

Protocol For R-Type Project

Status of this Memo

This memo defines an Experimental Protocol for the Internet community. This memo does not specify an Internet standard of any kind. Discussion and suggestions for improvement are requested.

Distribution of this memo is unlimited.

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1. Introduction

The protocol created by the team is used only for the R-Type project. It defines a formatted string with the pattern "ACTION argument1:argumentN" with N arguments.

Here are two examples:

"CREATE_ROOM room1"

"INIT_PLAYER playerName"

2. Actions

Actions are calls to the server to control a game (Rooms, Join, ...). These words are in uppercase.

TCP packets are composed by a header that contains the total message length.

UDP packet headers are not handled.

2.1 TCP

a. CREATE_ROOM roomName maxSlots

This action creates a room with a specific name and a maximum player slots.

b. JOIN_ROOM roomName

This action allows or not a player to enter in a specific room. If the room is full, the player can't join the room.

c. LEAVE_ROOM

This action is used by a player to leave the current room instance.

d. SET_NAME name

This action sets the name of the player.

e. MESSAGE msg

This action is used for send a message in the room.

f. GET_ROOMS

This action returns all rooms created.

g. GET_ROOM_PLAYERS roomName

This action returns all players in a specific room.

h. GET_MESSAGES

This actions returns all messages in the room.

i. SET_READY

This action sets a player to ready.

j. GET_READY

This action returns true if a player is ready.

2.2 UDP

a. COLLISION

This action reduces a player's life by 1 if it collides with a monster or a bullet.

b. INIT_PLAYER playerName

This action initialise a player for the UDP session.
It also establish the UDP endpoint.

c. MOVE_PLAYER x y

This action is used to update a player's position in the server.

d. FIRE_BULLET x y

This actions fires a new bullet from the player.

e. DEAD monsterId

This action is used to kill a monster by his id.

f. UPDATE_SCORE score

This action updates the score for a player.

g. GET_SCORE

This action returns the player's score.

h. NEW_BULLET x y monster|player

This action is used by a client for create a new bullet from a monster or a player.

i. GET_POSITIONS

This action is used by a client to get all entities' positions.

j. GET_ALL_SCORE

This action returns the score of all players.

k. DAMAGE

This action decrease a player's score by 10.