

LAB DAY 4 - RED VS. BLUE

A27 - Fundamentals and Design of Blockchain-based Systems

February 9, 2023

Assignment

On this fourth day, we expect you to implement a malicious node that can attack the blockchain. We ask you to divide into two groups: a blue team and a red team. The blue team gets to decide amongst themselves what implementation they will pick as their favourite. You will provide the red team with this implementation. The red team will then implement a malicious node that can attack the blockchain. The red team is free in their approach to attacks, for instance:

- double spending;
- Sybil attacks;
- eclipse attacks; or
- Byzantine nodes.

The end goal is to steal tokens from the blue team. The blue team will then try to defend their blockchain against the red team. The blue team is free in their approach to defending their blockchain. They should critically assess and try to find weaknesses in the implementation. However, it is most important to not change the message format of the blockchain as this would sabotage the red team.