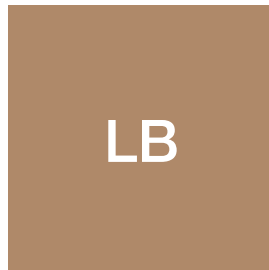


# Legend



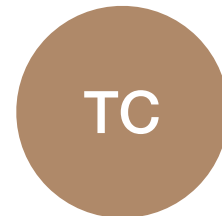
**Origin Client**



**Local Broker**



**Remote Broker**

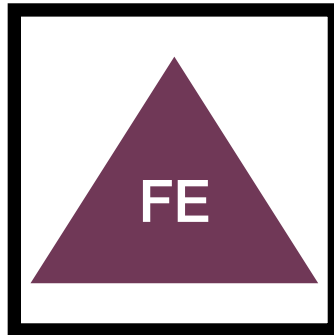


**Target Client**

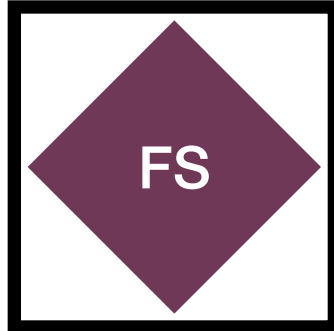
**SG = Subscription Geofence**

**EG = Event Geofence**

# Strategien



**Flooding Events**



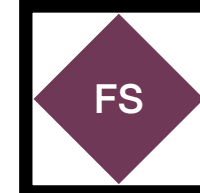
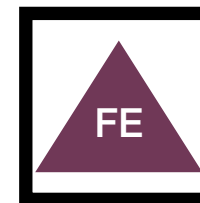
**Flooding Subscriptions**



**DisGB Events**



**DisGB Subscriptions**



# Strategien



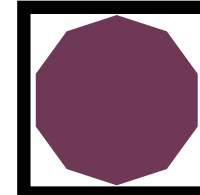
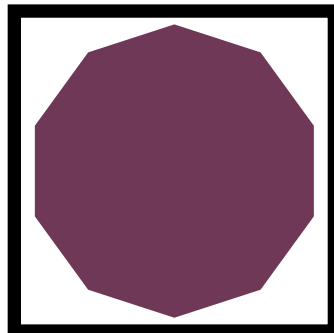
**Distributed Hash Table**



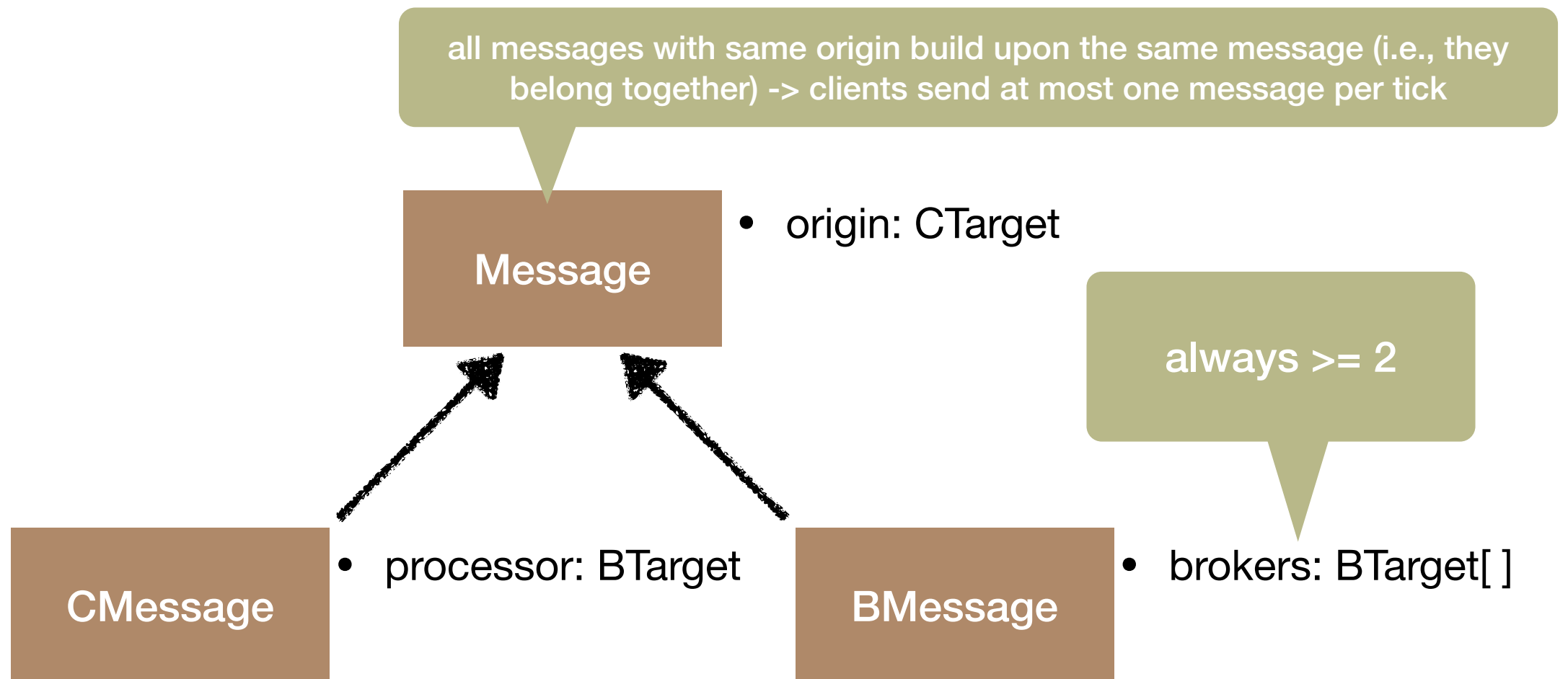
**Grid Quorum-based Pub/Sub**



**Broadcast Groups**



# Abstract Messages



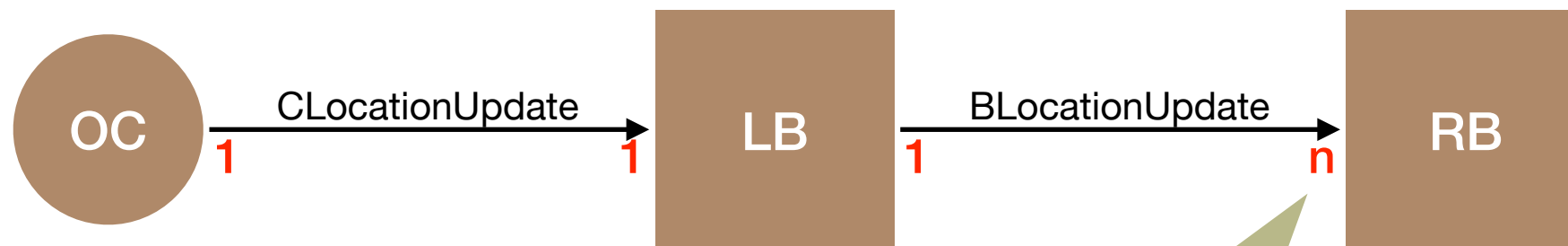
# CMessages

| Message              | Fields   | Notes   |
|----------------------|--|---|
| CLocationUpdate      | <ul style="list-style-type: none"><li>• newLocation: Location</li></ul>      |   |
| CSubscriptionUpdate  | <ul style="list-style-type: none"><li>• subscription: Subscription</li></ul> |   |
| CSubscriptionRemoval | <ul style="list-style-type: none"><li>• topic: Topic</li></ul>               |   |
| CEventMatching       | <ul style="list-style-type: none"><li>• event: Event</li></ul>               |   |
| CEventDelivery       | <ul style="list-style-type: none"><li>• subscriber: CTarget</li></ul>        | event not needed -> can be identified by message origin |

# BMessages

| Message                     | Fields   | Notes   |
|-----------------------------|--|---|
| <b>BLocationUpdate</b>      | <ul style="list-style-type: none"><li>• newLocation: Location</li></ul>      |   |
| <b>BSubscriptionUpdate</b>  | <ul style="list-style-type: none"><li>• subscription: Subscription</li></ul> |   |
| <b>BSubscriptionRemoval</b> | <ul style="list-style-type: none"><li>• topic: Topic</li></ul>               |   |
| <b>BEventMatching</b>       | <ul style="list-style-type: none"><li>• event: Event</li></ul>               |   |
| <b>BEventDelivery</b>       | <ul style="list-style-type: none"><li>• subscribers: ClientId[ ]</li></ul>   | event not needed -> can be identified by message origin |

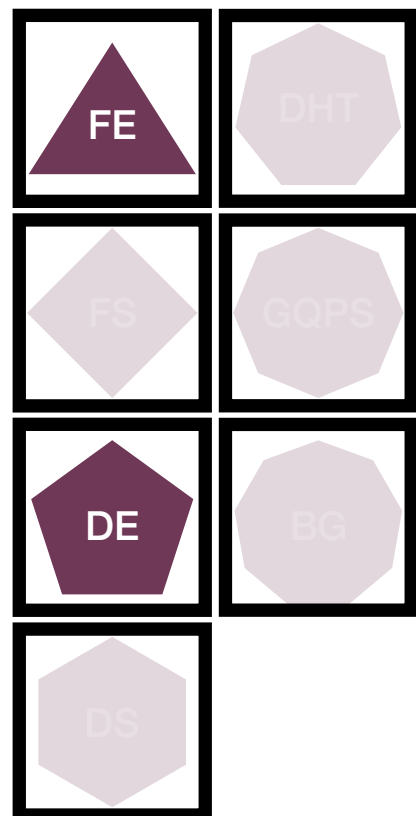
# Location Update



number of RB  
BG: number of RB  
+ 1 (the Cloud)

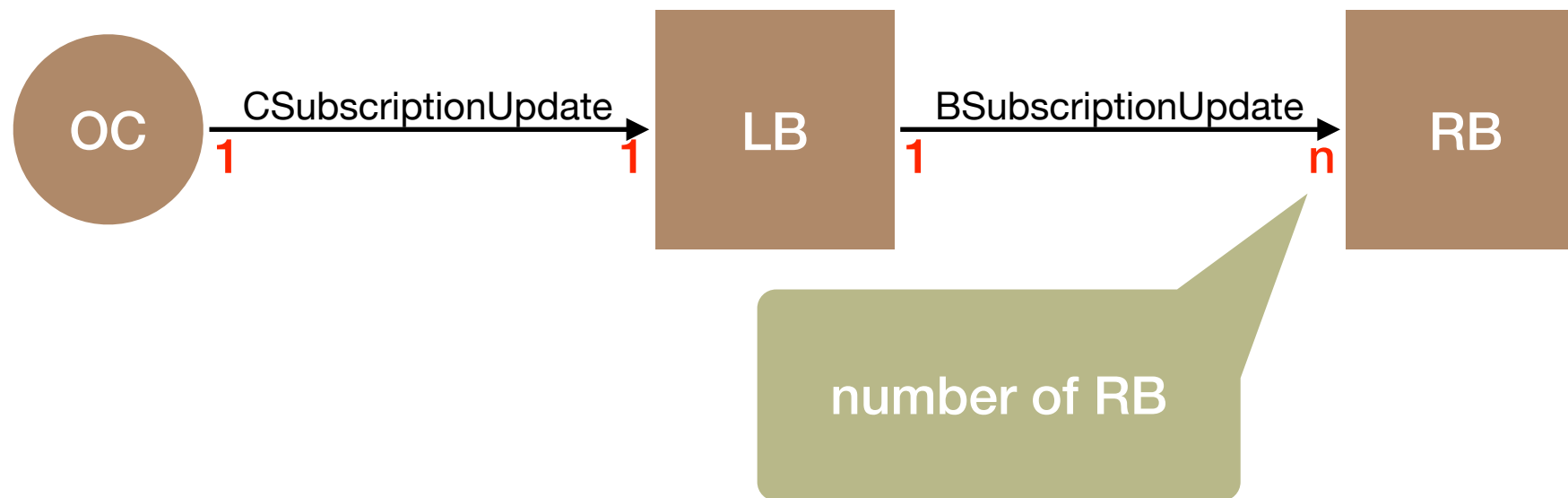
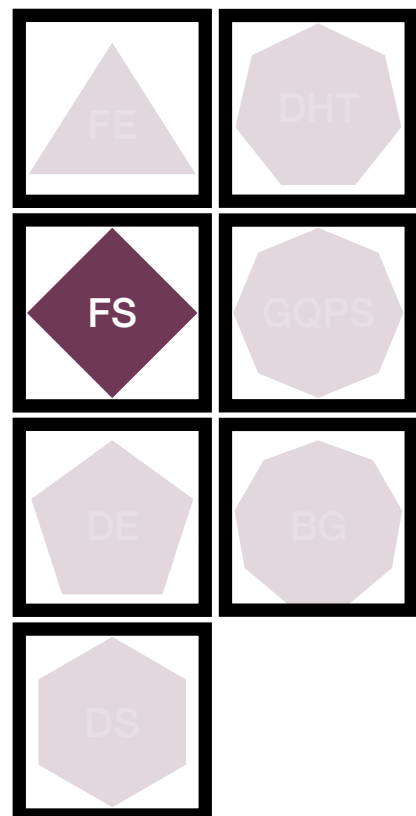


# Subscription Update (1)

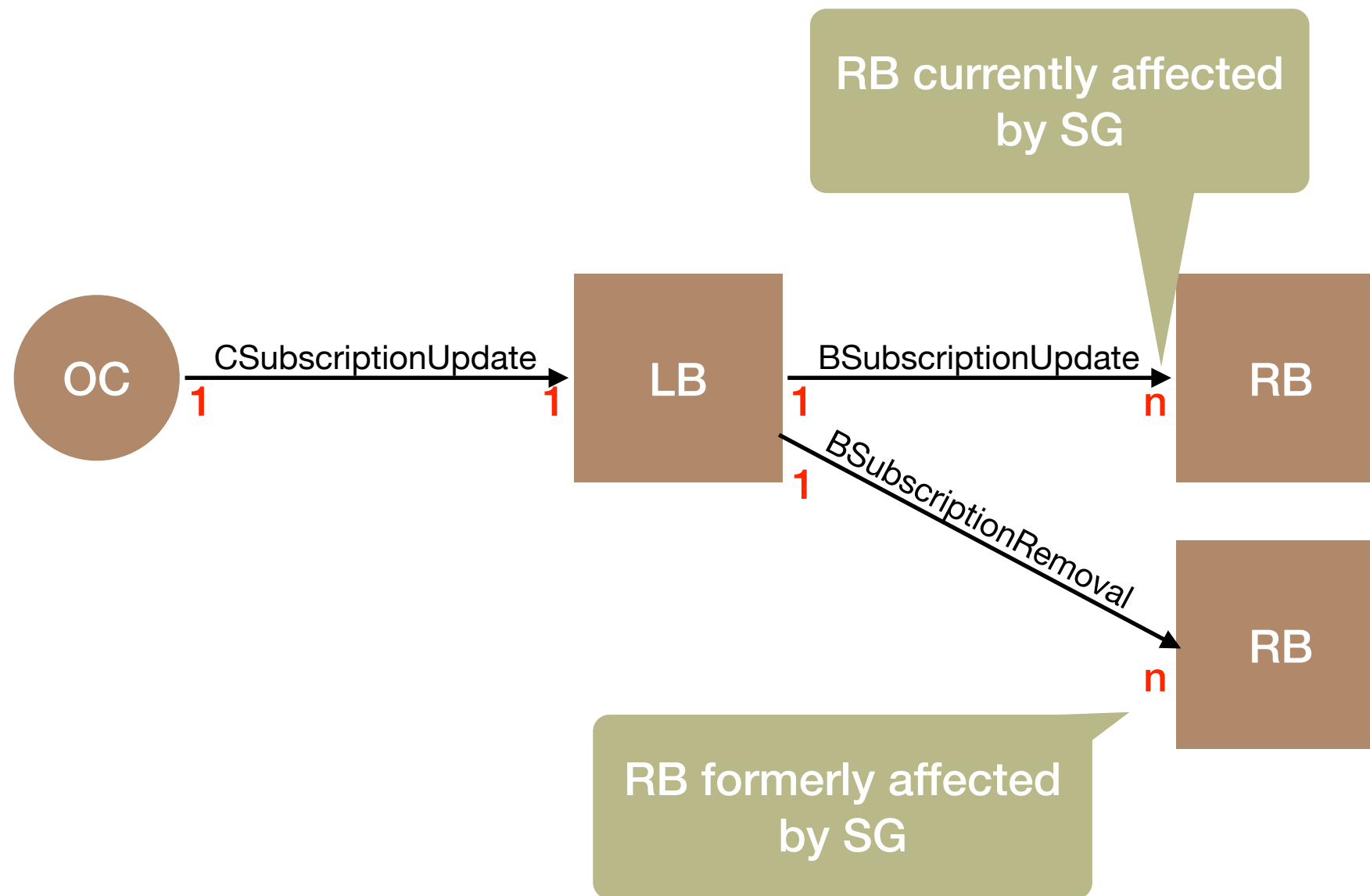
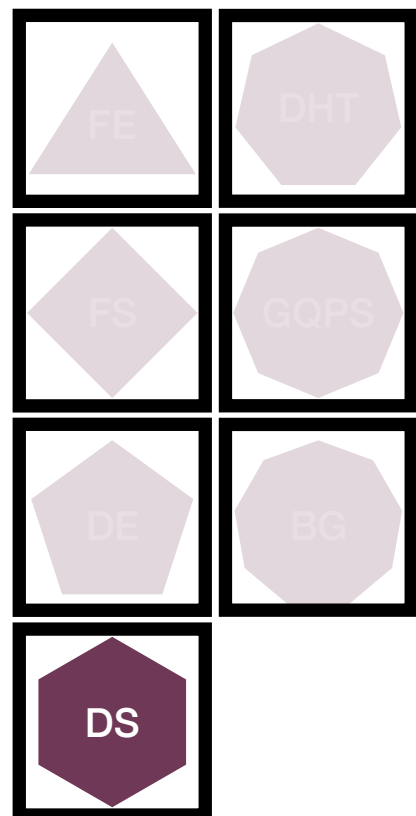




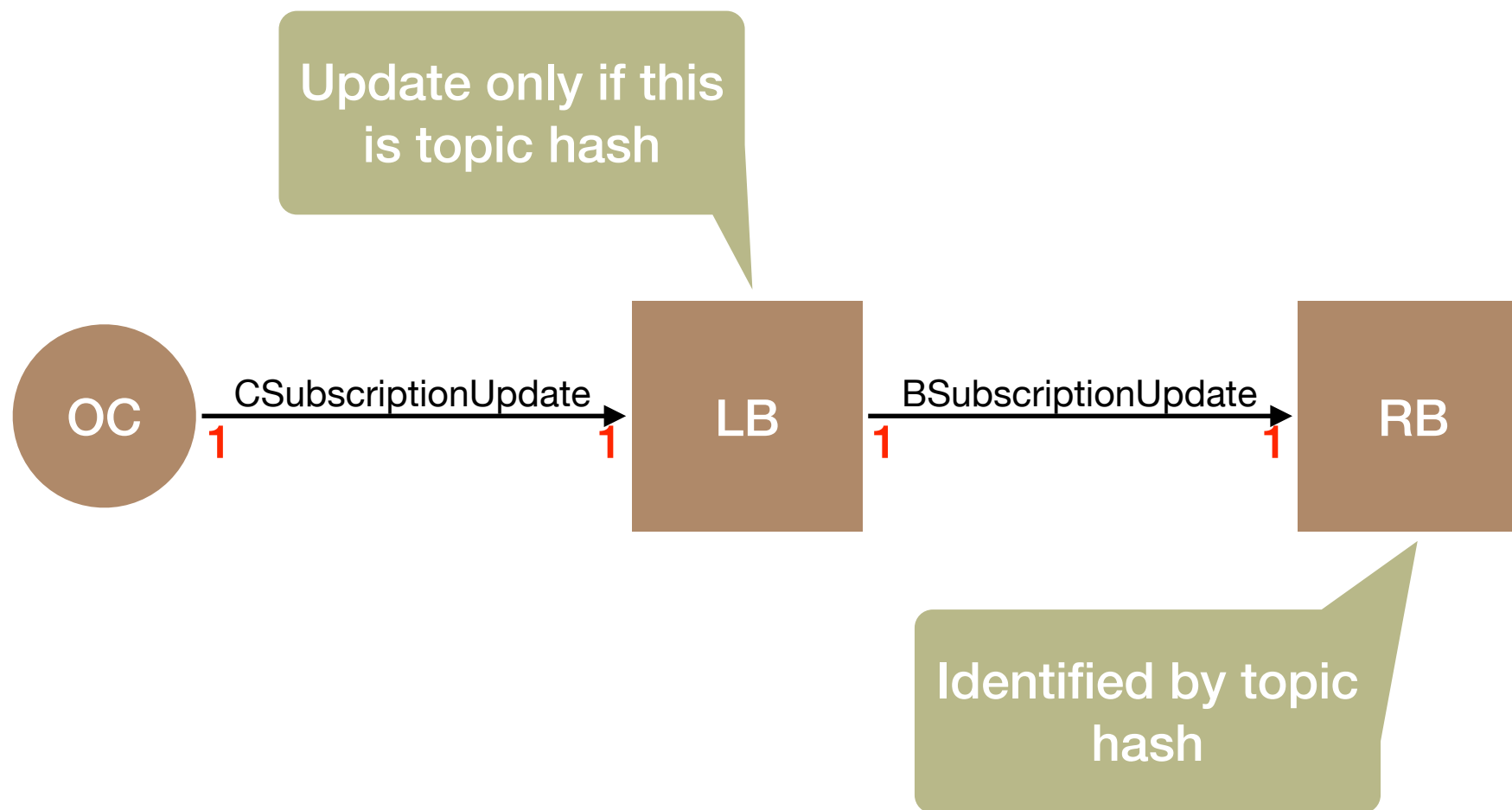
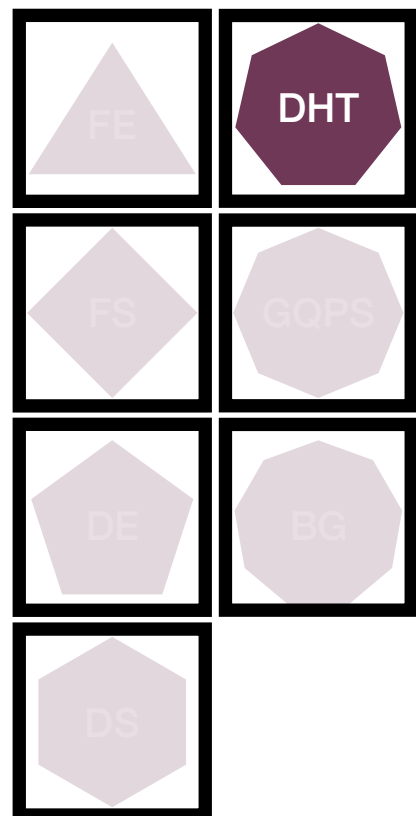
# Subscription Update (2)



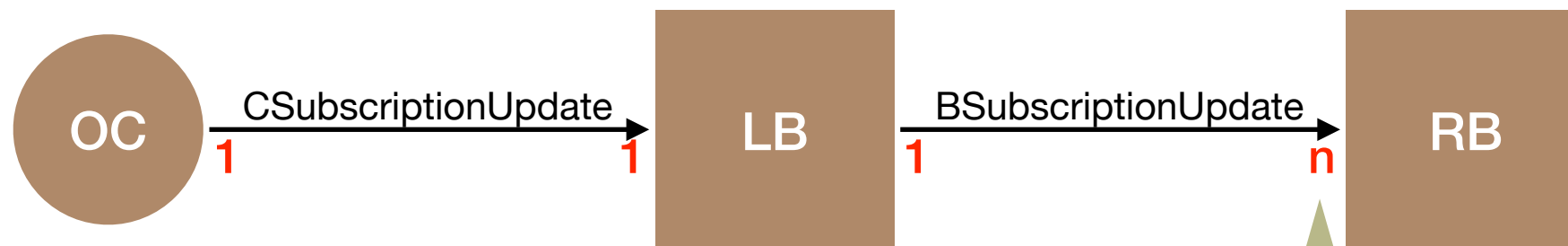
# Subscription Update (3)



# Subscription Update (4)

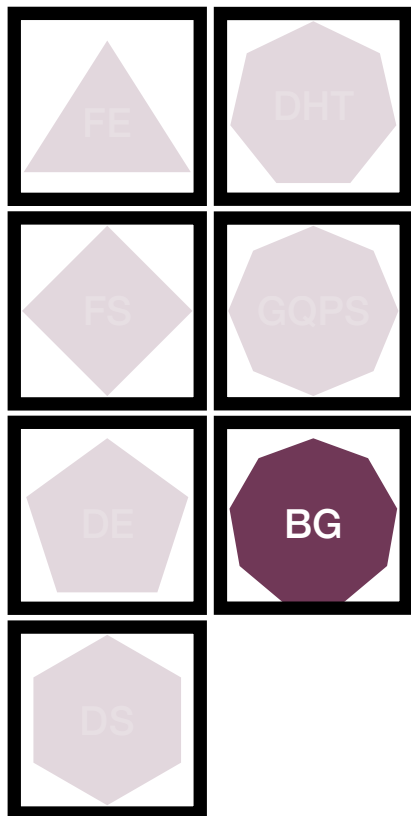
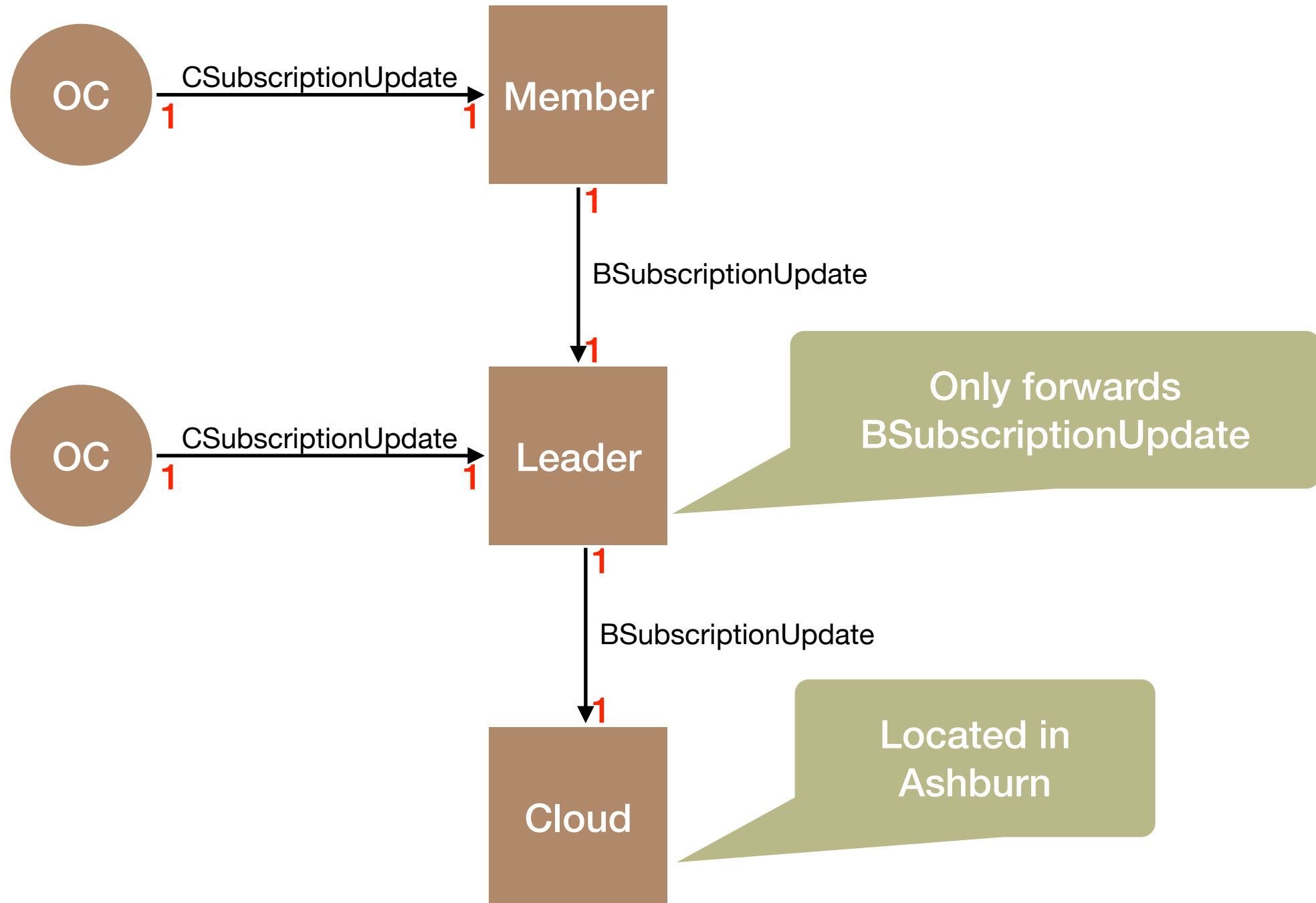


# Subscription Update (5)

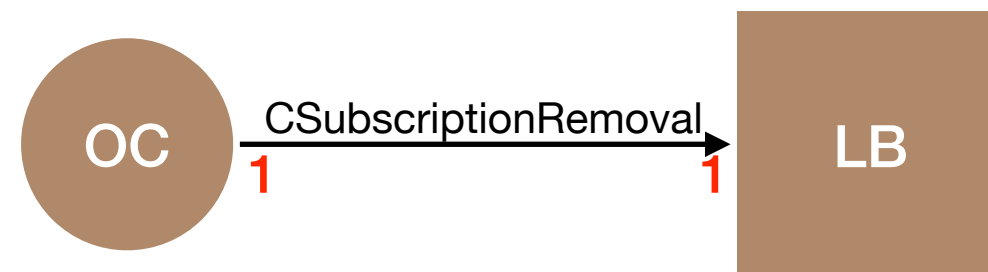
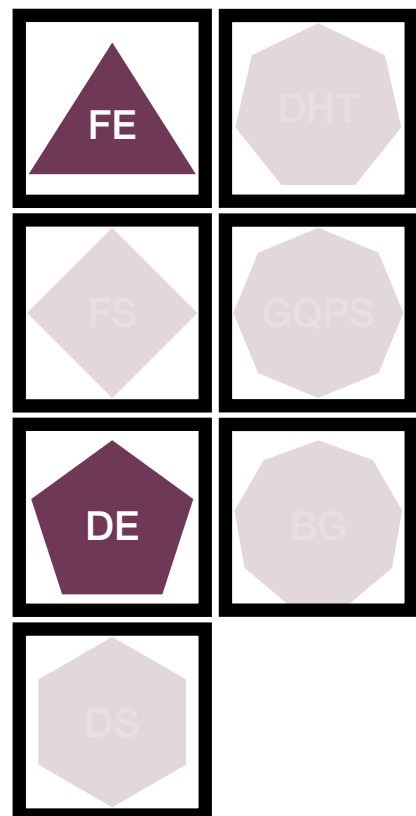


RB in same row or column

# Subscription Update (6)



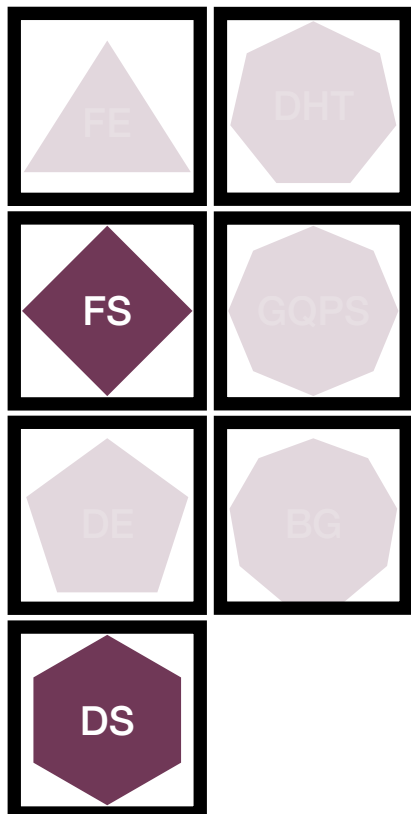
# Subscription Removal (1)



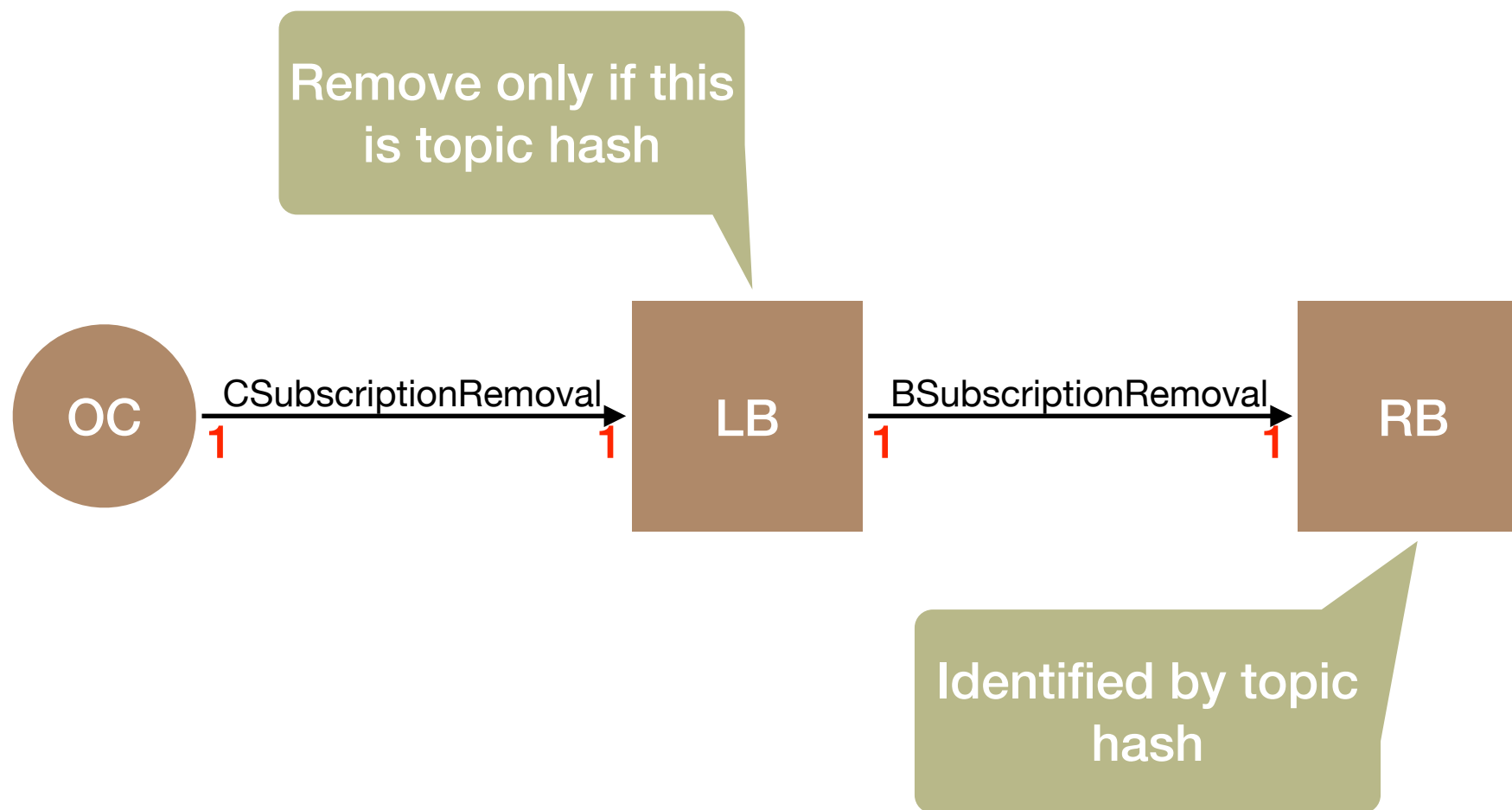
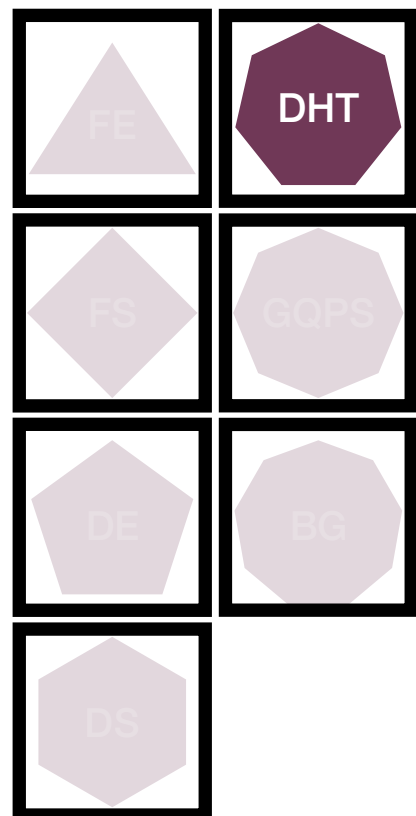
# Subscription Removal (2)



FE: number of RB  
DE: RB affected by SG

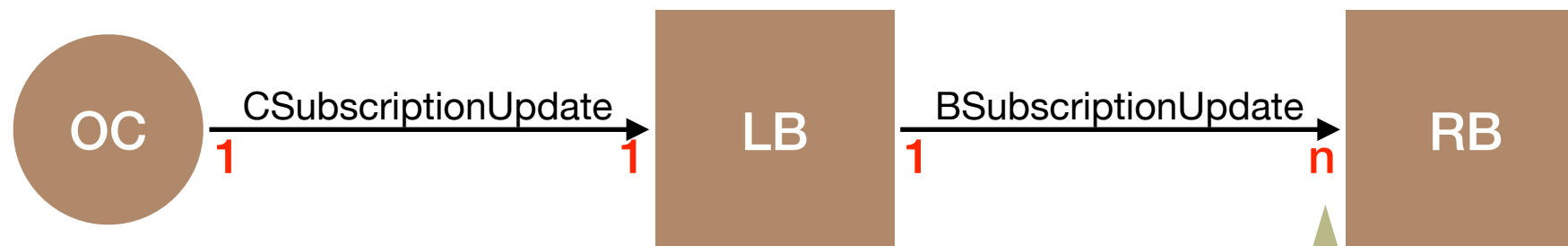
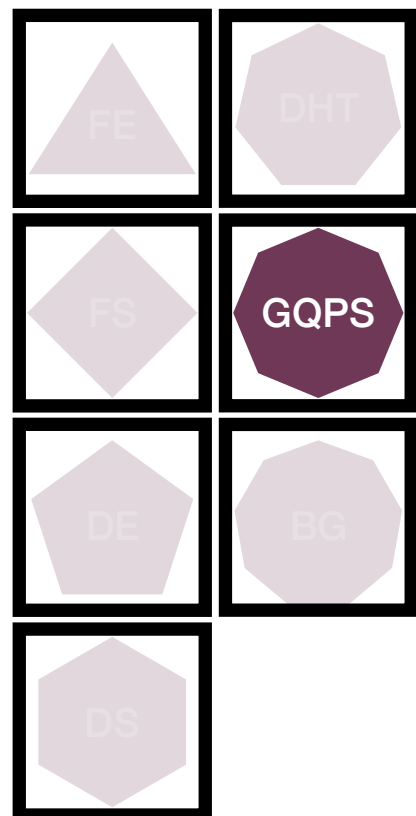


# Subscription Removal (3)



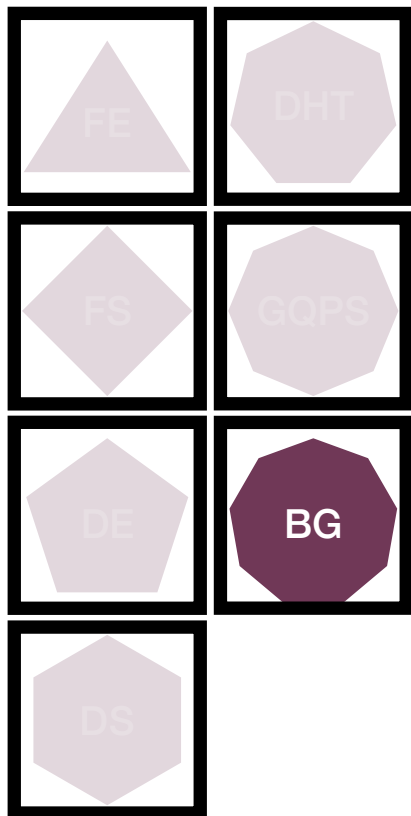
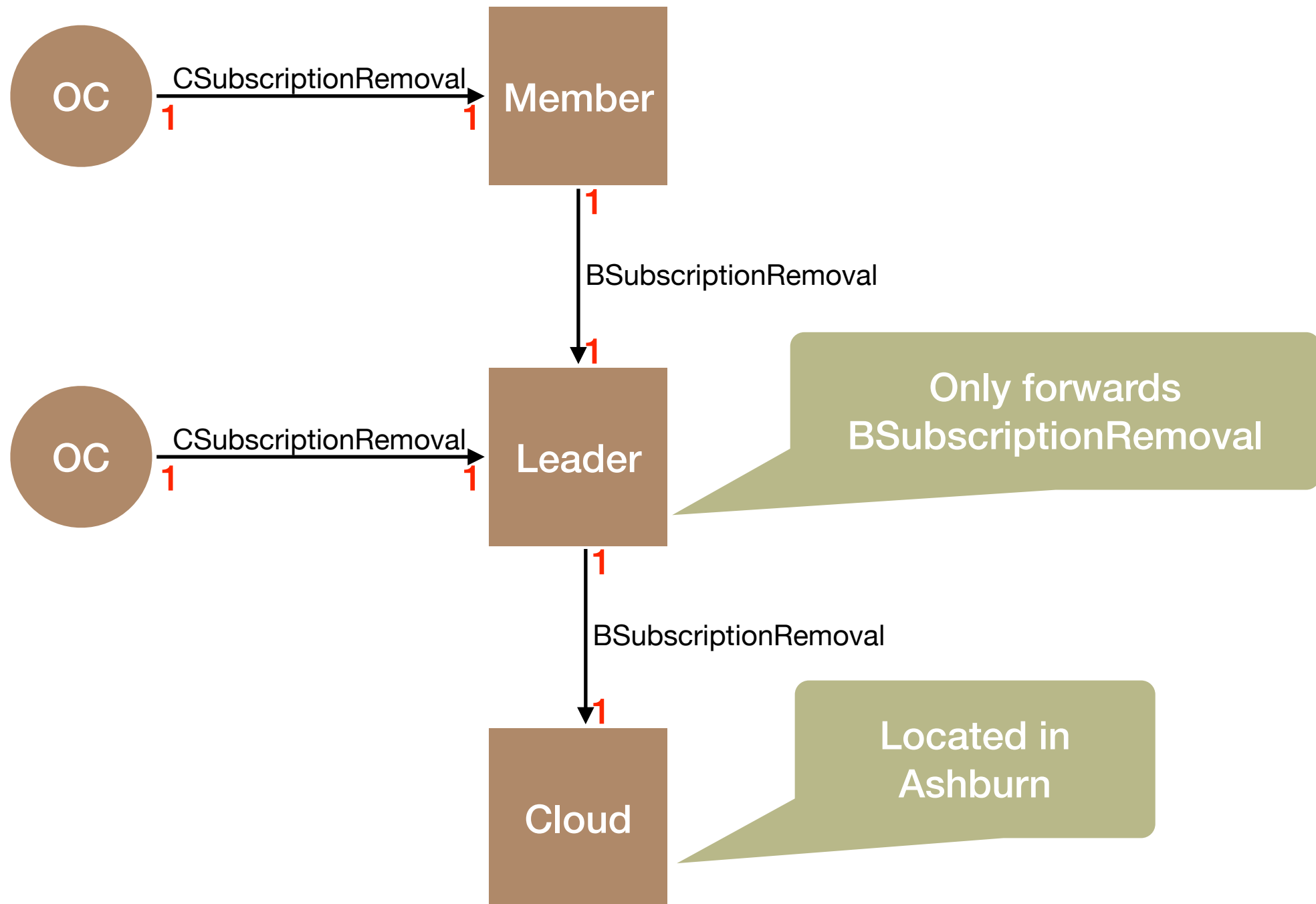


# Subscription Removal (4)

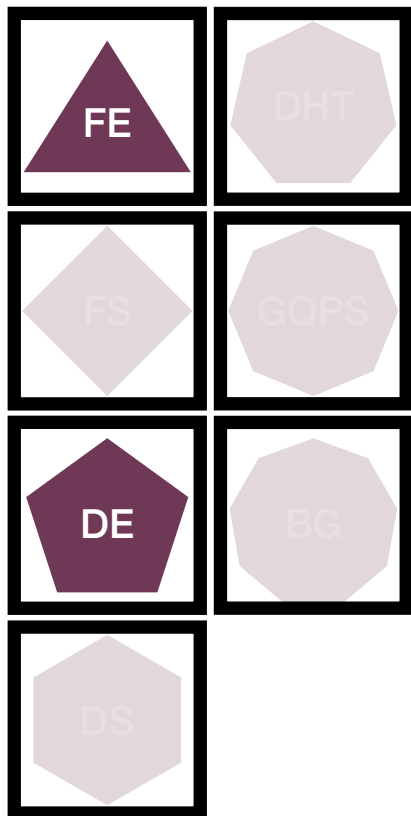
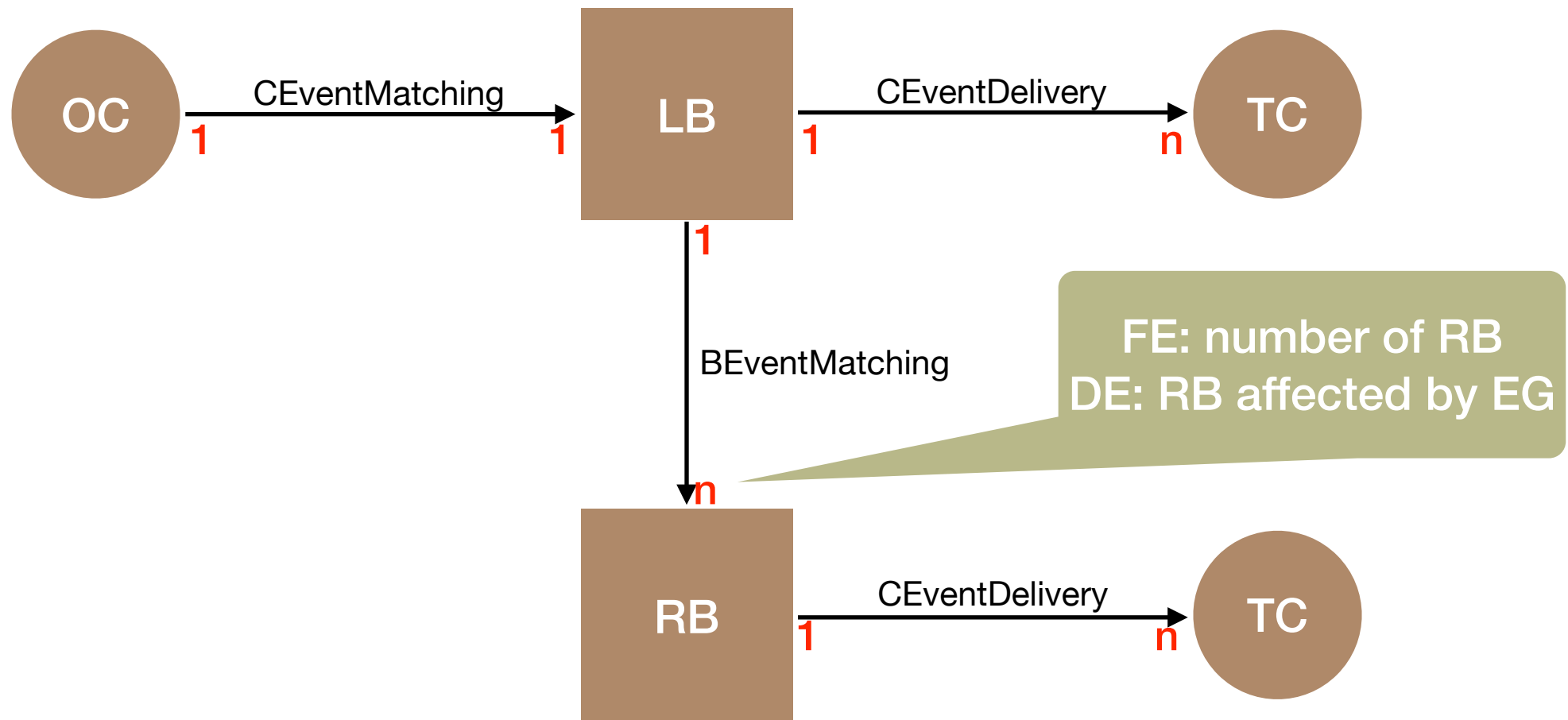


RB in same row or column

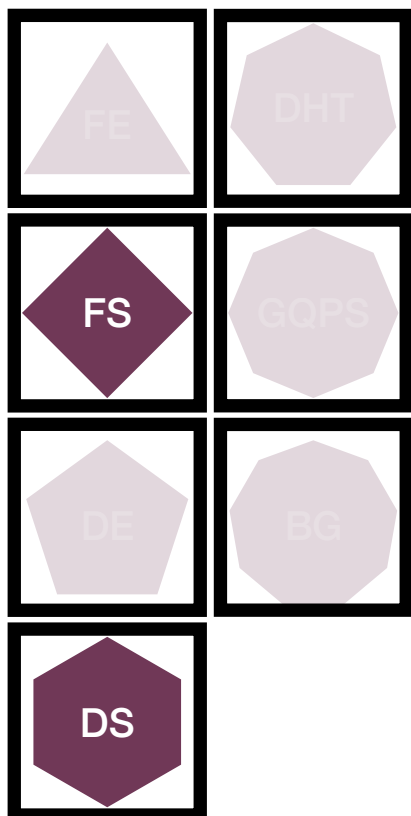
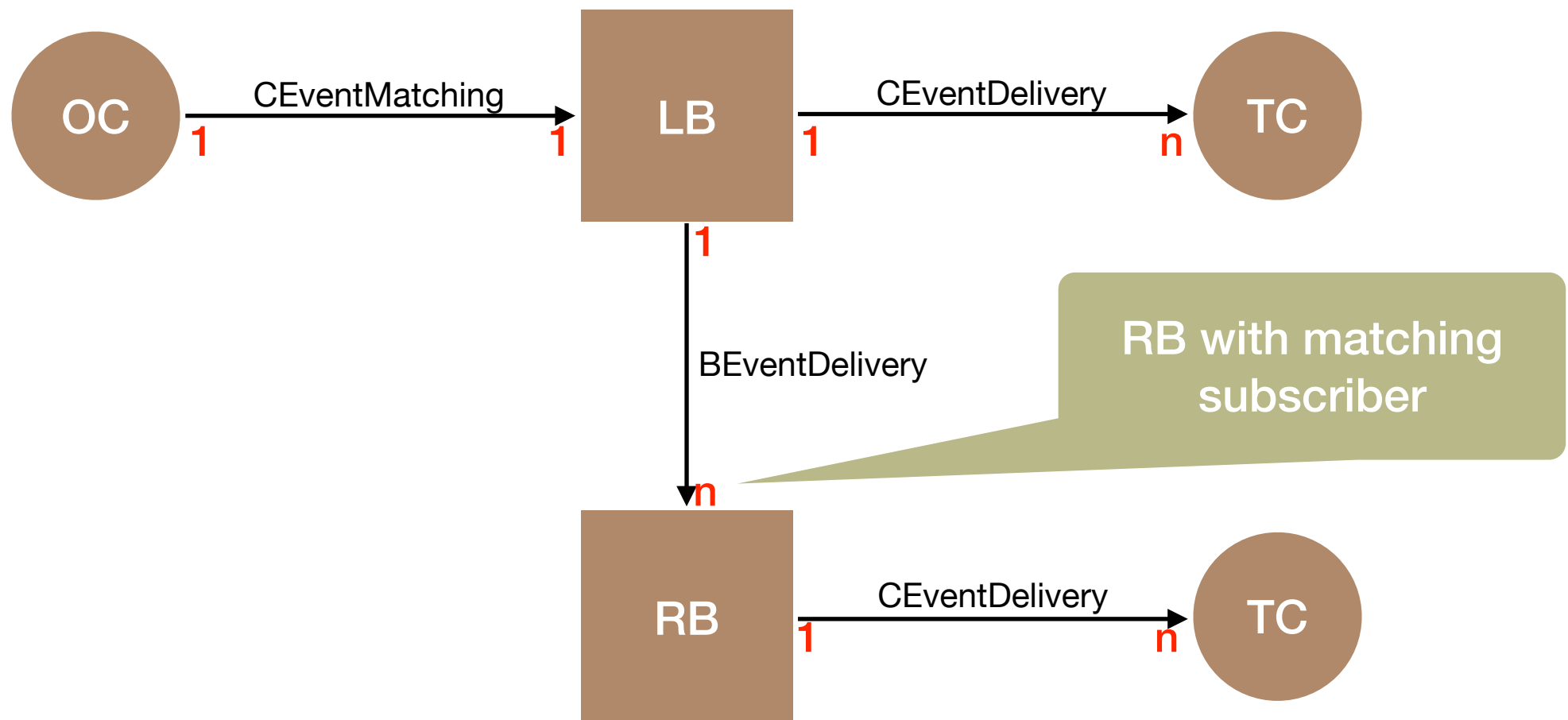
# Subscription Removal (5)



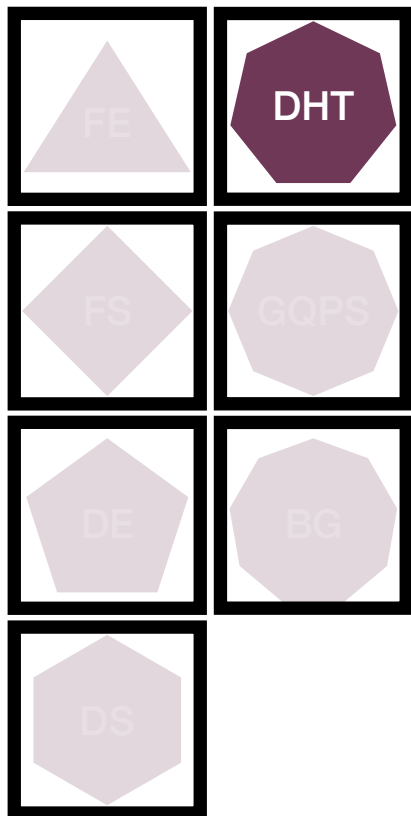
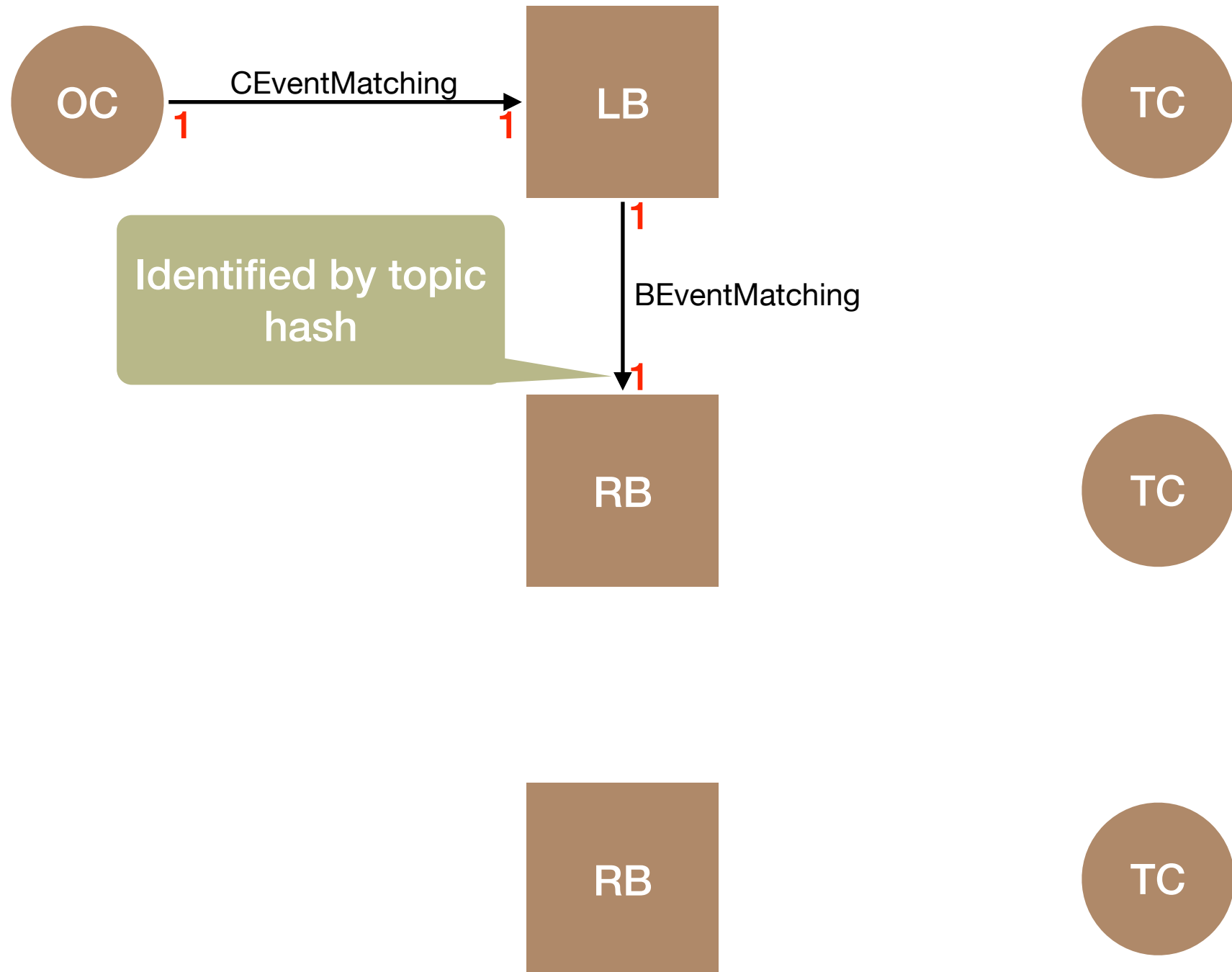
# Event (1)



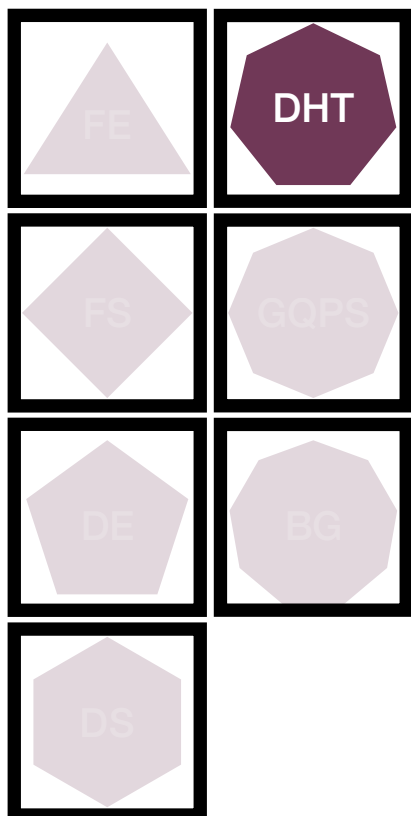
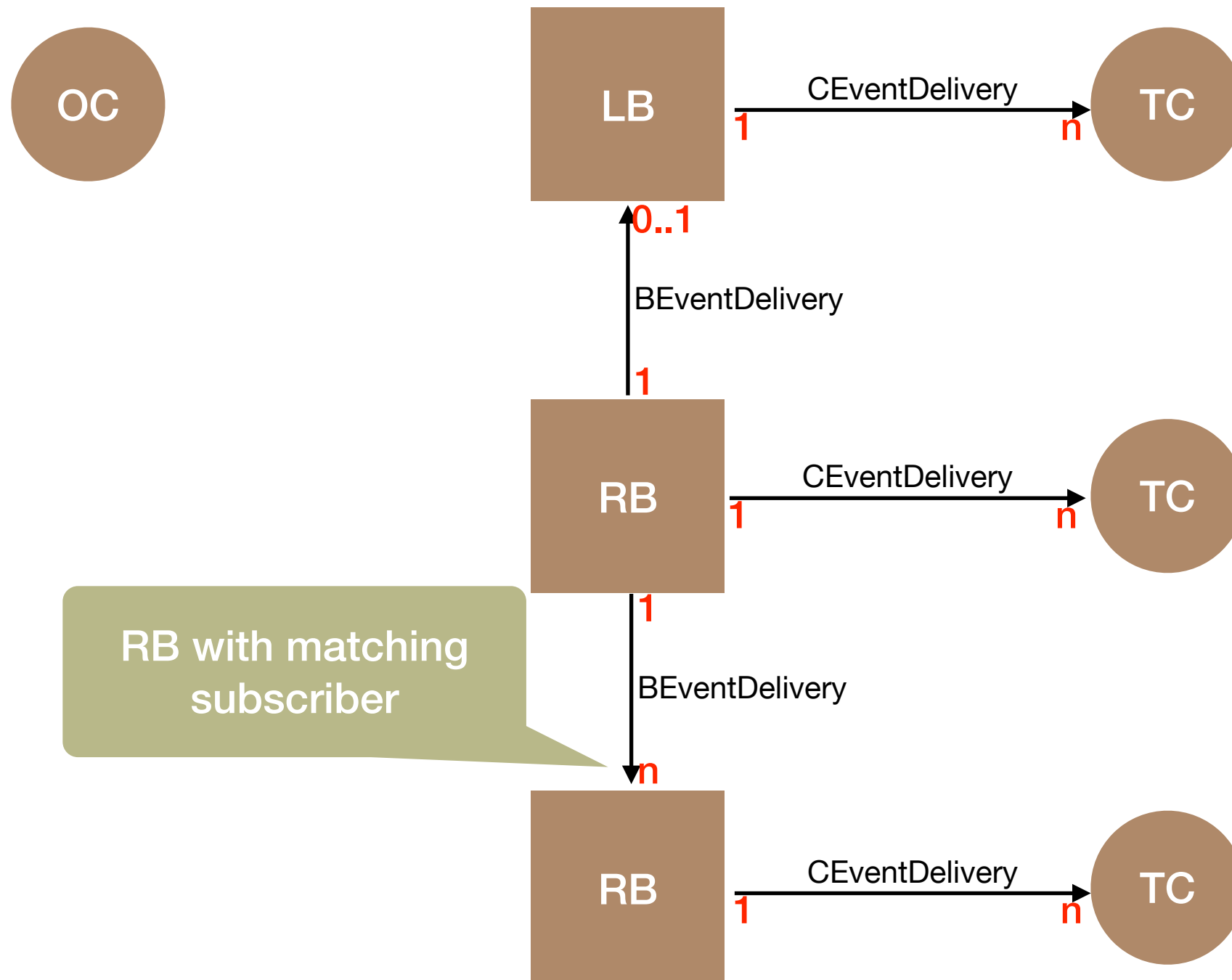
# Event (2)



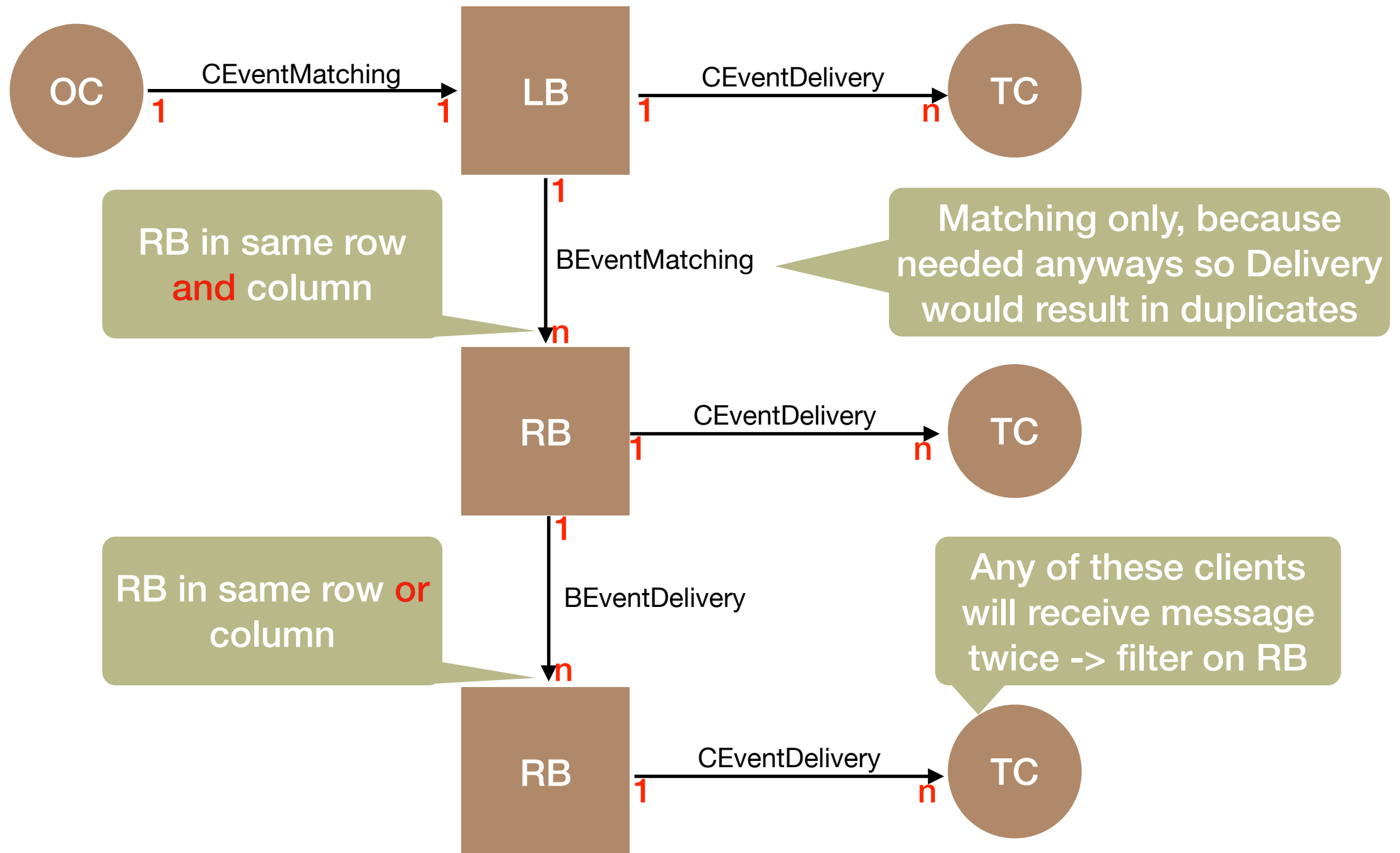
# Event (3a)



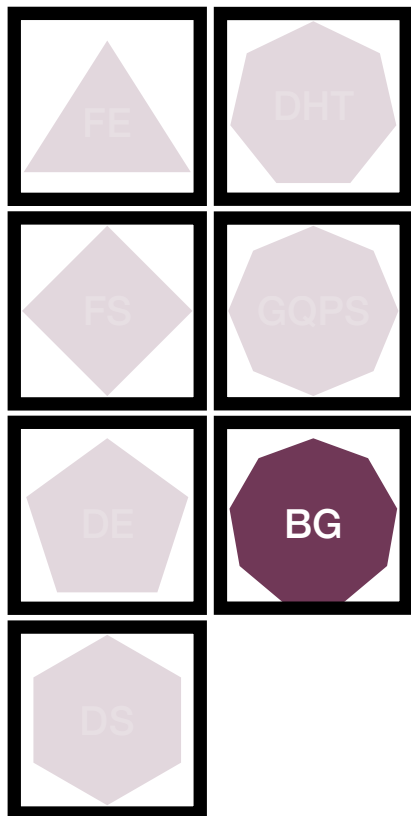
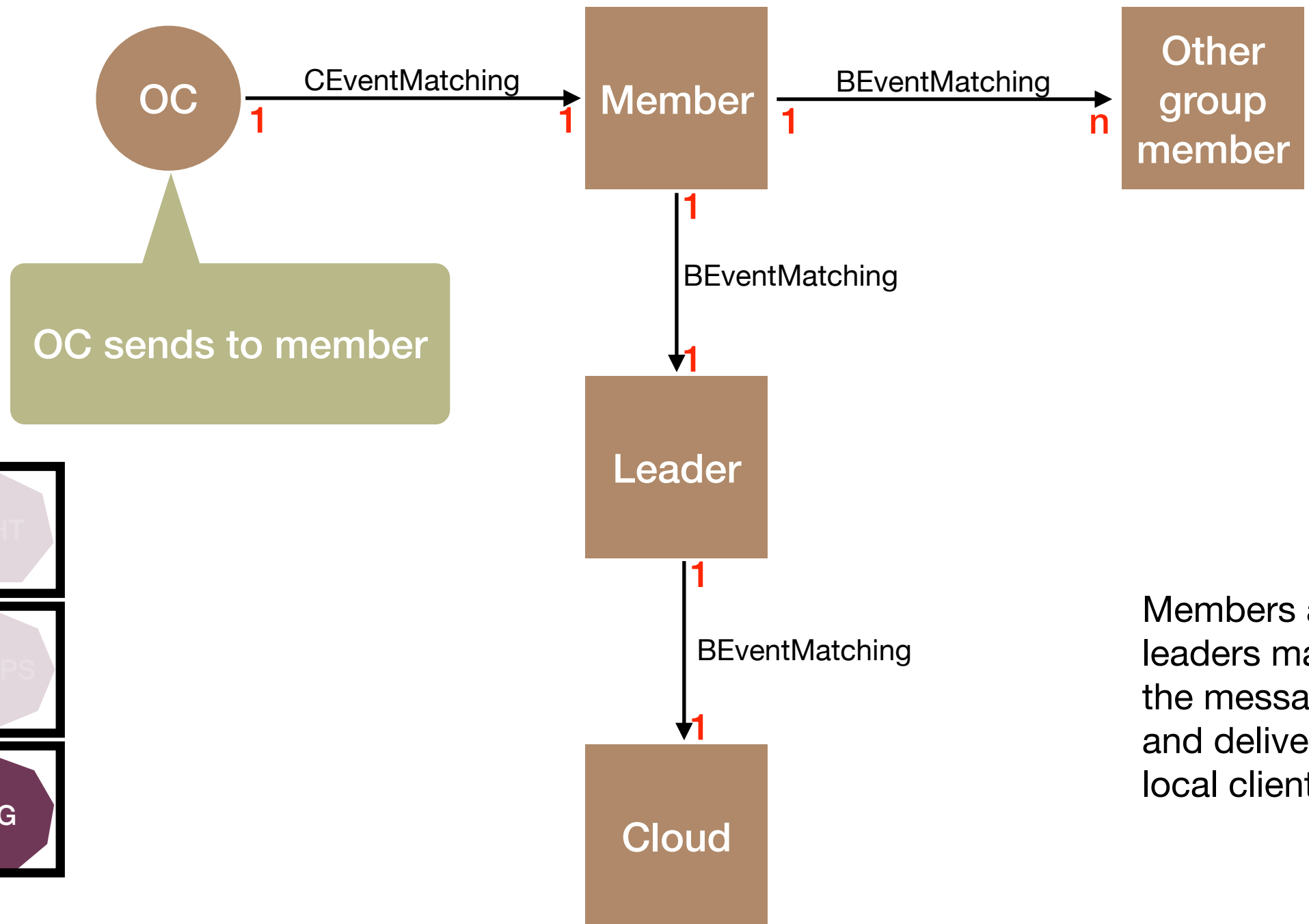
# Event (3b)



# Event (4)

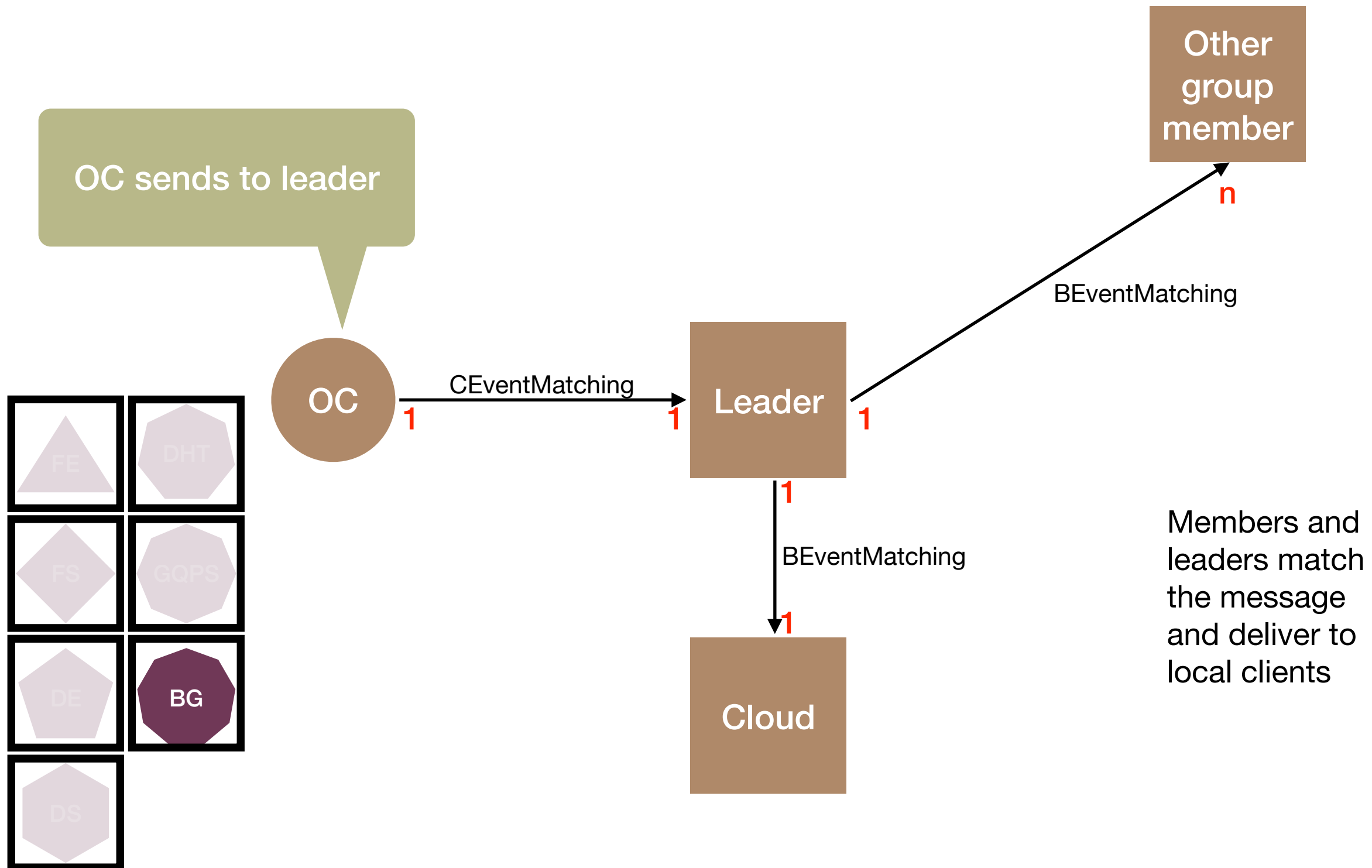


# Event (5a1)





# Event (5a2)



# Event (5b)

