AXYON.AI
AI & Deep Learning solutions for Finance

Agenda

- Company
- Products
- Axyon Platform
- SHAPE-PRACE project
- EOSC-HUB project

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Company

Axyon AI leverages the most recent advancements in **AI and deep learning** to create business applications for **trading and asset management**

Main investors

ING UniCredit

Main partners

REFINITIV IBM NVIDIA UNIMORE UNIVERSITÀ DEGLI STUDI DI MODENA E REGGIO EMILIA

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Axyon AI technology

Proprietary deep learning technology for financial time series

More than 10 AI-powered strategies launched

Continuous R&D activity to explore new frontiers (Reinforcement learning, Generative models)

More than 100K hours spent in computing per year

(continuously growing)

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Axyon IRIS

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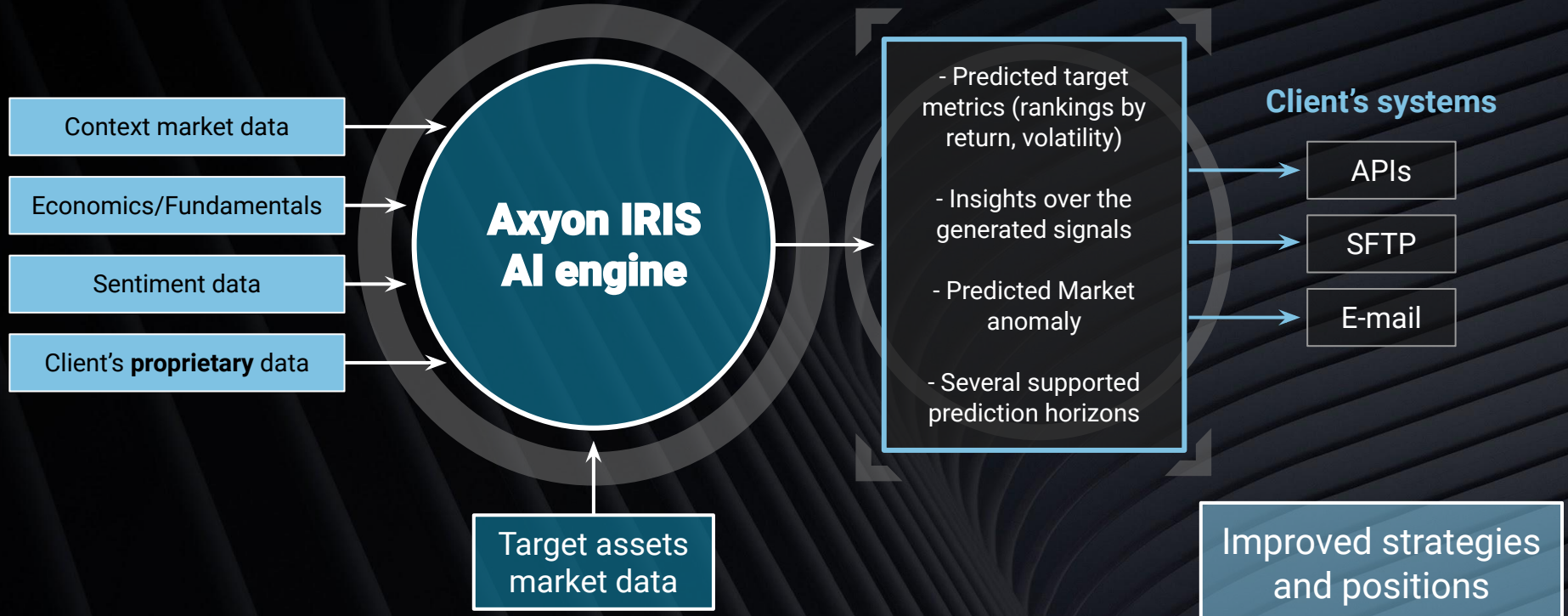
IRIS: Data and predictions flow



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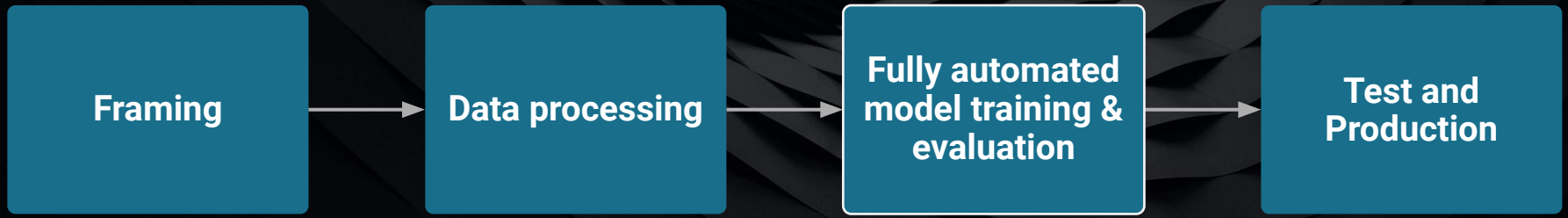
Why do we need computing power?



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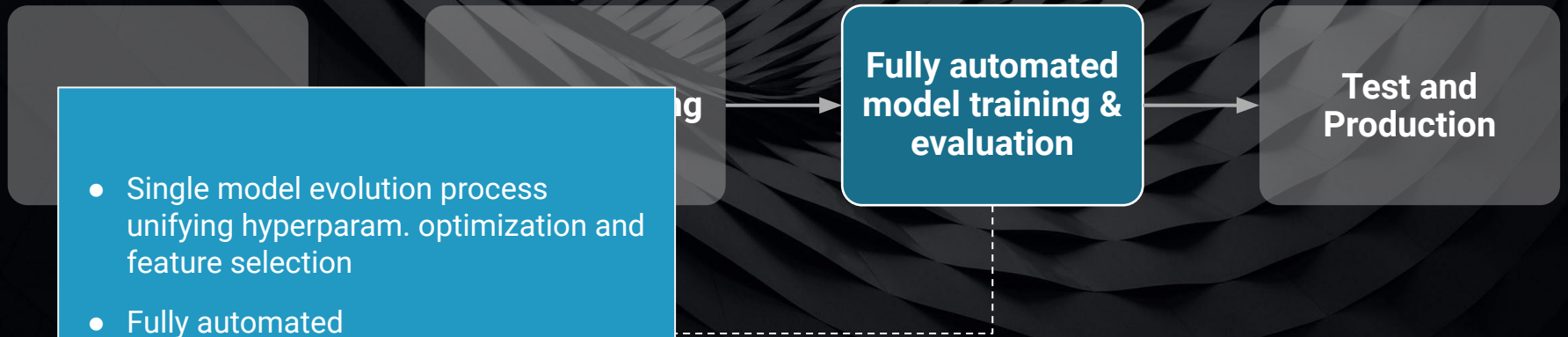

- Single model evolution process unifying hyperparam. optimization and feature selection
- Fully automated
- Improved time-series splitting with meta-validation
- Improved Genetic Algorithm features

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Axyon Platform

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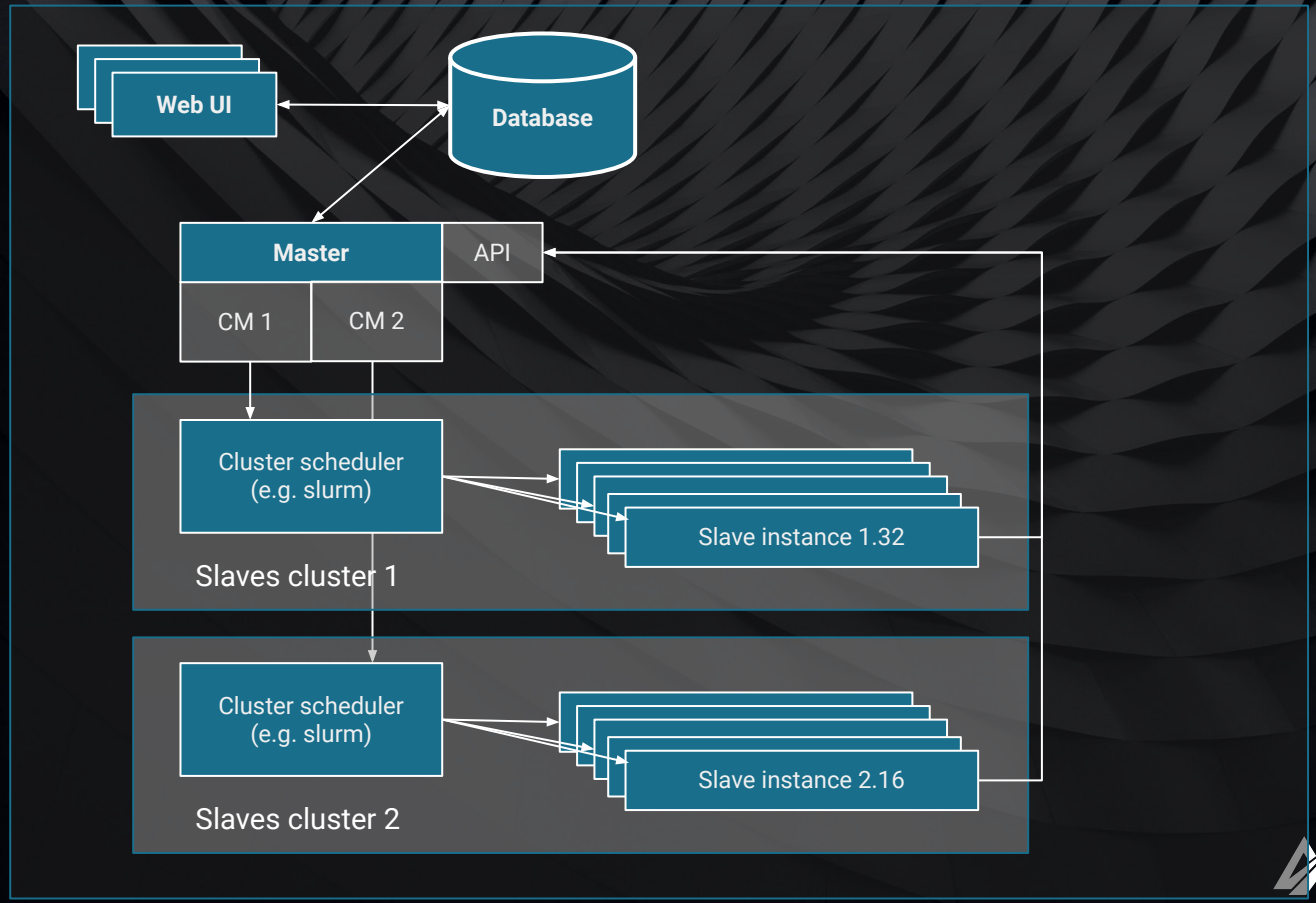
SHAPE-PRACE project



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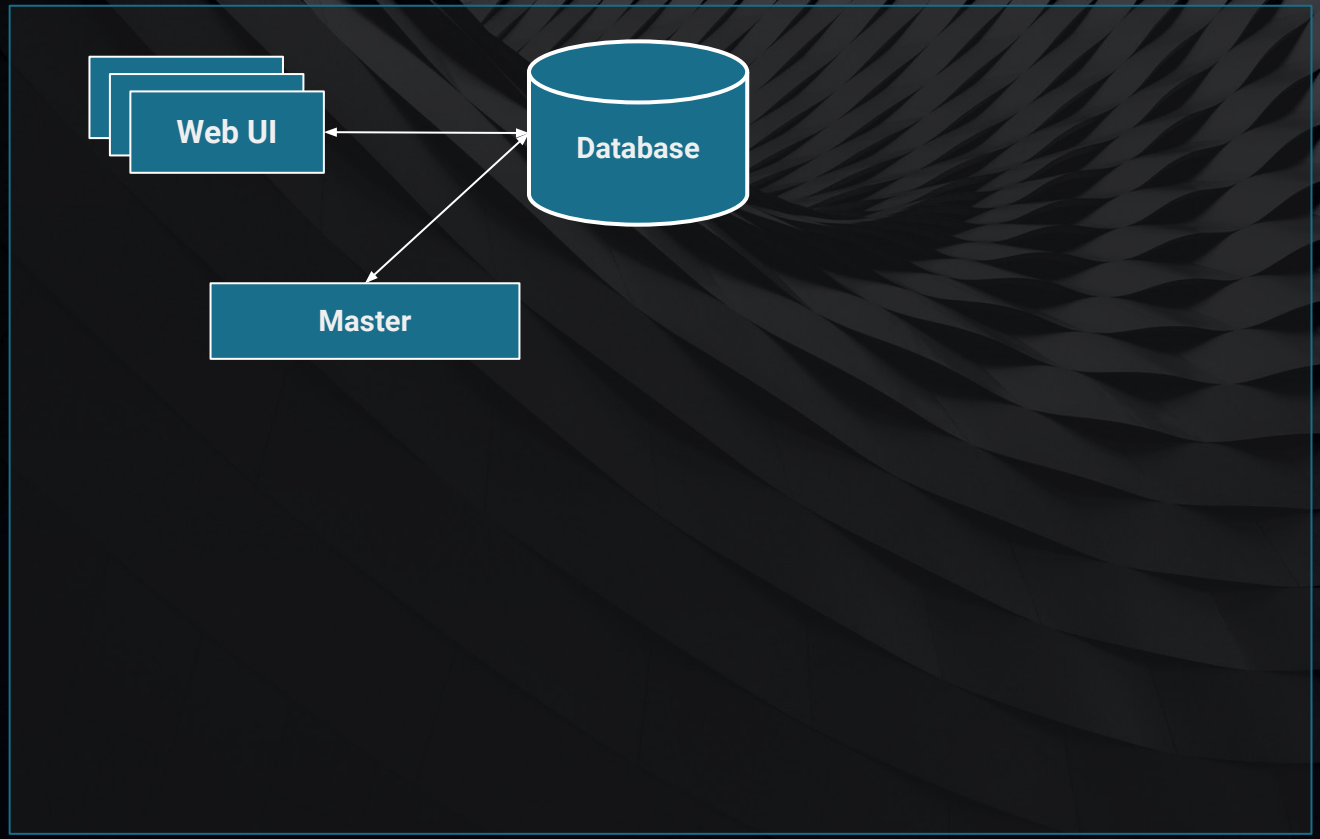
SHAPE-PRACE project

Axyon core platform 2.0



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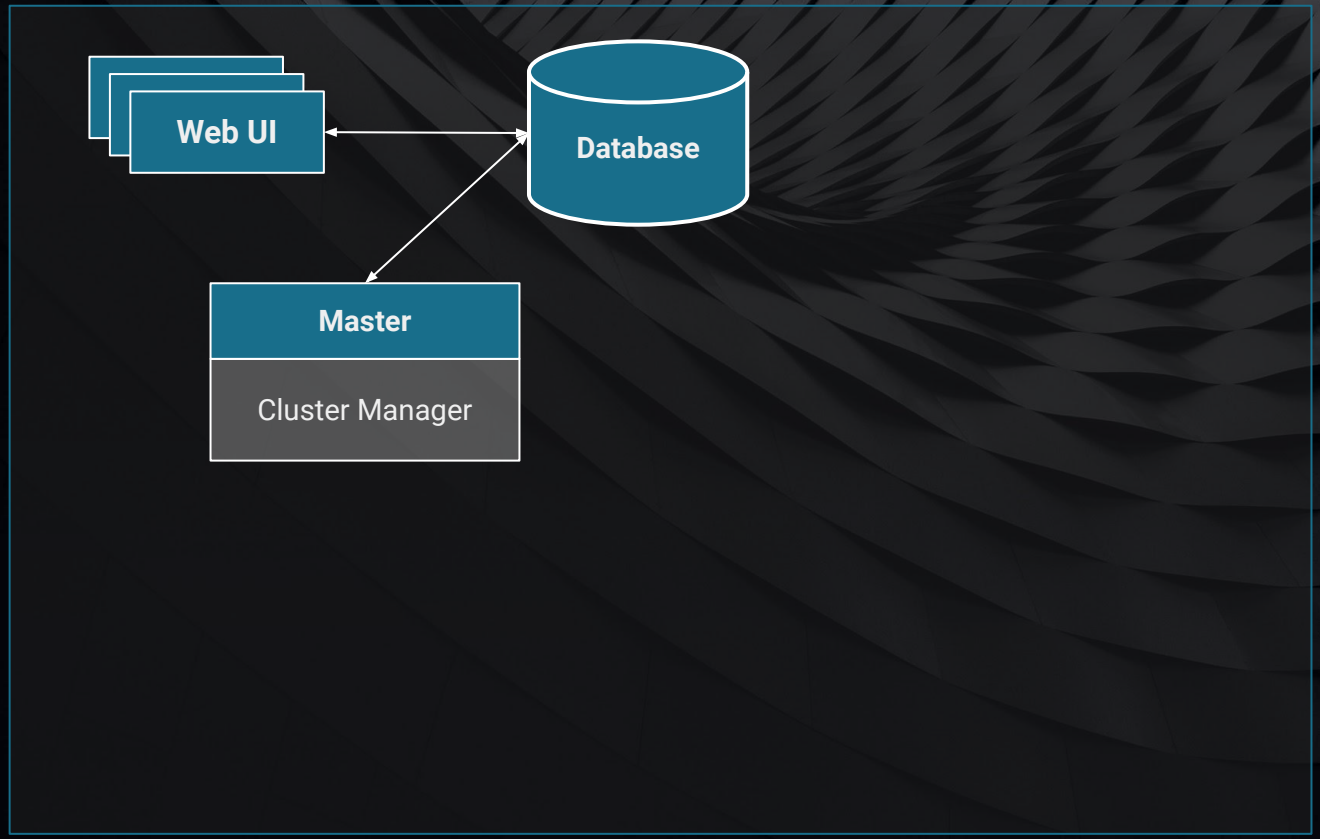
SHAPE-PRACE project

Axyon core platform 2.0



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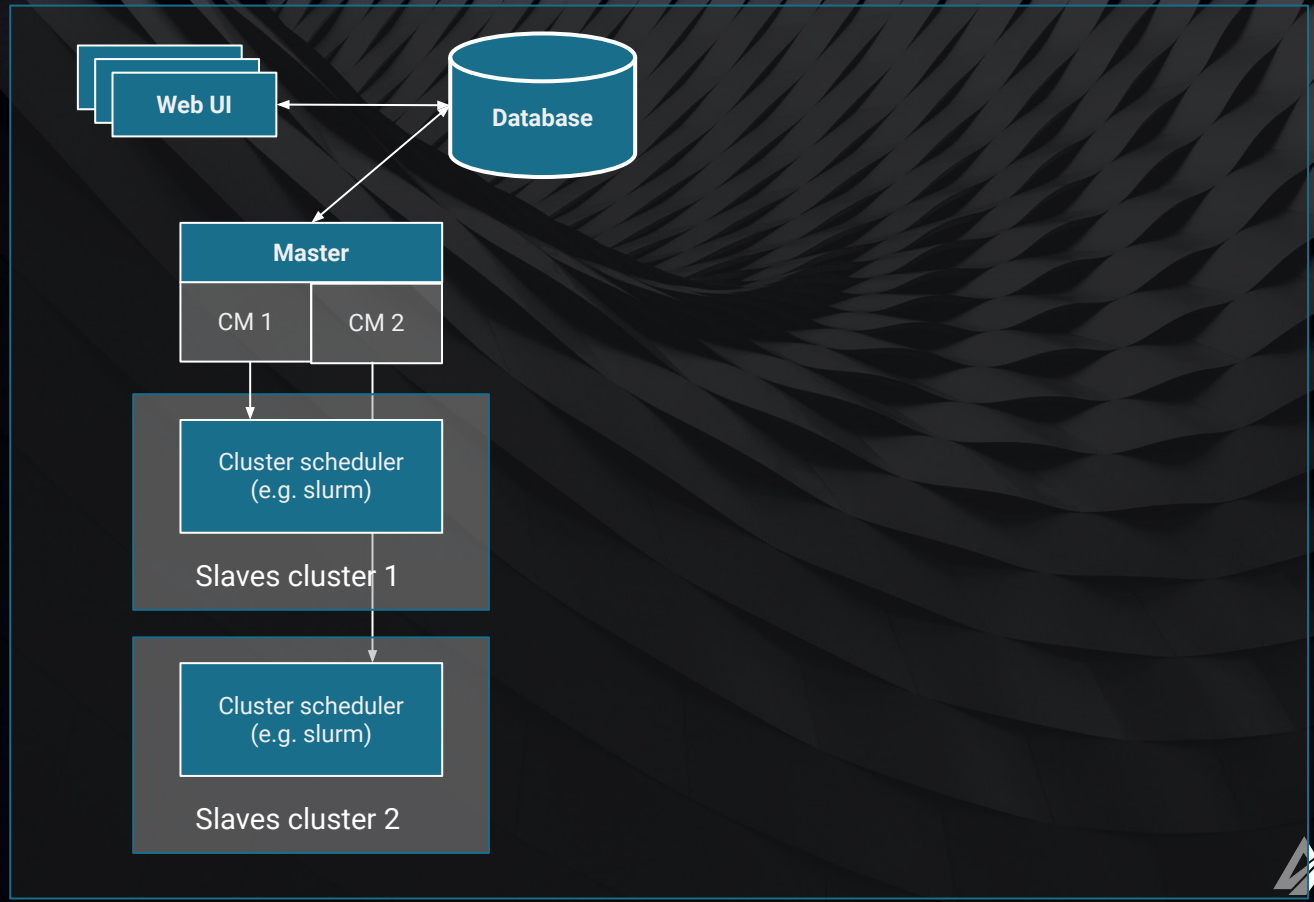
SHAPE-PRACE project



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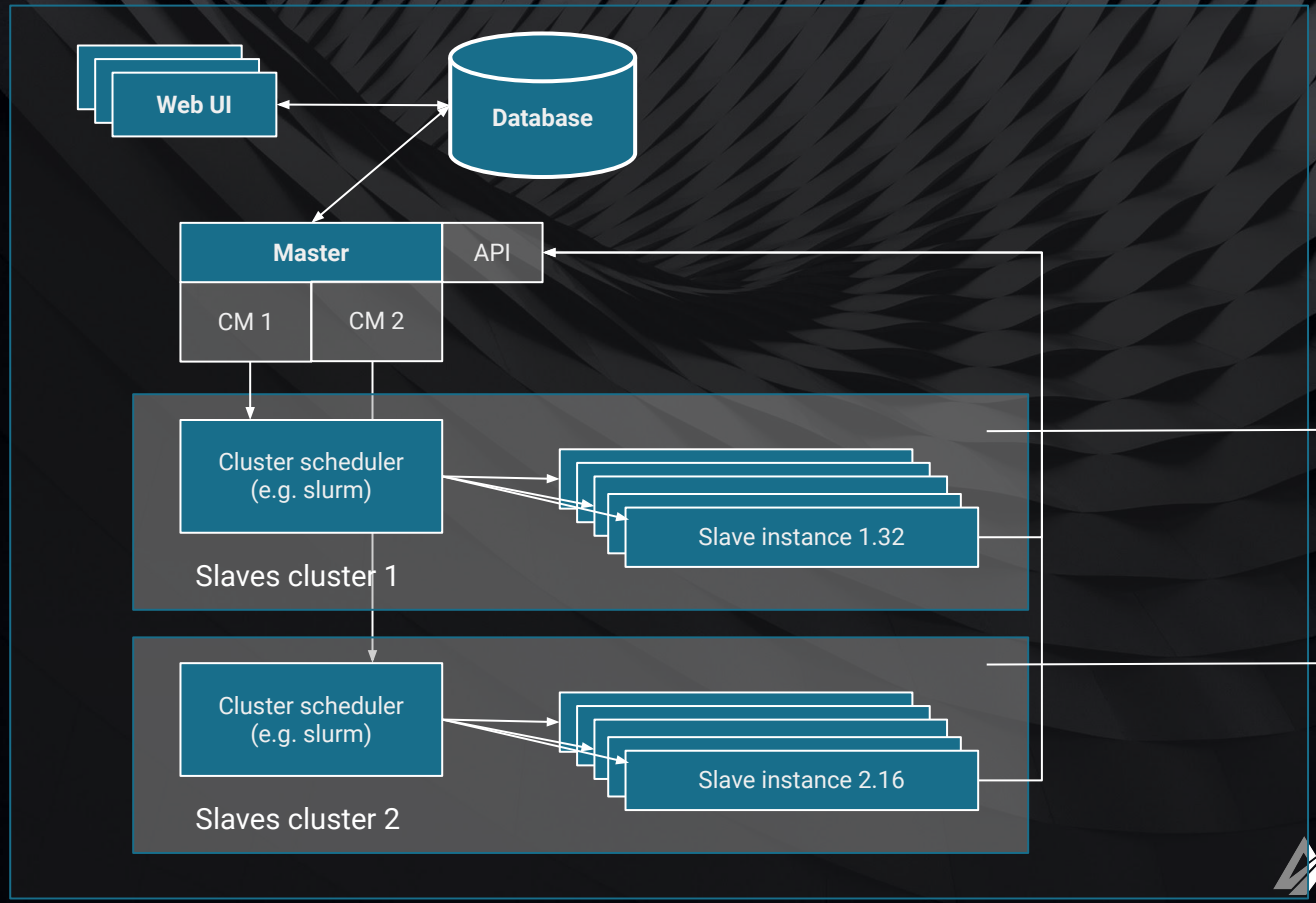
SHAPE-PRACE project



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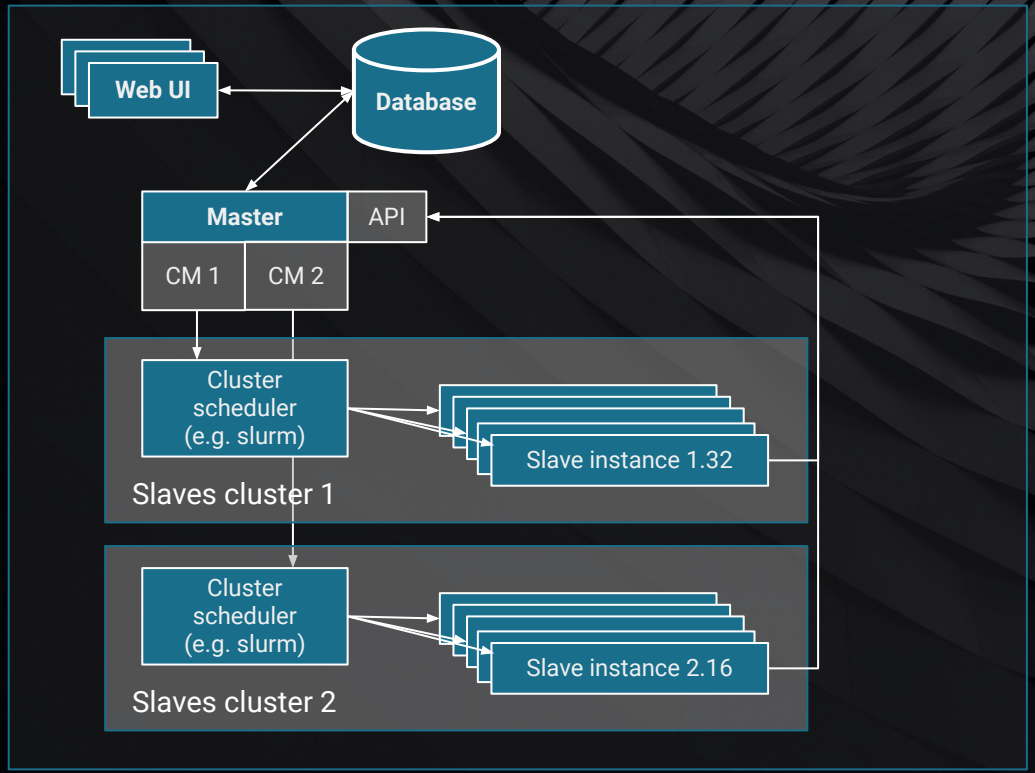
SHAPE-PRACE project

Axyon core platform 2.0



- Master-slave architecture
- Designed for improved scalability and flexibility for multiple jobs
- Supports both cloud-like and HPC-like slave clusters
- Central job dispatcher, managing one or multiple slave clusters
- Containerized slaves with simpler logic (job executor only)
- Currently in production environment @AxyonAI
- CINECA D.A.V.I.D.E.-approved ✔
- CINECA MARCONI100 is on the way!

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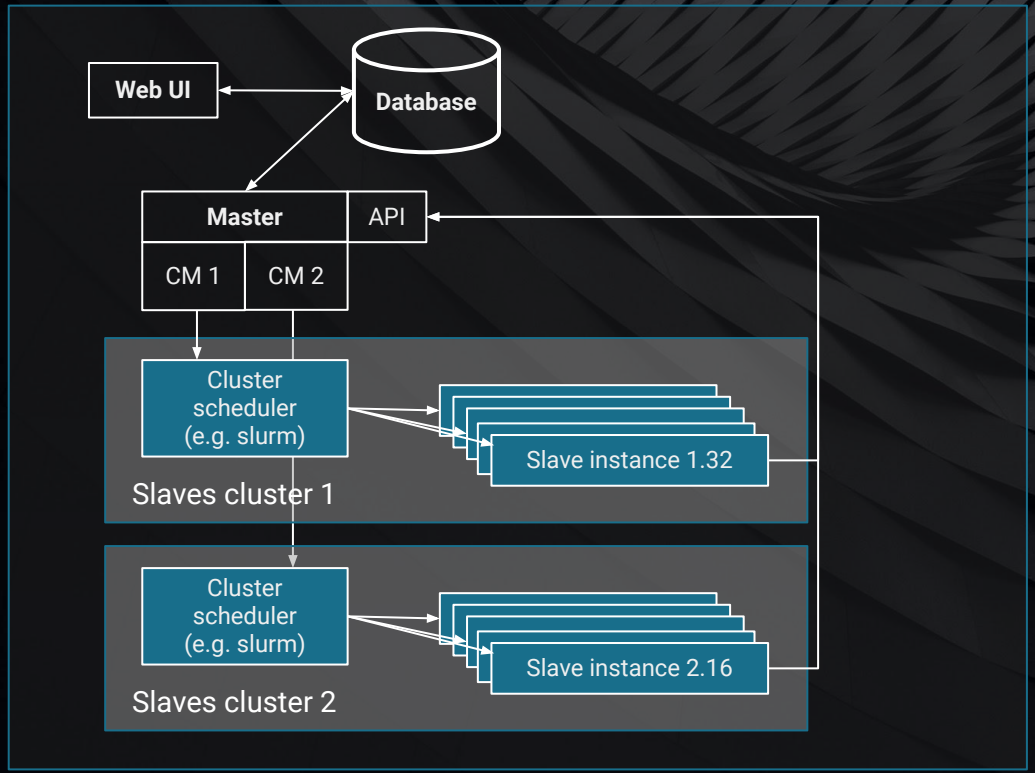
EOSC - HUB project

Axyon core platform 2.x



Objectives

- Parallel distributed training
- Take advantage of
  - Multi-GPU on a single node
  - Multi-node computation for a single ML job
- Huge dataset support - ~TeraBytes

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