Adquisición de métricas en cloud gaming

O. S. Peñaherrera-Pulla(1), Carlos Baena(1), Sergio Fortes(1), Eduardo Baena(1), Mai Tran-Le(2), Raquel Barco(1).

{sppulla, jcbg, sfr, ebm}@ic.uma.es , Mai.TranLe@vodafone.com, rbm@ic.uma.es

(1) Dept. de Ingeniería de Comunicaciones. Universidad de Málaga. Campus de Teatinos s/n, 29071 Málaga, España.

(2) Dpt. Networks Strategy & Architecture. Vodafone Group. Vodafone Plaza, Avenida de América 115, 28042, Madrid

ABSTRACT

This document presents a Cloud Gaming review and how it works in contrast with the traditional Gaming scenario. Then several platforms that can be used to implement this service are described. Next, it's exposed the way how Cloud Gaming is qualified by "gamers" in terms of Quality of Experience through some specific parameters such as Bit Rate, Network Latency, video resolution, frame rate, etc. In order to measure these parameters, a testbed was developed. This experiment is designed in a Server-Client architecture which embed Moonlight-Stream platform with Python Scripts to analyze temporal client logs and extract metrics, automatize human actions as mouse and keyboard events. Testbed was probed over WLAN for an objective resolution of 1080p. To maintain an objective criterion, several iterations were executed over the same network, simulated human actions were used. Results show that Cloud Gaming comply with theorical limits in previous studies explained in first sections.

ACKNOWLEDGEMENTS

Este trabajo ha sido parcialmente financiado por el Ministerio de Asuntos Económico y transformación digital y FEDER (red.es, Piloto 5G Andalucía, Caso 31 Estudio OpenRAN), por la Junta de Andalucía y fondos FEDER (Programa Operativo FEDER Andalucía 2014-2020) proyecto IDADE-5G (UMA18-FEDERJA-201) y a la Universidad de Málaga en el contexto de la beca de ayuda para la iniciación a la investigación.