

Dynamo - Extra

Big Data Systems

Dr. Rubi Boim

Dynamo - Extra

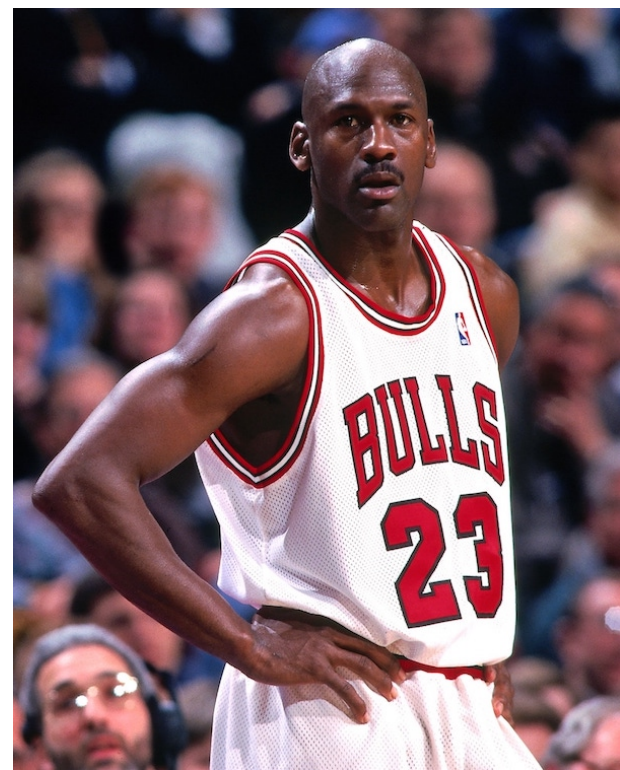
- Deleted item resurface example
- Data versioning - example (paper)

Dynamo - Extra

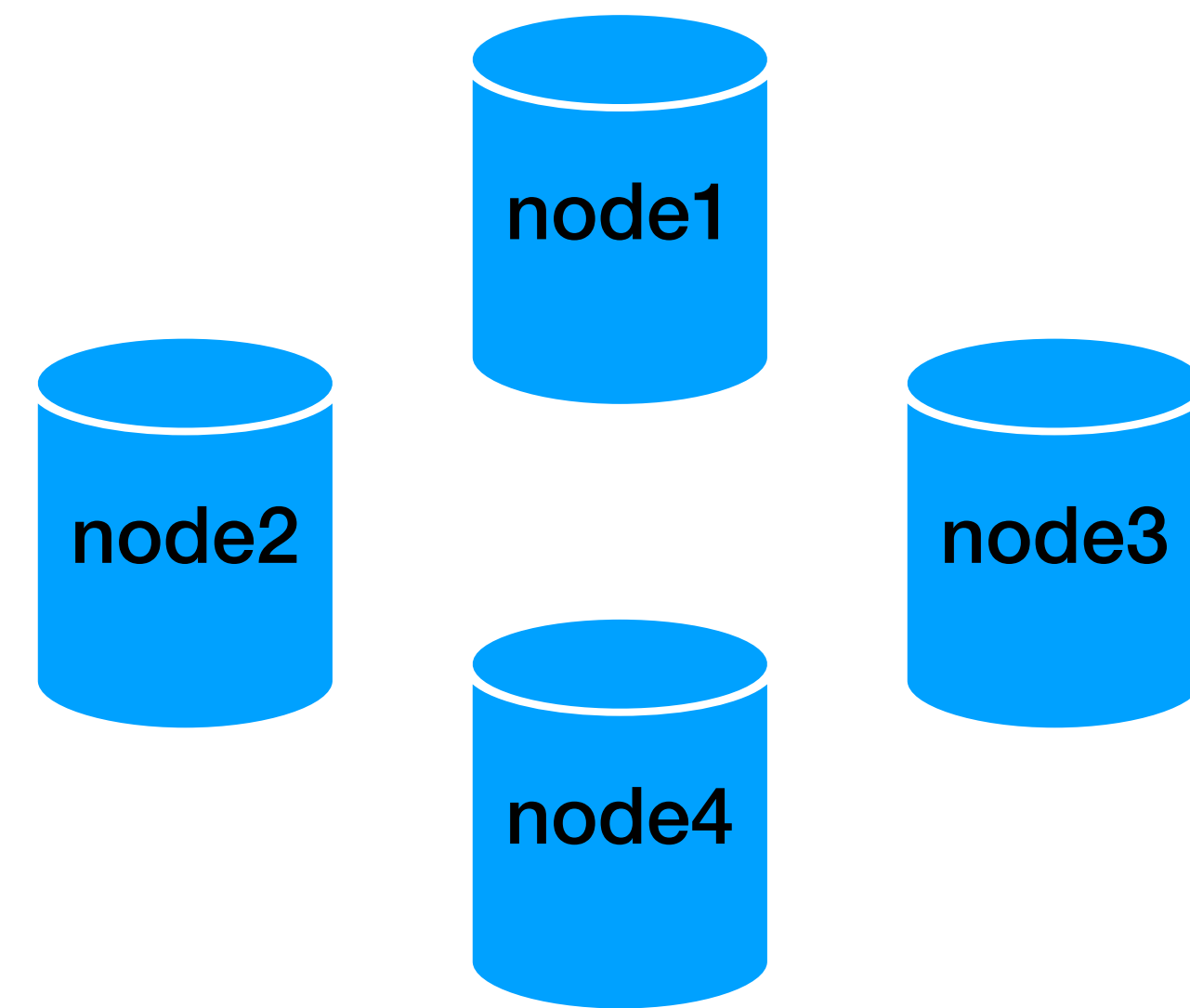
- **Deleted item resurface example**
- Data versioning - example (paper)

Try doing it yourself before you go to next slides

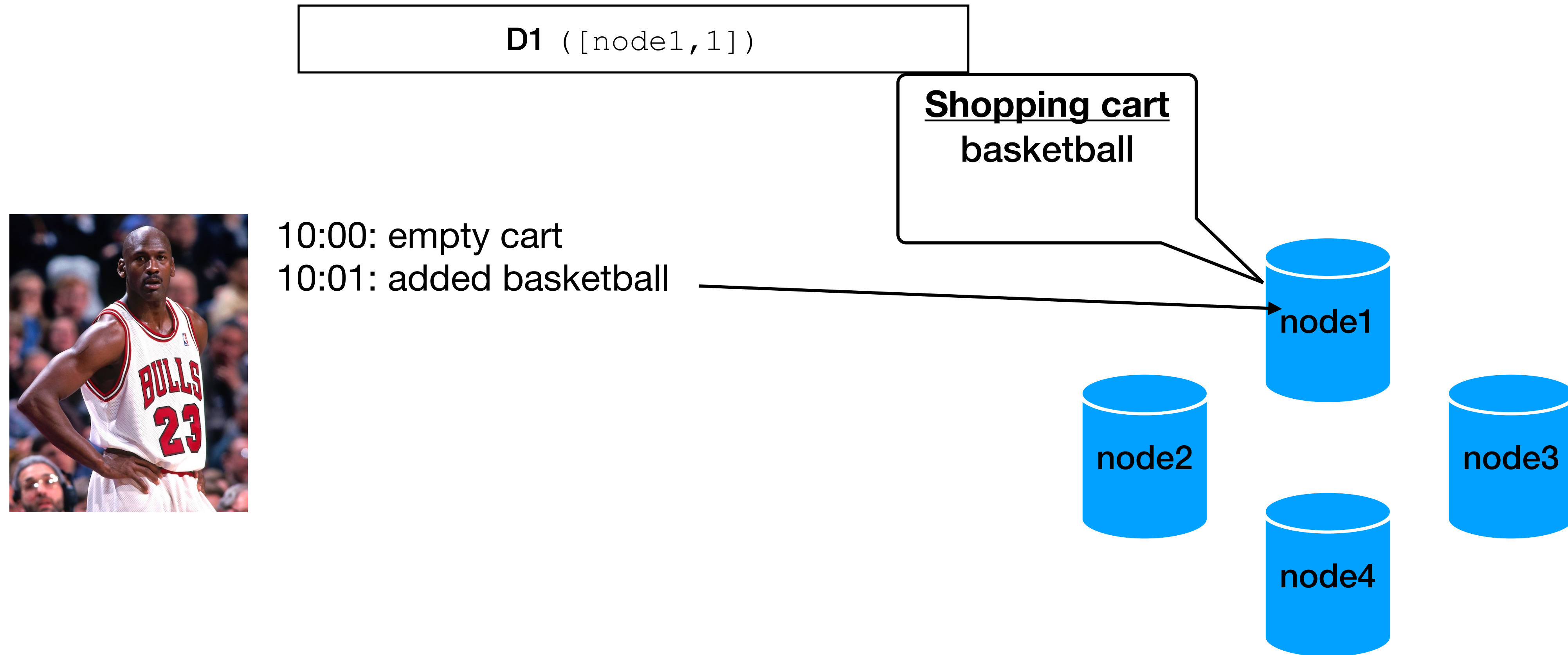
Data versioning - delete resurface



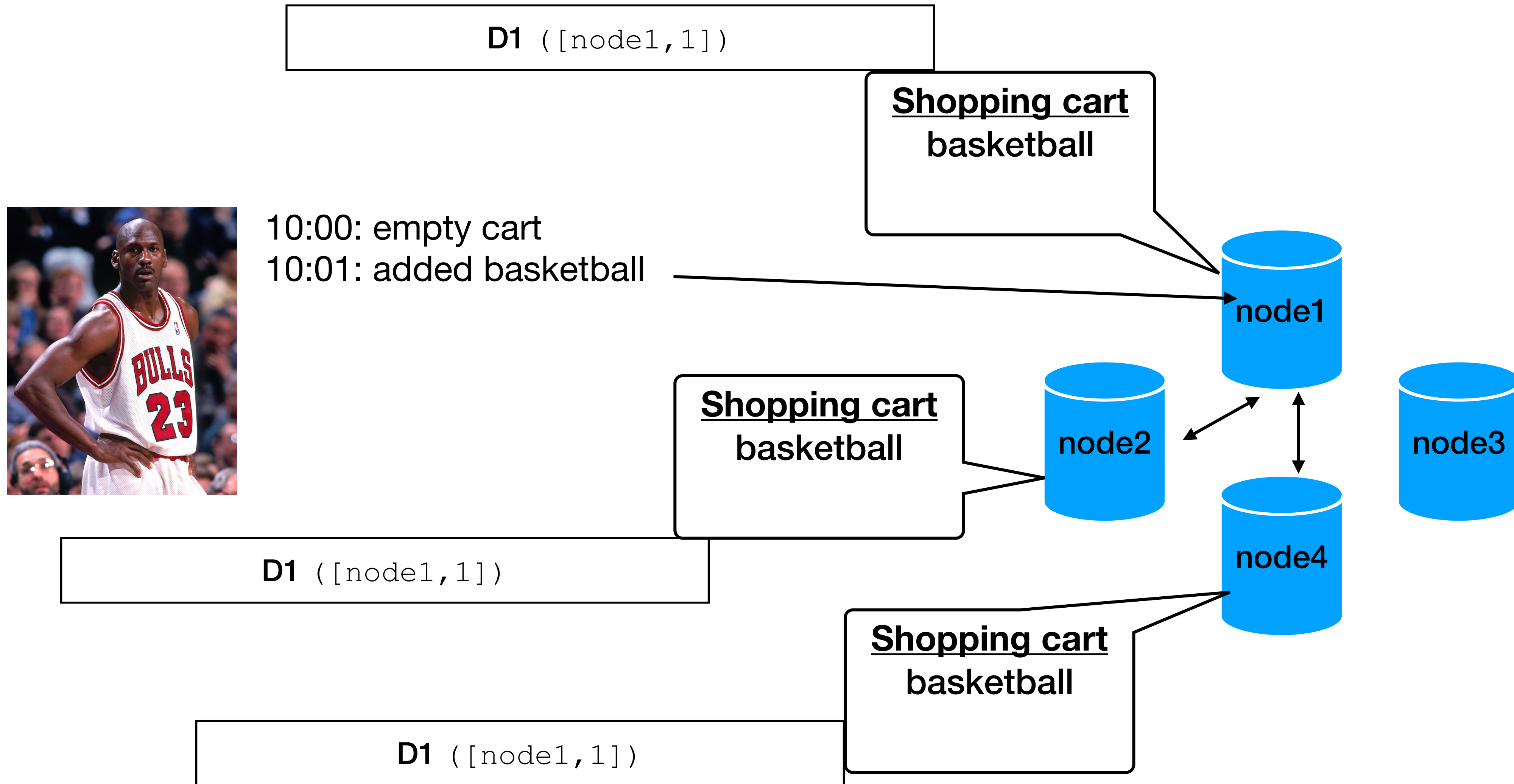
10:00: empty cart



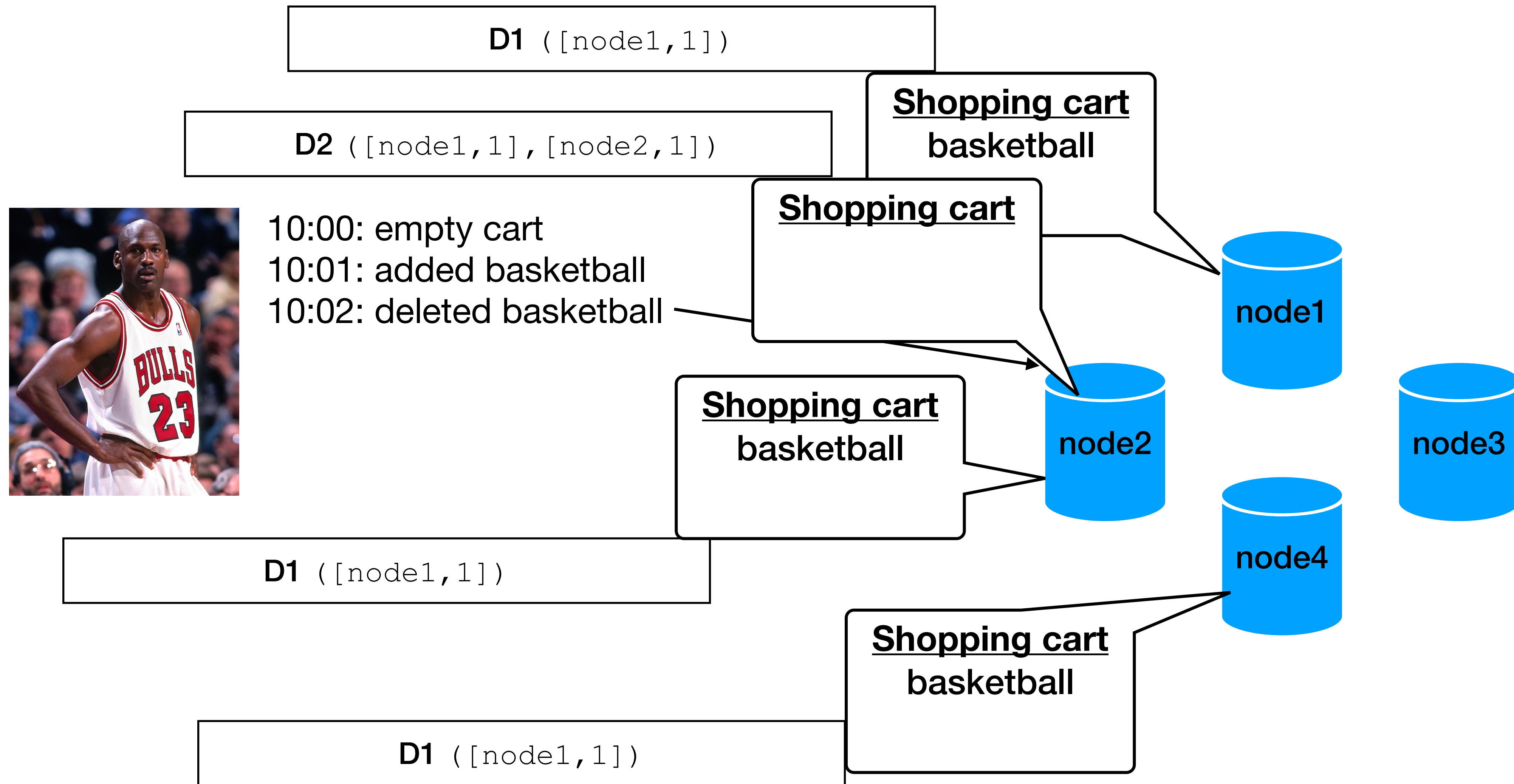
Data versioning - delete resurface



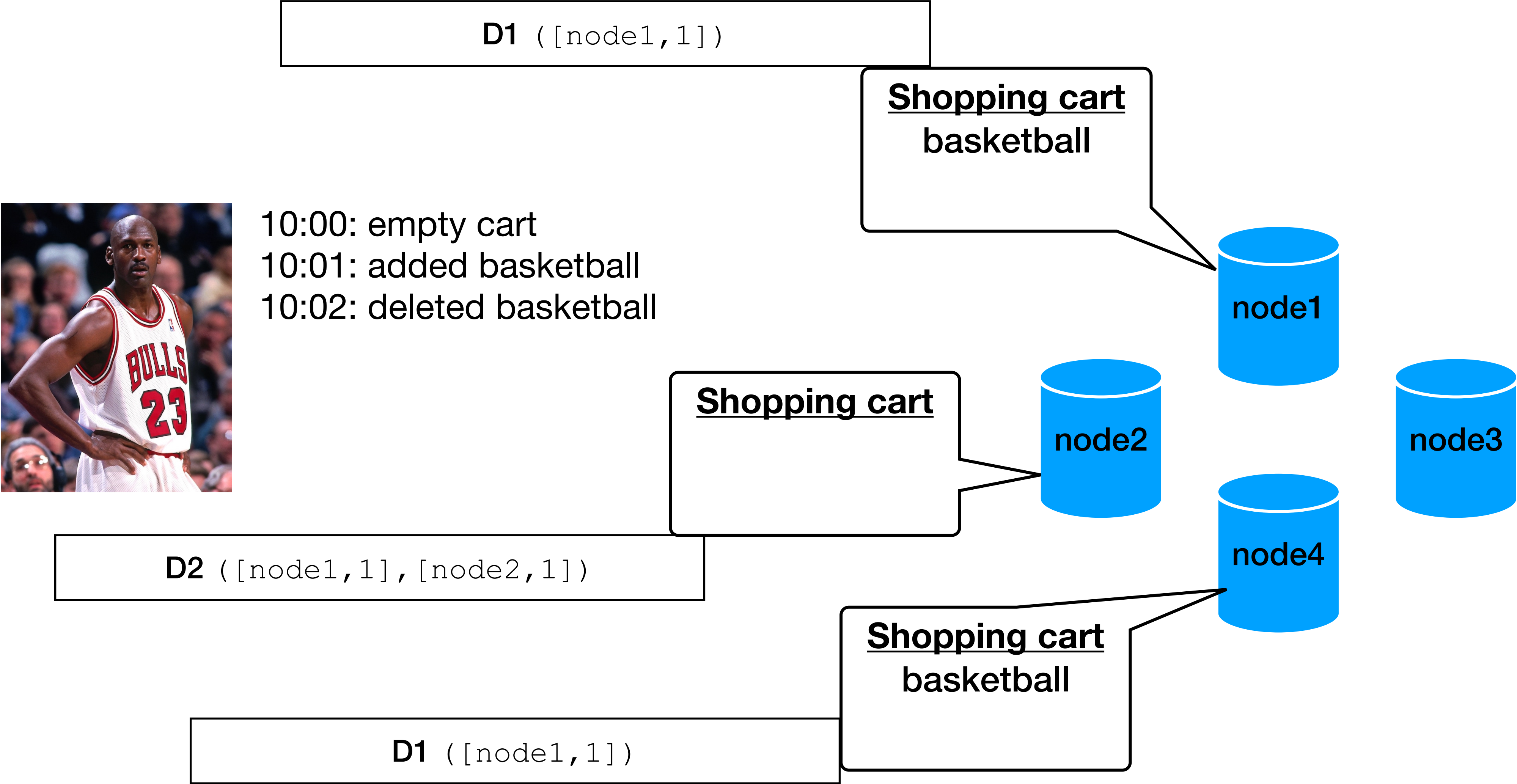
Data versioning - delete resurface



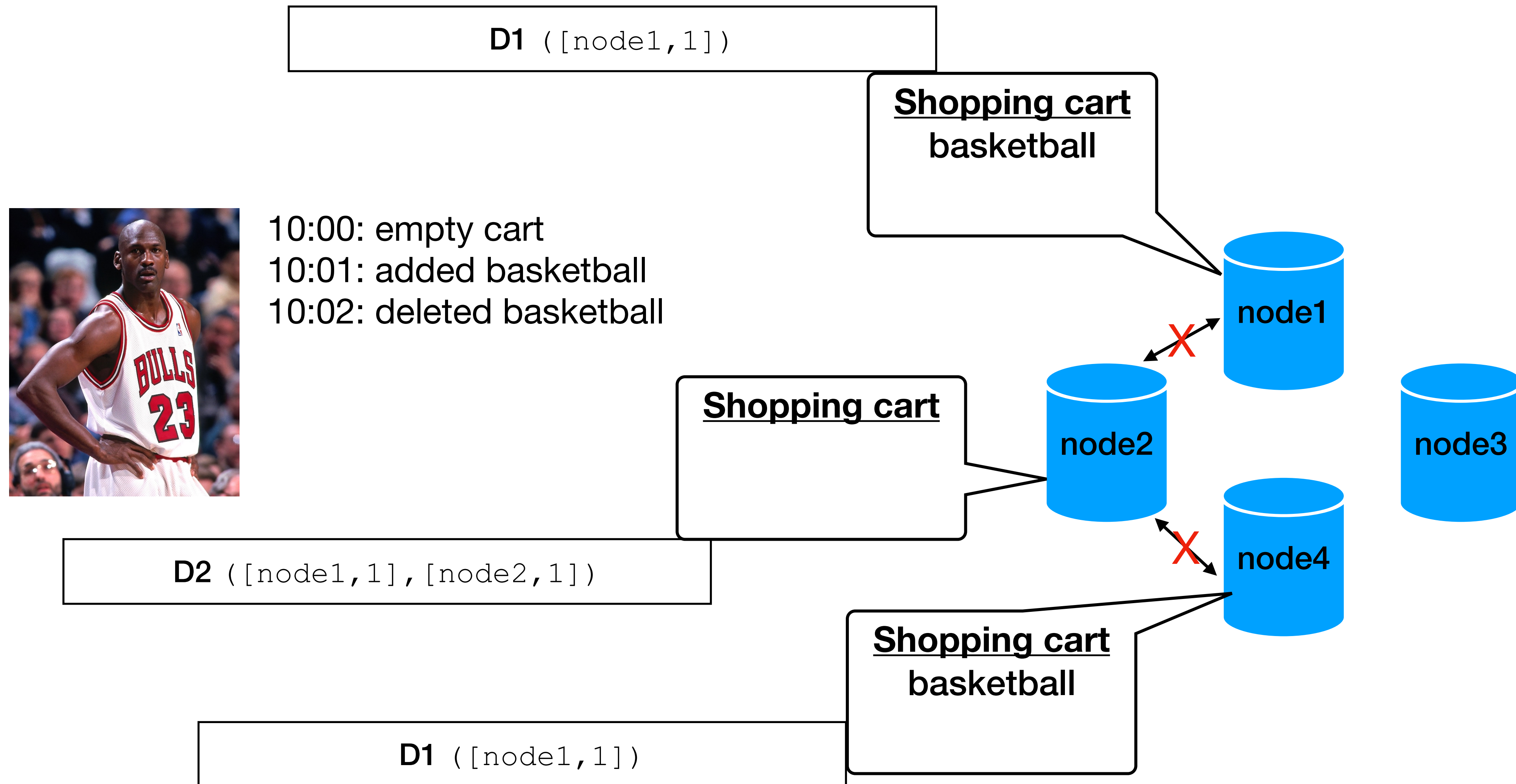
Data versioning - delete resurface



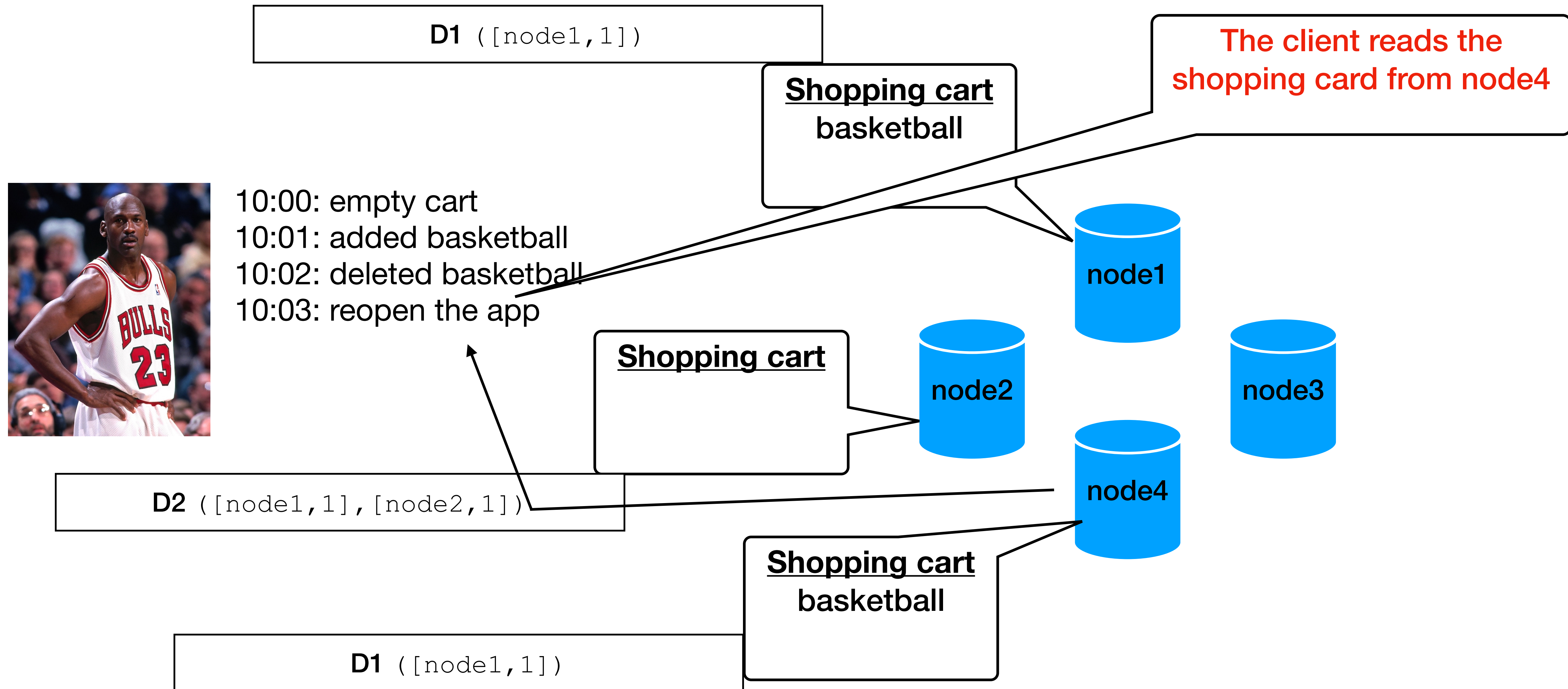
Data versioning - delete resurface



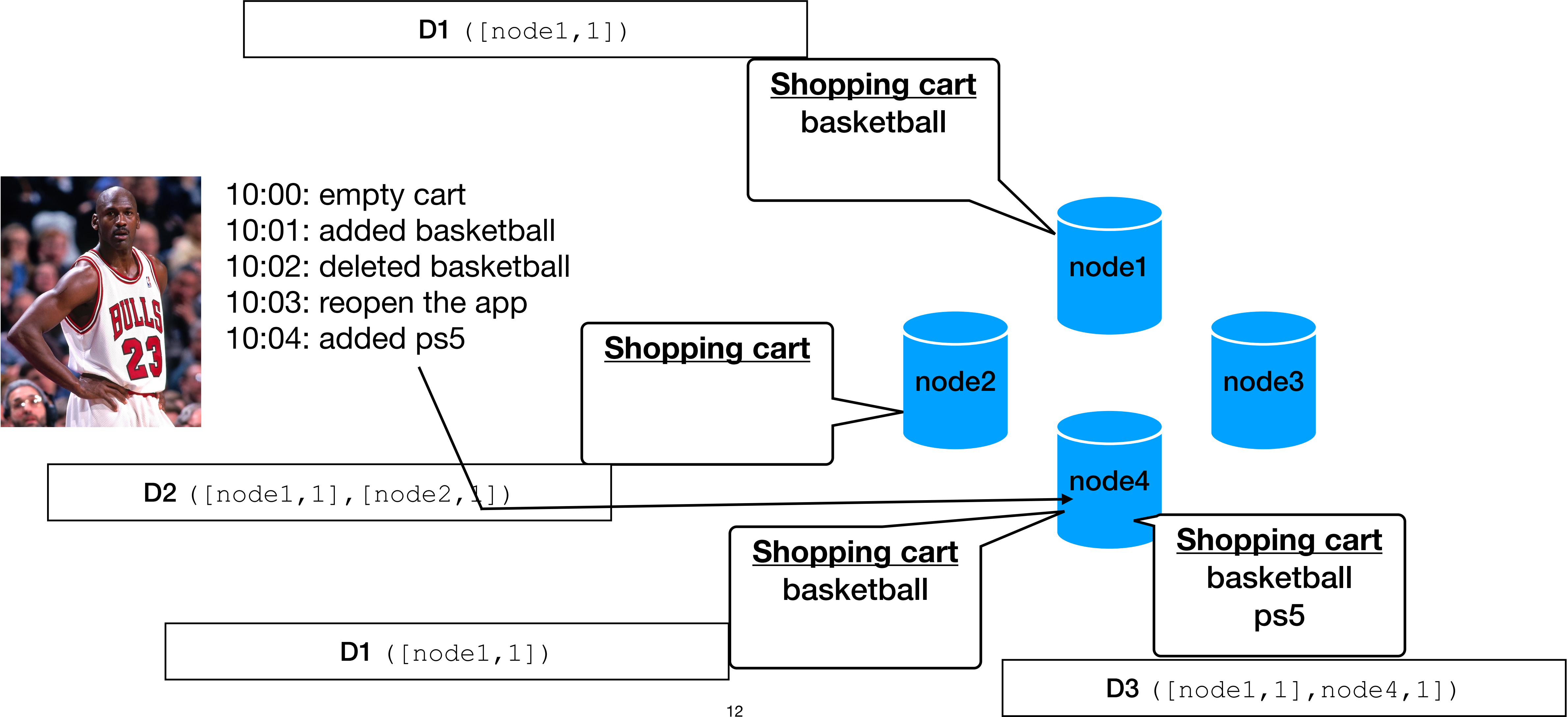
Data versioning - delete resurface



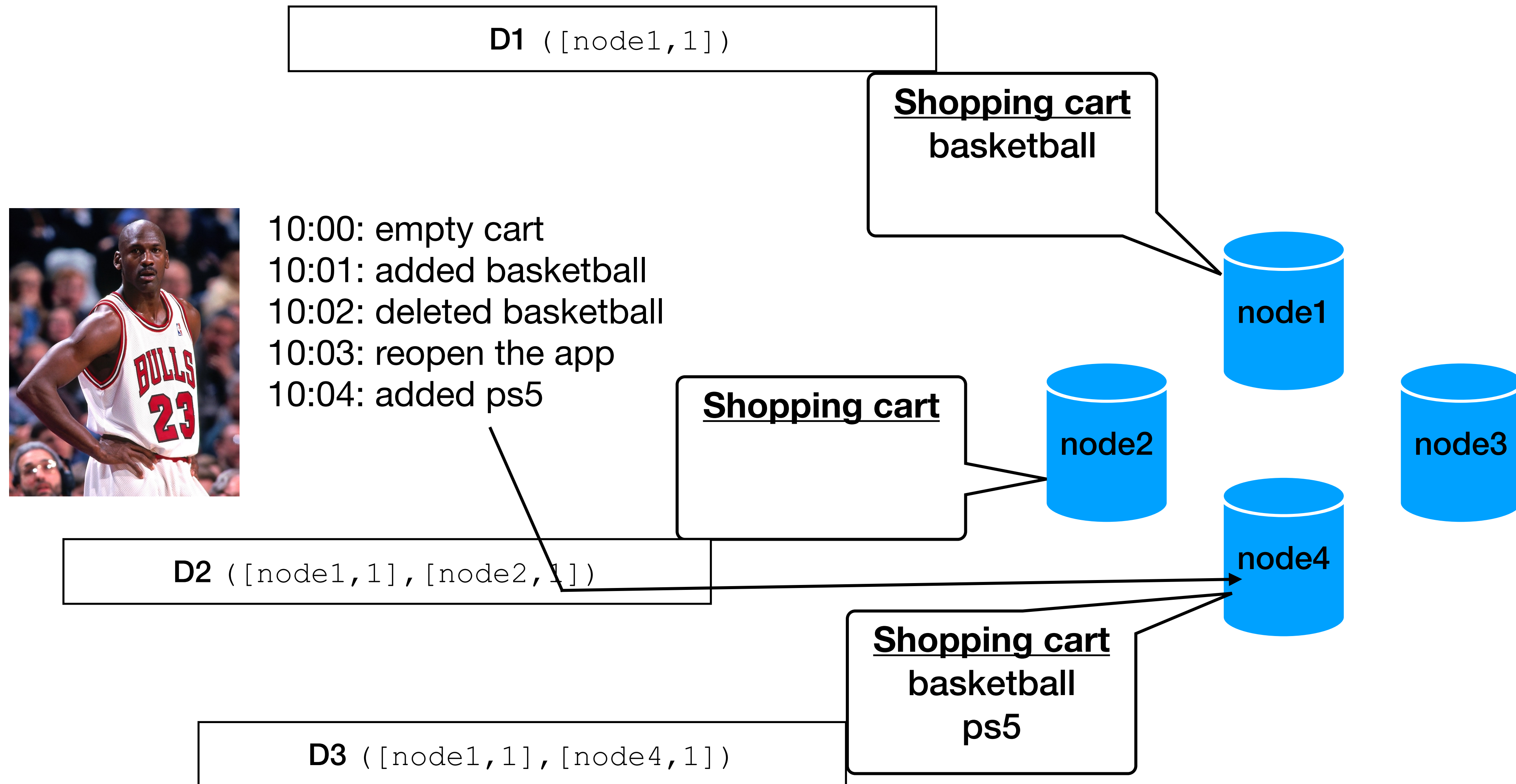
Data versioning - delete resurface



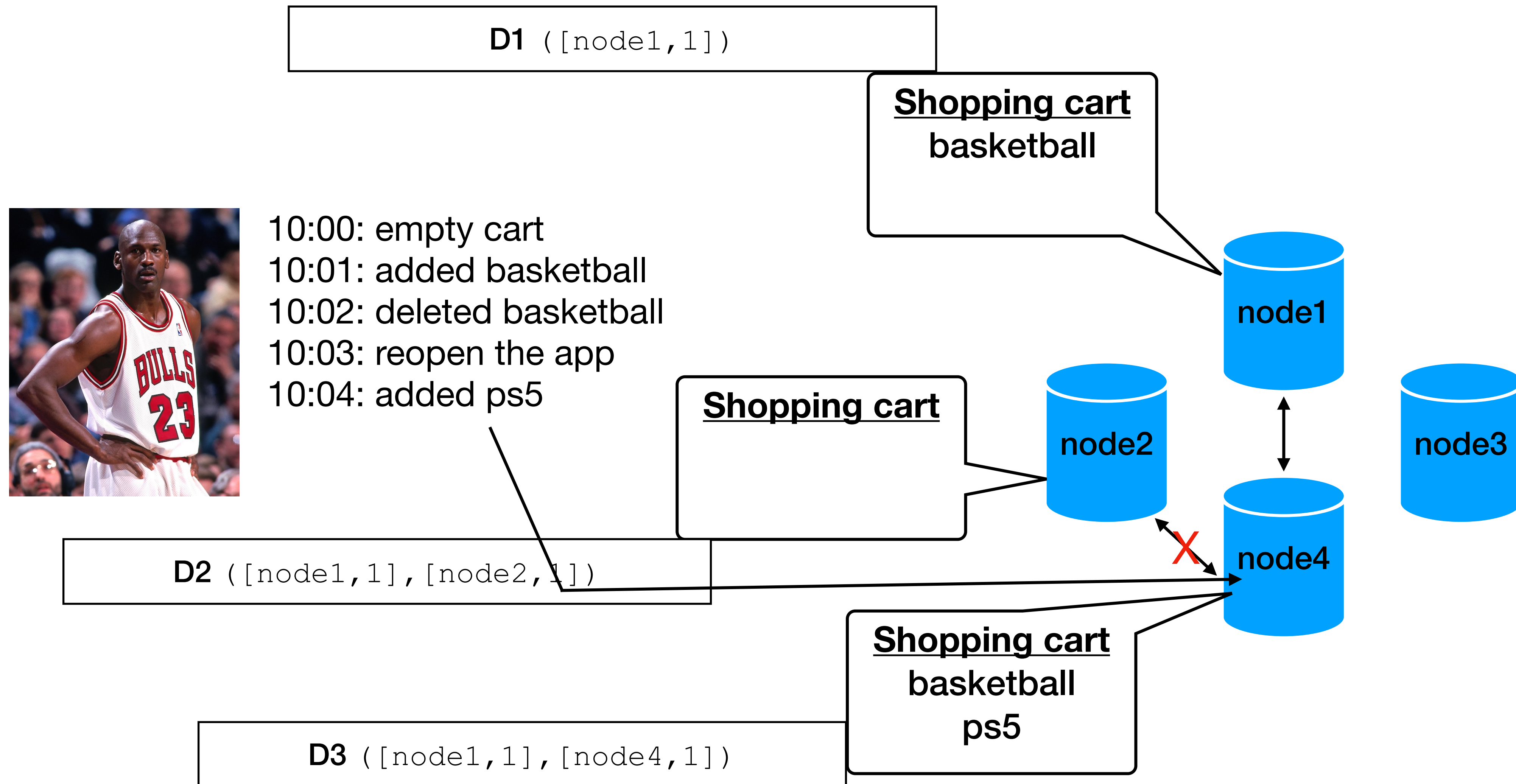
Data versioning - delete resurface



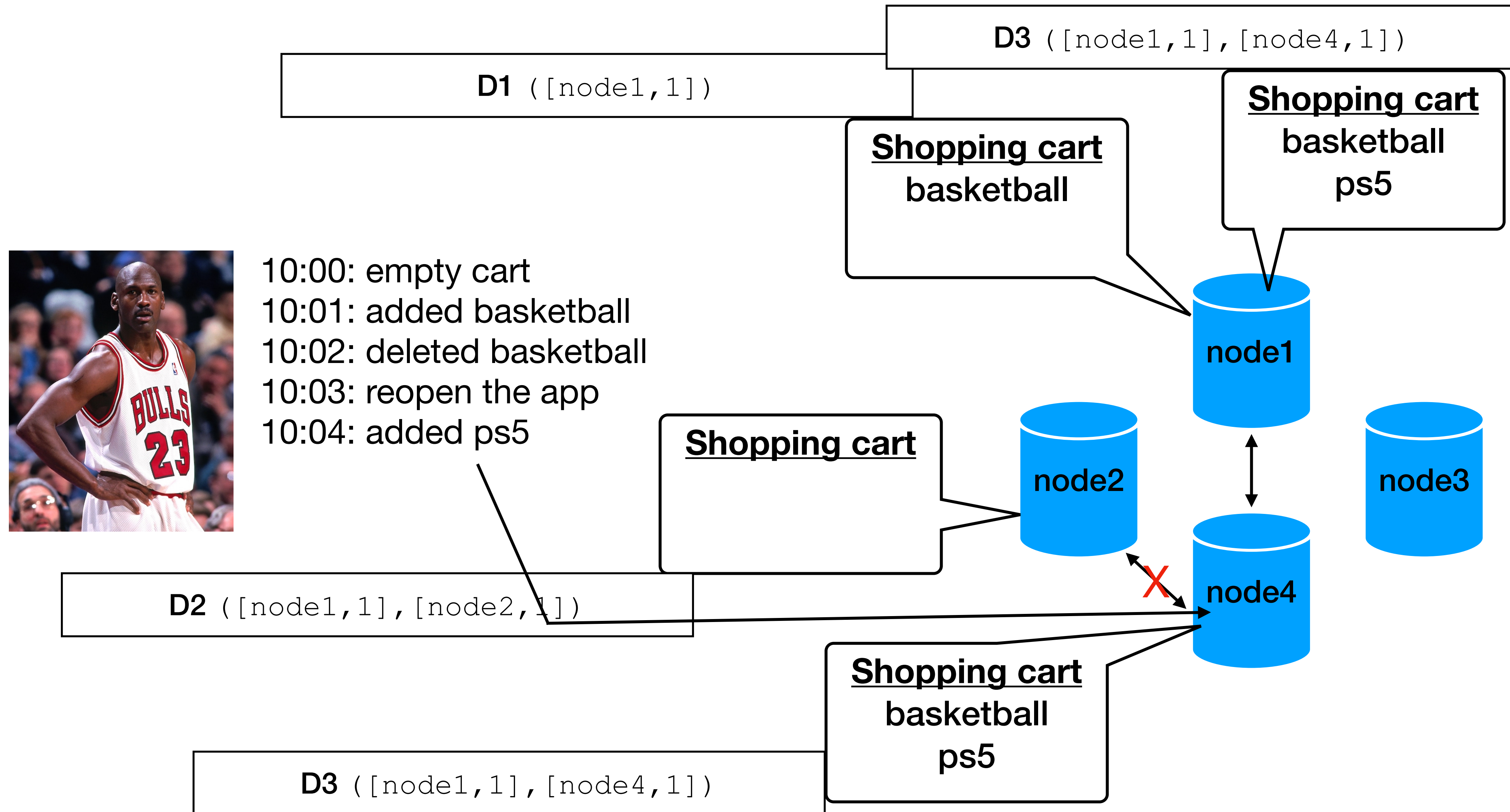
Data versioning - delete resurface



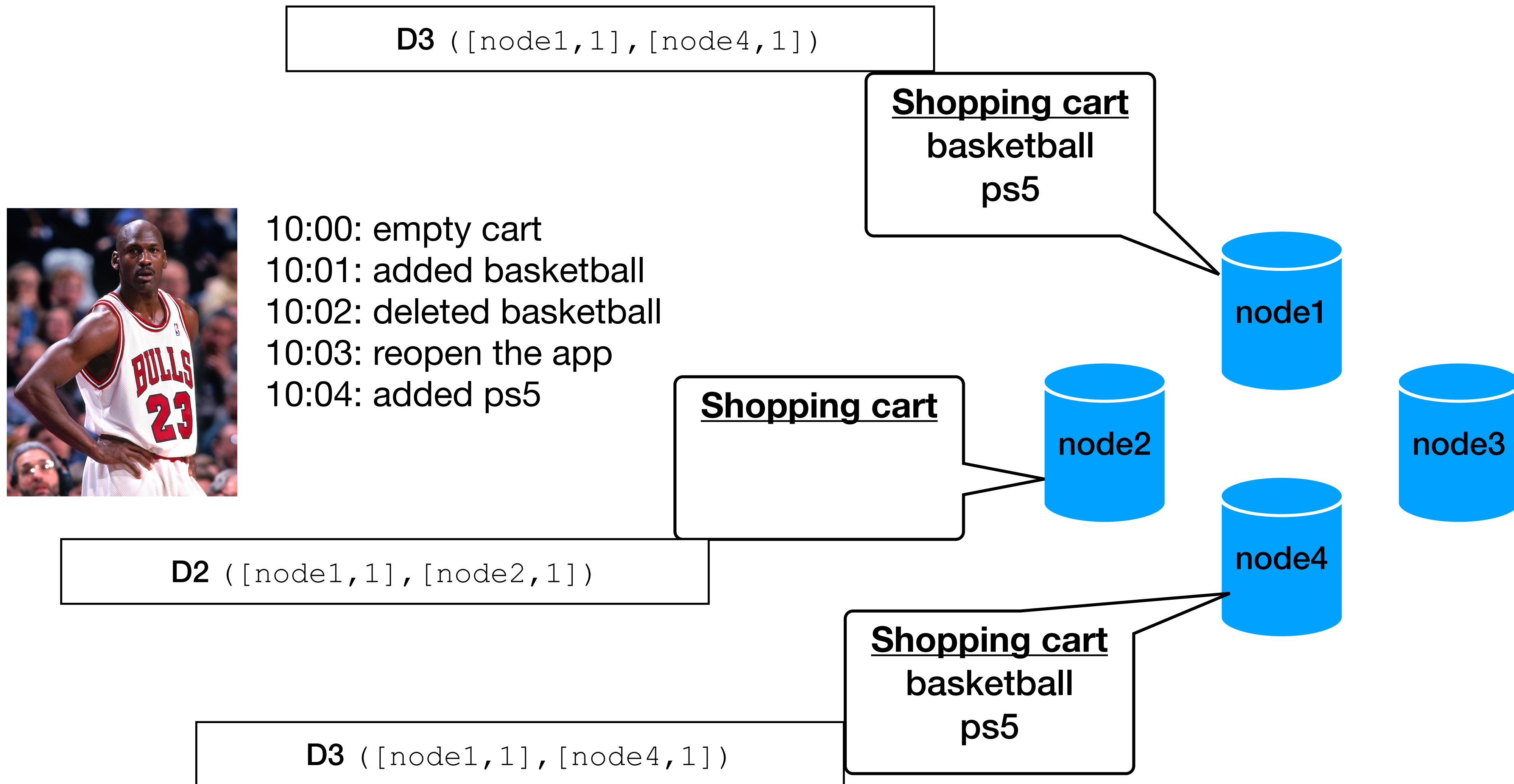
Data versioning - delete resurface



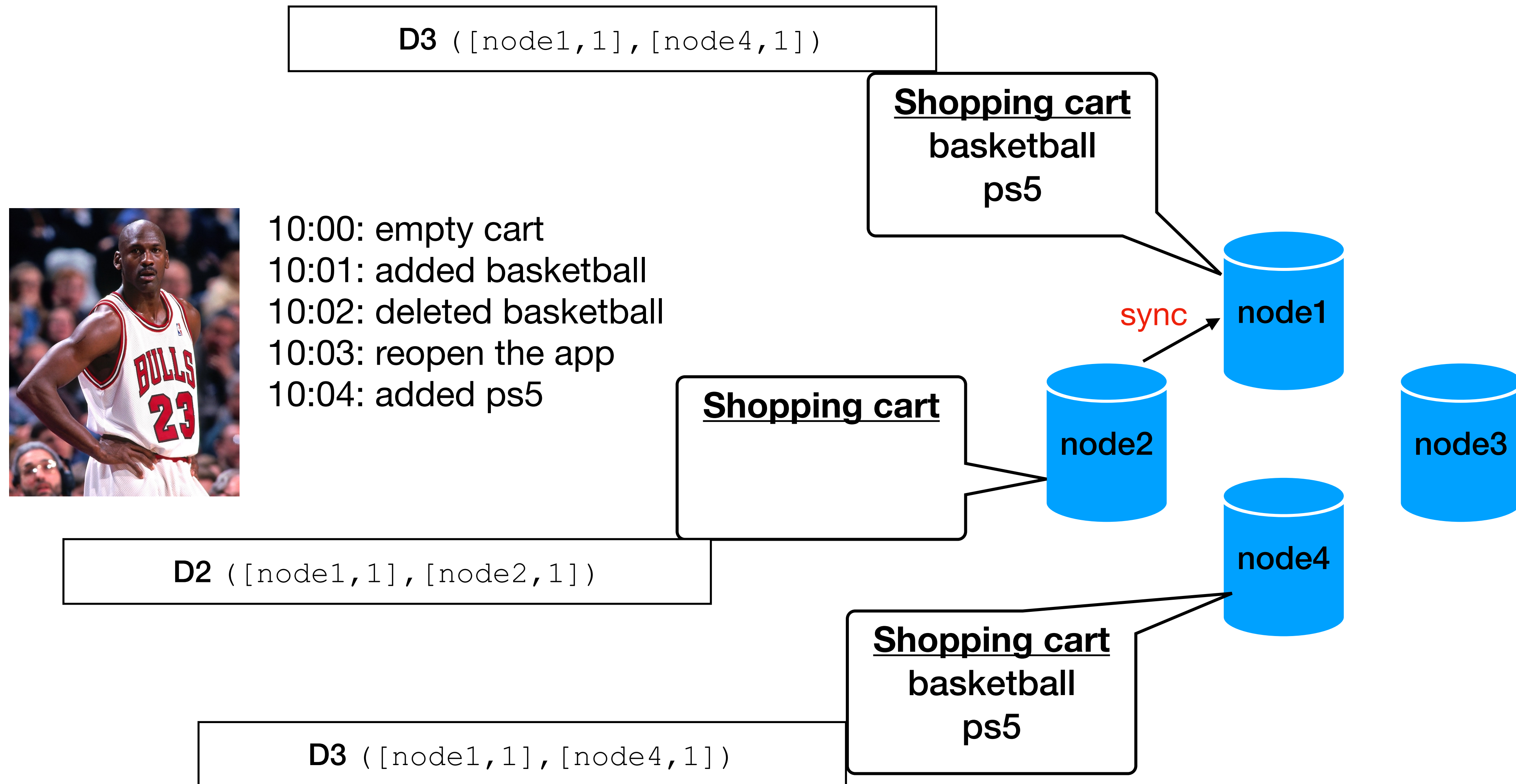
Data versioning - delete resurface



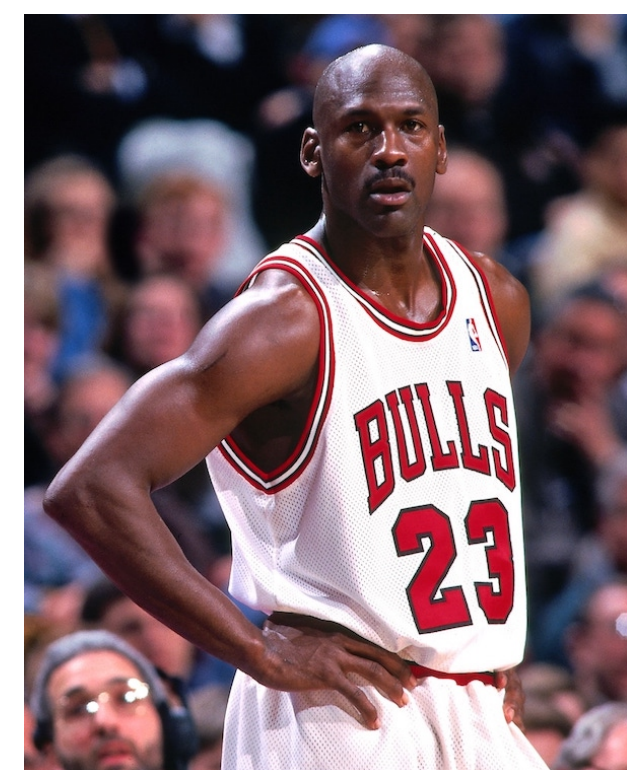
Data versioning - delete resurface



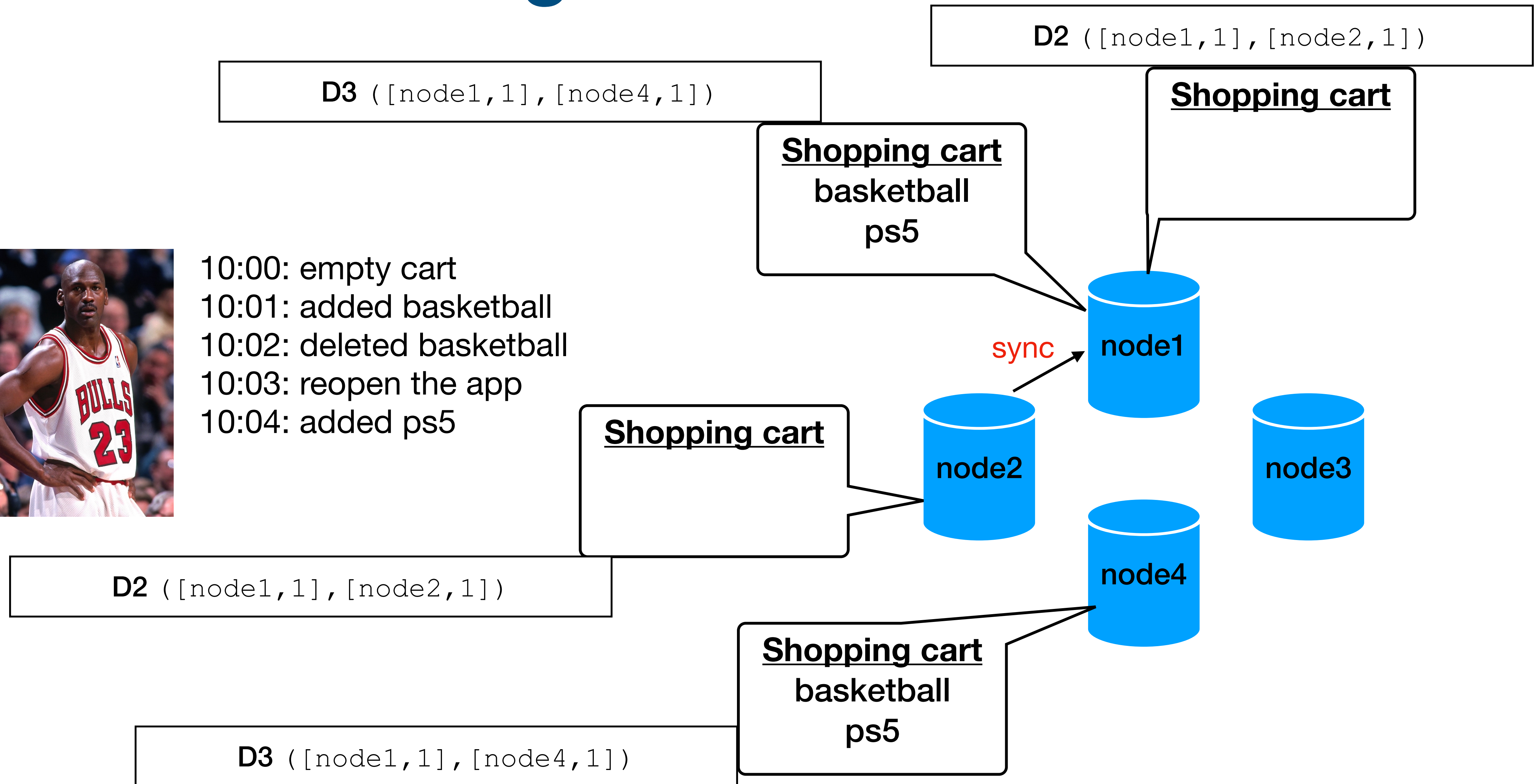
Data versioning - delete resurface



Data versioning - delete resurface



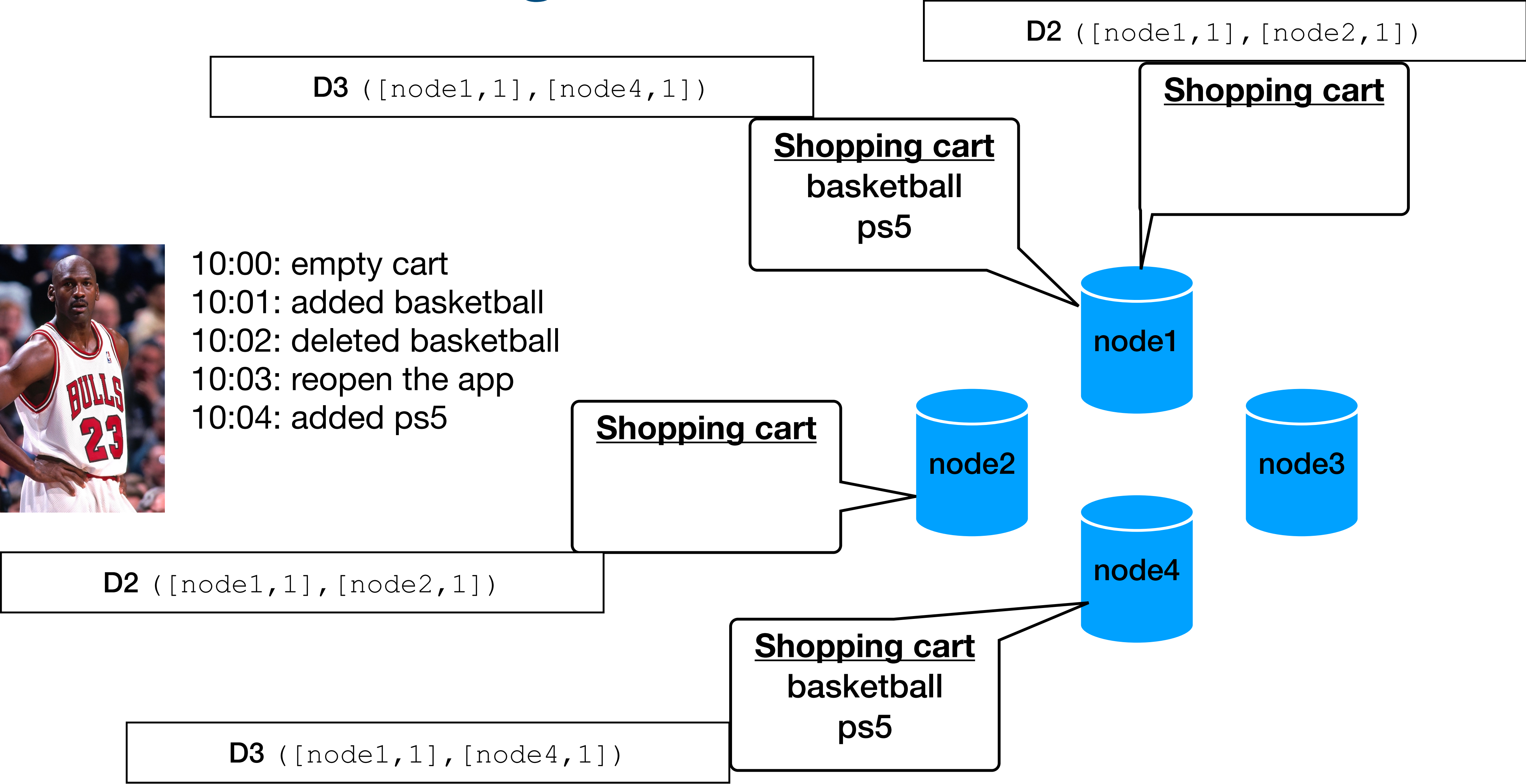
10:00: empty cart
10:01: added basketball
10:02: deleted basketball
10:03: reopen the app
10:04: added ps5



Data versioning - delete resurface



10:00: empty cart
10:01: added basketball
10:02: deleted basketball
10:03: reopen the app
10:04: added ps5



Data versioning - delete resurface



10:00: empty cart
10:01: added basketball
10:02: deleted basketball
10:03: reopen the app
10:04: added ps5
10:06: reopen the app

D3 ([node1, 1], [node4, 1])

D2 ([node1, 1], [node2, 1])

Shopping cart
basketball
ps5

Shopping cart

node1

node2

node3

Shopping cart

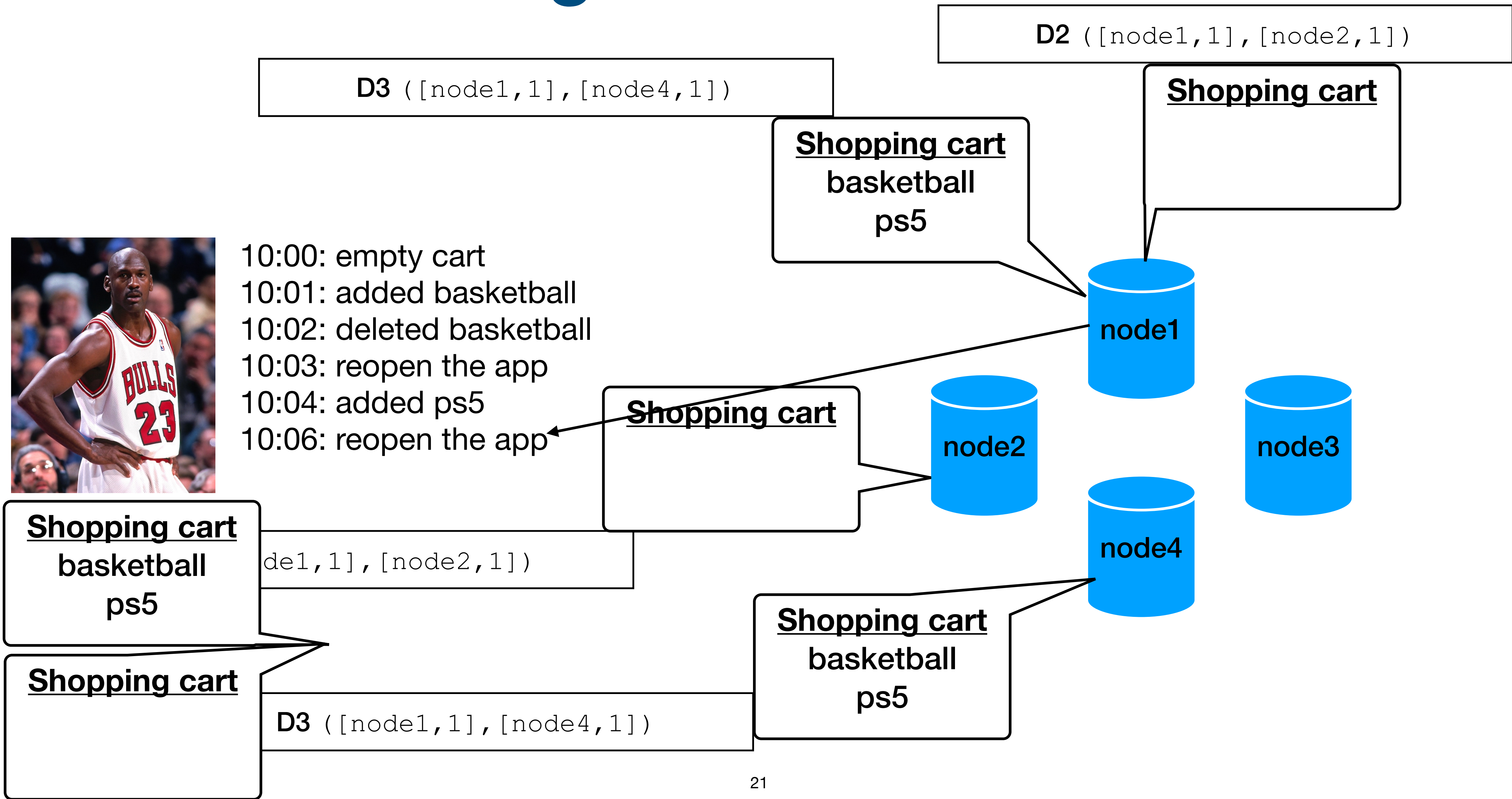
D2 ([node1, 1], [node2, 1])

D3 ([node1, 1], [node4, 1])

Shopping cart
basketball
ps5

The client reads the shopping card from node1.
2 versions are returned.
A merge will be done AFTER the next write

Data versioning - delete resurface



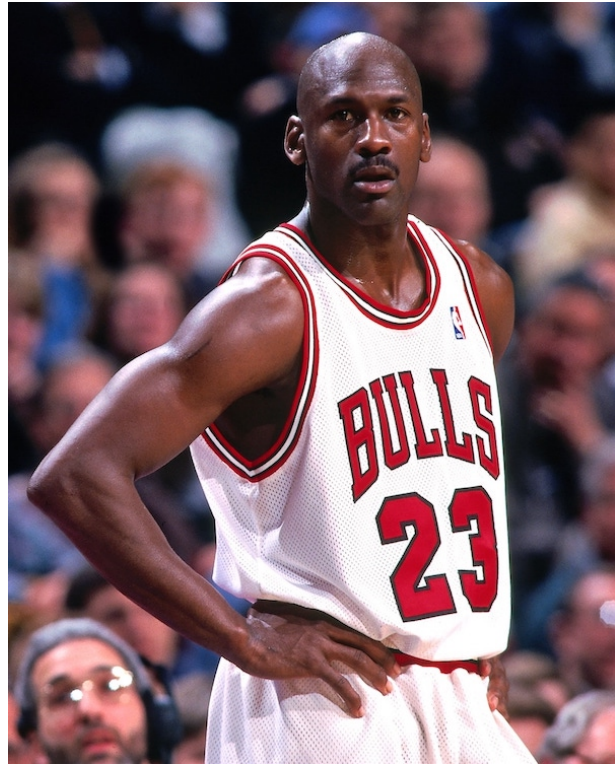
Data versioning - delete resurface

D2 ([node1, 1], [node2, 1])

D3 ([node1, 1], [node4, 1])

Shopping cart
basketball
ps5

Shopping cart



10:00: empty cart
10:01: added basketball
10:02: deleted basketball
10:03: reopen the app
10:04: added ps5
10:06: reopen the app

Shopping cart

node2

node1

node3

node4

Shopping cart
basketball
ps5

Shopping cart
basketball
ps5

Shopping cart
basketball
ps5

Shopping cart

D3 ([node1, 1], [node4, 1])

Merge by the client

Data versioning - delete resurface

D2 ([node1, 1], [node2, 1])

D3 ([node1, 1], [node4, 1])

Shopping cart

Shopping cart
basketball
ps5

node1

node3

node2

node4

Shopping cart

Shopping cart
basketball
ps5

Shopping cart
basketball
ps5

D3 ([node1, 1], [node4, 1])



10:00: empty cart
10:01: added basketball
10:02: deleted basketball
10:03: reopen the app
10:04: added ps5
10:06: reopen the app
10:07: added shoes

Shopping cart
basketball
ps5

Shopping cart

Data versioning - delete resurface

D2 ([node1, 1], [node2, 1])

D3 ([node1, 1], [node4, 1])

Shopping cart

Shopping cart
basketball
ps5

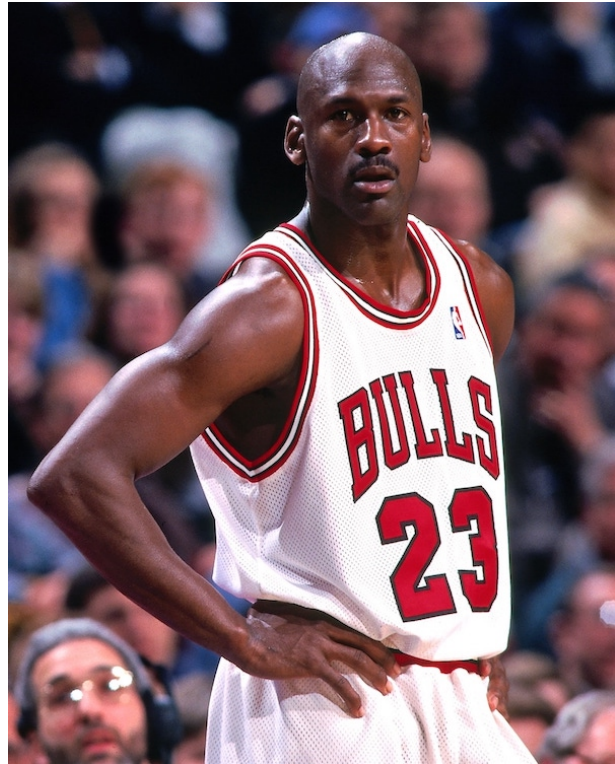
node1

node3

node2

node4

Shopping cart



10:00: empty cart
10:01: added basketball
10:02: deleted basketball
10:03: reopen the app
10:04: added ps5
10:06: reopen the app
10:07: added shoes

Shopping cart
basketball
ps5

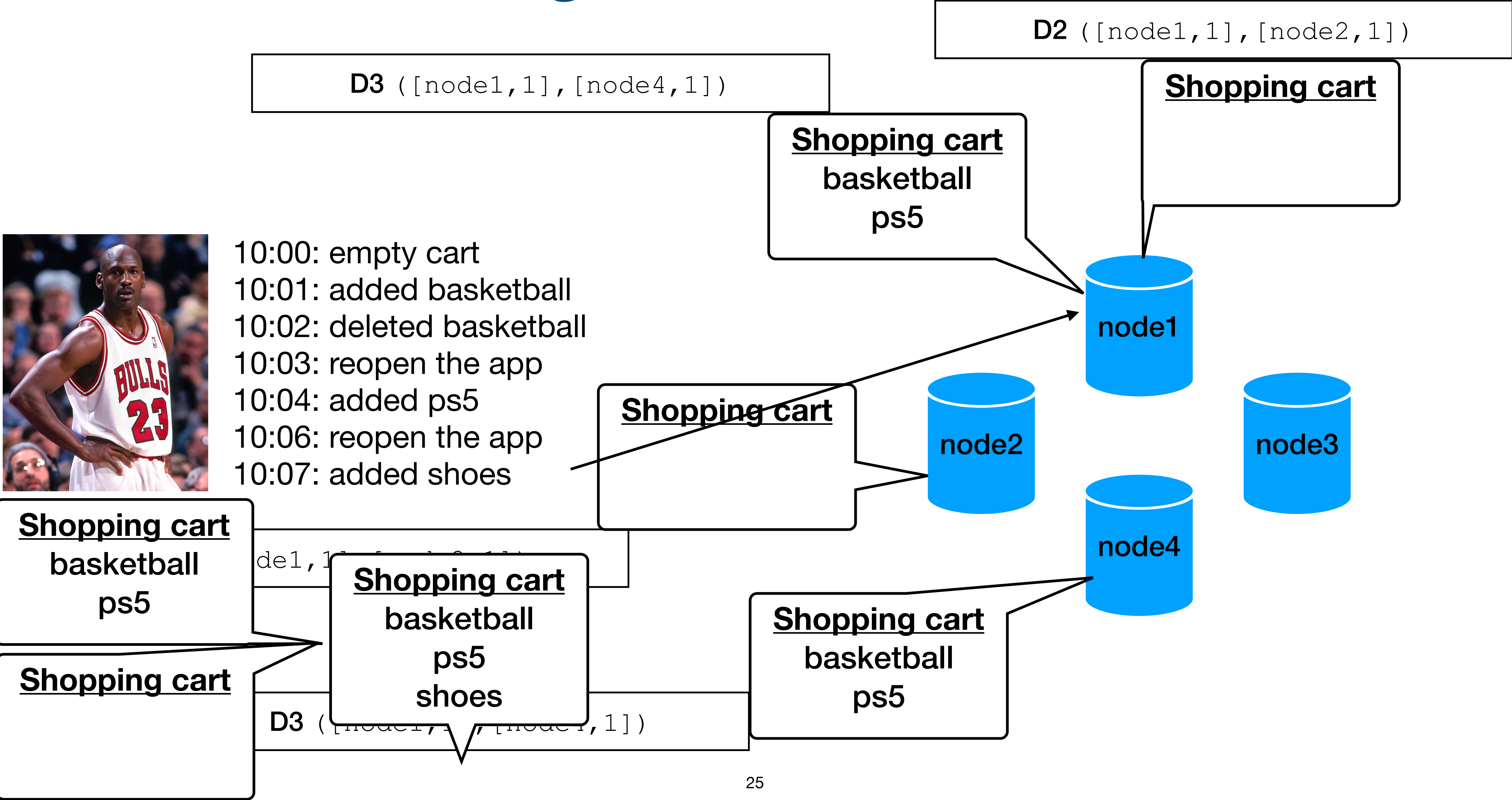
Shopping cart
basketball
ps5
shoes

D3 ([node1, 1], [node4, 1])

Shopping cart
basketball
ps5

Shopping cart

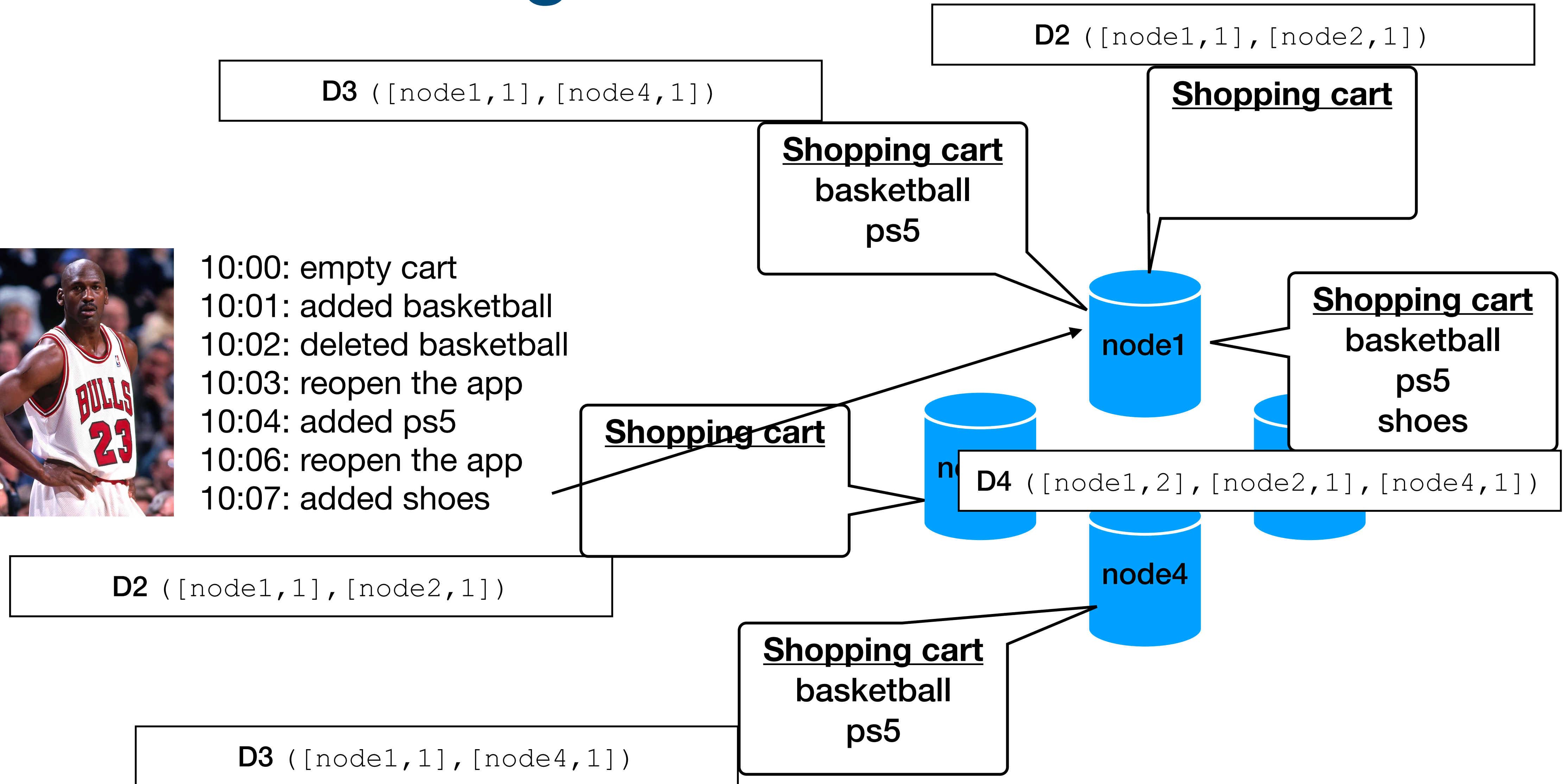
Data versioning - delete resurface



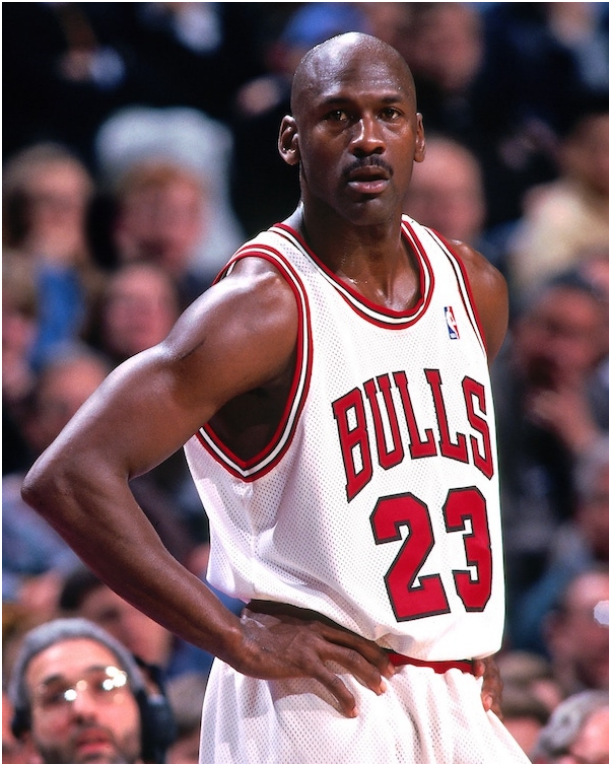
Data versioning - delete resurface



10:00: empty cart
10:01: added basketball
10:02: deleted basketball
10:03: reopen the app
10:04: added ps5
10:06: reopen the app
10:07: added shoes



Data versioning - delete resurface



10:00: empty cart
10:01: added basketball
10:02: deleted basketball
10:03: reopen the app
10:04: added ps5
10:06: reopen the app
10:07: added shoes

D4 ([node1, 2], [node2, 1], [node4, 1])

Shopping cart
basketball
ps5
shoes

node1

Shopping cart

node2

node3

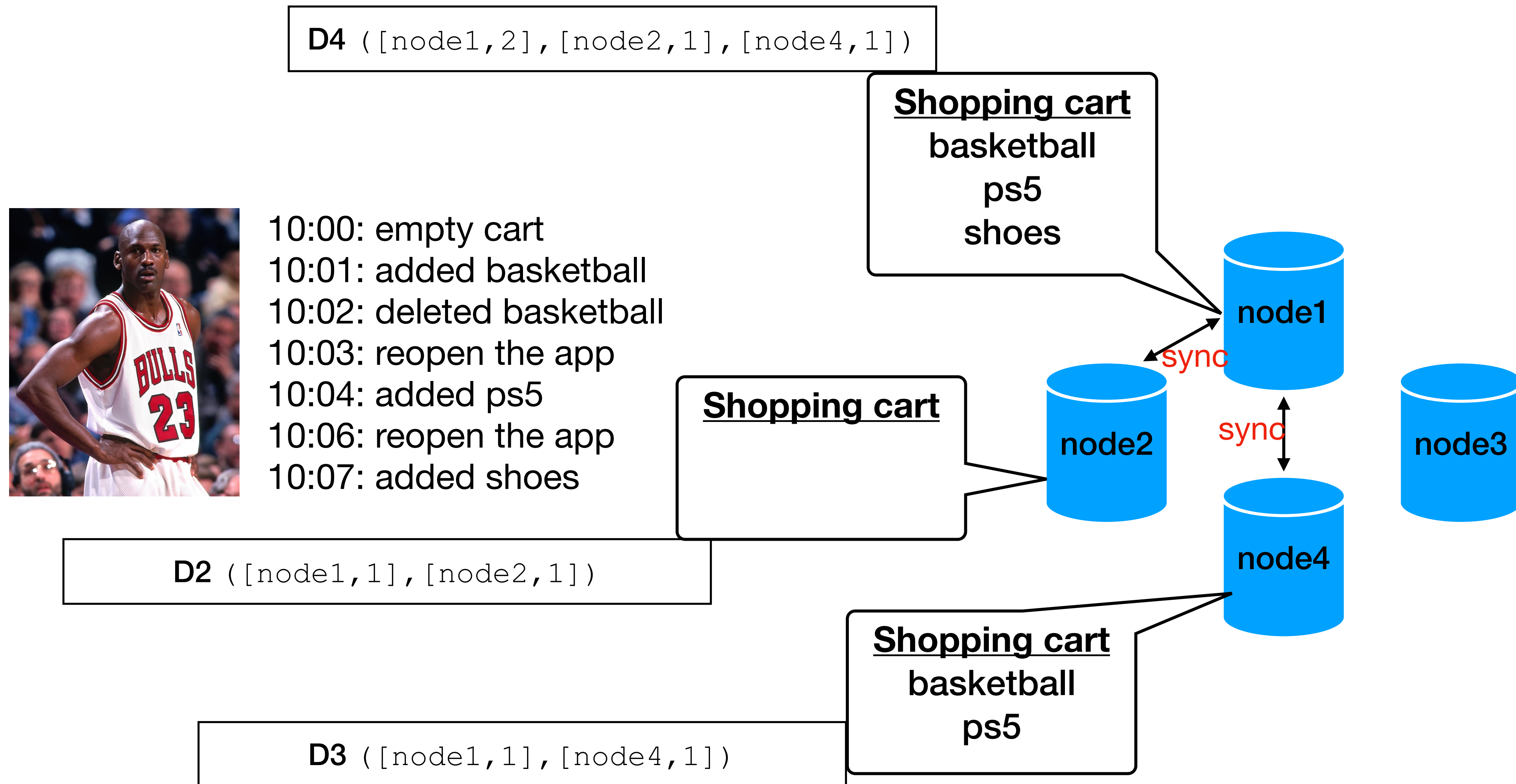
node4

D2 ([node1, 1], [node2, 1])

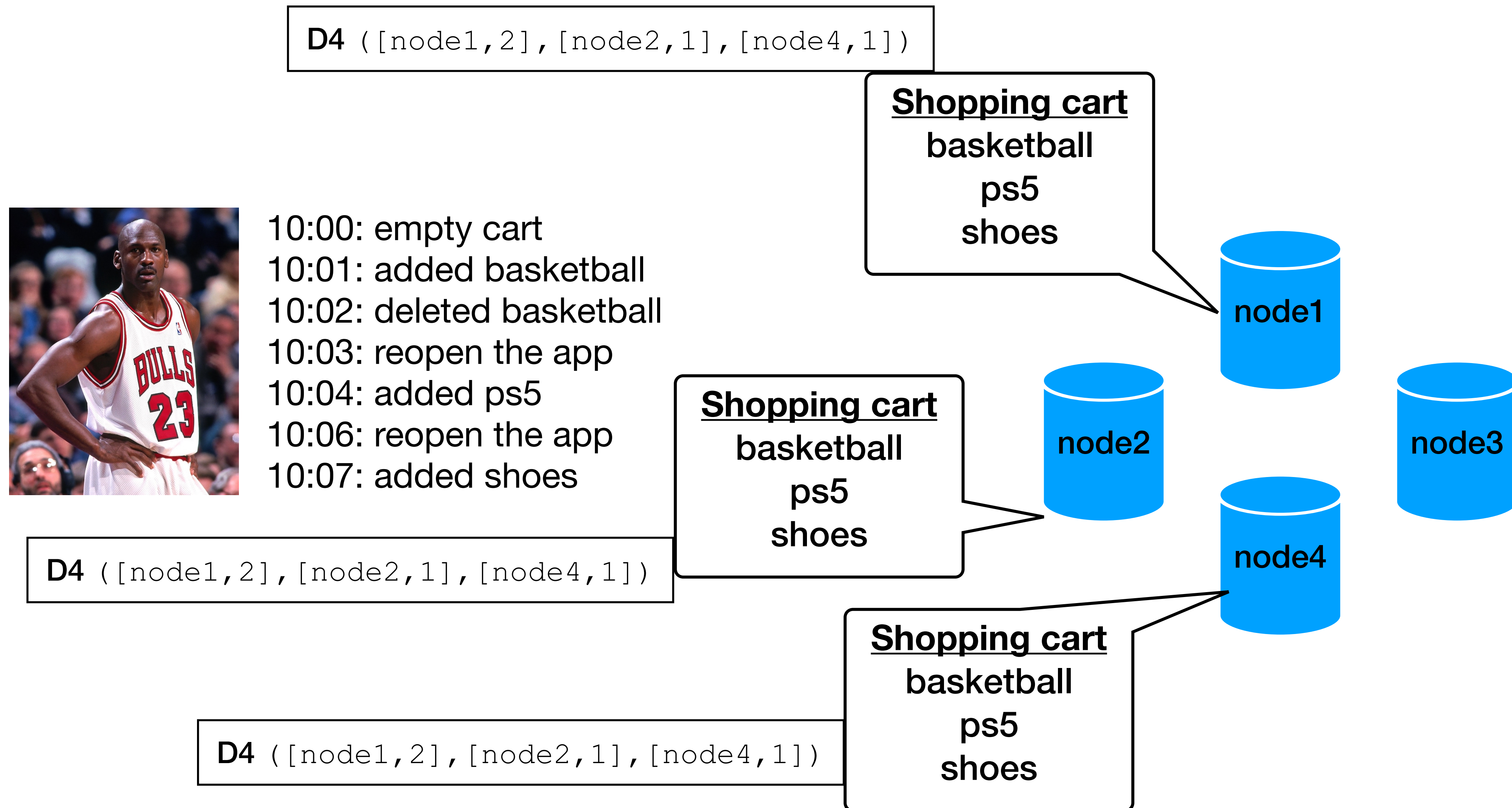
Shopping cart
basketball
ps5

D3 ([node1, 1], [node4, 1])

Data versioning - delete resurface



Data versioning - delete resurface



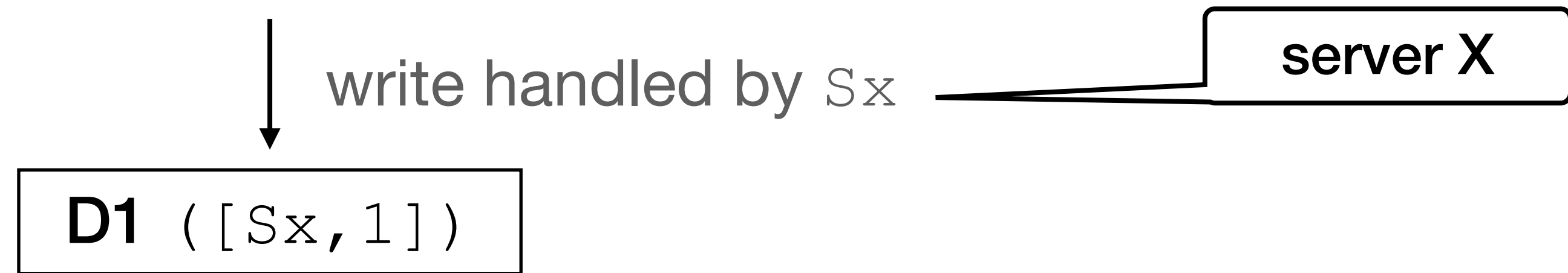
Dynamo - Extra

- Deleted item resurface example
- **Data versioning - example (paper)**

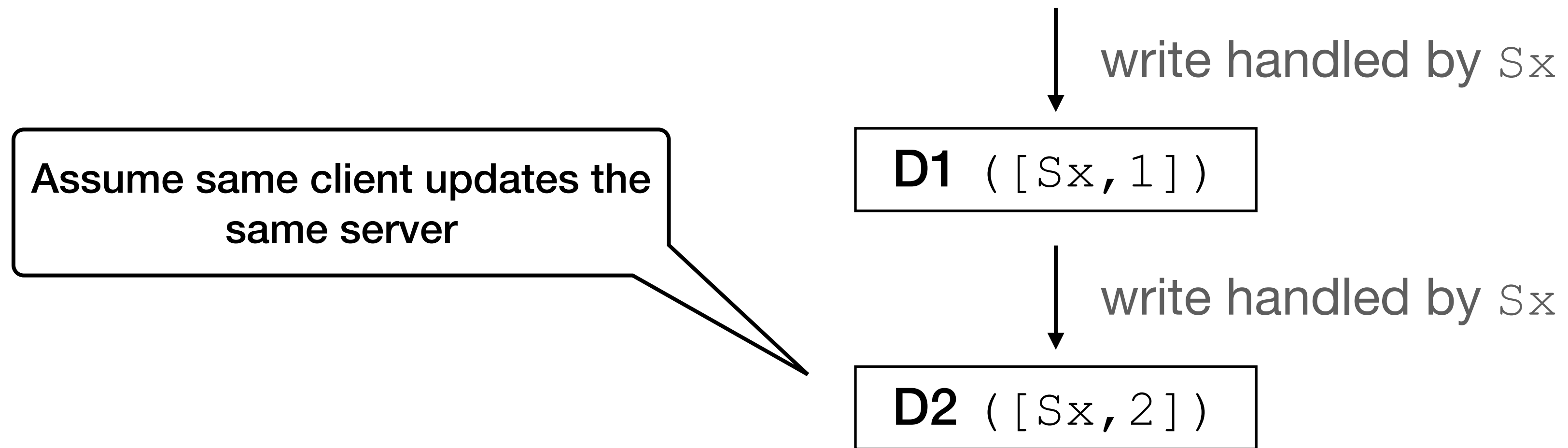
Data versioning - example (paper)

- If you want another example, on the next slides is the one from the original Dynamo paper

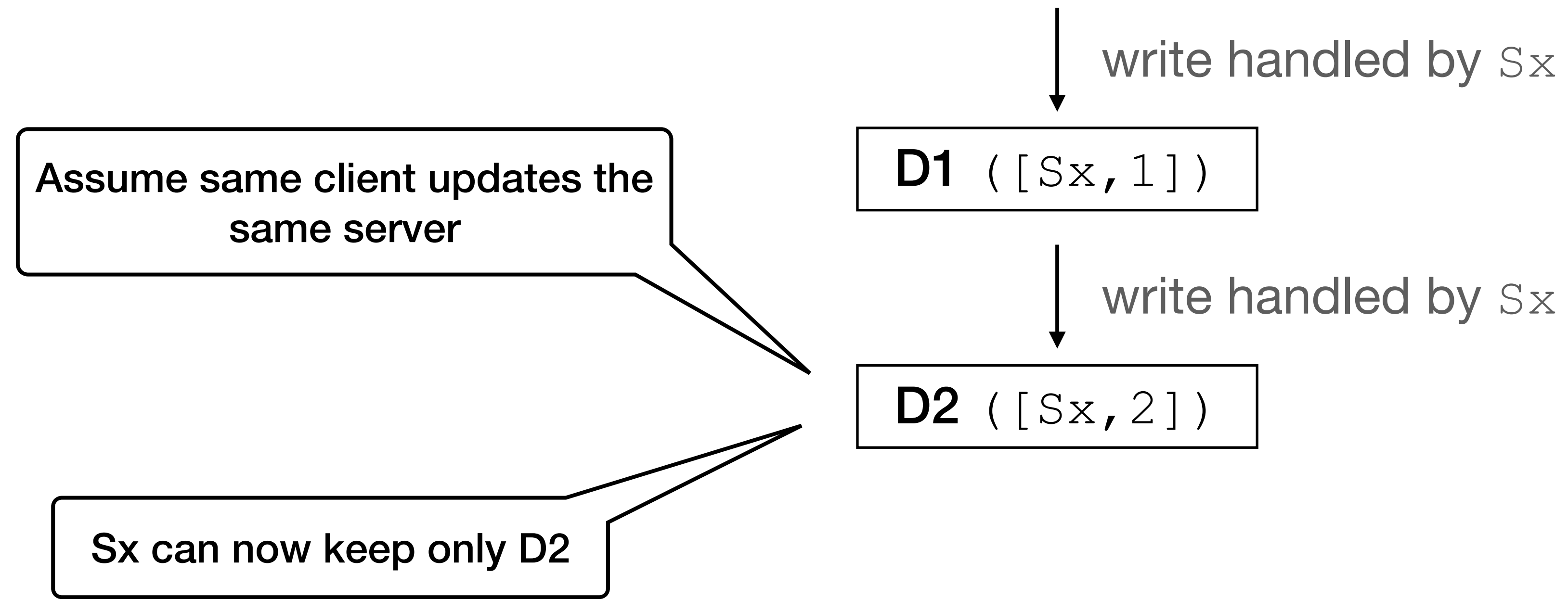
Data versioning - example (paper)



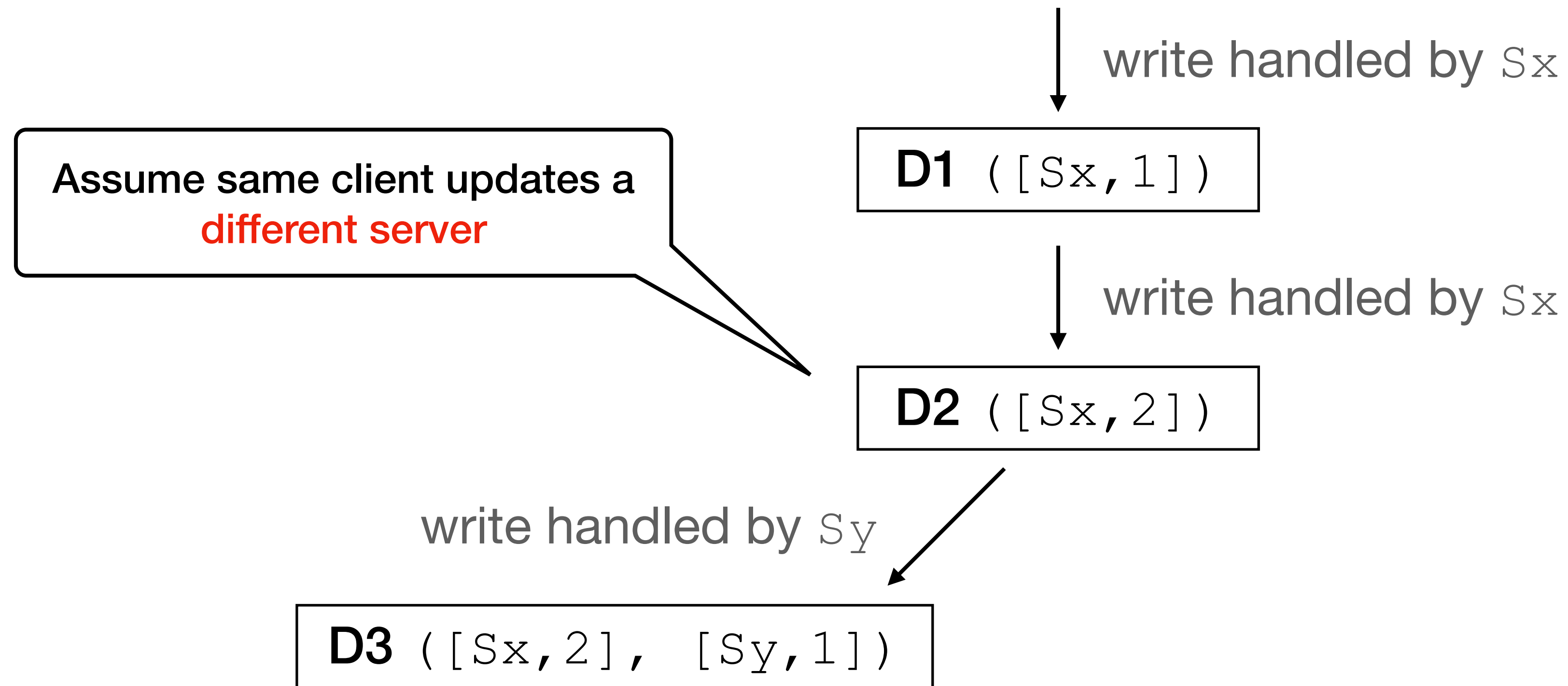
Data versioning - example (paper)



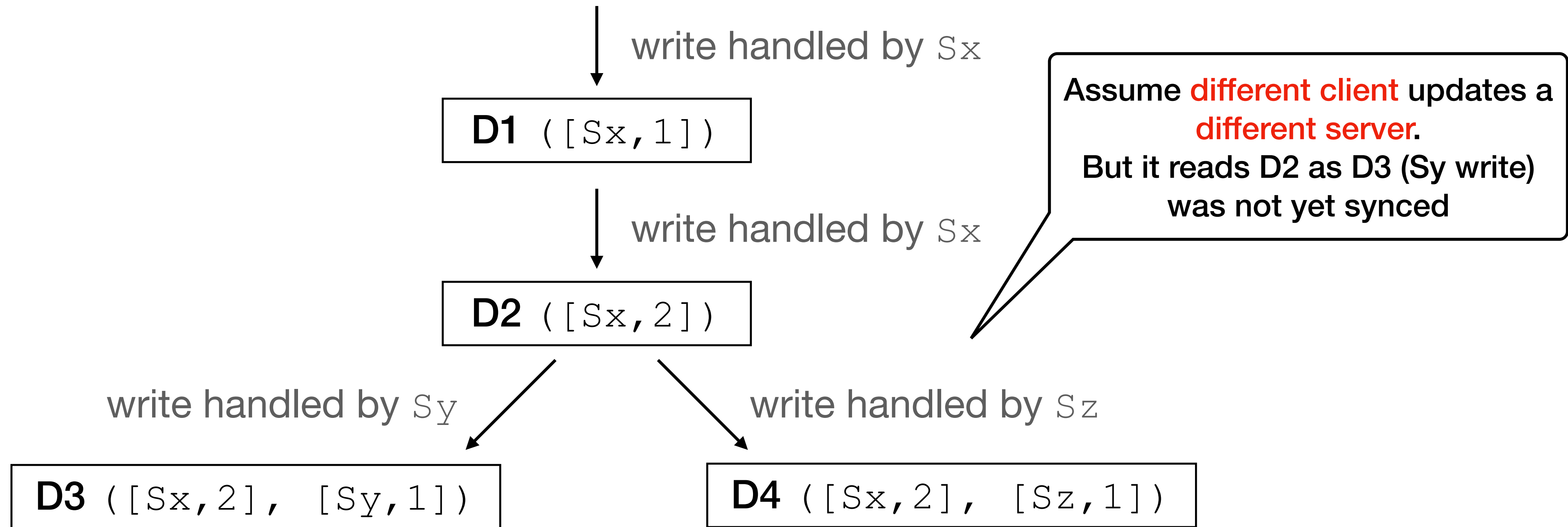
Data versioning - example (paper)



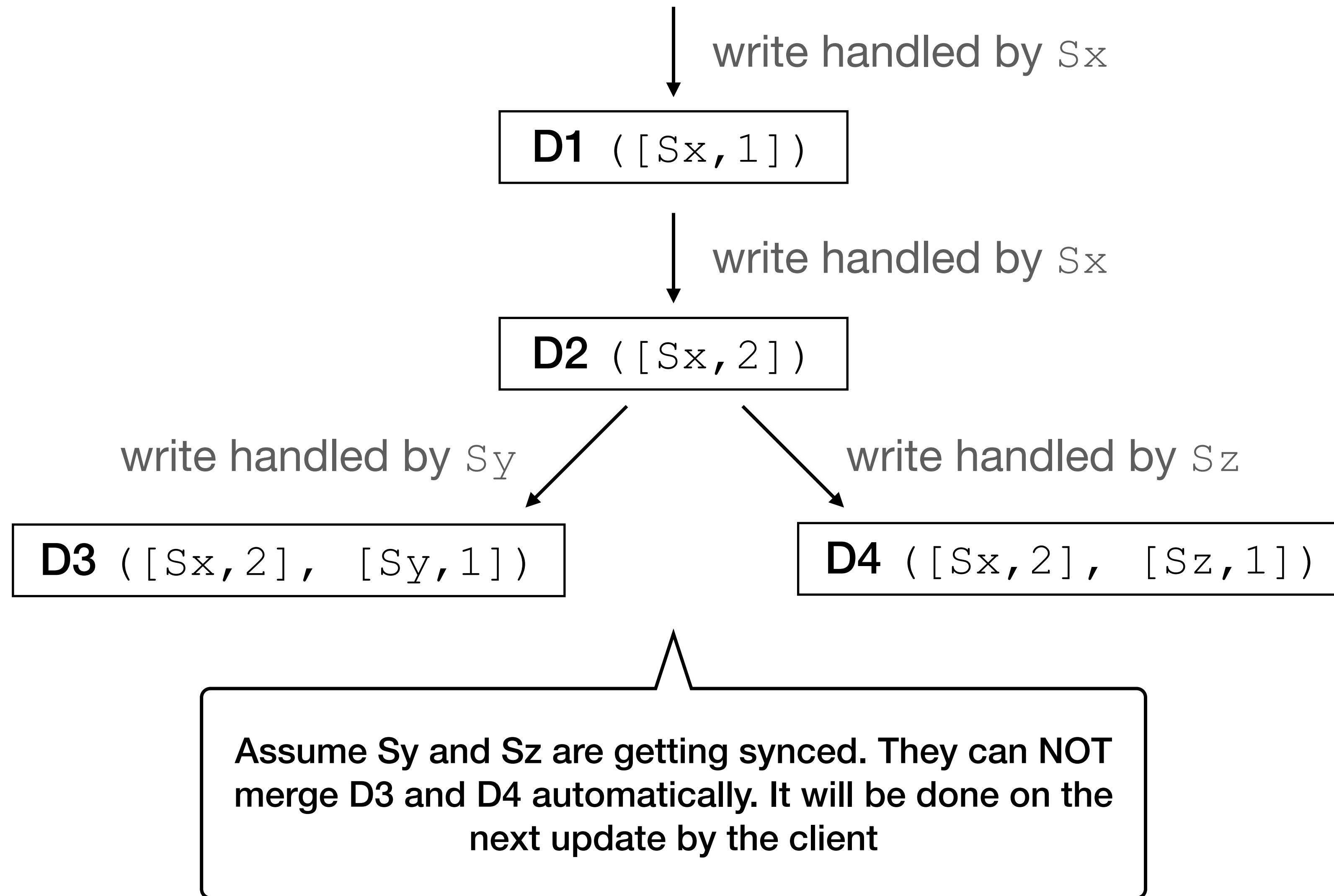
Data versioning - example (paper)



Data versioning - example (paper)



Data versioning - example (paper)



Data versioning - example (paper)

