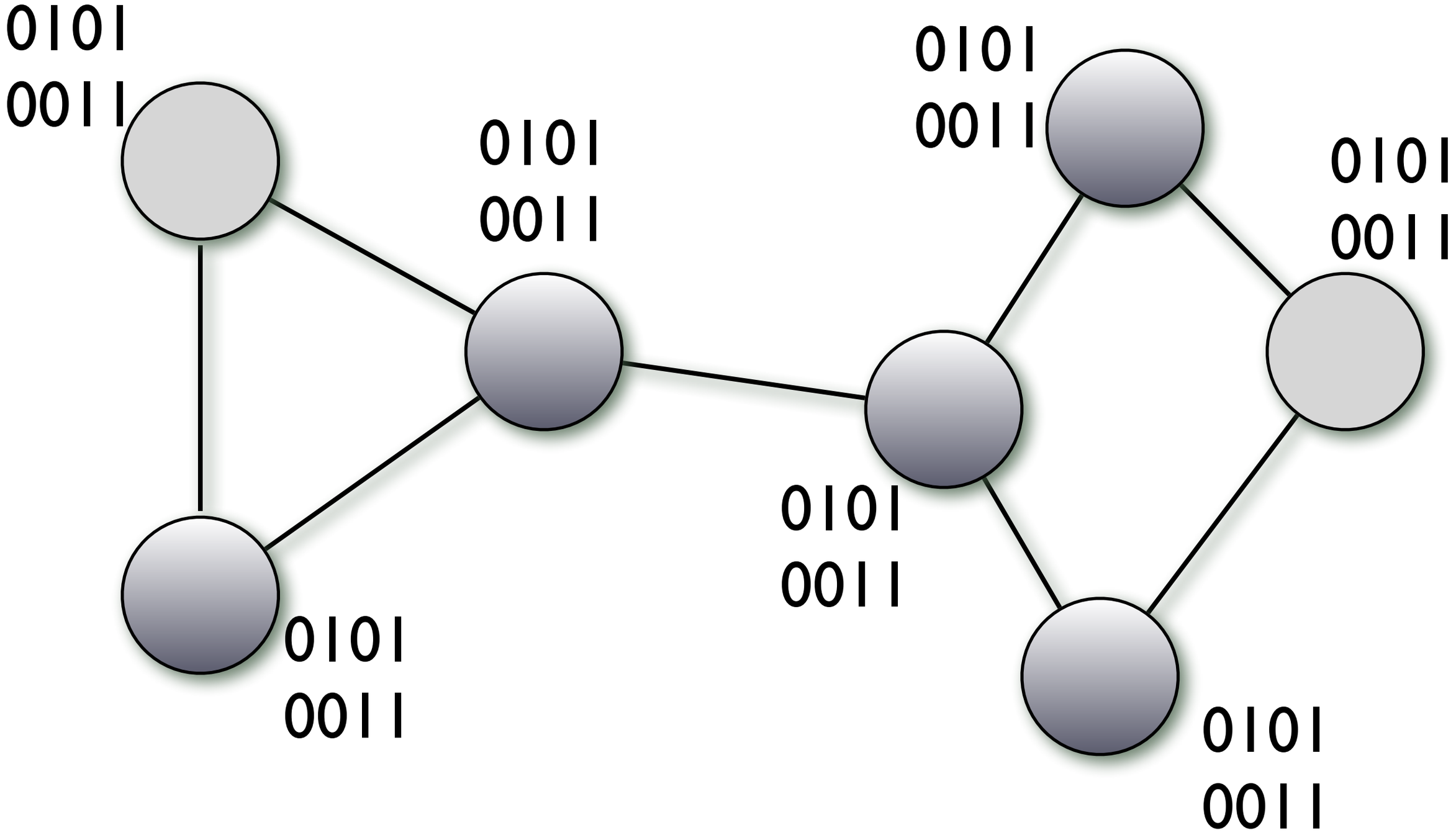
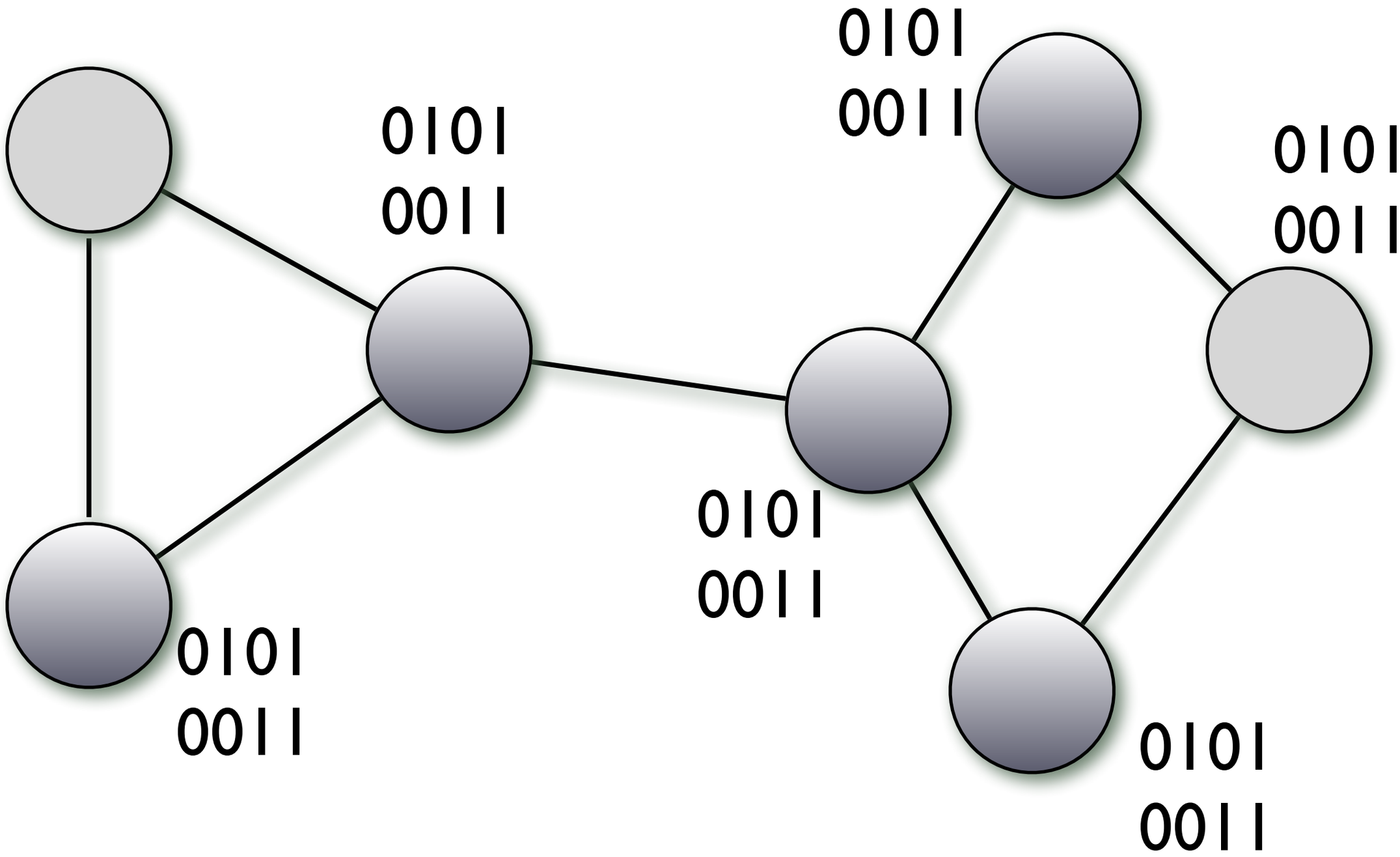
Faults & Behaviors Models

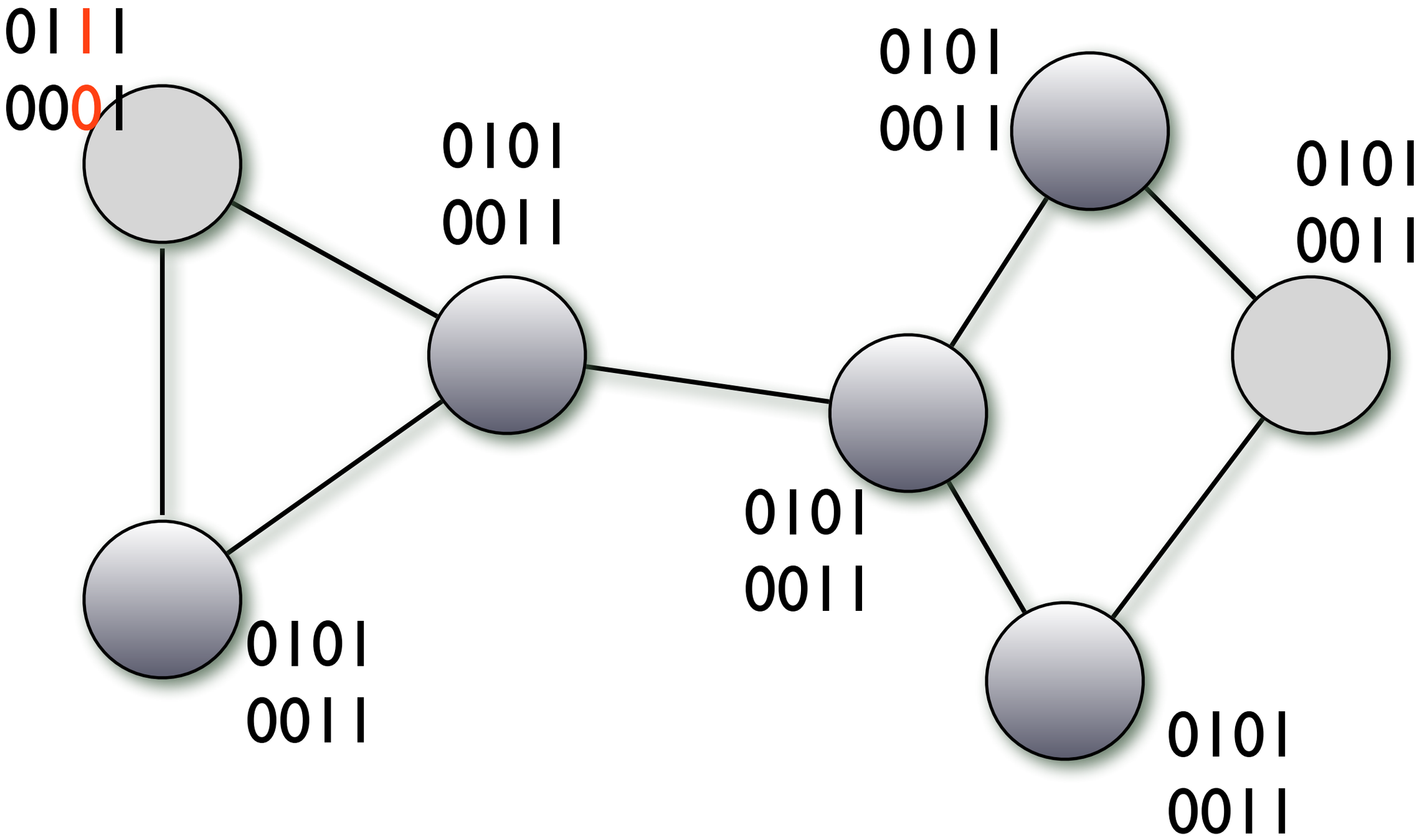
Transient Faults



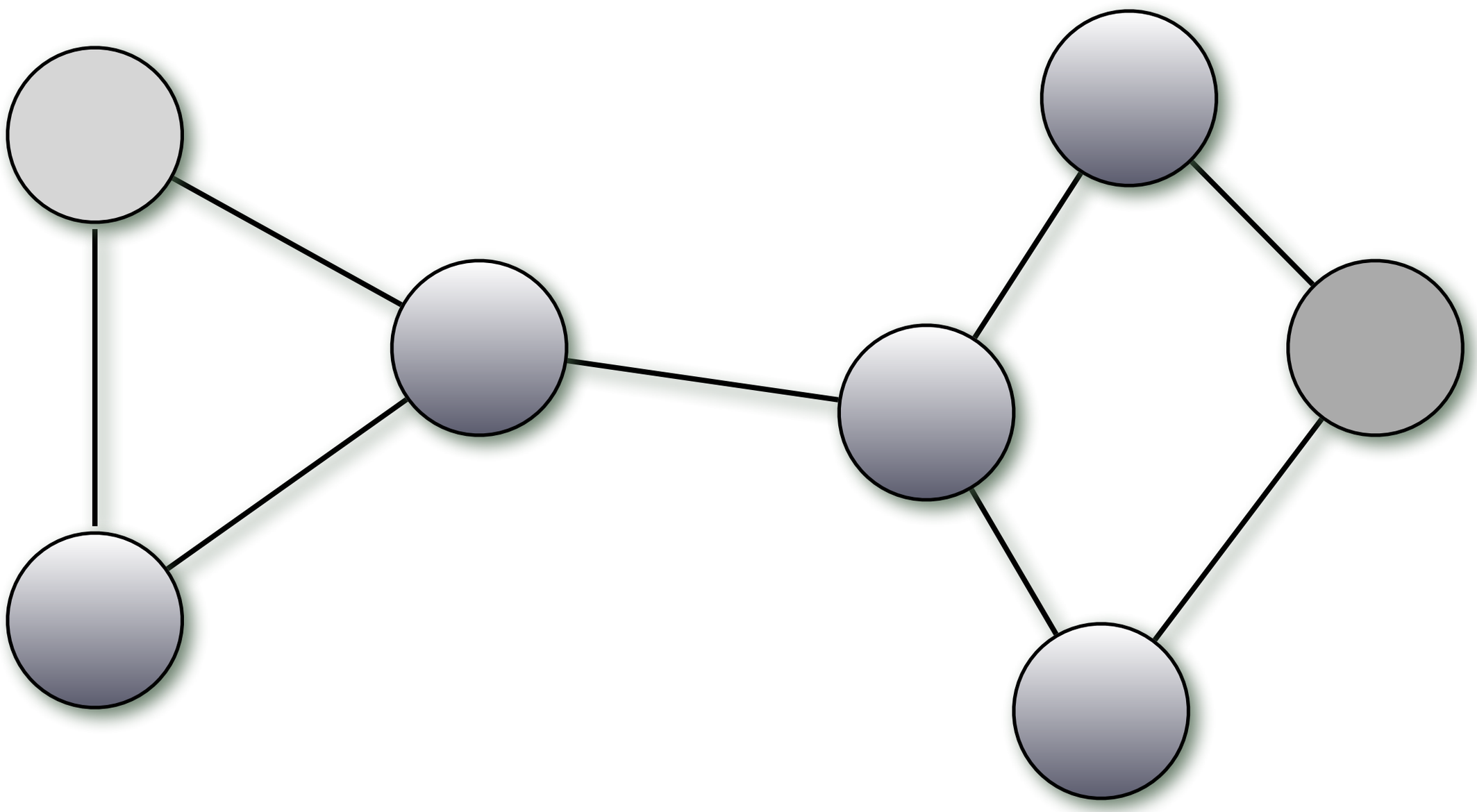
Transient Faults



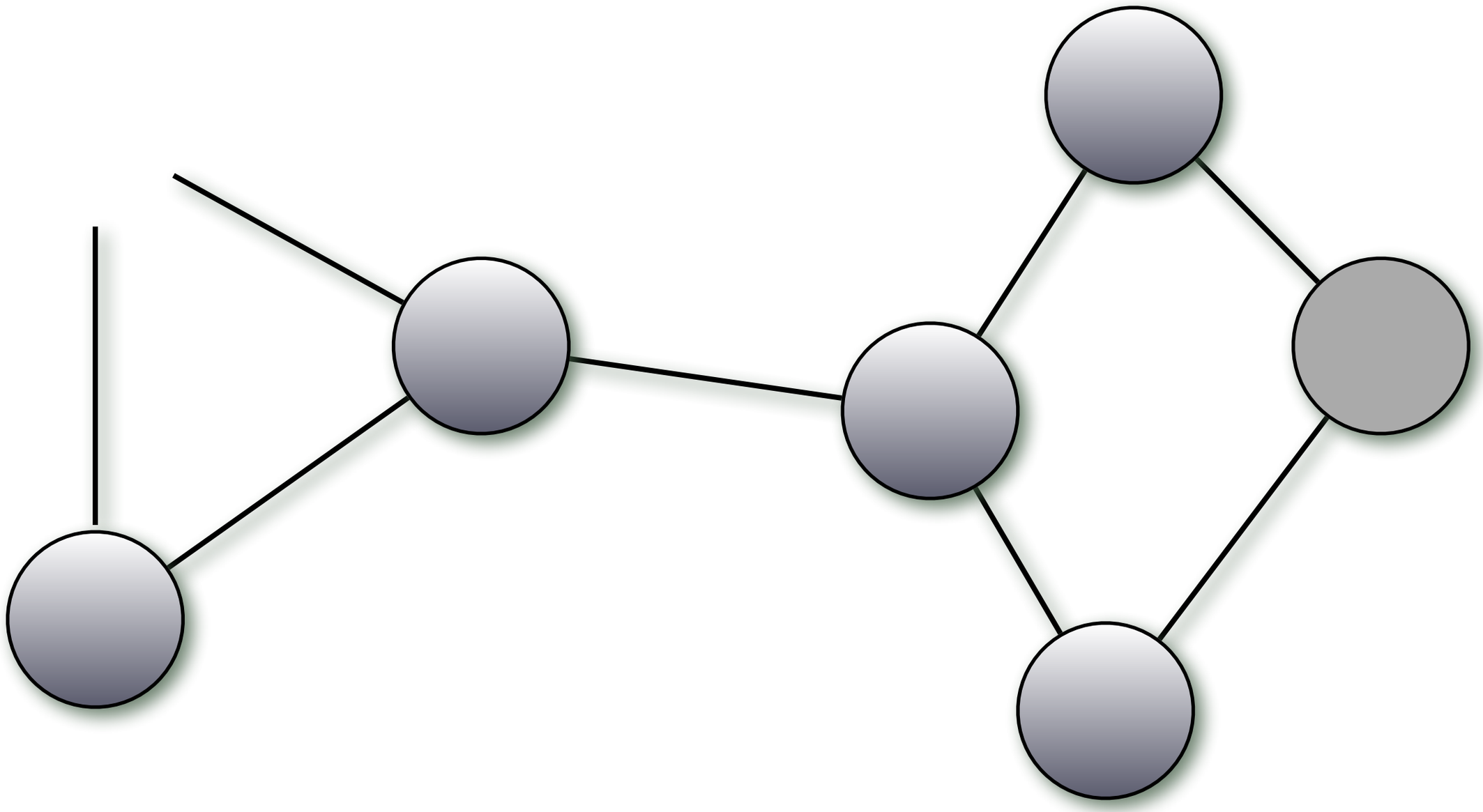
Transient Faults



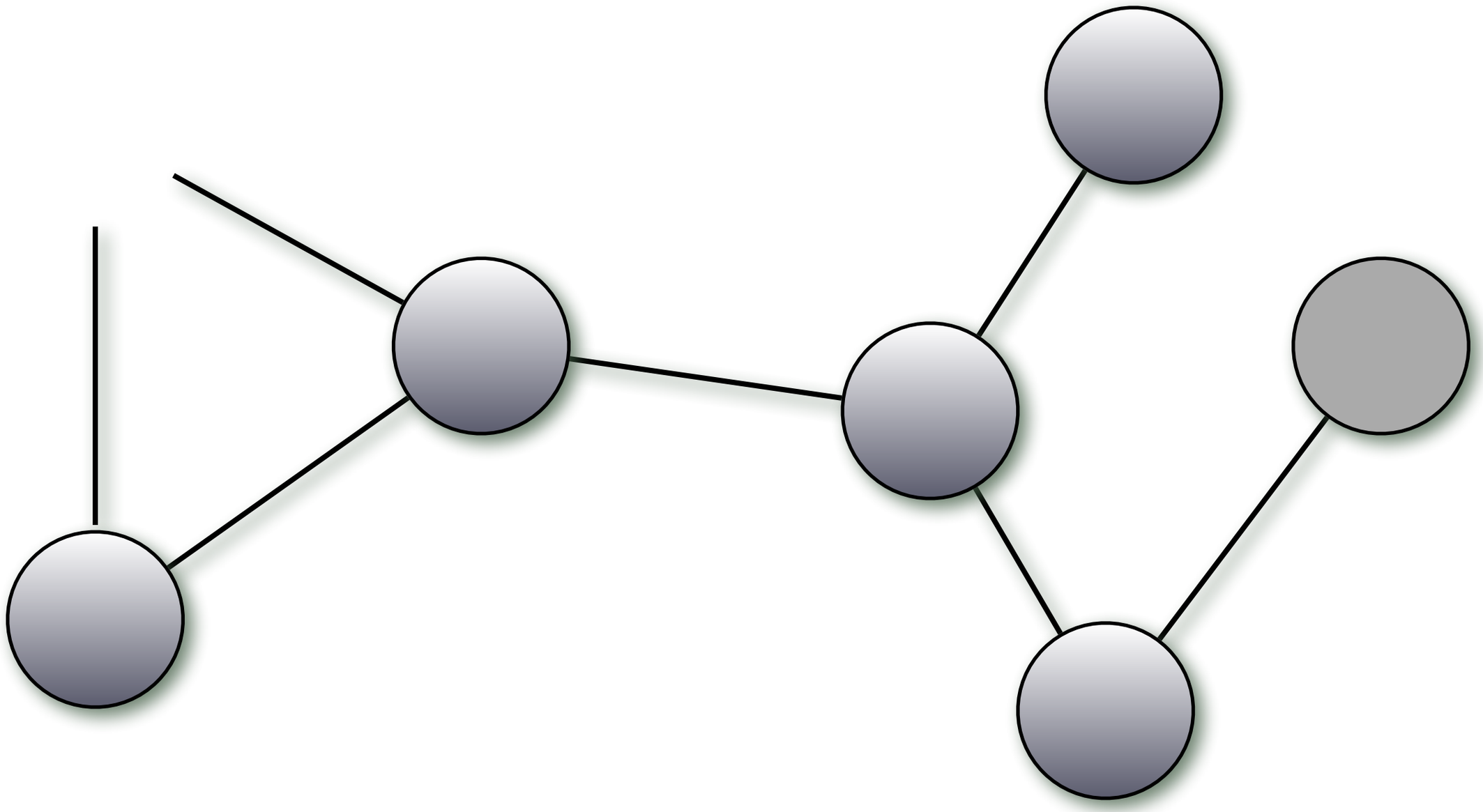
Crash Faults



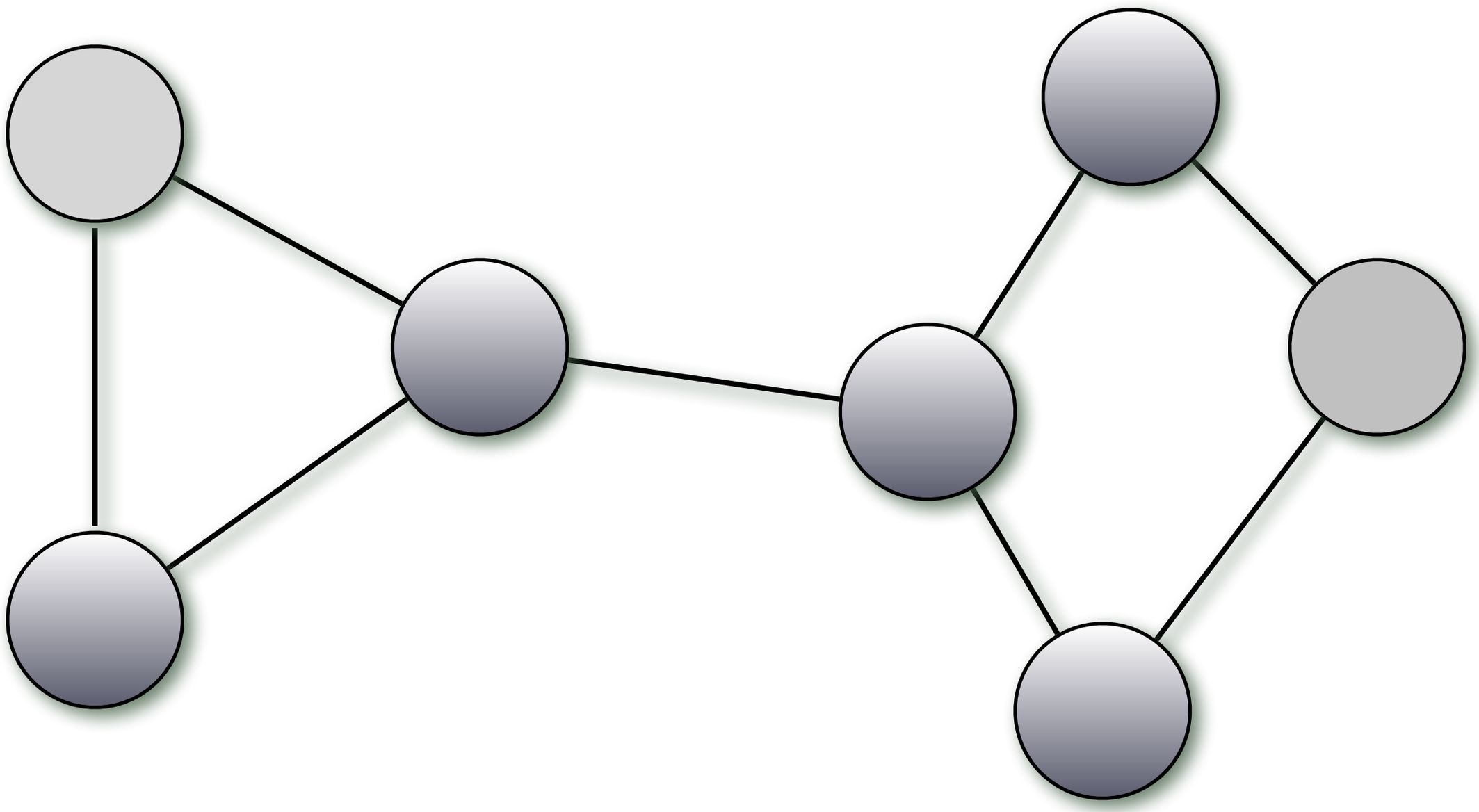
Crash Faults



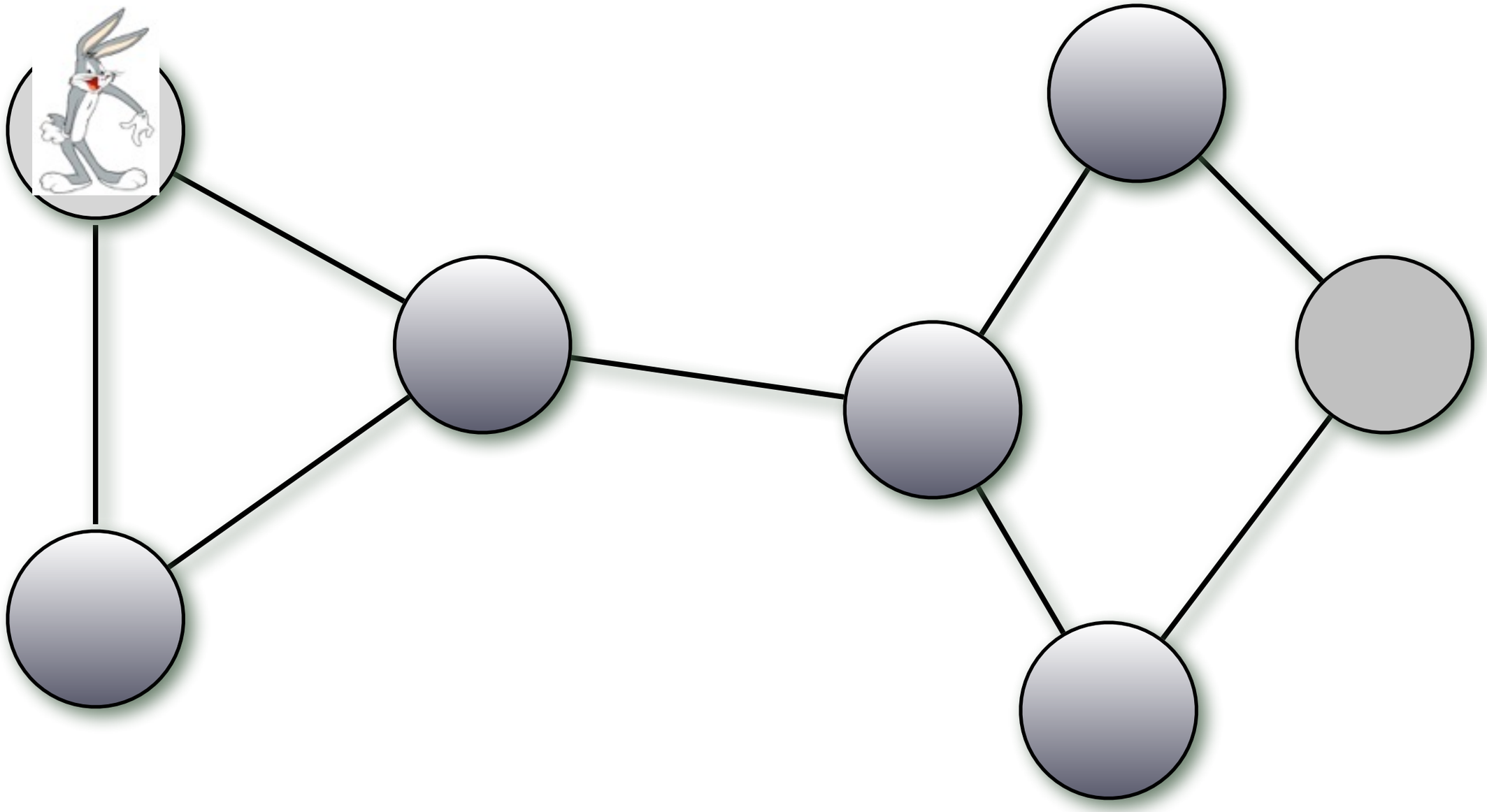
Crash Faults



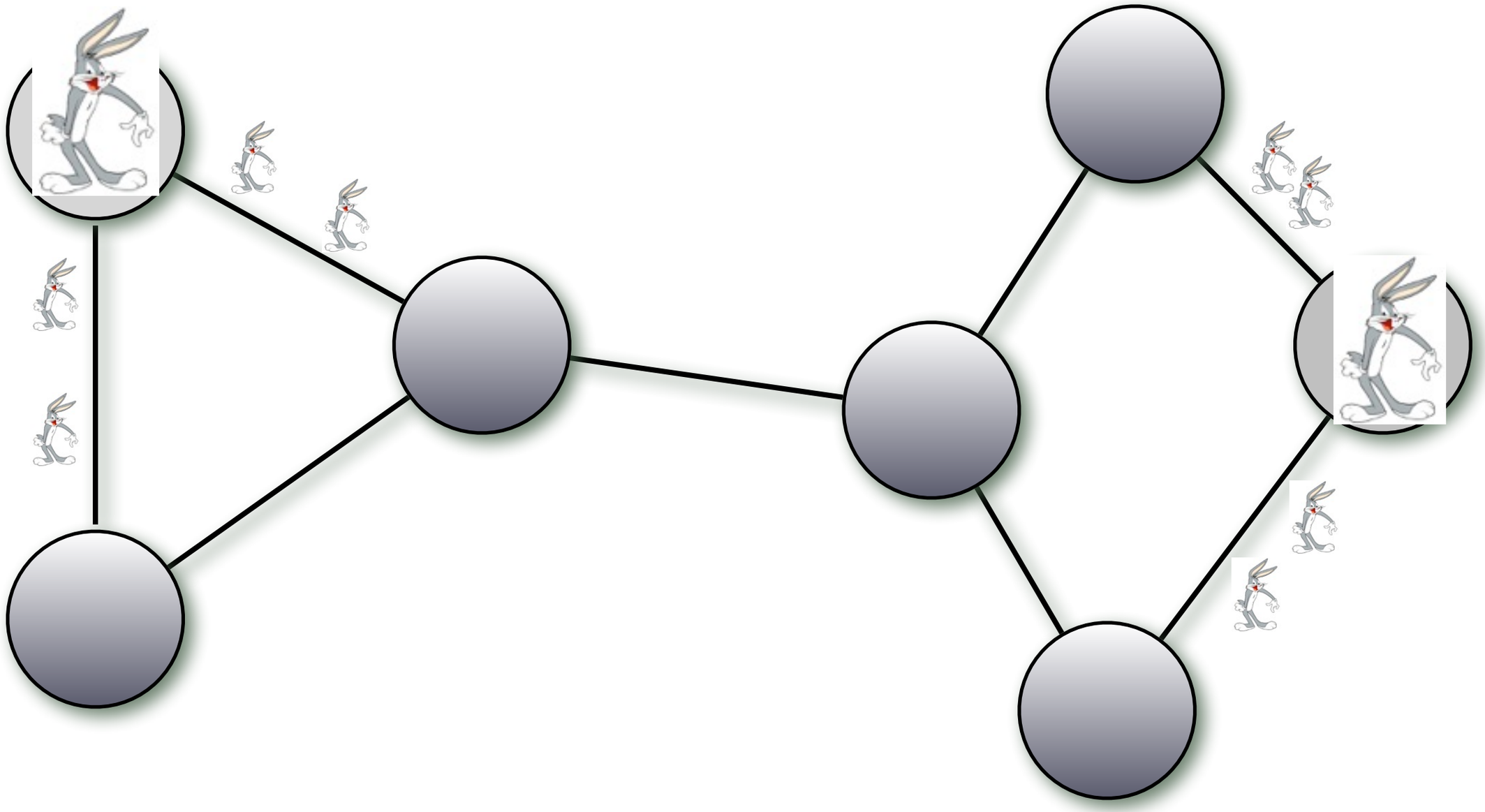
Byzantine Faults



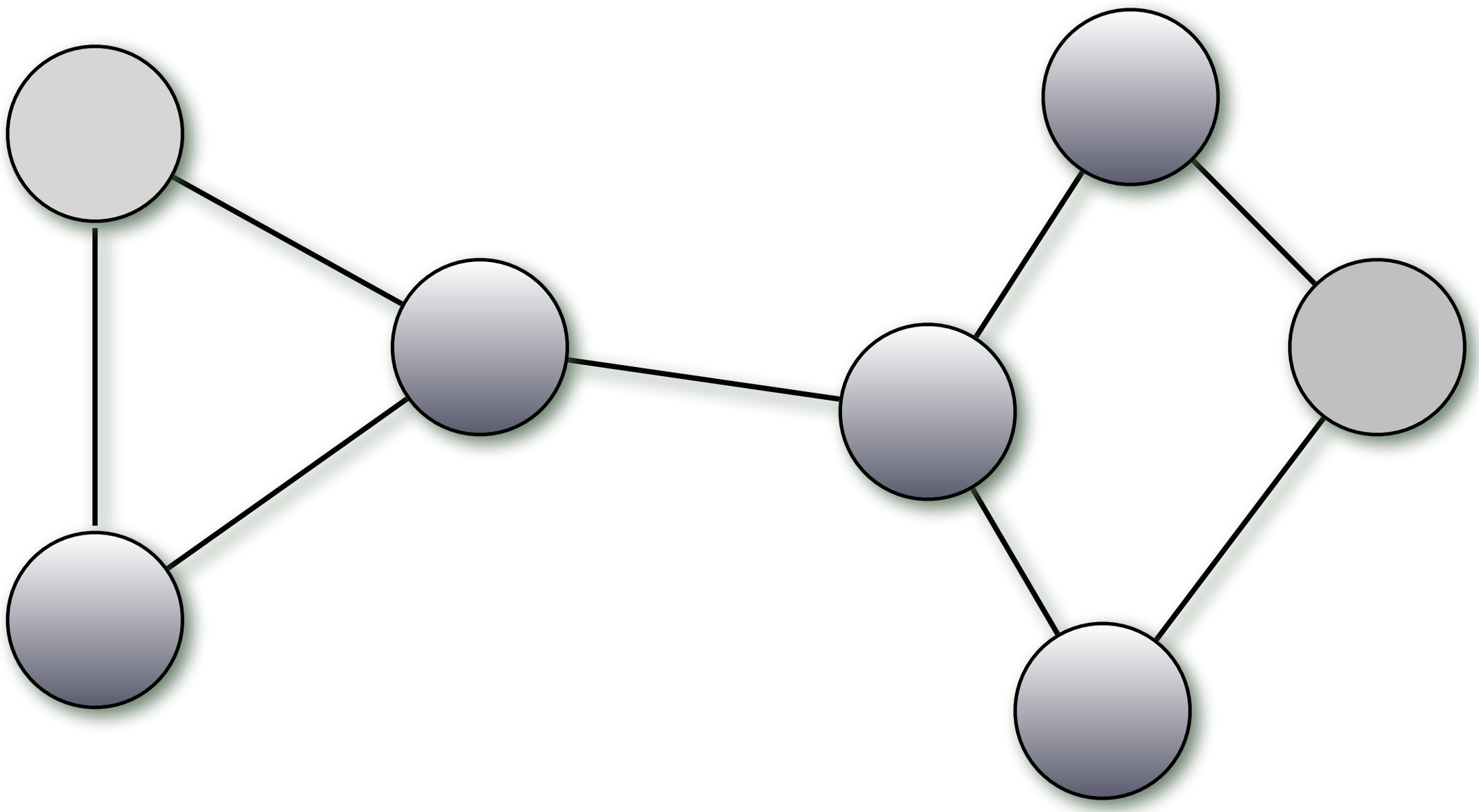
Byzantine Faults



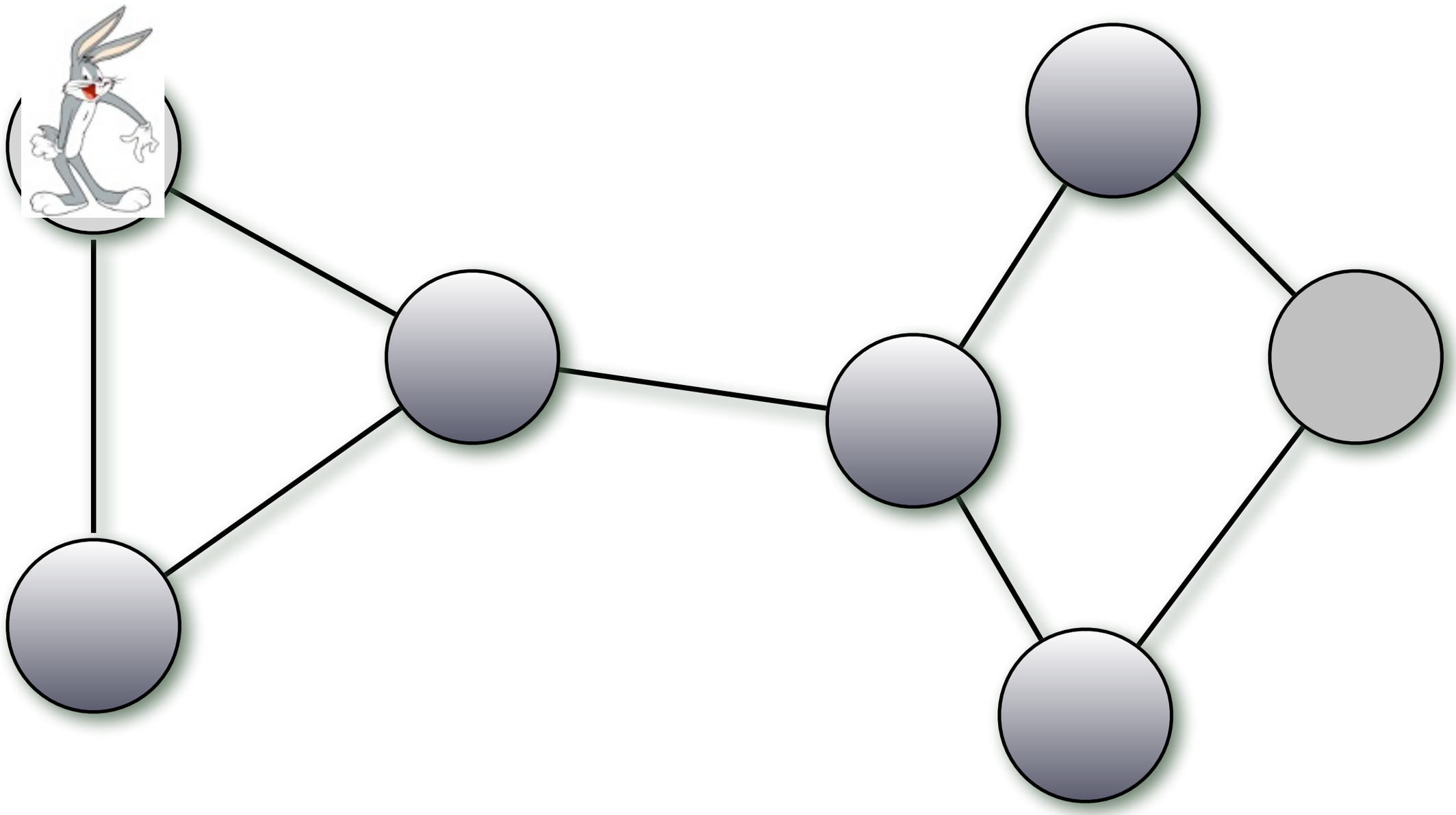
Byzantine Faults



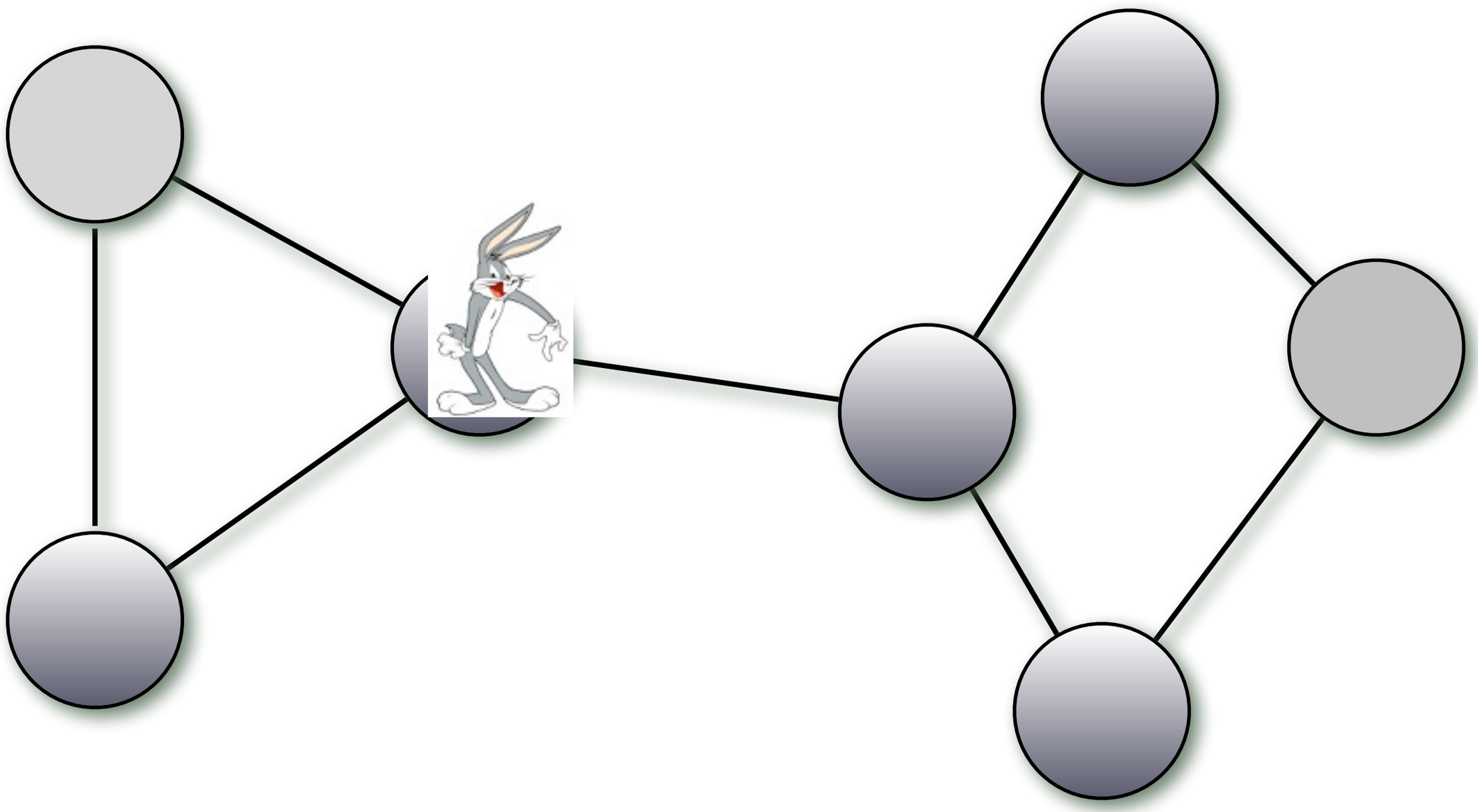
Mobile Byzantine Faults



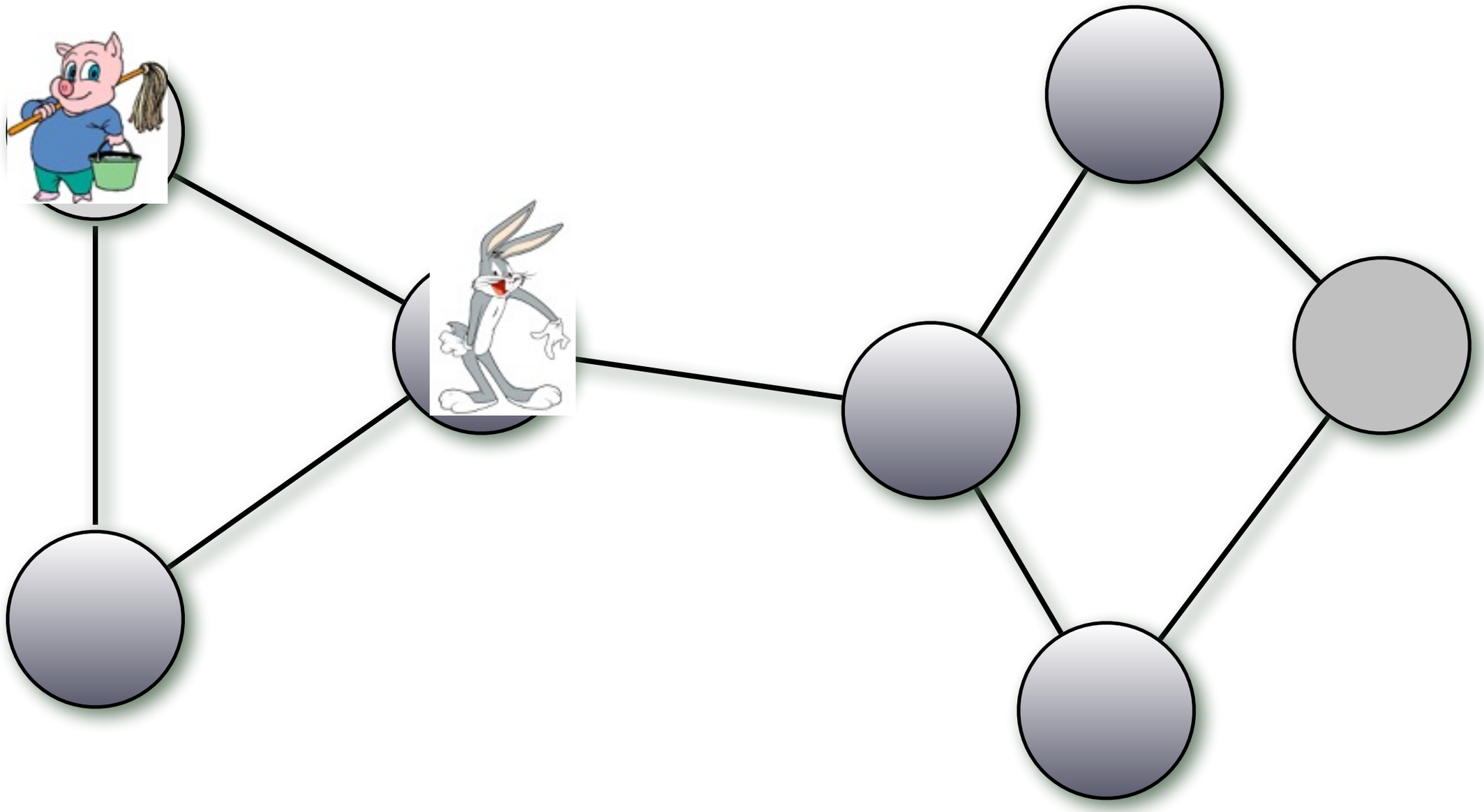
Mobile Byzantine Faults



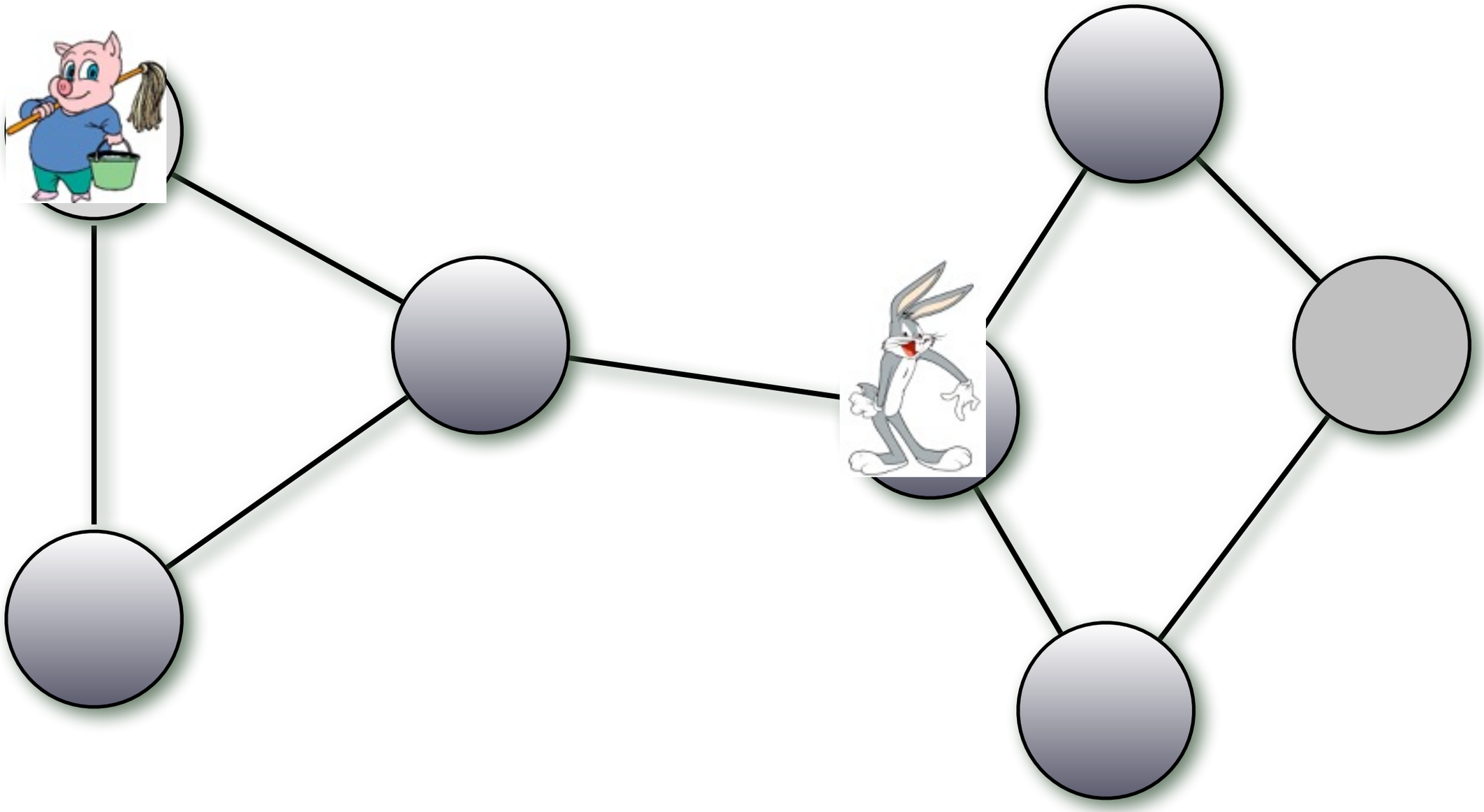
Mobile Byzantine Faults



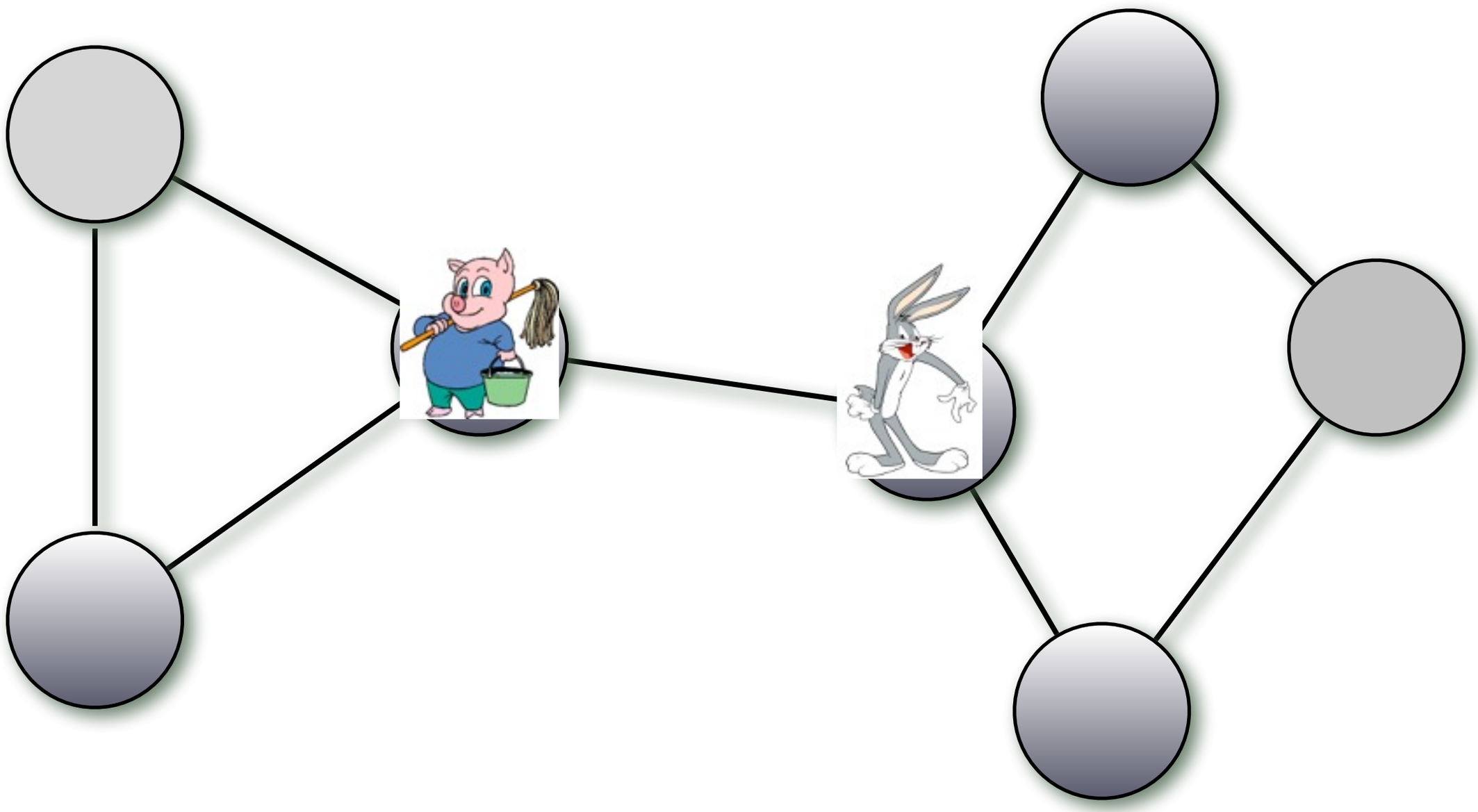
Mobile Byzantine Faults



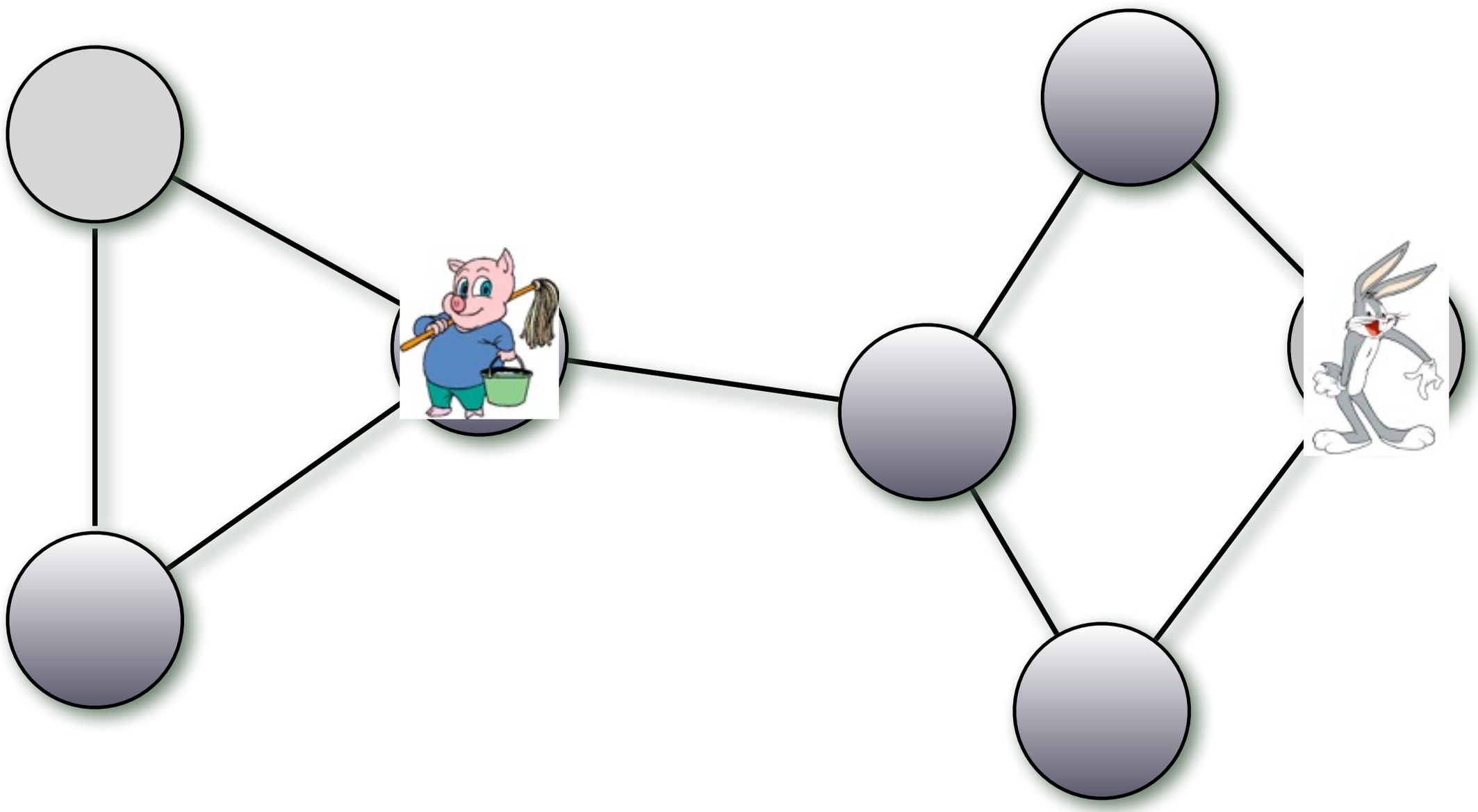
Mobile Byzantine Faults



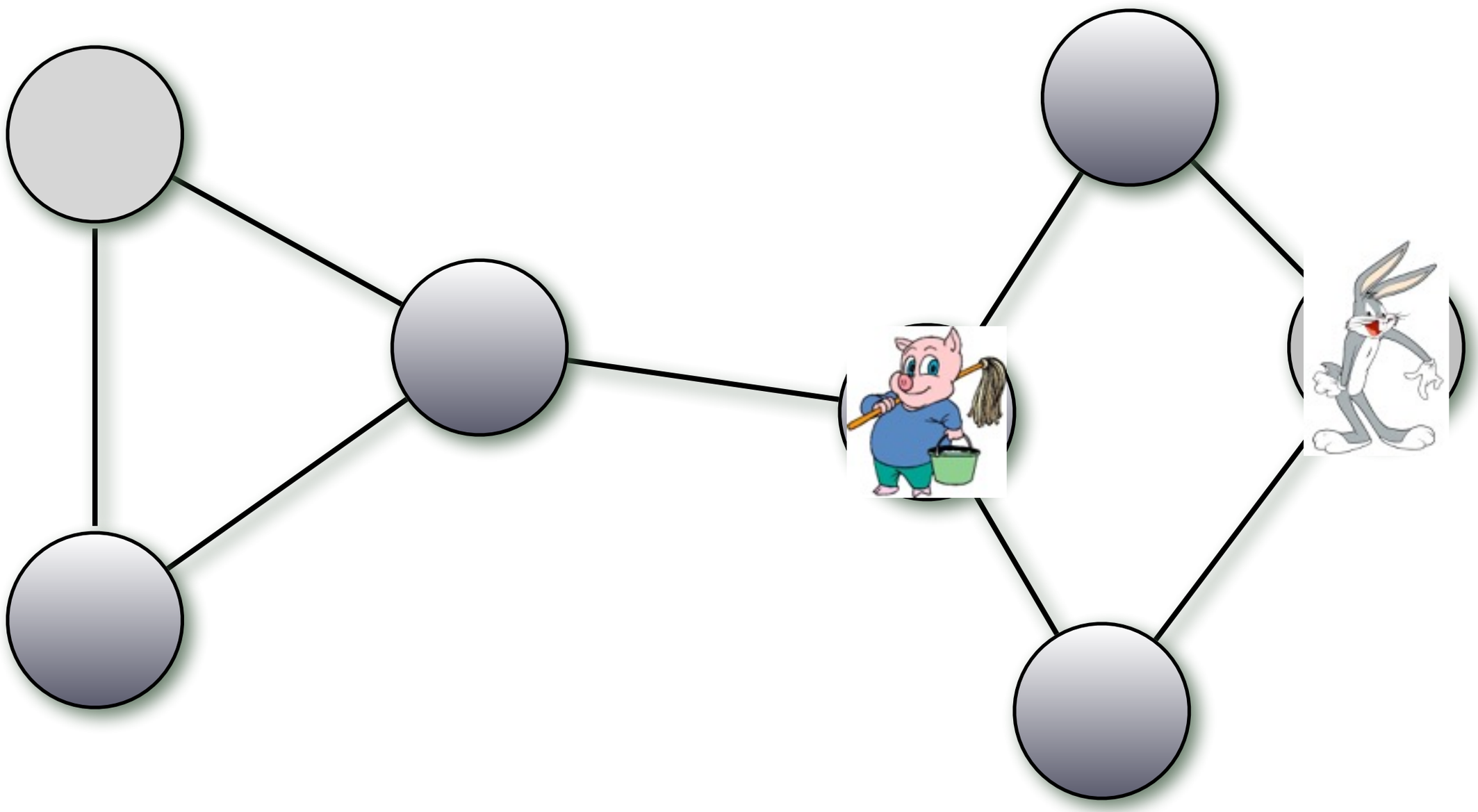
Mobile Byzantine Faults



Mobile Byzantine Faults



Mobile Byzantine Faults



Behaviors characterization*

- **Byzantine - any behavior including harming the system**
- **Altruistic - follow the prescribed protocol whatever the cost**
- **Rational - try to maximize its utility function**

* BAR Fault Tolerance for Cooperative Services, ACM SOSP 2005
A. Aiyer, L. Alvisi, A. Clement, M. Dahlin, J-P Martin, C. Porth

Strategies to mask faults

- exploit redundancy (fault-tolerance)
- correct local memory/code (self-stabilization)