Online Technology Short Essay

As a CTO for a video game company the technical challenges I could imagine dealing with would be the like of the servers dealing with the number of players, and trying to decide between using TCP or UDP.

Server Intake:

The problem here is a relatively common problem with current games where the servers are only able to handle a much smaller player base than is actually required. This could cause many major problems such as players being unable to connect to the servers, the players that are connected to the server being disconnected unexpectedly and the server crashing.
A possible solution to this is to get more servers then you originally would expect to handle a large influx of players and from there you can gradually decrease the number of servers you have for the game to the actual number you need.
You could also keep a very close eye on the internet in relation to your game to see if more people are starting to talk about it and to see if there is a large increase in interest in the game which will then inform you to increase the numbers of servers to handle the expected income of players.
You could also handle the expected influx of players by adding a wait time to the servers .

TCP or UDP:

When choosing between using TCP or UDP you need to consider which is more important for your game genre, for fast paced games such as first person shooters, fighting games, arena games etc. the use of UDP is very important and useful as it is excellent for syncing player movement and updating the game state. UDP is ideal for this as it sends these game updates extremely quickly but messages are not guaranteed due to the next message coming so fast.

Although if you are running a turn based game TCP is more suitable as it guarantees message delivery and in games where every move matters it’s a great option for the multiplayer gameplay. For a multiplayer game ensuring the game state and delivering player inputs is crucial which makes TCP ideal.