

Improving QoE using OSC nearRT-RIC and OAI 5G RAN leveraging O-RAN E2 KPM and RC SMs

We improve the Quality-of-Experience (QoE) of a user playing the online game slither.io in a 5G network through a near-RT RIC. We deploy an end-to-end 5G cellular network with the OSC RIC, OAI CU, OAI DU, and OAI 5GC. Because the online game is a delay-sensitive application, it is directly and noticeably affected when the cell has high load, becoming unresponsive and affecting the QoE negatively. In order to overcome this issue, we deploy our custom QoE xApp over the OSC RIC. We use the KPM SM to monitor the RAN packet delay. When the latency at the RLC buffer surpasses a threshold, we use the RC SM to create a new radio bearer in the E2 nodes. In this manner, traffic belonging to the game is scheduled preferentially, improving the QoE of the game.

