CLIENT (player)

SERVER (Zone ext.)

SERVER (Room ext.)

1. On Extension initialization, instantiates the core Game class

2. Starts simulation (scheduled task)

3. On Extension initialization, loads and parses starships def. xml

4. Connects to server

5. Sends login request

6. In custom login sends starships details back to client

7. Shows starship selection view

8. Saves selected ship type in User Vars

9. Shows solar system (MMORoom) selection view

10. Sends join request for selected MMORoom

11. Receives MMORoom join event

12. Sets up the game view and starts simulation

13. Receives MMORoom join internal event

14. Creates starship object based on selected type

Ship type retrieved from User Vars

15. Sets starship initial position randomly

16. Saves initial position (x,y) and velocity (vx,vy) in User Vars **WITH** client update

As user didn't set his position in Proximity Manager yet, no one else will receive the update event

LAG

17. Receives User Vars update event

18. Creates starship

19. Extrapolates current position and speed taking lag into account

20. Simulation animates starship

ALL CLIENTS (player & opponents)

LAG + 1/2 PROXIMITY LIST UPDATE DELAY

This informs clients that the current user entered the AoI, so that they can create the corresponding starship

22. Receives proximity update event

23. Removes ships of users who left the AoI

24. Creates ships of users who entered the AoI

25. For each ship extrapolates current position and speed taking lag into account

26. Simulation animates starships

21. Sets ship position (x,y) in Proximity Manager

27. calculates next position and velocity

28. Trajectory changed?

N

29. Saves position (x,y) and velocity (vx,vy) in User Vars **WITHOUT** client update

Y

Trajectory can change due to hit

30. Saves position (x,y) and velocity (vx,vy) in User Vars **WITH** client update

Simulation iteration

LAG

31. Receives User Vars update event

32. Get reference to user starship

33. Extrapolates current position and speed taking lag into account

34. Simulation animates starship

This makes all the clients having the current user in their proximity to synchronize his trajectory with respect to the server

User Vars update sent to clients in proximity only