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Enabling transparent access to hetergeneous computing providers via interLink

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interTwin is a project started in September 2022, funded by the EU for the development of an open source platform, called Digital Twin Engine (DTE), to support the digital twins of selected communities, which can be exported in multiple scientific fields. For this reason, interTwin was designed to develop the platform involving both scientific domain experts and computational resource providers.
From the infrastructural perspective one of the main challenge is to federate a set of highly heterogeneous and disparate providers. We envision to cope with it enabling the "transparent offloading" capability. The latter will be embedded in the DTE infrastructural layer by exploiting the Virtual Kubelet technology. In this talk we present the API layer developed by interTwin in order to guarantee a unique interface and thus a standard way for a cloud deployed service to communicate to any external system for the actual payload offloading. The status of the current testbeds at Vega and Juelich supercomputing centers will be also presented.

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