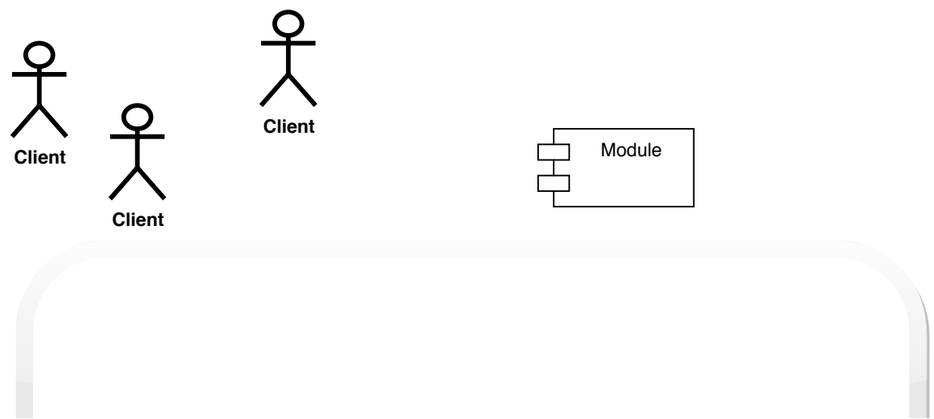

Client
Client
Client
Module

From Connection to Game

A Scalable Solution For An Online Gaming Service

By Ashley Sands

Initial Connection

During the initial connection stages, the user is registered into network by assigning them a unique registration key. The key is then used to identify users when changing server or reconnecting to a server if the connection is lost

When creating an online multiplayer game one main issues is scaling and managing system resources to ensure that our users have a smooth gaming experience. This can be achieved by containerizing each game instance in docker containers and use Kubernetes to scale the game instances dynamically.

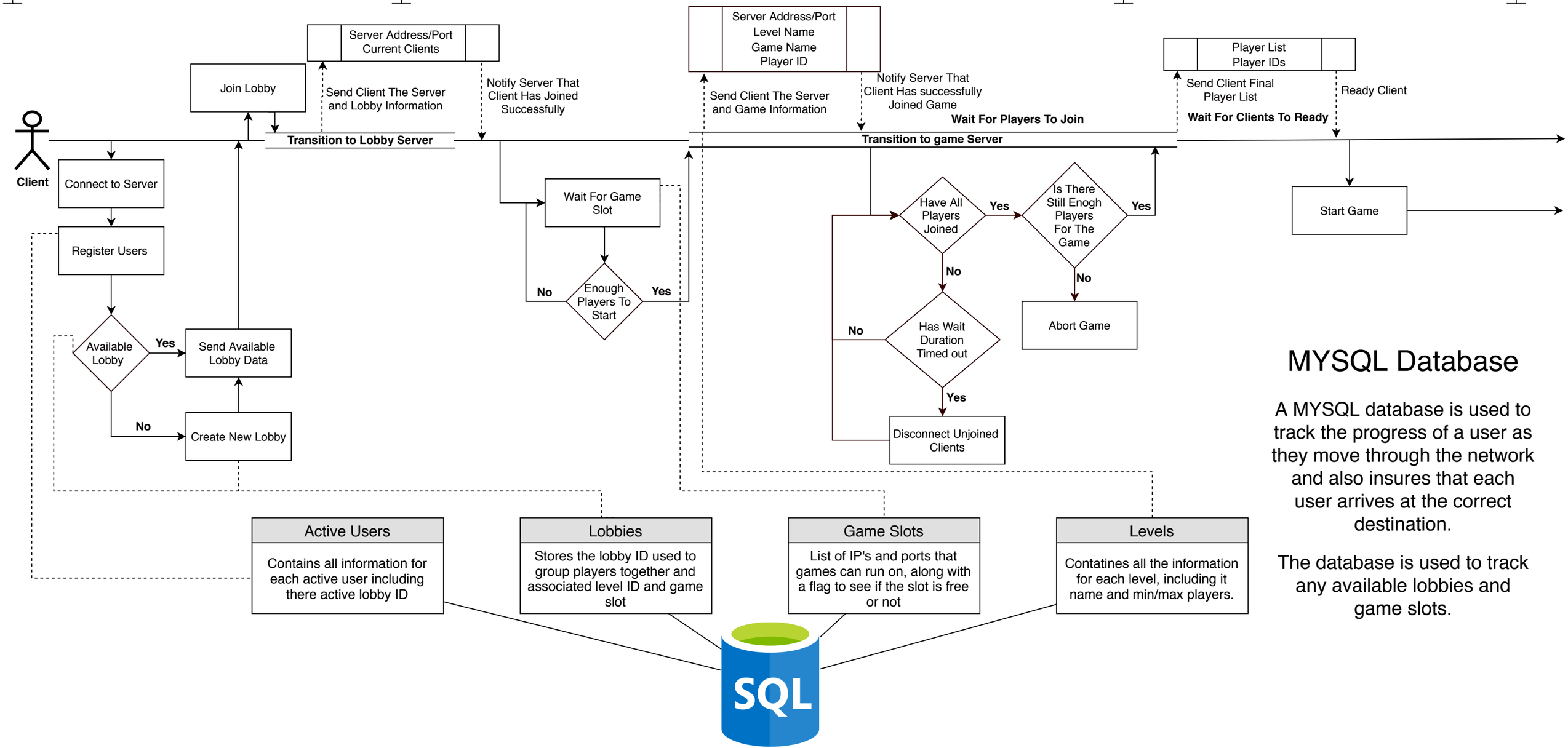
Waiting for a Game Slot

For the case that we run out of resources or the max concurrent active game limit is reached, lobbies are put into a queue to wait for a game slot to become available.

This helps to insure that all of our users have a smooth gaming experience!

Transition To Game

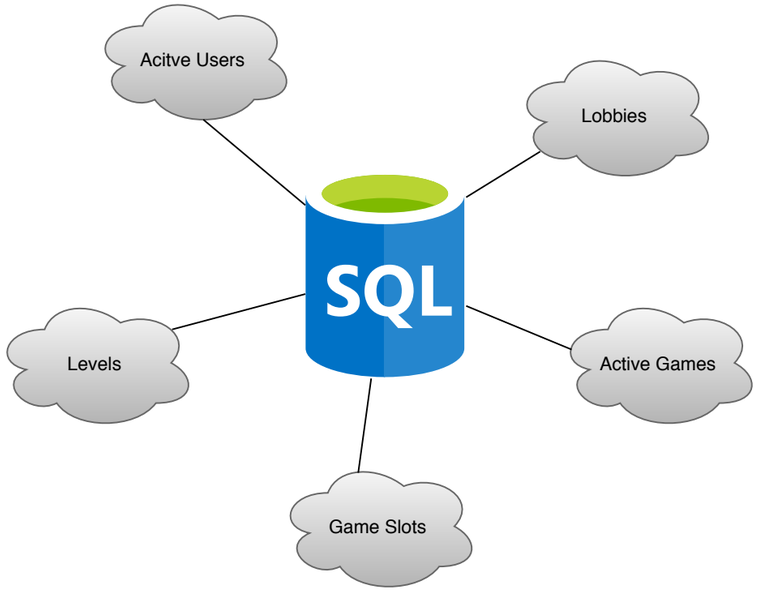
Once the lobby has been assigned a game slot, the server sends each user of the lobby the address of the server that the game will be hosted by, along with level that should be loaded and the players id within the game.

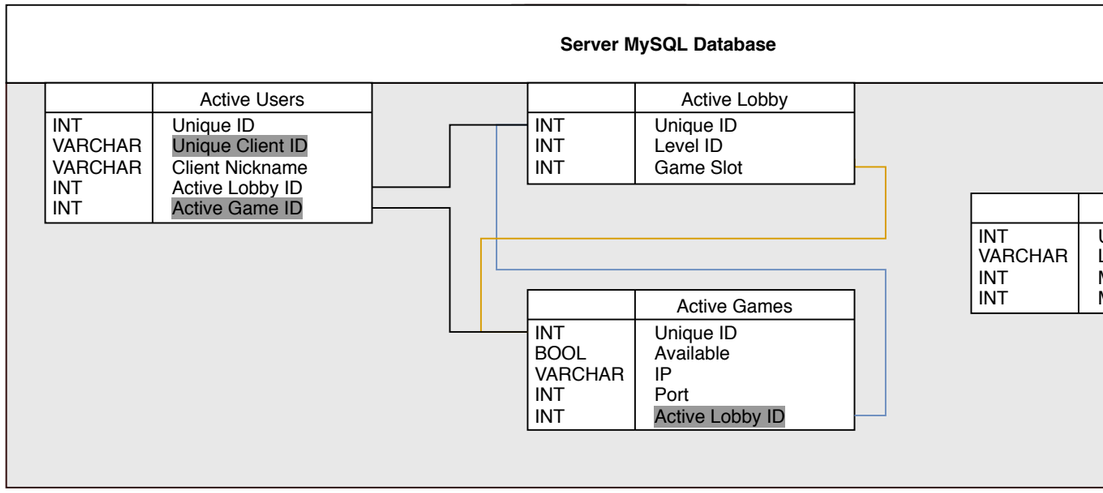


MYSQL Database

A MYSQL database is used to track the progress of a user as they move through the network and also insures that each user arrives at the correct destination.

The database is used to track any available lobbies and game slots.





When creating an online multiplayer game one main issues is scaling and managing system resources to ensure that our users have a smooth gaming experience. This can be achieved by containerizing each game instance in docker containers and use Kubernetes to scale the game instances dynamically.

Levels
Unique ID
Level Name
Min Players
Max Players