AWS re:Invent

ANT325-R

Slow queries? Understanding the nuances of slow queries

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Software Development Engineer
Amazon

AWS re:Invent

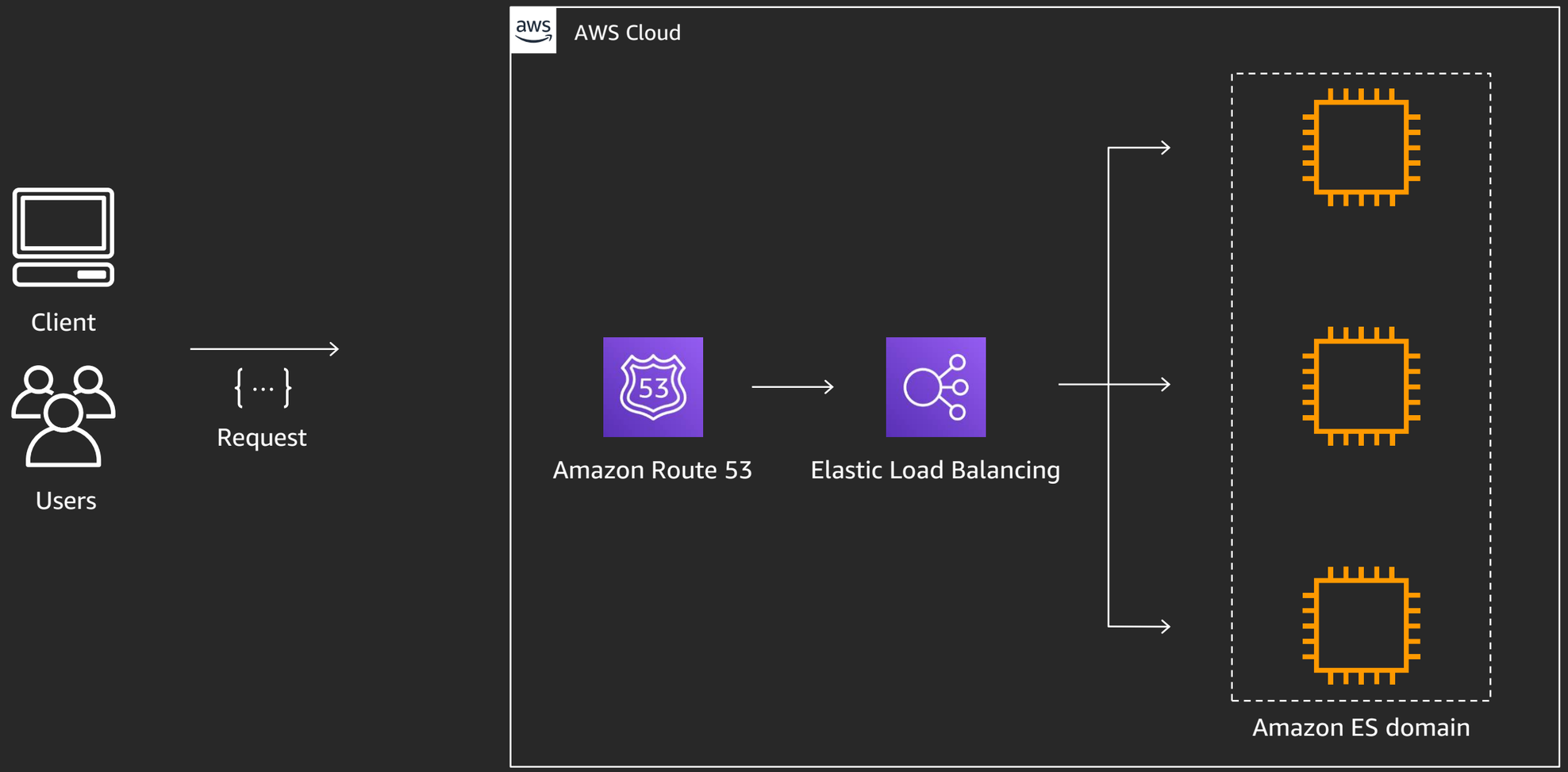
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Query: Behind the scenes

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Amazon Elasticsearch Service (Amazon ES)

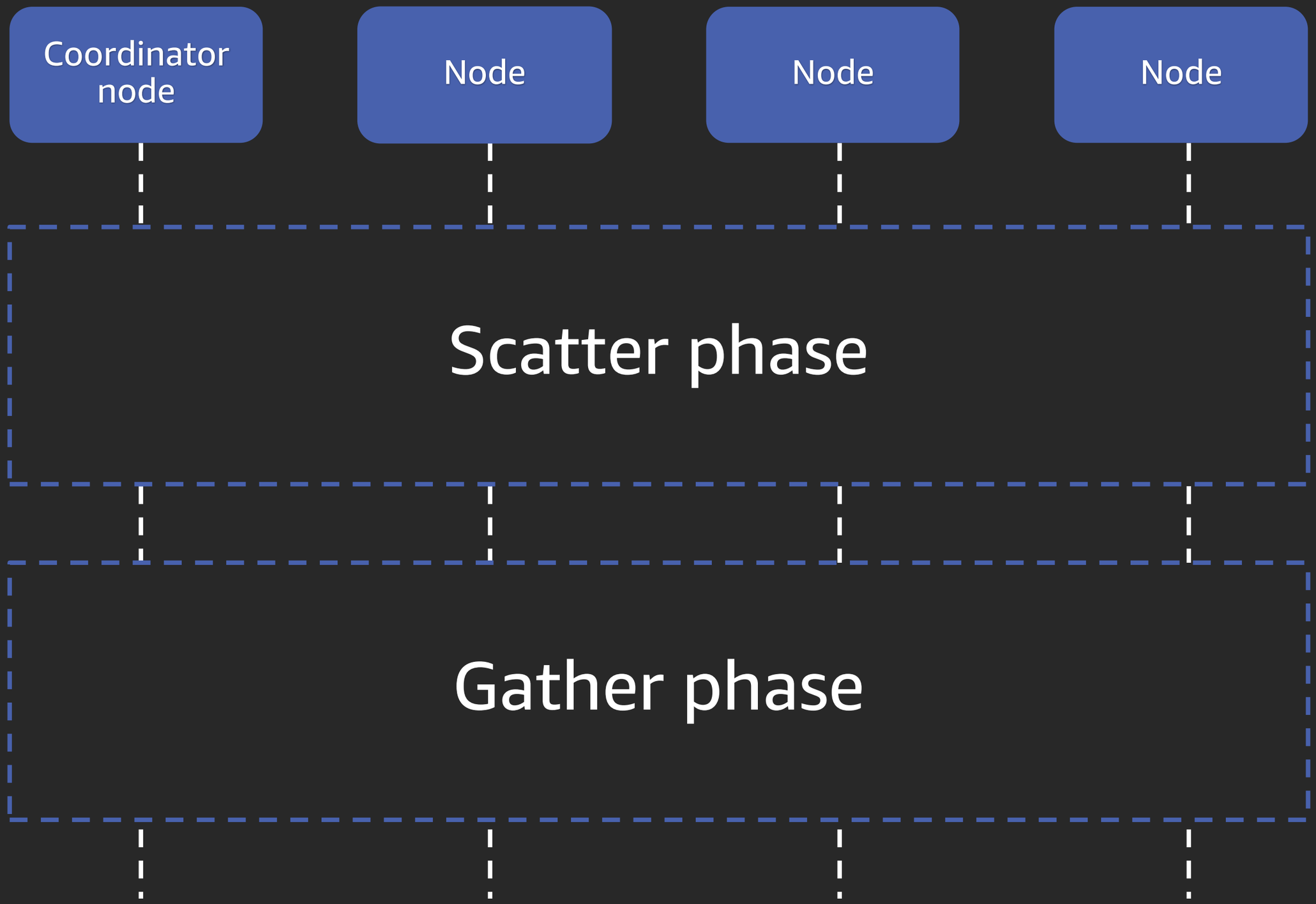


Coordinator nodes

- Implicitly every node
- Responsible for request
- Routing
- Cluster state

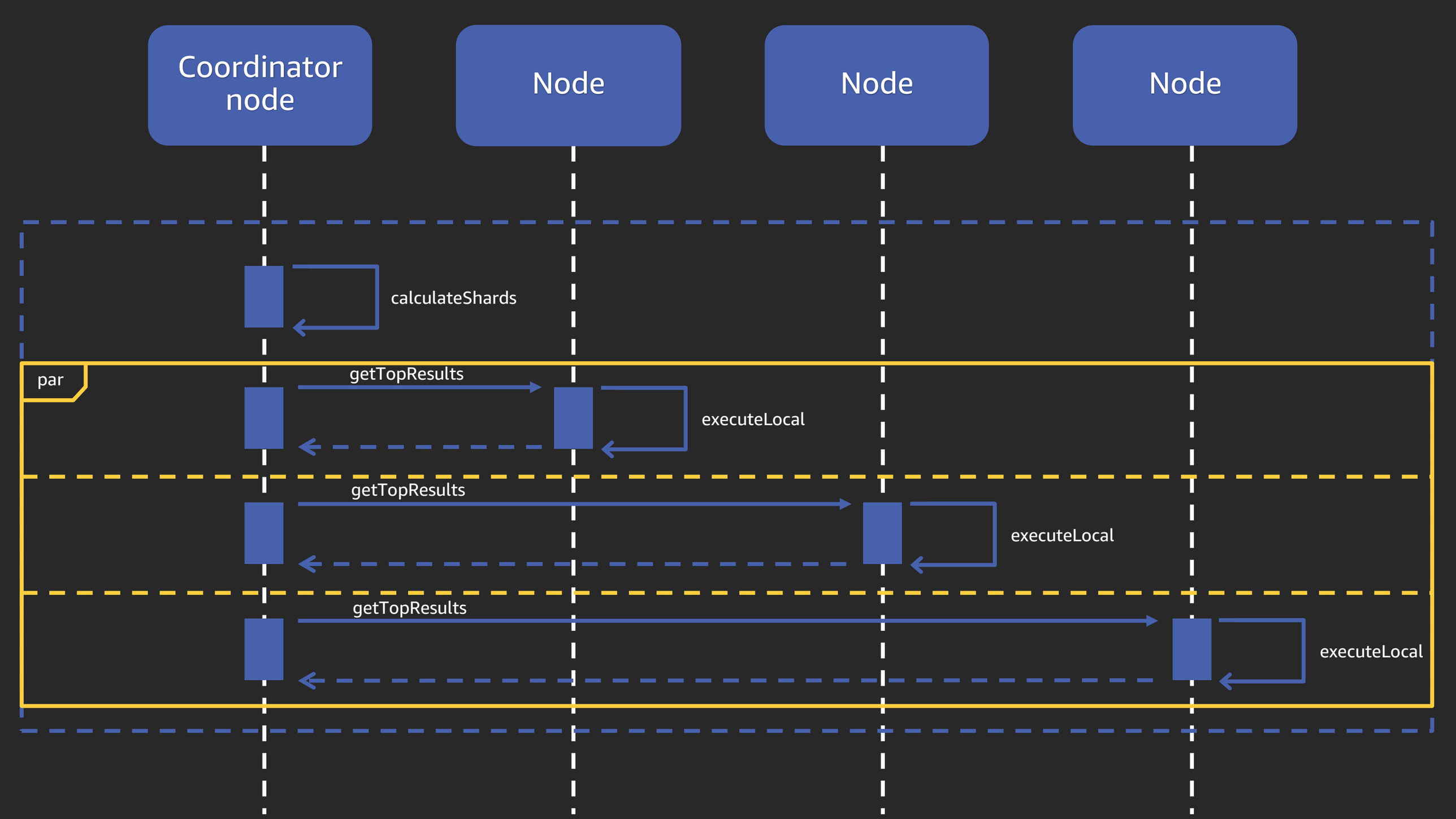
Search types

- Query then fetch (Qtf)
  - Scatter phase
  - Gather phase
- Distributed frequency search, query then fetch (Dfs, Qtf)
  - Initial scatter phase
  - Scatter phase
  - Gather phase


Coordinator node
Node
Node
Node
Scatter phase
Gather phase

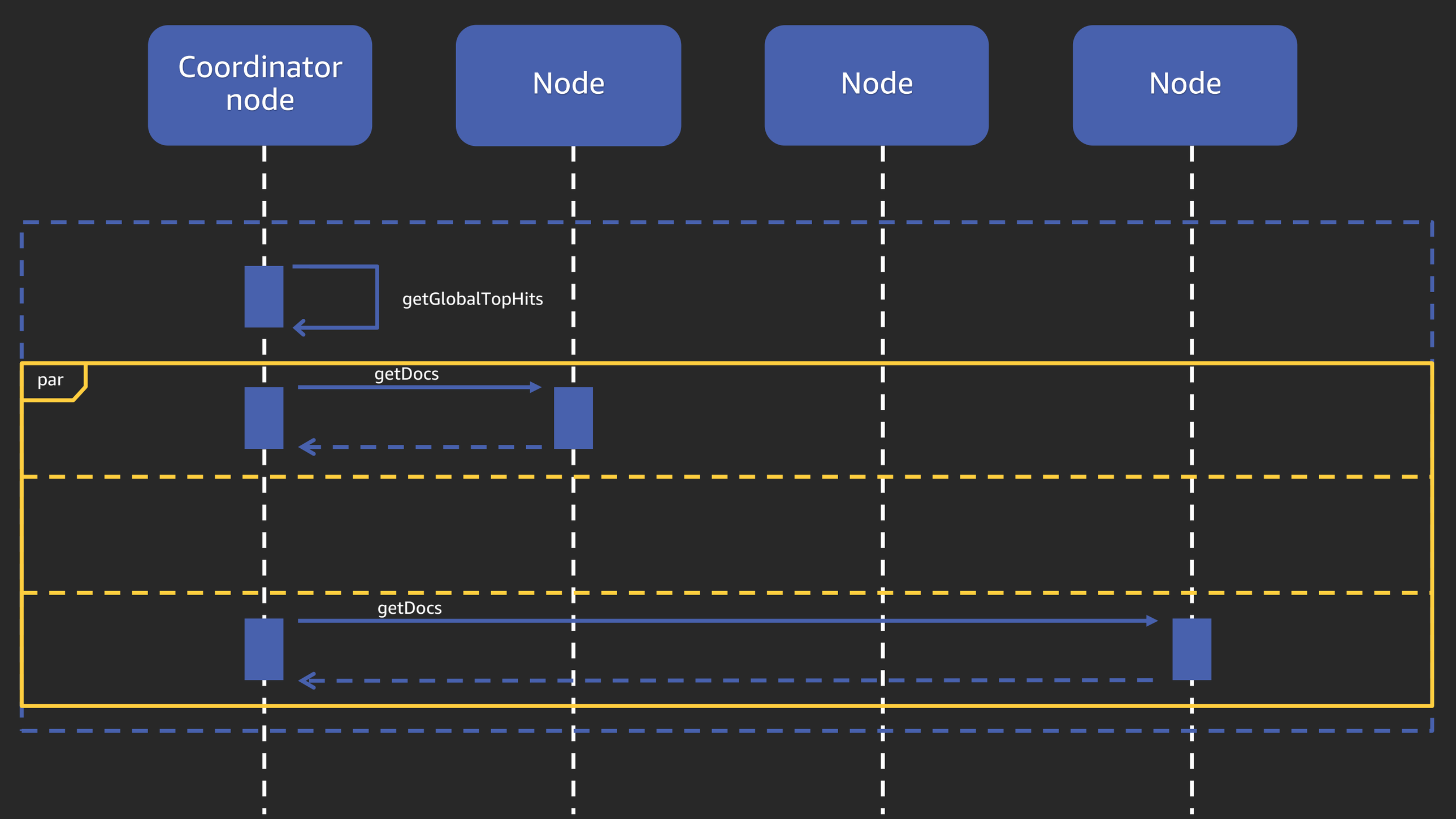
Scatter phase

- Calculates involved shards
- Executes on shards
- Returns top *n* results


Coordinator node
Node
Node
Node
calculateShards
par
getTopResults
executeLocal
getTopResults
executeLocal
getTopResults
executeLocal

Gather phase

- Global top hits
- Get documents
- Return to caller

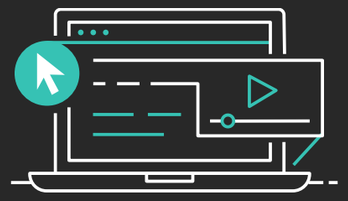

Coordinator node
Node
Node
Node
getGlobalTopHits
par
getDocs
getDocs

Demo

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Thank you!

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