Graphical user interface, application

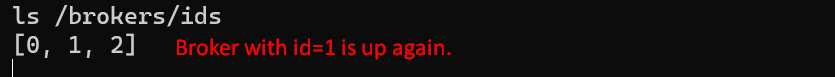
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1. Kafka Broker is a **Masterless Cluster**.
2. It doesn’t follow Master-Slave Architecture.
3. Diagram, schematic

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4. However, it uses Apache Zookeeper to maintain the list of active Brokers.
5. Diagram, schematic

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6. 
7. Every Kafka Broker has a unique ID that we define in the Broker Configuration file like 🡪 server.properties.
8. We also configure the coordinate of the Zookeeper in the Kafka Broker Configuration file like  
   
9. When the broker starts, it connects to the Zookeeper and creates ephemeral node using broker id to represent an active Broker session.  
   **Ephemeral node in zookeeper are temporary kind of znodes. These znodes exists for a specific session only. They get created for a session and as soon as session ends they also get deleted.  
   Every node created in Zookeeper is referred to as ZNode.**
10. The ephemeral node remains intact as soon as the Broker Session with the Zookeeper is active.
11. When the Broker loses connectivity with the Zookeeper due to any reason, the Zookeeper will automatically remove the ephemeral node.
12. So, the list of active Brokers in the Cluster is maintained as the list of ephemeral nodes under the brokers/ids path in the zookeeper.  
    Scatter chart

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13. **Jatin**:  
    1st start Zookeeper Start.  
    Then Broker(s).  
    Then following commands (Topic creation is up to you). The following command is to enter zookeeper DB shell.  
    Text

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14. Let’s stop broker with id=1.
15. 
16. 
17. So, this is way how Kafka Cluster maintains the list of active brokers which is maintained by zookeeper under the path brokers/ids.