

DISCOVER THE CERN OPENLAB PROJECTS



Sustainable Infrastructures

Heterogeneous Computing,
Platforms and HPC systems

Advanced Storage, Data
Management and Networks

Computing Architectures and
Software Engineering

Infrastructures and Techniques
for Artificial Intelligence

Applications for Society and
Environment

 CERN openlab •  micron

Real-time Data Processing
for Level-1 Trigger:
Scouting at CMS using CXL
Memory-Lake Architecture

 CERN openlab •  ORACLE

Anomaly Detection for
Ultra-Low Latency Event
Selection at the LHC

 CERN openlab •  SIM NS
FOUNDATION

Applied Multi-
Disciplinary AI on High-
Performance Computing

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Oracle
Kubernetes
Operator



Cost Optimization and
Sustainability for Public
Cloud Provider



Integration of Oracle Cloud
Resources into CERN IT
Business Continuity &
Disaster Recovery

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Next Generation
Archiver for WinCC OA

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Data Analytics for
Industrial Control
Systems

Sustainable Infrastructures

Advanced Storage, Data
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Next-Generation
Exascale Flash Storage

Emerging Technologies

New Materials for
Long-Term Digital Storage



Evaluation of Cerabyte:
Archival Data Storage
Technology using
Ceramic Nanolayers



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• ODISSEE

Online Data Intensive
Solutions for Science in
the Exabytes Era
(ODISSEE)



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• SPECTRUM

SPECTRUM:
Strategical and technical
blueprint for an exabyte-
scale research data
federation and compute
continuum for data-
intensive sciences

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Emerging Technologies

Digital Twins



interTwin: Co-designing
and Prototyping an
Interdisciplinary
Digital Twin Engine



Digital Twin: Data
Science Engine

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Center of Excellence on
AI and Simulation-Based
Engineering at Exascale
(CoE RAISE)



EMP2: Environmental
Modelling and Prediction
Platform



BioDynaMo: Biology
Dynamics Modeller



Strategic Partnership on
Artificial Intelligence

Contact us for more information!



Send us a message



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linkedin.com/showcase/cernopenlab

Accelerating computing for science

