



# Hedera™ Hashgraph

## Certificate of Blockchain Proof

Powered by **Proven**<sup>DB</sup>

hh-consensus-service-whitepaper.pdf

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

This certificate constitutes proof that a document has been anchored to a Blockchain using the Hedera Hashgraph Protocol on [Wed, 10 Mar 2021 20:10:47 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/9b065684f1457f8c9a5cfaf3b694280337dc0c7f205680d4874f7fe239479089b281db1e6c65561801386bd0fb237f64faadd813f74288c2e33f9a1950bf794238024e40ed628dc6d17a8785140c27e4c22db5f1a354cfc07651c96649f1643f577cc95a49d54ac874bf0d0063675a45950491331e568311984ffce959e85f3f24fd0cf24ec47856050a2ea1932a09/compliance>



## Details of the document being proved

The document was uploaded by Hedera Hashgraph (email user: [contact@hedera.com](mailto:contact@hedera.com)) at [Wed, 10 Mar 2021 20:10:44 GMT](#)

The document name when hashed was "*hh-consensus-service-whitepaper.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:  
*b4d6f5ee01665da12aa2c9bdc2179e56230dd9e3d1a537f8b0eed636f007cd28*

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/  
b165af052fc1c9eea9438d739fe9f8785937d8238f98e3365aa991c33fbedebb7ffa60c8462f470b53d7062804170d5f](https://explorer.kabuto.sh/mainnet/transaction/b165af052fc1c9eea9438d739fe9f8785937d8238f98e3365aa991c33fbedebb7ffa60c8462f470b53d7062804170d5f)

See *Schedule 2* for a detailed cryptographic proof.

The Hedera Hashgraph proof was anchored to the Blockchain in transaction  
[b165af052fc1c9eea9438d739fe9f8785937d8238f98e3365aa991c33fbedebb7ffa60c8462f470b53d7062804170d5f](https://explorer.kabuto.sh/mainnet/transaction/b165af052fc1c9eea9438d739fe9f8785937d8238f98e3365aa991c33fbedebb7ffa60c8462f470b53d7062804170d5f)  
at: [Wed, 10 Mar 2021 20:10:47 GMT](#)

## Summary

The document *hh-consensus-service-whitepaper.pdf* with hash value *b4d6f5ee01665da12aa2c9bdc2179e56230dd9e3d1a537f8b0eed636f007cd28* was anchored to the Hedera Hashgraph Blockchain by Hedera Hashgraph (email user: [contact@hedera.com](mailto:contact@hedera.com)) at: [Wed, 10 Mar 2021 20:10:47 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 `b4d6f5ee01665da12aa2c9bdc2179e56230dd9e3d1a537f8b0eed636f007cd28` 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

`b4d6f5ee01665da12aa2c9bdc2179e56230dd9e3d1a537f8b0eed636f007cd28`

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

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

`b165af052fc1c9eea9438d739fe9f8785937d8238f98e3365aa991c33fbedebb7ffa60c8462f470b53d7062804170d5f`

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

## Below is a binary representation of the Blockchain proof

```
eJy0LL2u20UQxXkKagpaxsz0/uR6kq8AhWNmU9s6ca2bCeQMtDQJm8ACUpAiApR8h6WeBjk3BBxsZBoaOc//9+emd1zv1tLcf16vhYH210p/
DVduexktOvWBAWhRZQPsXyEMrD2j/7+W3vxle208T5Y5eCZGwLG5MXADEXQpgLFJRAV7Oo/8Rf/vw3/Bs9yNbWcXzx9Q
+3onH7y9515Ttb3X14udsf//jgw2ff3Z5vnPsg9Dayax2REyOAE282CLhPEMhiYGmpYmITqxagmcSUaO3Z97v96+NaFsjtLbBySunKLtG4SJVqyM14C
EKlWUbu5hUKWbA0R2jQqyKyAFv2K+AIT8VSnPvkaM7iLRx4ugvMi4pgGTak16JYeptmxohmAQXGtcJZyAviAPCY2rl6aVQJckiYSgVTsE8tBtMMcgax
MwN3gkYEV0DhmooJWlpq9CYp3qYOFaDqtfEselkoR2m190gaNLu1RA+ghveBh/MN+9QiKRZEipijgneYBTjV0hPFUBkIjUePoSAKBWWMHtAmul4p
pDm1+hDGwalYp2Pn3mdFFxETJsw6Wx3SwXuZ0KabjwmJT35SqFDoU5g05jnHJaOplUmTK4dm8IYOQbM4TIwL8NGHZ6TwwdTyyWtgK72NBpW
cgch5avRggTTAXhWku2s4KxAVa6WWTG1knRxV6GpklGRPfoYYRqUQ41UKolVB0qRYQwi1ZVL1aGQolZSQWYDoutLodbNG
+DkxqV6k0EuteQcXWvL6WAcYNFmj8rBvSVXopaW0/neO3zny/NHF2Ouw+Mgq0ey2W7jtLo4dHf4m1WfP3t9Vzs+/+bV6ek+Xprc/
viubePnzxUaSxbGNLAZlBPS8E4zY+bogyd1H0gj5wiixiJzghGlhodqz5RWbNSGWXtRJu+l4SgVenHOV48Pm+Pz84v16bQ/Plwu745+sD/sdil6Gw82u
+WTOGzy6fL+LMv/W9mbG9ttT/HV6fe/tH1JG3+wO3yxtLVstvvdZntaPqG3a/vpk/
eIV5c0Pd9o9ZYcUaA1dgEUQZvqhtBncEMq7vMSDMLUc2iJ8EYtS+nmON7n+CXs/1u0/xkAAP//q0r8KA==
```

---

### Schedule 3: List of printable links in the document

Document being proven:

<https://app.provodb.com/app/document/share/4fb8c886f605f711420b701e567565bd3da7f4b65767402b279db178595667f4055a22ebd98d9812cbf2be76c0259623c8d27f406caf73711fefe9dc031534e3e47c7fef6a3612b96dfb270175a16a64e5699bb16cbf416e490a9fd937f475f9edd5c1b1716071309af0f93f12c872505c3d741adaf716c5c5e4ce19db4d5b24a568a29abb50ee35ed34640e95c3d/compliance>

Hedera Hashgraph

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

Blockchain transaction:

[b165af052fc1c9eea9438d739fe9f8785937d8238f98e3365aa991c33fbedebb7ffa60c8462f470b53d7062804170d5f](https://app.provodb.com/app/transaction/share/b165af052fc1c9eea9438d739fe9f8785937d8238f98e3365aa991c33fbedebb7ffa60c8462f470b53d7062804170d5f)

Open source validation tool:

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