



Hedera™ Hashgraph

Certificate of Blockchain Proof

Powered by **Proven**^{DB}

hh_whitepaper_v2.1-20200815.pdf

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

This certificate constitutes proof that a document has been anchored to a Blockchain using the Hedera Hashgraph Protocol on [Mon, 21 Dec 2020 12:52:56 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.provencdb.com/app/document/share/434ebd30e2ade780ad9c014ce9b4db9b5b5d0d5500f27edc482afb08d063d404fb5b23f40754c4d846f45cc467078bc7a022ac0efd5ae22c671ed1cccc91de64fe56da42dd8def5855cbfb8a5f778ad2852a2e41e9fb10dca859cd332a656daaa40c9a662f0ea3ba3ccd6980b924f9617c85dc3bb708dadf698b5aea564b6ae85cb8427591f80008102c1bd2ee2dc5/compliance>



Details of the document being proved

The document was uploaded by Hedera Hashgraph (email user: contact@hedera.com) at [Mon, 21 Dec 2020 12:52:53 GMT](#)

The document name when hashed was "*hh_whitepaper_v2.1-20200815.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:
1cf16266bde8c8c248afde9396176994db30b7c1f878af574c3628f09e37a0e2

See *Schedule 1* for details of the hashing algorithm employed.

Blockchain proof details

The document hash was included within the [Hedera Hashgraph](#) proof at
<https://explorer.kabuto.sh/mainnet/transaction/1e0b076a3f05a64f5591a7397a0563a2417aad93f701a28f9eec7c2ae3b3360441657542eeb36f40081fa0bf793513b9>

See *Schedule 2* for a detailed cryptographic proof.

The Hedera Hashgraph proof was anchored to the Blockchain in transaction
[1e0b076a3f05a64f5591a7397a0563a2417aad93f701a28f9eec7c2ae3b3360441657542eeb36f40081fa0bf793513b9](#) at: [Mon, 21 Dec 2020 12:52:56 GMT](#)

Summary

The document *hh_whitepaper_v2.1-20200815.pdf* with hash value *1cf16266bde8c8c248afde9396176994db30b7c1f878af574c3628f09e37a0e2* was anchored to the Hedera Hashgraph Blockchain by Hedera Hashgraph (email user: contact@hedera.com) at: [Mon, 21 Dec 2020 12:52:56 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 `1cf16266bde8c8c248afde9396176994db30b7c1f878af574c3628f09e37a0e2` 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.provencdb.com/homepage/downloads>.

Schedule 2: Hedera Hashgraph proof

The Hedera Hashgraph 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 Hedera Hashgraph proof proves that the hash value of

`1cf16266bde8c8c248afde9396176994db30b7c1f878af574c3628f09e37a0e2`

is associated with the root hash placed on the Hedera Hashgraph Blockchain in transaction

<https://explorer.kabuto.sh/mainnet/transaction/1e0b076a3f05a64f5591a7397a0563a2417aad93f701a28f9eec7c2ae3b3360441657542eeb36f40081fa0bf793513b9>

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

Below is a binary representation of the Blockchain proof

```
eJy0ID3OG0QTx99TvDUFreOdmZ2PTfVIXIGKxsuzumBLT2zLdglpExtra5AaQoASEqBAI97DEYZBjiBQsGiTaXc1vPv//b16v/bg
+38FIEBTPM2zYwGqeMxo1AZXW6uxUug5IU/NkrYMELUsLUI+BP10wq81cbXczzh9PL0iDx2JY4wVAtIUT5gldPXD2MaL++i7k+Lg/2pxOcY1c
+ekXLFgWgAuETwEfMj5k+ew9fuwO/xJ/ifuw/Nt+801Yx/Hl8+/vvcf9z/vZV3M3VtePV7v98ff//f/
Zt4fznWKEt1mq2aTS2kzgUtUrBJGYAgk64CithqtUQhpaoUTzAmL92Xe7/
Zvj2hf18g5obeJErJKJlFsYBpEd01DvFmM9ILWJyCV3pgHuLRmbSpAnX8D3p/vWlViQlqUSesFgXsVbihEIFYFoIPInjRyA.JgXK9kVaFRUVrkBlrKkNO3i
yRyCE2erUX10szYliFmm0Bzc2M1jZEOXAmjoU00mZSQr40k5lauXlpHg2r2TJLNipkLRinZrSlzVpE6aRJFBtzOsFZwUJsnGknPZGPDWbRKq73y9A
wPIA7oJlpjVrUKMDMLSUy9AQoVs9LmTNek7gqIV6X0Ar0IDuPm6dxAJzTQMILExqVOyOwww+BFRWN0rAQD0SahY58pUIRbNijNZxc0SkHuxkoFB1
EiNpc0uG3ZIUsvdusMOMTnsxPMVpG0BoG2yN6ppSB2MShtRC0NIEkw9HbLgKrAvZvwqN3Nhr2zTk2x2sYQaZPalKk.JasDhUjuKpWQEz5sKCw7L
LiMGs1dh0BGh0ma93G0JApcumDnMOHojQsqZtVN62odLeX6R4Itby5q3B2OL75+fxq6j1fD73+4Pq028/w5R0IFxSkLu9RkbuBKTb2wkGMFdz
+NUgs4WraloQM9qBNJqRWEIStGXC6xlmKQXnpqlwbq7fXjw+b44vxyfTrtjw+Xy2vqB/
vDbpfe7+PBZrd8EodNPI2uY8bBV498s93GaffV3a1rfNHF9/6MPXqz/lcnezt3dhtT/HV6be/eviSNvPB7vDFcqx9s93vNtvT8gm9G++Pn7x/+iMAAP//
buf1xw==
```

Schedule 3: List of printable links in the document

Document being proven:

<https://app.provendb.com/app/document/share/e78563f6edcbf3053e846ece987075e6e4473031eb3e1f8913b0cdc166680f415982c5b7ef6eca0a168b2872eddf2442c7655ad071776be16276e38592ce1ecfd8c9600a952ba1f0ec0b873fe73fc2f68d3857017bda1378df5c387d3335a9ac6949ddf07b3777b6278d0bc5228433b54ae5d9ee2e88c491aa314783d14e3d3bf5c77ed41a3798f9b547529419303a/compliance>

Hedera Hashgraph

<https://www.hedera.com/>

Blockchain transaction:

[1e0b076a3f05a64f5591a7397a0563a2417aad93f701a28f9eec7c2ae3b3360441657542eeb36f40081fa0bf793513b9](https://app.provendb.com/app/transaction/1e0b076a3f05a64f5591a7397a0563a2417aad93f701a28f9eec7c2ae3b3360441657542eeb36f40081fa0bf793513b9)

Open source validation tool:

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