



Detailed New Features of Firebird 5.0, Part 3: SKIP LOCKED

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President Of Firebird Foundation

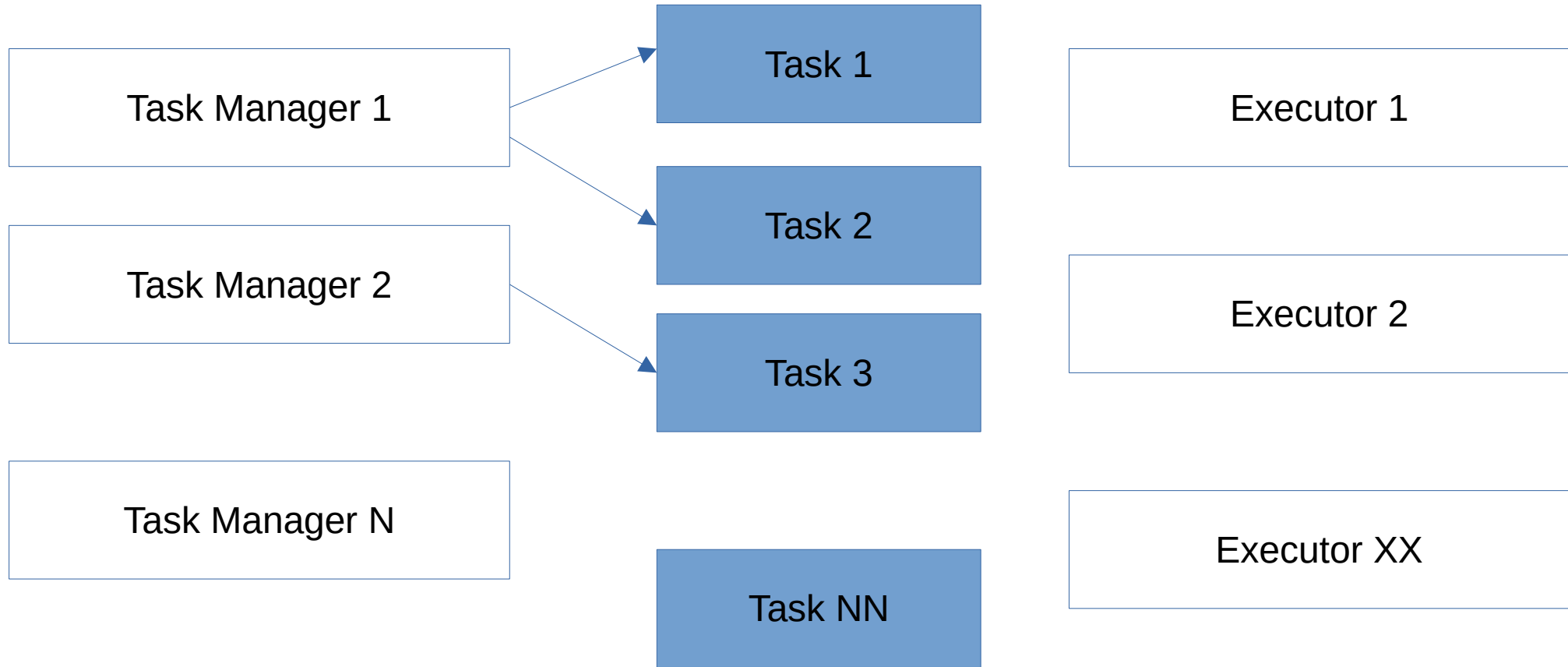
Idea of SKIP LOCKED

- Help developers to avoid conflicts which occur during the operations with records which already being updated

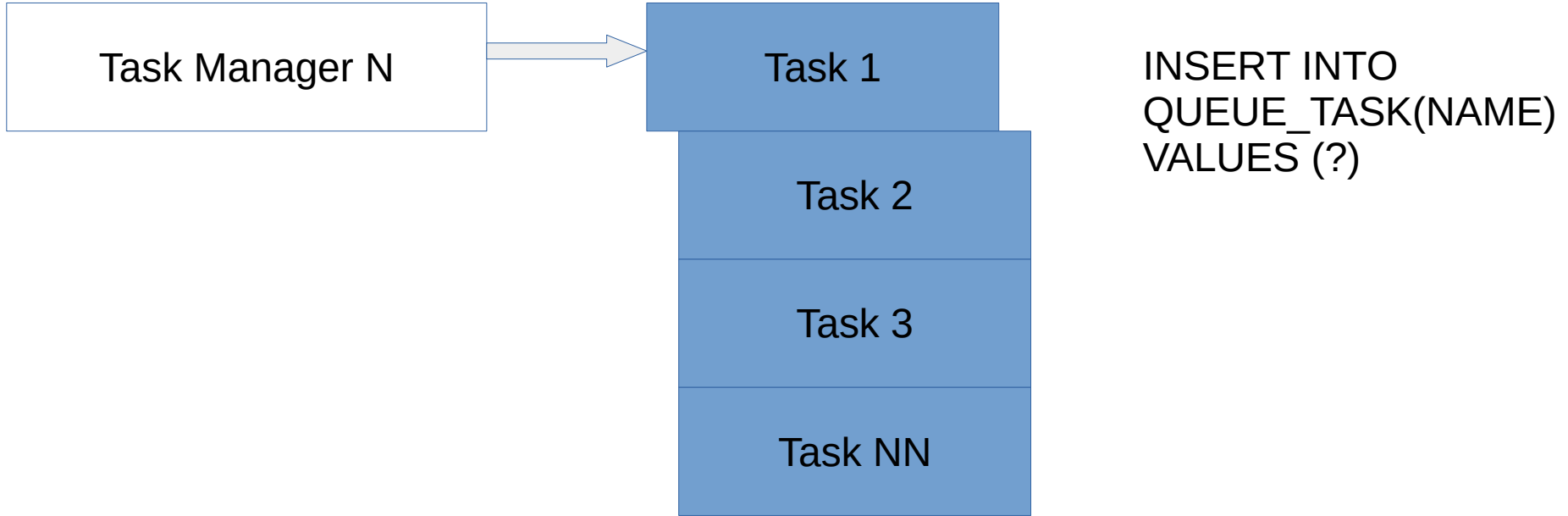
Example: Queue of tasks



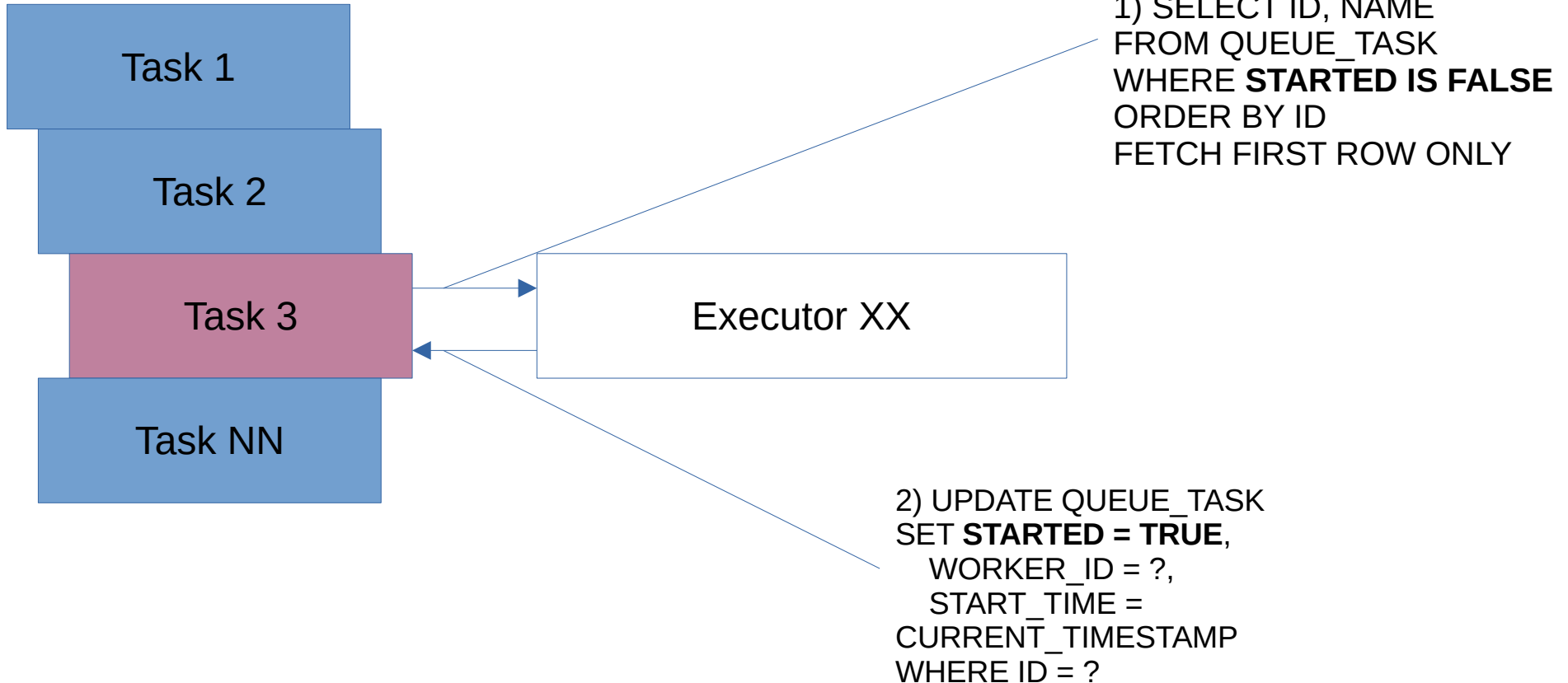
Queue of tasks



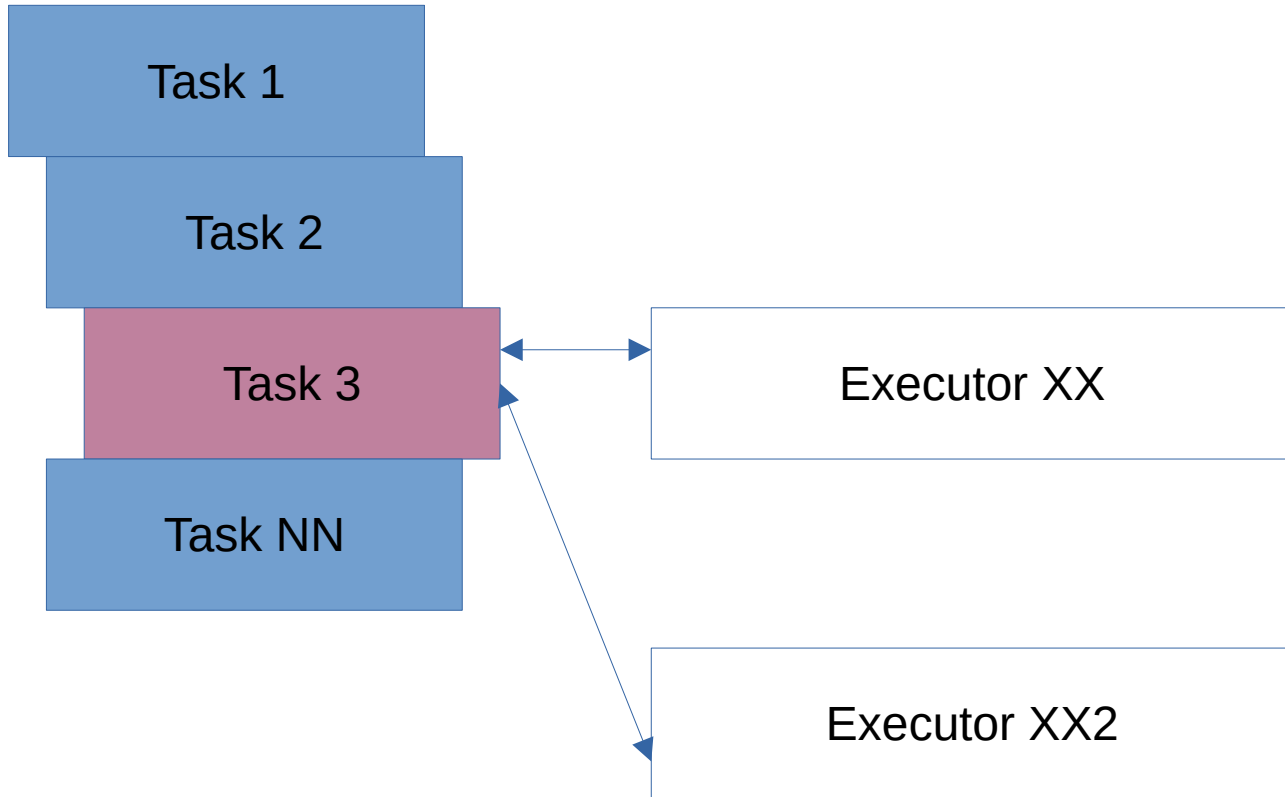
Queue of tasks



Queue of tasks



Queue of tasks

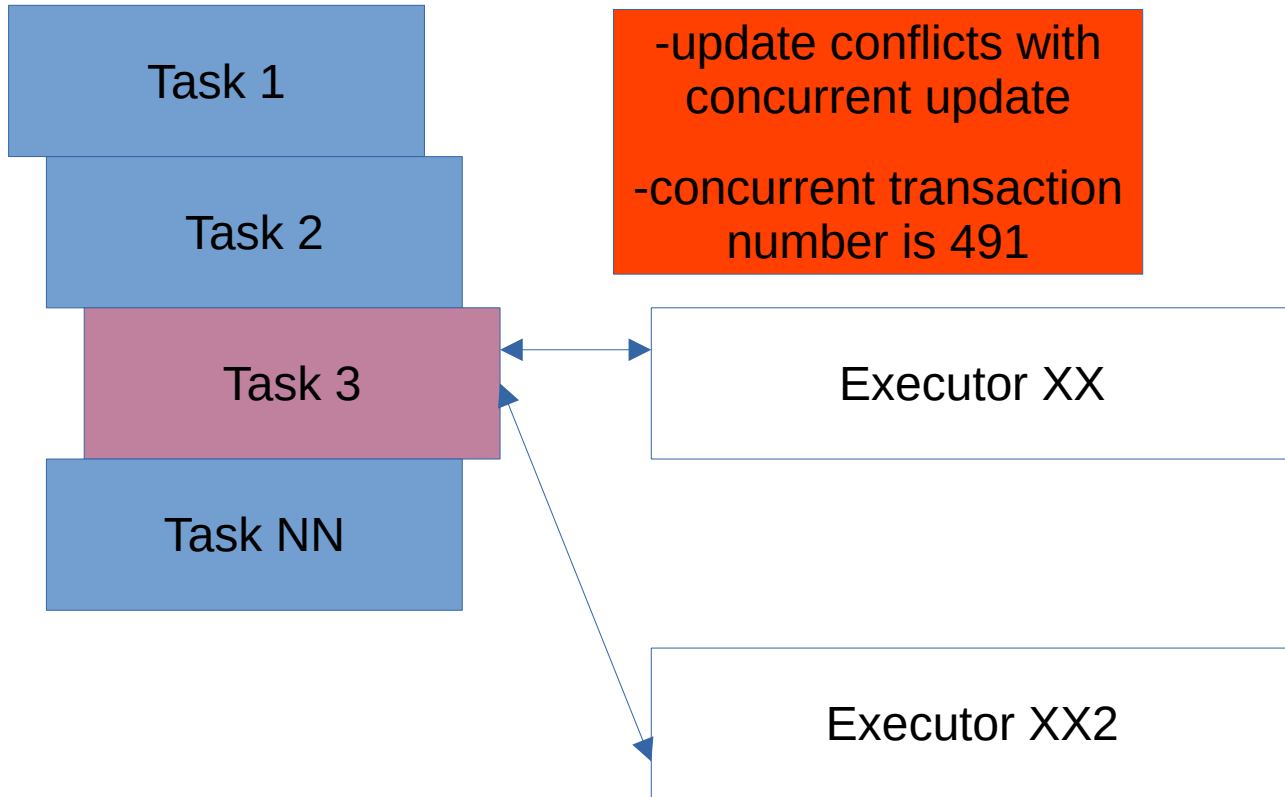


```
1) SELECT ID, NAME
FROM QUEUE_TASK
WHERE STARTED IS FALSE
ORDER BY ID
FETCH FIRST ROW ONLY
```

```
2) UPDATE QUEUE_TASK
SET STARTED = TRUE,
    WORKER_ID = ?,
    START_TIME =
    CURRENT_TIMESTAMP
WHERE ID = ?
```

Demo

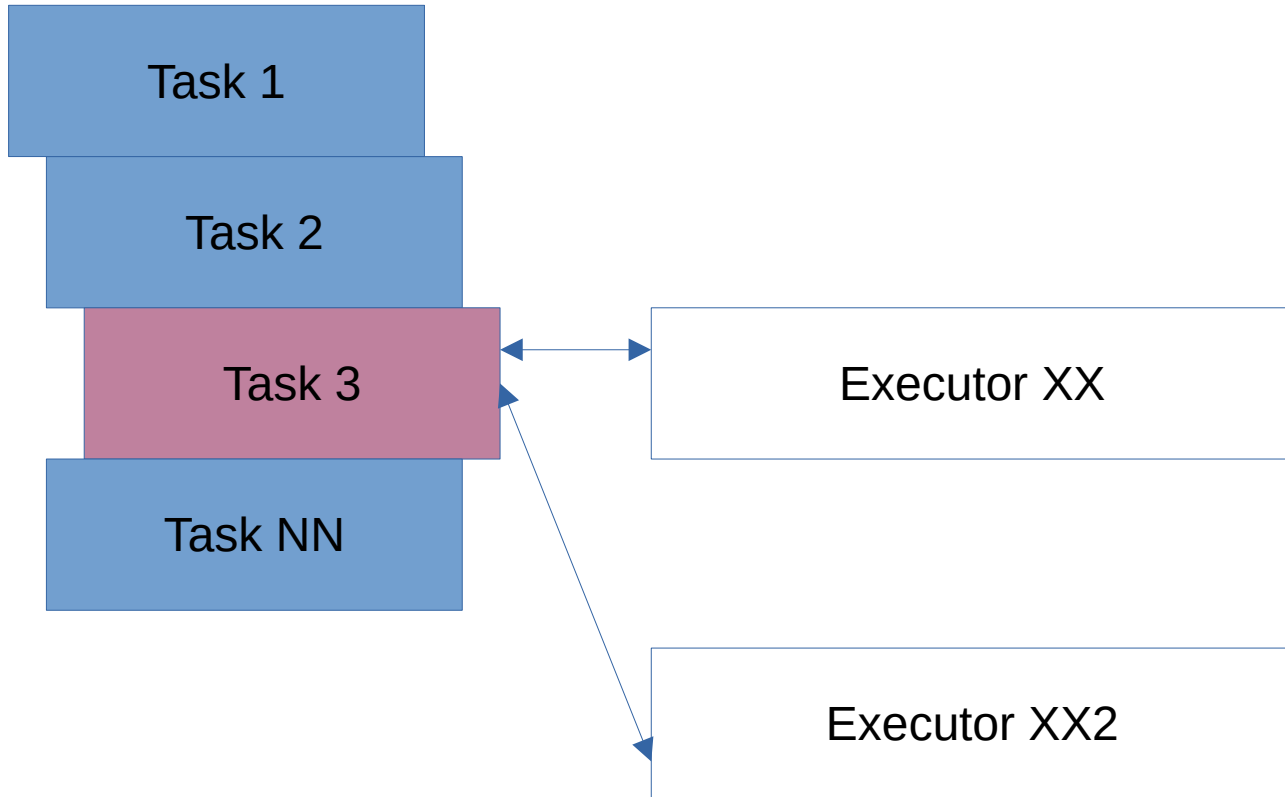
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Queue of tasks

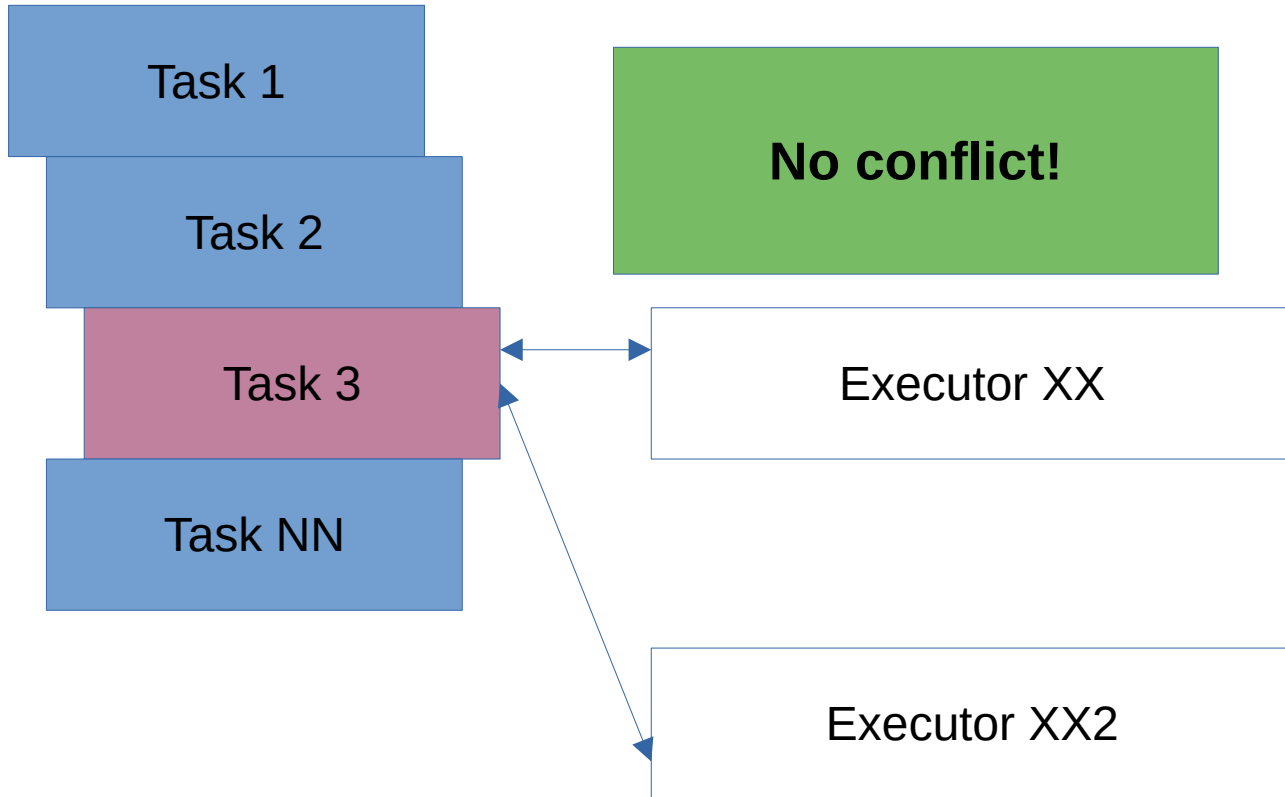


```
1) SELECT ID, NAME
   FROM QUEUE_TASK
   WHERE STARTED IS FALSE
   ORDER BY ID
   FETCH FIRST ROW ONLY
   FOR UPDATE WITH LOCK
   SKIP LOCKED
```

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2) UPDATE QUEUE_TASK
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   WHERE ID = ?
```

Demo with SKIP LOCKED

Queue of tasks

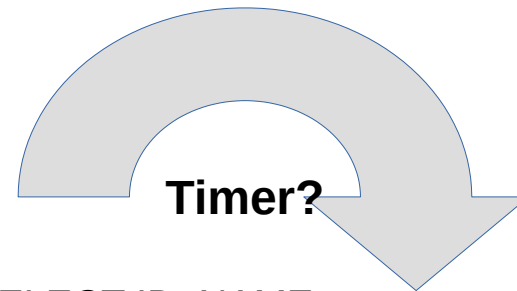
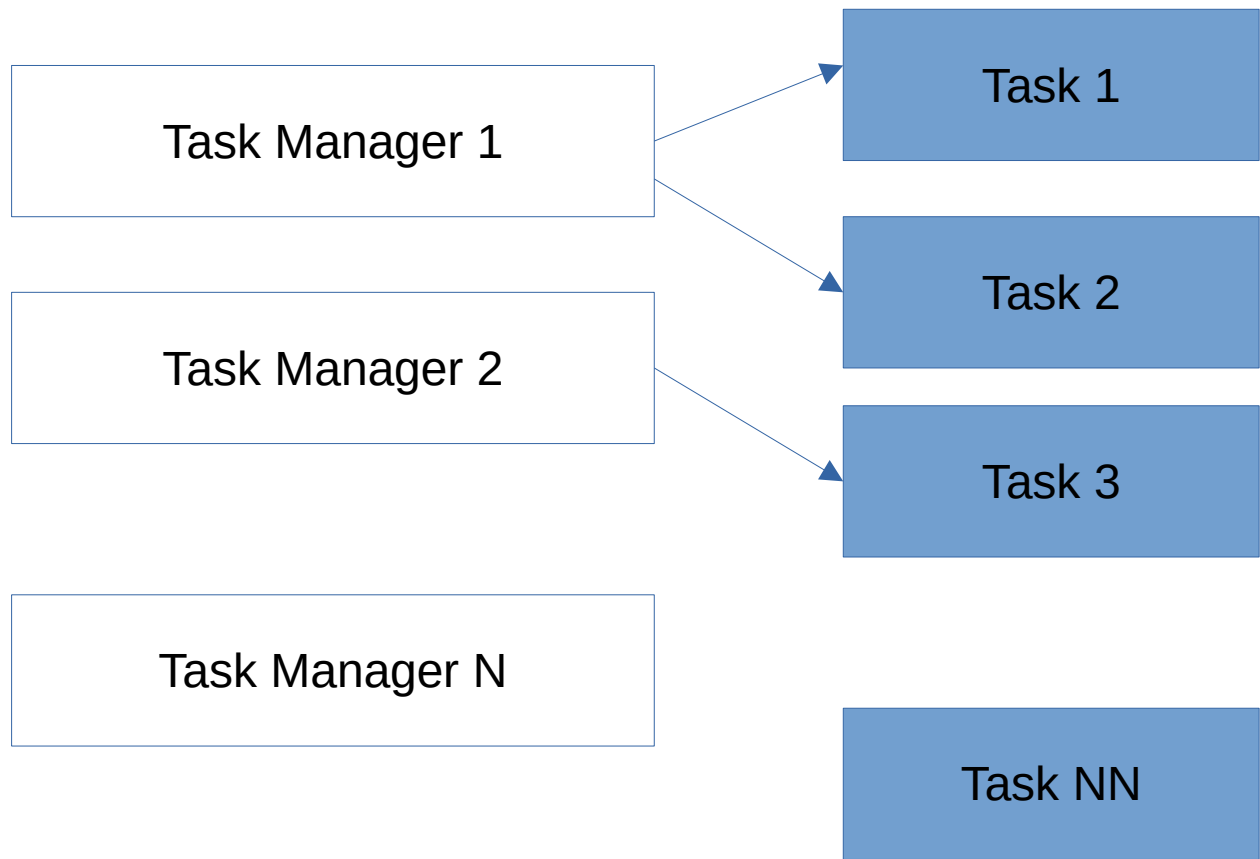


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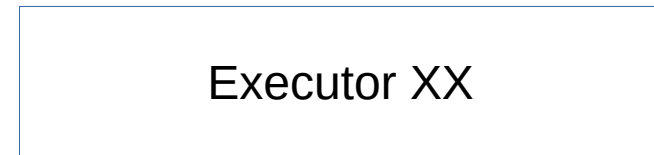
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When to check new tasks?

Queue of tasks



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   FROM QUEUE_TASK
   WHERE STARTED IS FALSE
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```



Too frequent queries

- Too frequent queries to check is there new task in the queue from every client connection can create significant CPU load!

How to get asynchronous notifications

- `POST_EVENT`
- Direct notification (bypassing database table)
- Streaming of tables changes

Thank you!

- General questions?
 - Firebird Support List
<https://groups.google.com/g/firebird-support>
- Questions about this presentation
 - ak@firebirdsql.org