

2.3.2.2 Permissioned Networks

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[Permissioned Networks](#) (Glossary Definition)

Permissioned blockchains combine the properties of both the [public network](#) and [private network](#). Each permissioned network is unique and represents a careful balance of public and private networks to meet specific business use cases.

The available options include allowing anyone to join the permissioned network after suitable verification of their identity, and the allocation of select and designated permissions to perform only certain activities on the network. ¹⁾

Benefits of Permissioned Networks

Decentralization

The degree of decentralization for permissioned networks is a business decision. The extent and quality of decentralization depends upon the number of peers (i.e., nodes), the expected number of bad nodes in the network, and the type of [consensus](#) mechanism determined by the [stakeholder](#). Permissioned blockchains usually employ an algorithm such as [byzantine_fault_tolerance](#), which differs from the [proof of work \(PoW\)](#) algorithm²⁾.

Transparency

Transparency is not a driving force in permissioned networks and is often a major factor in the business decision to choose permissioned over [permissionless networks](#). Most permissioned blockchains do not use cryptoeconomic [coins](#) incentive or [tokens](#). The primary incentive of permissioned blockchain participants is to minimize the transparency, cost, time, and ease of sharing information³⁾.

Privacy

Permissioned blockchains offer fine-grained visibility into transaction details, as well as, metadata about those transactions which, in many ways, compromises the privacy of the Network participants⁴⁾.

Governance

There are fundamental differences between [permissionless](#) and permissioned network governance. Permissioned governance is decided and agreed upon by members of the business network. Economic incentives, code quality, code changes, and power allocation among peers are based on the business dynamics and the common purpose and goals of the permissioned members. This allows for agile and responsive networks desired by businesses⁵⁾.

Tokens

Permissioned blockchains generally do not employ a cryptoeconomic [coins](#) incentive or [tokens](#)⁶⁾.

Scalability and Performance

Permissioned blockchains use [consensus](#) mechanisms, which are computationally inexpensive (when compared to [proof of work \(PoW\)](#)). Therefore, they enjoy substantially better scalability and performance than their [permissionless network](#) cousins⁷⁾.

1)

“Public, Private, Permissioned Blockchains Compared”, Shobhit Seth, Investopedia, 10 April 2018, <https://www.investopedia.com/news/public-private-permissioned-blockchains-compared/>

2) 3) 4) 5) 6) 7)

“Nuances Between Permissionless and Permissioned Blockchains”, Anant Kadiyala, 18 February 2018, <https://medium.com/@akadiyala/nuances-between-permissionless-and-permissioned-blockchains-f5b566f5d483>

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