

Serverless endpoint with public container clusters for HEP experiments

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In recent years, public clouds have undergone a large transformation. Nowadays, cloud providers compete in delivery specialized scalable and fault tolerant services where resource management is completely on their side. Such computing model called serverless computing is very attractive for users who do not want to worry about OS level management, security patches and scaling resources.

Our aim was to build a batch computing solution based on serverless model enriched in traditional Grid computing endpoint features, like X509 certificate authorization and job scheduler. As the jobs processing ground we are using Docker container clusters orchestrated by AWS Batch service and AWS Lambda functions to handle REST API requests. API definition will be public available, so the proposed solution, initially for the Belle II, can be used by any HEP experiment.

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