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CYGNO @ INFN - Cloud

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The aim of the CYGNO project is to demonstrate the capability of a high resolution gaseous TPC based on sCMOS (scientific CMOS) optical readout for present and future directional Dark Matter searches at low WIMP masses (1-10 GeV) down to and beyond the Neutrino Floor.
CYGNO is a typical medium size astro-particle experiment that require a relative small amount of computing resources and for this reason can be subjected to a fragmentation and low utilisation rate. A typical use case that could exploit and benefit of all the features of a Cloud infrastructure. Moreover, the CYGNO experiment since the beginning started to use the cloud storage system, previously on SWIFT today on S3, where data are open and accessible from everywhere as soon as uploaded by the DAQ machines.
This demanded a container that can meet the experiment requirements, on which preliminary tests are ongoing. The container offers via JupiterHub the experiment environment in terms of authentication, data and software (ROOT, GEANT, GARFIELD++, libraries, ecc) realising a prototype of Software as a Service for data analysis and simulation with common tools of our community. Moreover, the container is generic and adaptable to different experiment environments.
The project and preliminary user experiences are presented.

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