

Online Franco-African Seminar in Digital Sciences - LIRIMA
Wednesday May 13 2020, 4:00 pm

Gabriel Antoniu, Inria



The Edge, the Cloud and the Supercomputer: Welcome to the Age of the Digital Continuum!

Abstract:

With the spectacular growth of the Internet of Things, edge processing emerged as a relevant means to offload data processing and analytics from centralized clouds to the devices that serve as data sources (often provided with some processing capabilities). This leads to new challenges in ways to distribute processing across cloud-based, edge-based or hybrid cloud/edge-based infrastructures. The whole picture is actually bigger, IoT devices and clouds are pieces of a larger puzzle including the most powerful supercomputers, in what is now called the « Digital Continuum ». This talk will focus on the emergence of this term, on its motivations and related challenges. They points out to the ongoing convergence of concepts and of the underlying technologies, at the frontiers of several areas, including distributed computing, Big Data Analytics, High-Performance Computing and Artificial Intelligence.

Références

- Balouek-Thomert, Daniel & Gibert Renart, Eduard & Zamani, Ali Reza & Simonet, Anthony & Parashar, Manish. (2019). Towards a computing continuum: Enabling edge-to-cloud integration for data-driven workflows. The International Journal of High Performance Computing Applications. 33. 1159-1174. <https://doi.org/10.1177/1094342019877383>

- Kévin Fauvel, Daniel Balouek-Thomert, Diego Melgar, Pedro Silva, Anthony Simonet, Gabriel Antoniu, Alexandru Costan, Véronique Masson, Manish Parashar, Ivan Rodero, Alexandre Termier. A Distributed Multi-Sensor Machine Learning Approach to Earthquake Early Warning. AAAI 2020 - 34th AAAI Conference on Artificial Intelligence, Feb 2020, New York, United States. pp.1-9. URL: <https://hal.archives-ouvertes.fr/hal-02373429v2> Outstanding Paper Award for Social Impact.

- The ETP4HPC Strategic Agenda:

[https://www.etp4hpc.eu/pujades/files/ETP4HPC_SRA4_2020_web\(1\).pdf](https://www.etp4hpc.eu/pujades/files/ETP4HPC_SRA4_2020_web(1).pdf)