CCNx Synchronization protocol only works for directly connected users (scope 2). Since our game uses CCNx Sync protocol for asset synchronization, our game could only synchronize on scope 2 too. The drawback can be analyzed from different angles.

First, the game will not be scalable because the number of connections grow exponentially with the number of participants. Consider a game with users. In a fully connected network connections will be set up.

Second, and more importantly, the web cache in the NDN network will not be utilized in a fully connected network. In the -users game example, if a (*n*+1)th player joined, each of the *n* users will issue an interest for information about the new player, and each interest will be forwarded to every other player on the network. The worst part of this situation is that because any two machines on the network is NDN scope 2, the network will work as if there were no web cache at all.

In short, the scope 2 restriction requires a fully connected network, which introduces network congestion and fails to utilize NDN webcache.