

# Nightfall\*

Enables private token transfers on the public Ethereum blockchain, focused on enterprise use.

\* Nightfall is an internal project names at EY for code related to privacy/ZKP on a blockchain". This code is not owned by EY teams and EY teams provide no warranty, and disclaims any and all liability for use of this code. Users must conduct their own diligence with respect to use for their purposes, and any and all usage is on an as-is basis and at your own risk.

B2B value transfer on a public blockchain could be problematic because it may leak information to competitors. Nightfall addresses this problem by helping enable transfers to be fully private.

## Business challenges

Privacy on a public blockchain without overly compromising decentralisation, and staying compliant with regulations, is a difficult problem to solve. This makes it hard for enterprises to use public blockchains in spite of their advantages in terms of speed and error reduction. This update marks the readiness of Nightfall to help enable development of enterprise solutions.

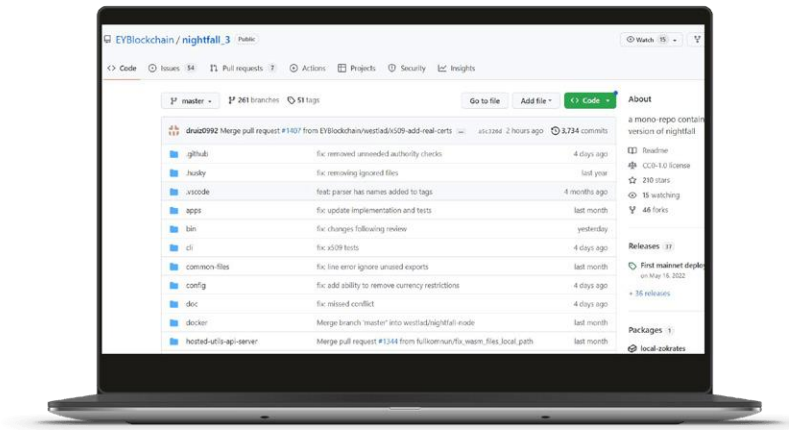
## Nightfall

Nightfall is an Zero-Knowledge (ZK) Optimistic Roll-Up that helps enable private transactions on the public Ethereum blockchain. Using Nightfall, enterprises can orchestrate private transactions efficiently on the Ethereum Mainnet without compromising the transparency, data immutability and security that Ethereum provides.

Nightfall is a public domain application that helps enables fully private transfer of tokens on Ethereum-compatible blockchains. It can help support regulatory compliance without significantly compromising decentralisation and potentially reduces the cost of token transfers by a factor of 10. Nightfall can help enable supply chain and business operations for enterprise users.

## Key features

- ▶ Private token transfers on a public blockchain
- ▶ Decentralised, autonomous authorisation of enterprises
- ▶ Cost reduction of x10 for ERCx token transfers.
- ▶ Public domain software



## Potential benefits

- ▶ Enterprises can transfer value without intermediaries and without risk of competitors seeing their transactions
- ▶ The blockchain provides a definitive view of transaction status, reducing errors
- ▶ Decentralised authorisation mechanisms to help support regulatory compliance
- ▶ Transaction cost is approximately one tenth of an equivalent, conventional blockchain transaction

## Continuing the conversation

To find out more contact the team below.



**Duncan Westland**  
Director,  
Innovation-Emerging Technology  
duncan.westland@uk.ey.com



**Paul R Brody Global**  
Blockchain Leader  
paul.brody@ey.com

### EY | Building a better working world

EY exists to build a better working world, helping to create long-term value for clients, people and society and build trust in the capital markets.

Enabled by data and technology, diverse EY teams in over 150 countries provide trust through assurance and help clients grow, transform and operate.

Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. Information about how EY collects and uses personal data and a description of the rights individuals have under data protection legislation are available via [ey.com/privacy](https://ey.com/privacy). EY member firms do not practice law where prohibited by local laws. For more information about our organization, please visit [ey.com](https://ey.com).

© 2024 EYGM Limited.  
All Rights Reserved.

BMC Agency  
GA 171348960

EYG no. 003826-23Gb1  
ED None

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax, legal or other professional advice. Please refer to your advisors for specific advice.

[ey.com](https://ey.com)