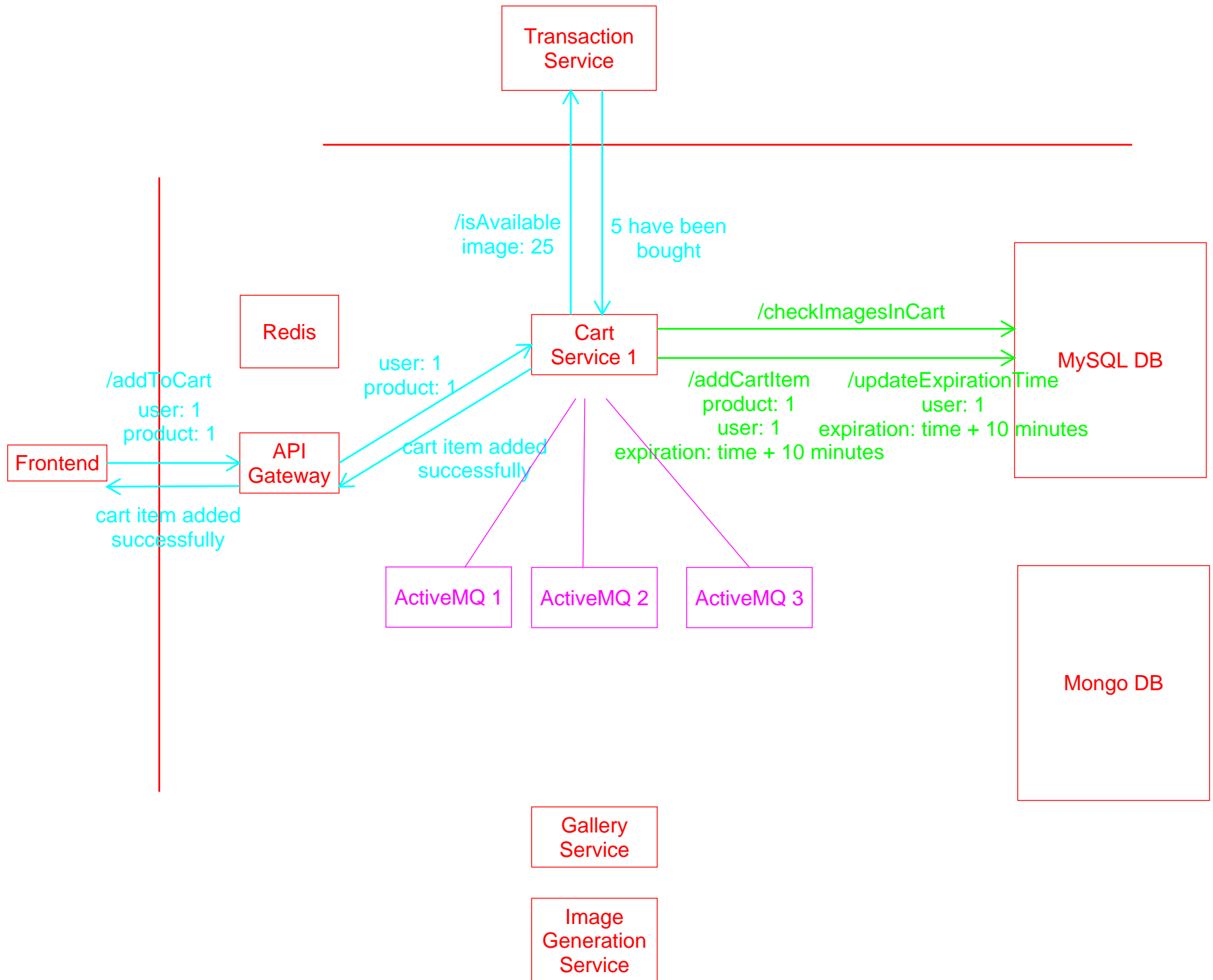
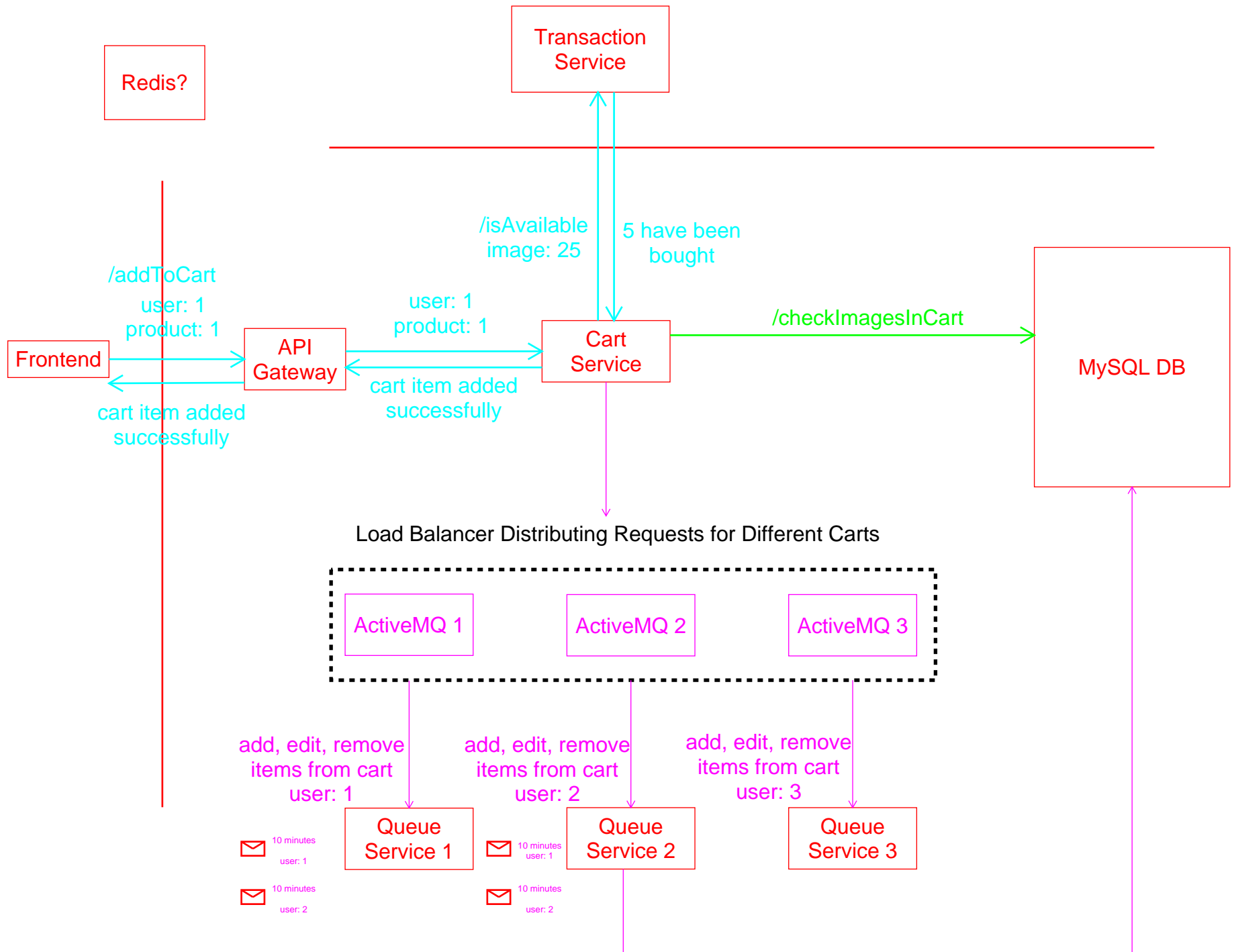
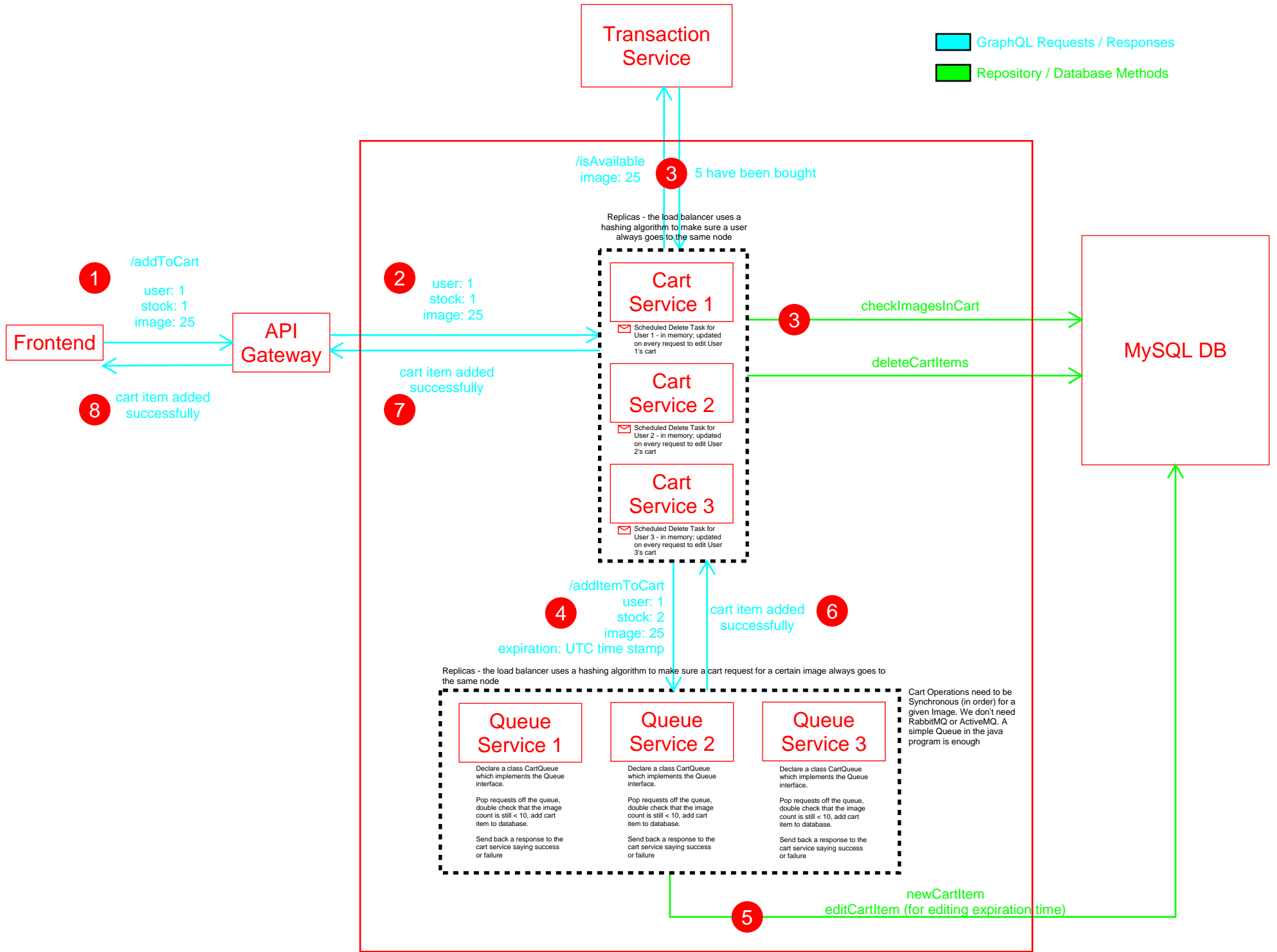


CART SERVICE DRAFTS





**CART
SERVICE
FINAL**



**TRANSACTION
SERVICE
DRAFTS**

Do we still need a gateway? we can ask the block directly.
advantage is block software can be deployed anywhere. gateway is adapter for our software

GraphQL Requests / Responses

gRPC Calls

Scenarios:
- image25 has never been bought: no record of it on the block, does not exist in the hashmap.
/isAvailable returns [MAX]
- image has been bought: hashmap finds block 4 as most recent transaction with image25. This block contains image count, as X. /isAvailable returns X.

1 /isAvailable
image: 25

Cart
Service 1

Transaction
Gateway

2 /executeTransaction
image: 25

Scenarios:
- image25 has not been bought MAX times. Blockchain successfully validates transaction with transaction logic, confirms via PoW that transaction can be executed. Adds block to blockchain. Sends back response message.
- image25 has been bought MAX times. Blockchain does not successfully validate transaction with transaction logic. Doesn't get to PoW. Sends back invalid transaction message.

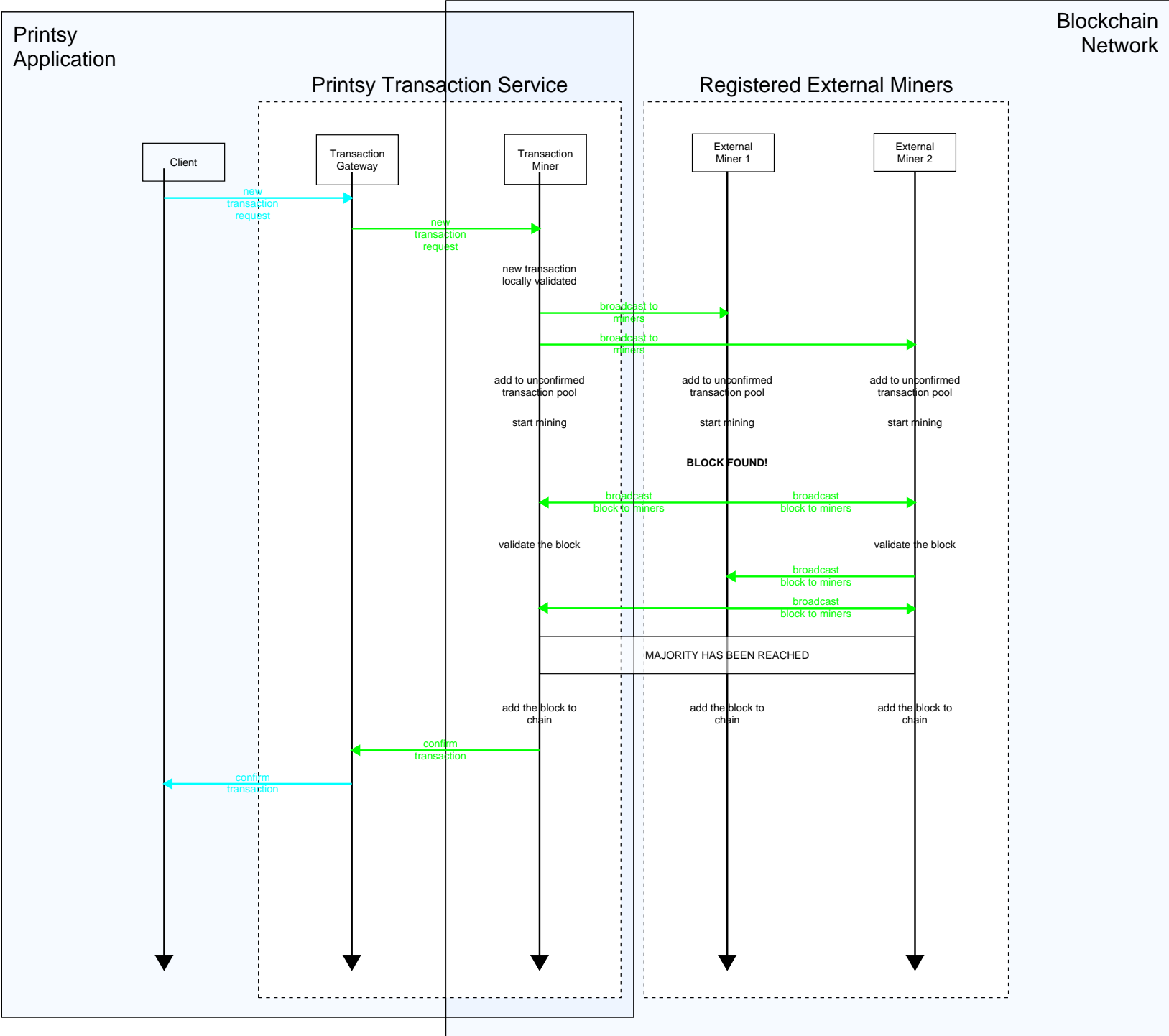
Transaction
Worker - L

Transaction
Worker C

Transaction
Worker B

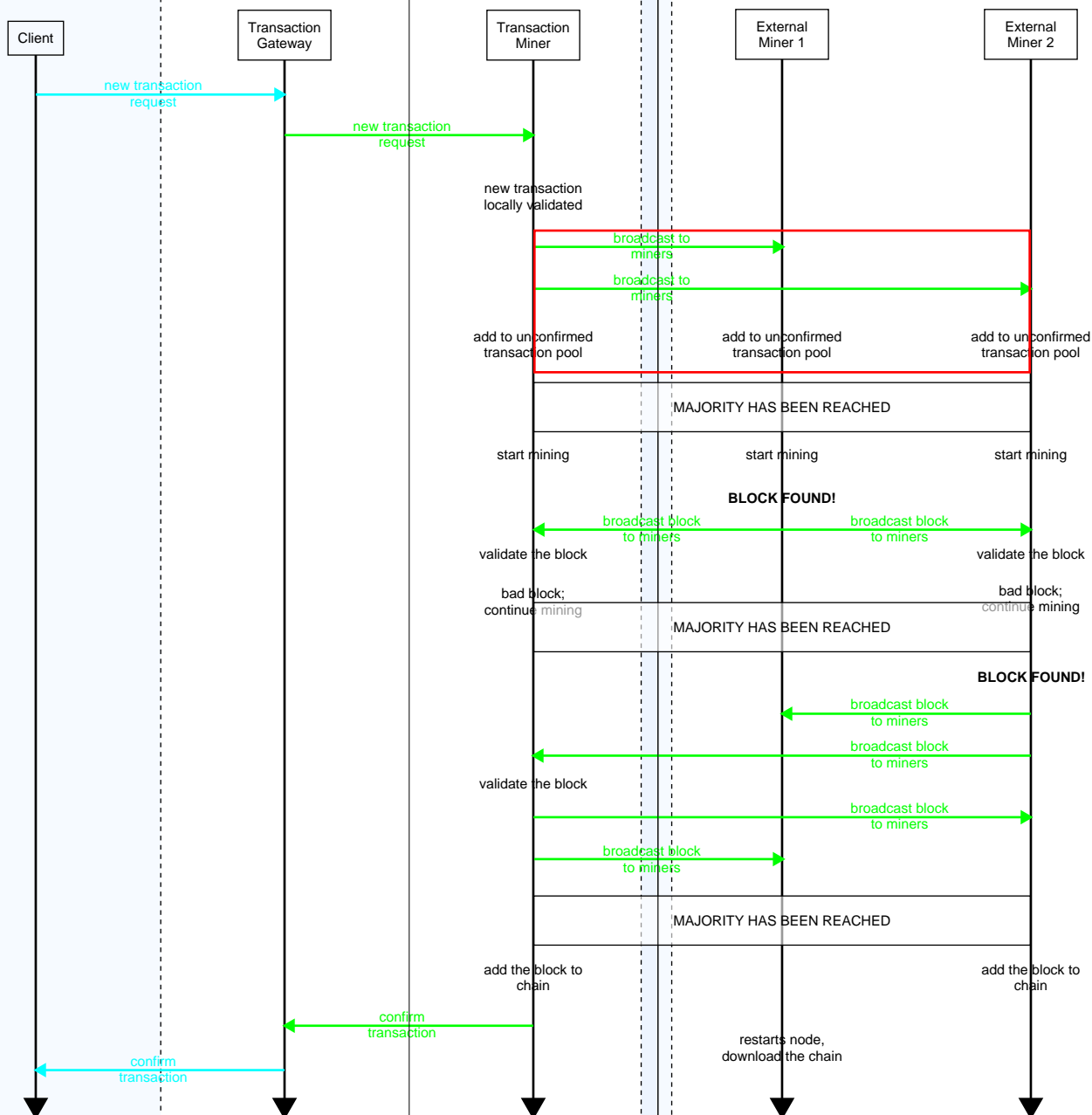
Transaction
Worker A

Scenario 1: Transaction is Valid



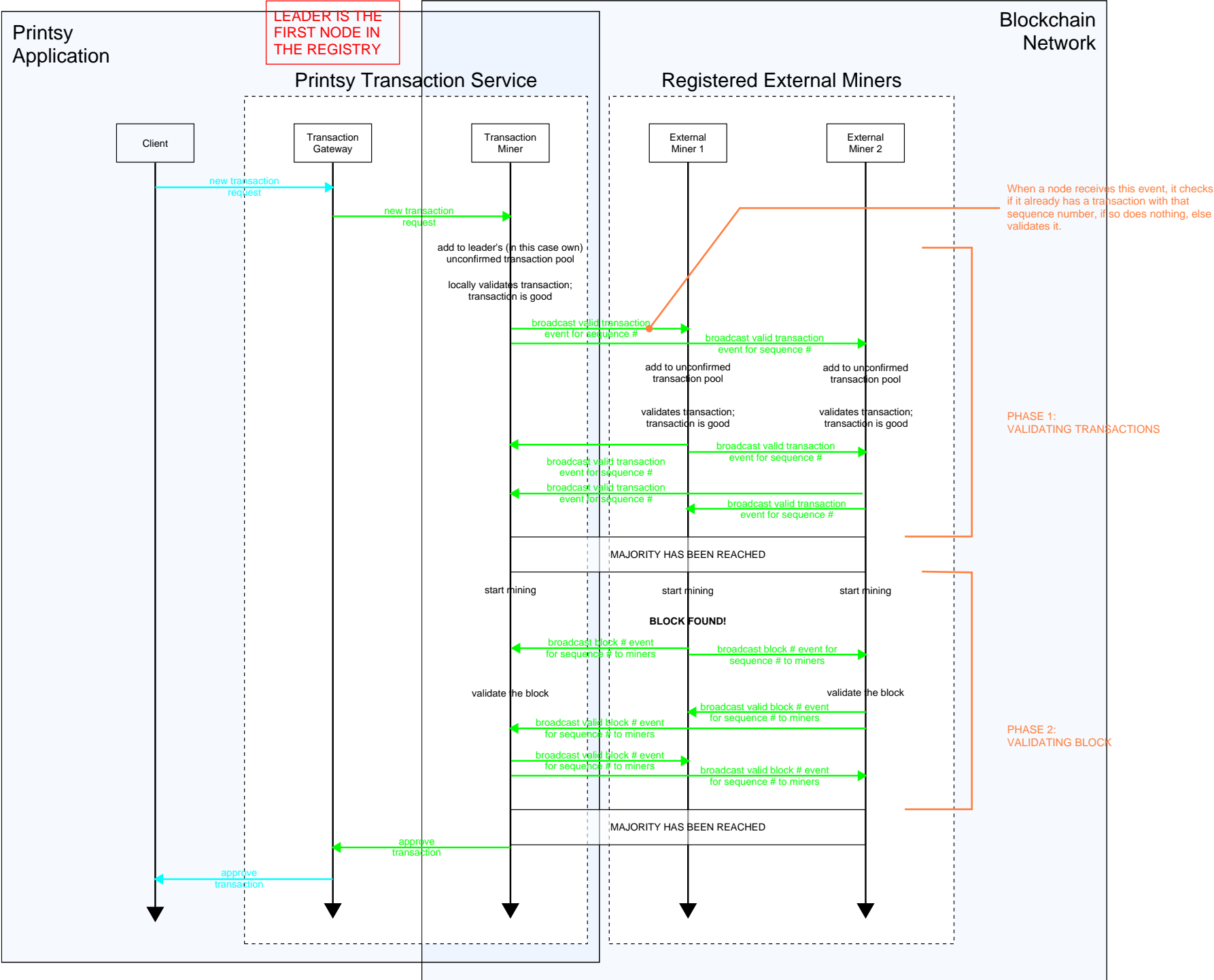
Printsy Transaction Service

Registered External Miners

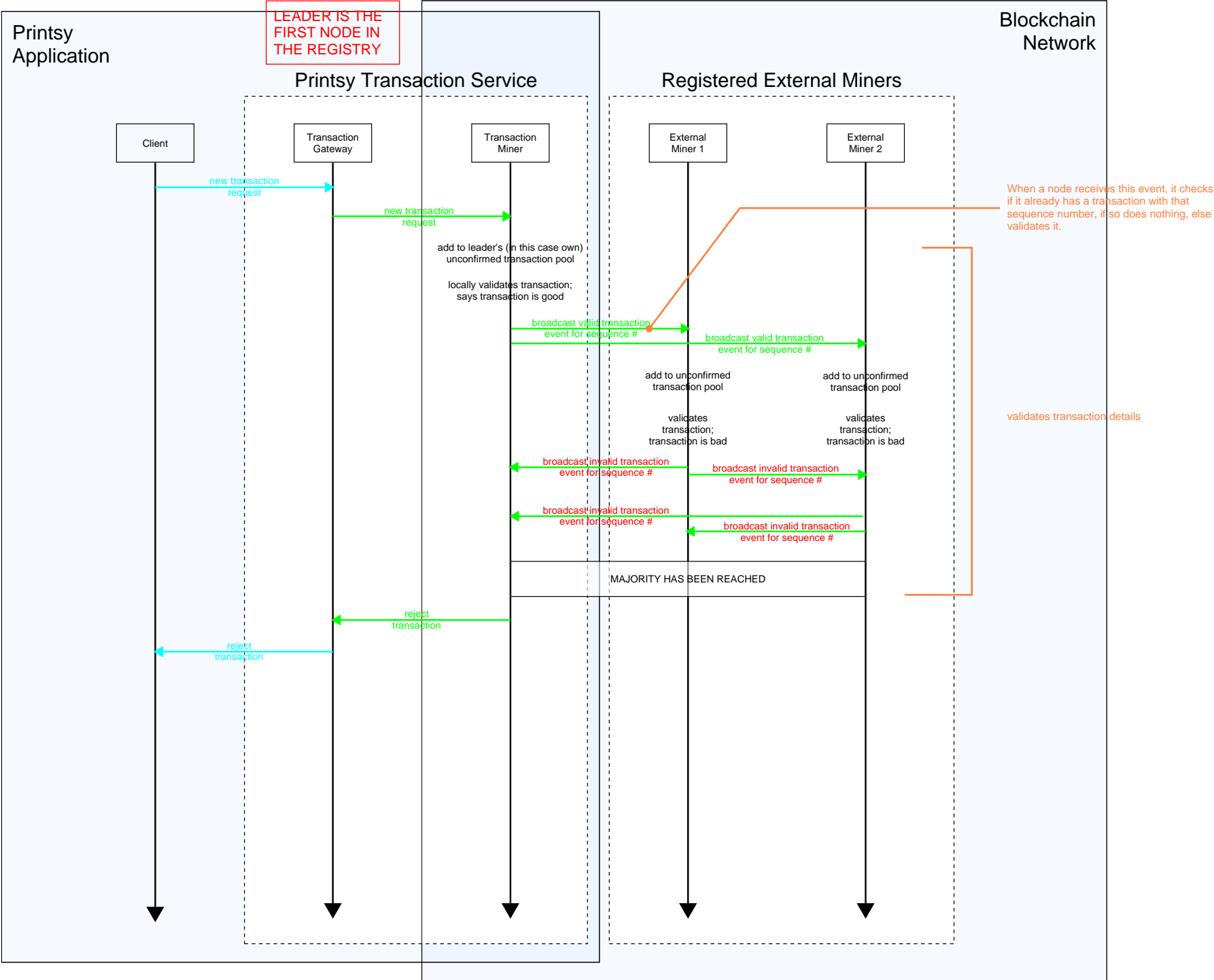


**TRANSACTION
SERVICE FINAL**

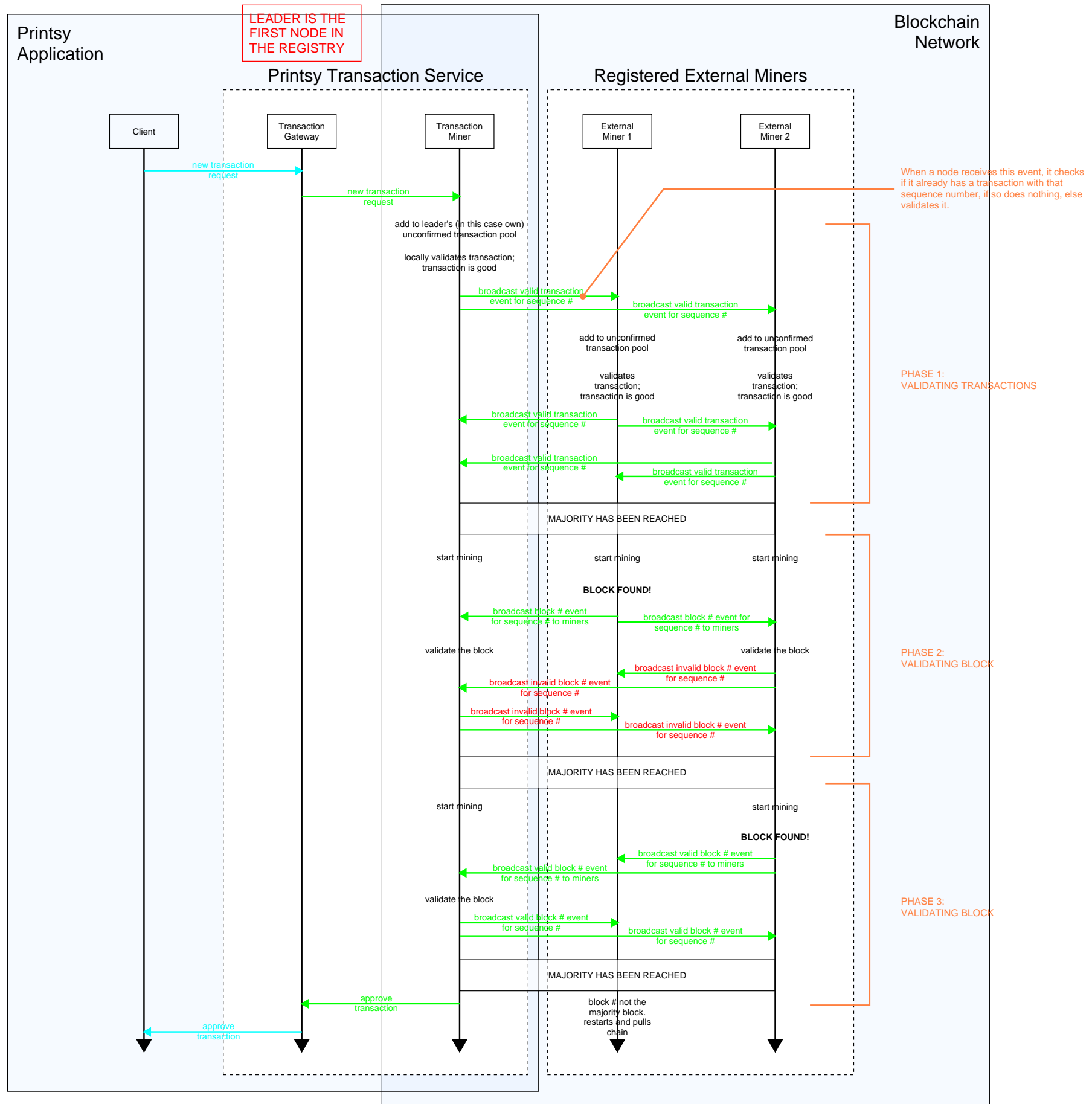
Scenario 1: Transaction is Valid



Scenario 2: Transaction is Not Valid

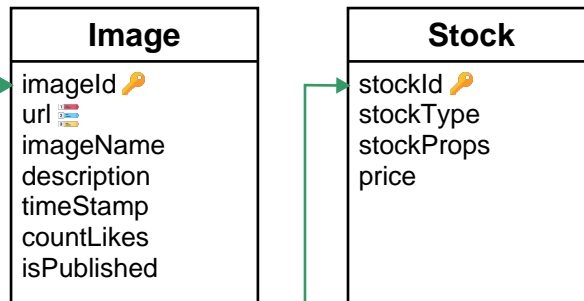


Scenario 3: Transaction is Valid, Winning Block is Invalid

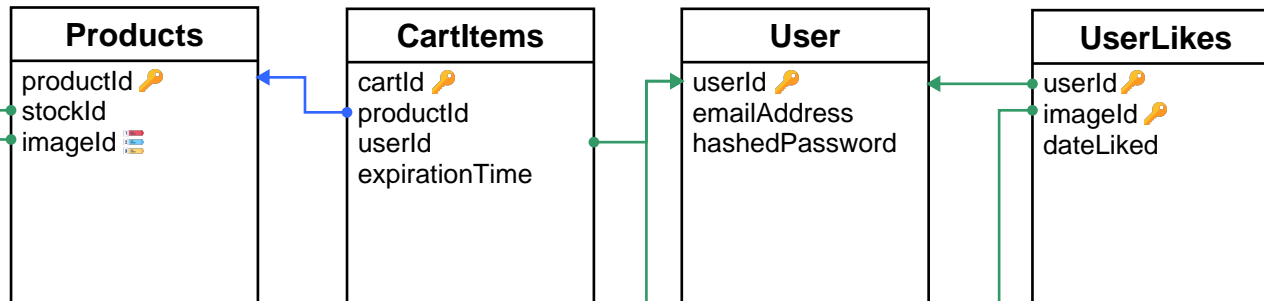


MongoDB

- One to One Relationship
- One to Many Relationship
- Primary Key / Index
- Additional Index



MySQL DB



Distributed Blockchain

