

Vocabulary

1. Discuss the defining characteristics of each of the following:

node	<i>A key point in a network relating to a specific connection or device.</i>
distributed system	<i>a collection of independent computing nodes that work together to perform a common goal.</i>

2. Answer the questions.

a) What is a *content delivery network* (CDN)?

A CDN is a web service where the data is available on servers in different geographical regions, allowing reduces response times and improved user experience.

b) What are the goals when (advantages of) implementing a distributed system?

A distributed system provides high level of performance (because of concurrency / parallel processing), scalability, and fault tolerance.

c) Explain why blockchain requires a distributed system.

Blockchain relies on distributed nodes to independently validate transactions and reach consensus via a majority agreement. Without this distribution, there is no trustlessness, no immutability, and no resistance to censorship – it becomes just a regular database.