

# Assigning Vertices

- How to decide which server a given vertex is assigned to?
- Different options
  - **Hash-based**:  $\text{Hash}(\text{vertex id}) \bmod \text{number of servers}$ 
    - Remember consistent hashing from P2P systems?!
  - **Locality-based**: Assign vertices with more neighbors to the same server as its neighbors
    - Reduces server to server communication volume after each iteration
    - Need to be careful: some “intelligent” locality-based schemes may take up a lot of upfront time and may not give sufficient benefits!