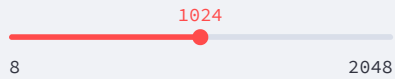


## Chat Mode

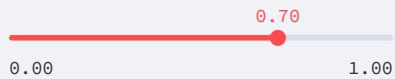
☐ RAG Mode  

## Parameters

Max Length



Temperature



## Actions

New Chat

Clear History

Response Time (Non-RAG): 6.08 seconds


CPU Usage (Non-RAG): 6.70%

Memory Usage (Non-RAG): -0.10%



# Local Chatbot



 A chatbot powered by LlamaIndex and Ollama 



Hello, I'm your assistant, how can I help you?



8. Given a distributed system using the Paxos consensus algorithm, what is the minimum number of nodes that must be operational to achieve consensus in a system with N nodes?
- a)  $N/2$  b)  $N/2 + 1$  c)  $2N/3$  d)  $N - 1$



Nice question!

The correct answer is (b)  $N/2 + 1$ .

In the Paxos consensus algorithm, the minimum number of nodes that must be operational to achieve consensus is  $N/2 + 1$ . This is because a majority of nodes must agree on a value for consensus to be reached.

To see why this is true, imagine that you have N nodes in your distributed system. If N is even (i.e.,  $N = 2k$  for some integer k), then the minimum number of operational nodes required for consensus would be  $N/2$ , since a majority would require half of the nodes to agree on a value.

However, if N is odd (i.e.,  $N = 2k + 1$  for some integer k), then the minimum number of operational nodes required for consensus would be  $N/2 + 1$ . This is because a majority requires more than half of the nodes to agree, and in this case, that means at least one extra node must be operational.

So, the correct answer is (b)  $N/2 + 1$ .

Ask a question:

