



clever cloud



## General information

**Organisation name :** *Clever Cloud* <https://www.clever-cloud.com>  
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## Targetted topics: (maximum 3)

- **HORIZON-CL4-2022-DATA-01-02**
- **HORIZON-CL4-2022-HUMAN-01-03**
- **HORIZON-CL4-2022-DIGITAL-EMERGING-01-26**

Le jeudi 3/2/2022



## Competencies

### 1. Clever Cloud is a cloud computing platform available on public cloud or on premise flavor, providing PaaS, IaaS, DBaaS and managed service in a scalable way

- a. Clever Cloud is orchestrating resources from bare metal to nested virtualized environments, and provide an observability AI based cognitive platform to ensure performance and stability of users applications. The platform is designed to enable federal management of decentralized cloud system.
- b. Multitenant data store and data bus, such as apache Pulsar
- c. ACL on blockchain using biscuit <https://www.biscuitsec.org/>
- d. You can try Clever Cloud for free <https://www.clever-cloud.com>

### 2. The skills the organization bring to the projects

- a. Design and implementation of distributed system for storage and data processing
- b. Hardening of linux distribution, virtualization development, low level understanding
- c. Design system open source framework and guidelines



## Project idea

### 1. Cloud to Edge WASM FaaS platform based on kerneless virtual machine

- a. Using HTTP (or another egress protocol) or event sourced protocol (ATM apache Pulsar) the FaaS is able to execute WebAssembly in a secured enclave (WASM = execution of patrimonial native code or cutting edge new tech), we need to move it to Edge capable model
- b. Use of Biscuit ACL <https://www.biscuitsec.org/> model to ensure multitenant right, with delegation and audit log (stored in blockchain to ensure unforgeability)
- c. Running on GPU, RISCV or ARM (low power consumption) using a dynamic balancing evaluating the need and consumption of the computing task
- d. Encrypted payload and data model, find a way to use homomorphic model on edge

### 2. Complementary skills you need to your consortium

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| a. Real AI use case for integration                | a. Industrial use case   |
| b. Processor provider or hardware provider         | b. Integrated IDE (web) and devXP specialist                   |
| c. Audit of the Biscuit model (independent review) | c. Data stream and data storage specialist on Cloud/Edge model |