE3gU6mSGGnxluVAZyNKHZDHuENwbdqDaW1EdpTt
5zFDh4mAiaaXSyNZqG1HyesNy8cQQwK5Dy1CTSjgKaloCIDt1CxodnAizUXSgPmmM3i5P/
WpDIGItJtcZSSnOGlxMW5eWvWh175aCLVNxDockkDTgWpDsvwQ+C6Xv15yGaft5pLK5fBBPF++ePPw7fjyq/u0e2Vy
+807Yzs/39h09ehawGCU2rMZIAxuvYgX1HBkl3lpvexCHK0gjWwRNUsmmv3562B1fnp9sT6f98fF6/YB
+tD8sS4rexqPdsn4Wh10+X8dpu/6v497e2HJ3ii9Ov/818PO280fL4cna3pf3+ln7MwAA//+nruVJ
```

Schedule 3: List of printable links in the document

Document being proven:

<https://app.provendb.com/app/document/share/04971e9fb9d6f54a379a912161bffd3ce3c26551604698a23cdb2a5857bf1bff8369bce57da9fd2969eb1f6d7a8decff84d341c112f7db4cef004d03f065a1081e2eab55ff7db741a705e3ce43edd089c46108ffc857b14f880df737fc200ffec9d03b1074f588756e4b53d35090653c1c8a7c56274107970160b3d8cf8edd74a15138f09bd51da53b636caf5f1653dff857a/compliance>

Ethereum.org:

<https://ethereum.org>

Blockchain transaction:

[c9dbde4b02c28014f3c20fe73432c7a1ed57da9720ef4a67e305681c3cfb6c9d](https://etherscan.io/tx/c9dbde4b02c28014f3c20fe73432c7a1ed57da9720ef4a67e305681c3cfb6c9d)

Open source validation tool:

<https://app.provendb.com/homepage/downloads>