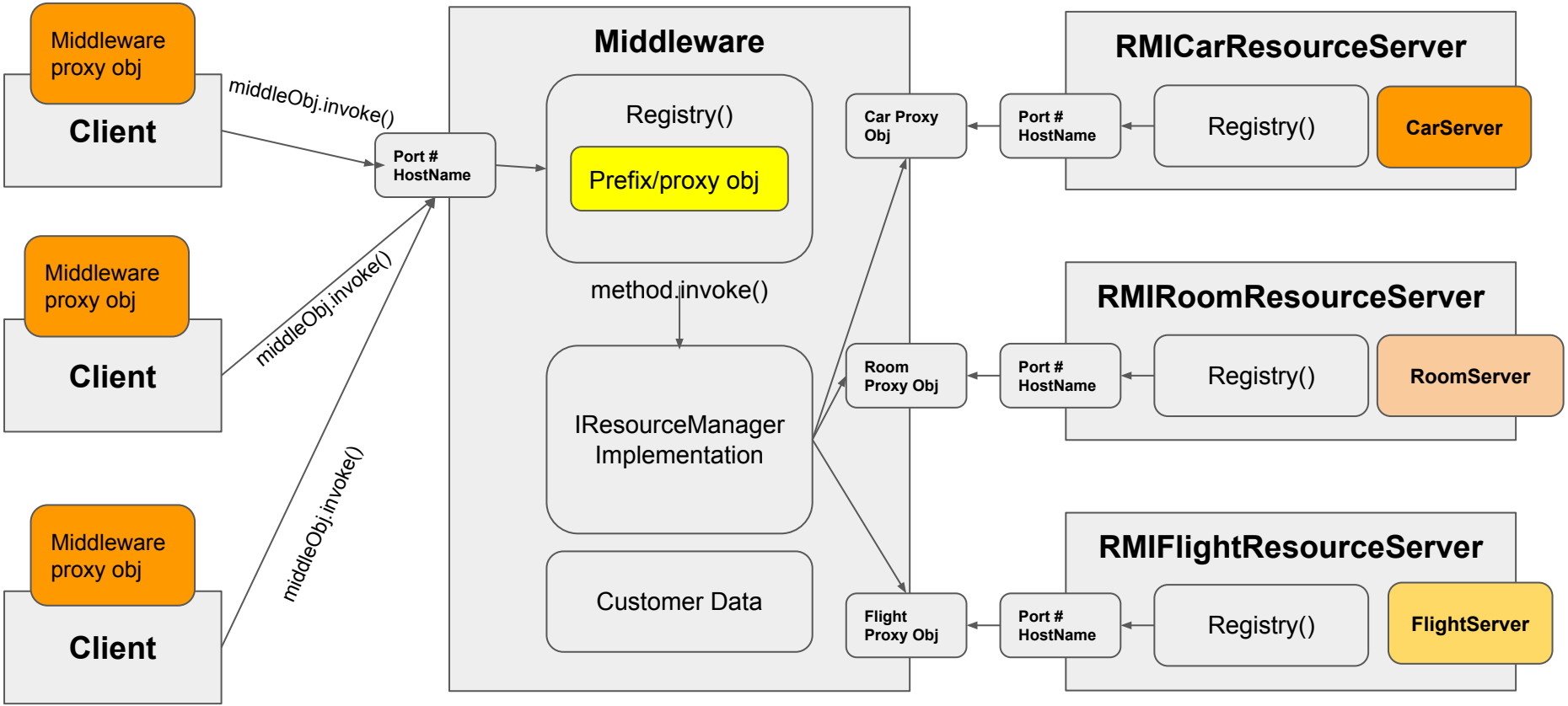
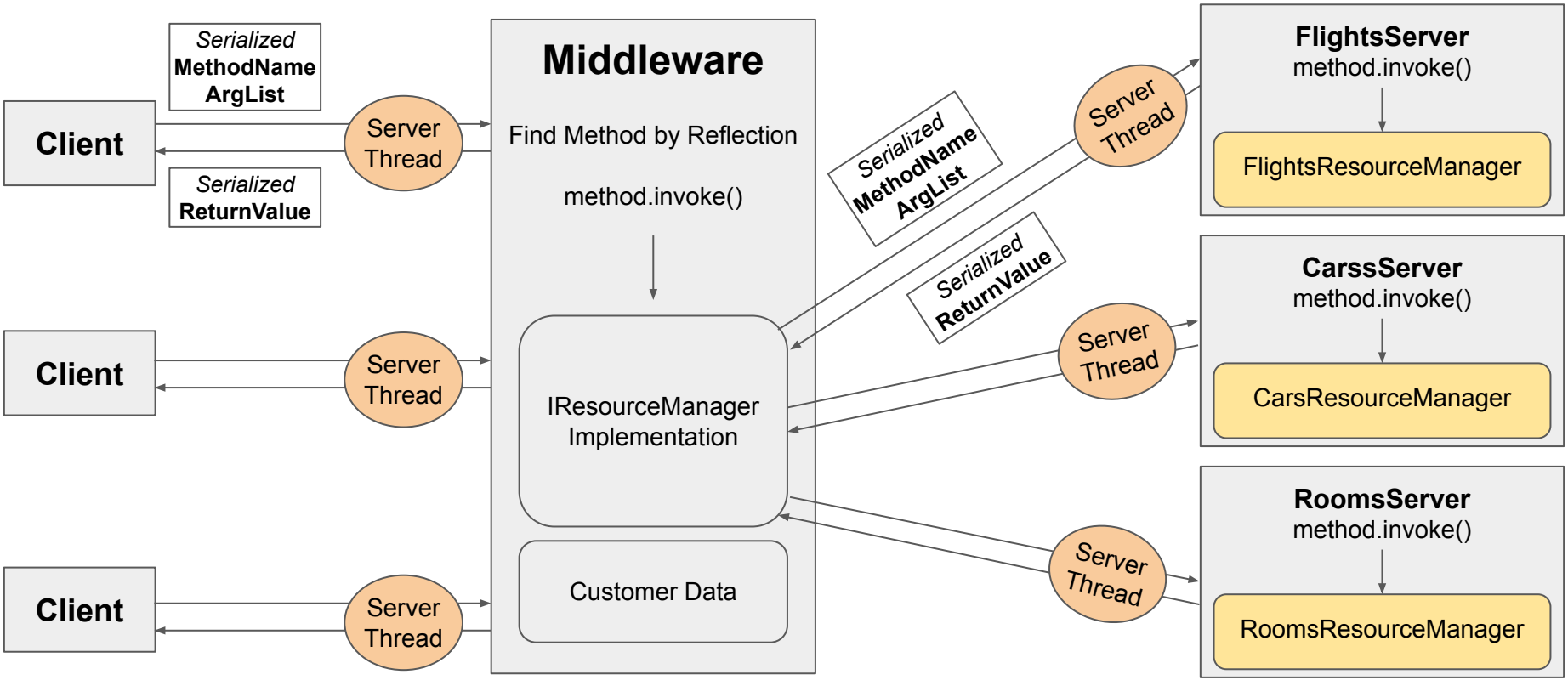
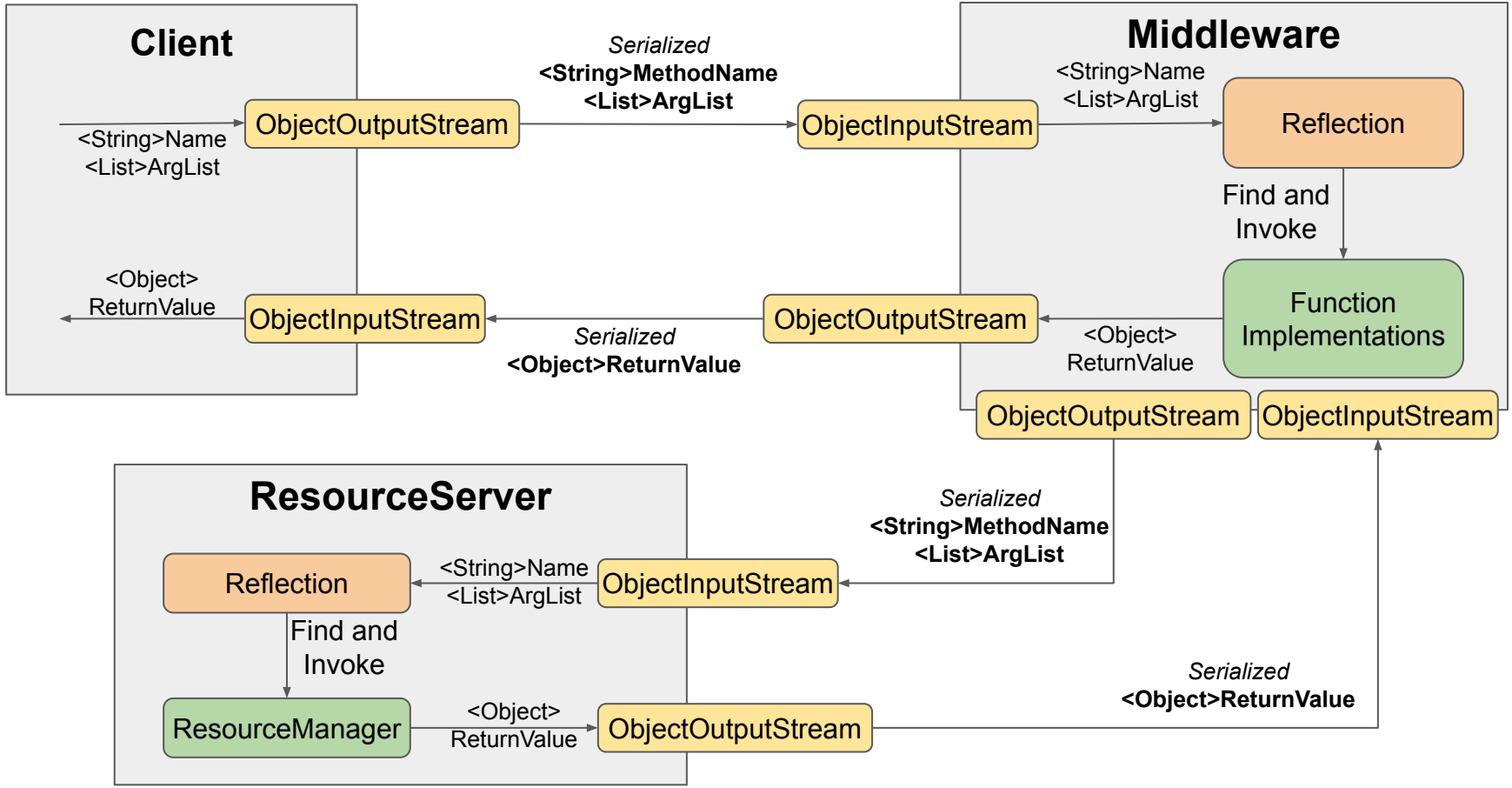
RMI


Middleware proxy obj
Client
middleObj.invoke()
Middleware proxy obj
Client
middleObj.invoke()
Middleware proxy obj
Client
middleObj.invoke()
Port # HostName
Middleware
Registry()
Prefix/proxy obj
method.invoke()
IResourceManager Implementation
Customer Data
Car Proxy Obj
Room Proxy Obj
Flight Proxy Obj
Port # HostName
Port # HostName
Port # HostName
RMICarResourceServer
Registry()
CarServer
RMIRoomResourceServer
Registry()
RoomServer
RMIFlightResourceServer
Registry()
FlightServer

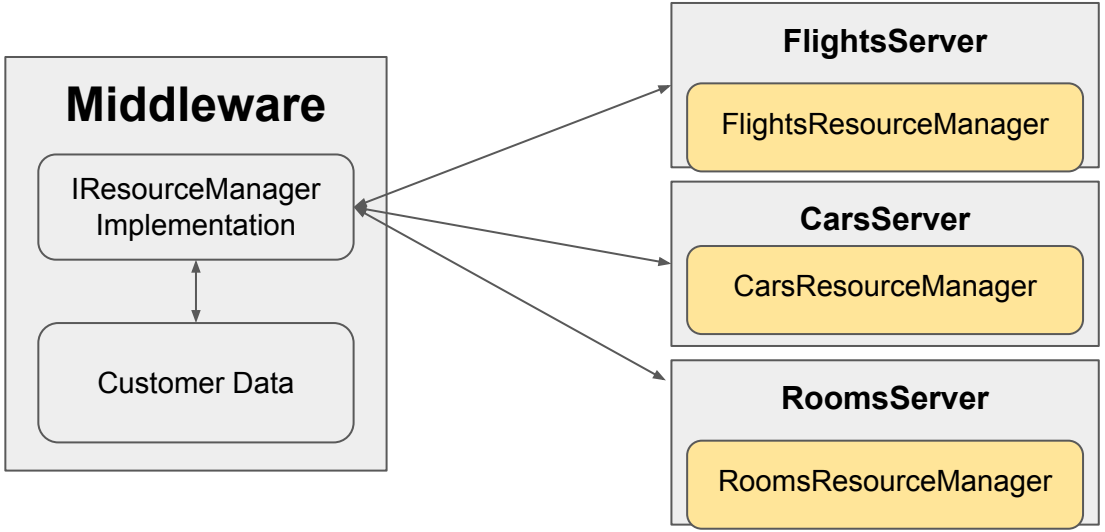
TCP


Client
Client
Client
Serialized
MethodName
ArgList
Serialized
ReturnValue
Server
Thread
Server
Thread
Server
Thread
Middleware
Find Method by Reflection
method.invoke()
IResourceManager
Implementation
Customer Data
Serialized
MethodName
ArgList
Serialized
ReturnValue
Server
Thread
Server
Thread
Server
Thread
FlightsServer
method.invoke()
FlightsResourceManager
CarssServer
method.invoke()
CarsResourceManager
RoomsServer
method.invoke()
RoomsResourceManager

Java Reflection and Serialization



Customer



Synchronization

Set methods synchronized to avoid data races.

Bundle

flightsRM.reserveFlights() + carsRM.reserveCar() + roomsRM.reserveRoom()

Extra Functionality

1. QueryReservableItems
2. QueryFlightReservers / QueryCarsReservers / QueryRoomsReservers