JUREAP
Seeding Exascale in Europe

Apply For Early Access Now!

1 Facts and figures

JUPITER ("Joint Undertaking Pioneer for Innovative and Transformative Exascale Research"), hosted at Jülich Supercomputing Centre (JSC), will be the first European exascale supercomputer. It will enable new breakthroughs in critical domains while fostering innovation for the entire European scientific community. The system, with an overall cost of 500 million euros is financed for 250 million euros by the European High Performance Computing Joint Undertaking (EuroHPC JU) and a further 250 million euros in equal parts by the German Federal Ministry of Education and Research (BMBF) and the Ministry of Culture and Science of the State of North Rhine-Westphalia (MKW NRW). To rapidly enable excellent science and maximize the impact of JUPITER as well as enable a smooth start-up for hard- and software, JSC runs the JUPITER Research and Early Access Program (JUREAP).
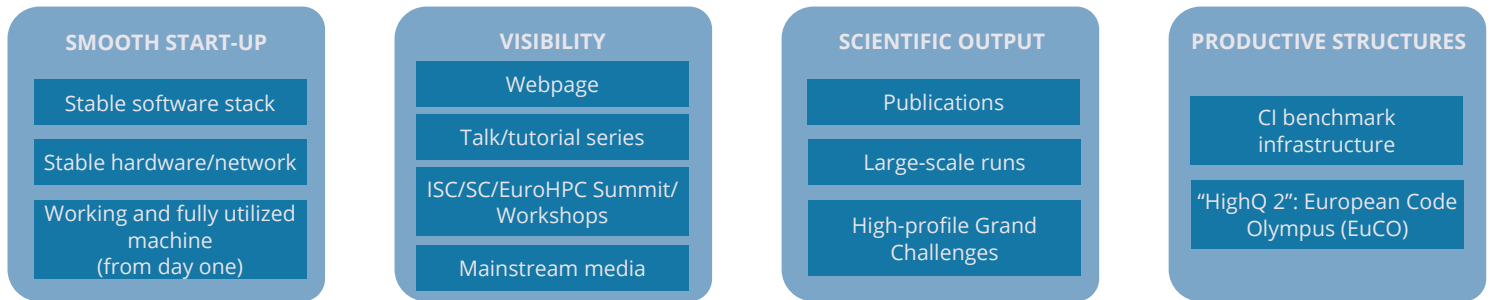
More details on JUPITER:

2 Mission and set-up

JUREAP, the JUPITER Research and Early Access Program, is run in close collaboration between the JSC, the EuroHPC Joint Undertaking, the Gauss Centre for Supercomputing (GCS), ParTec, Eviden, NVIDIA, and SiPearl.
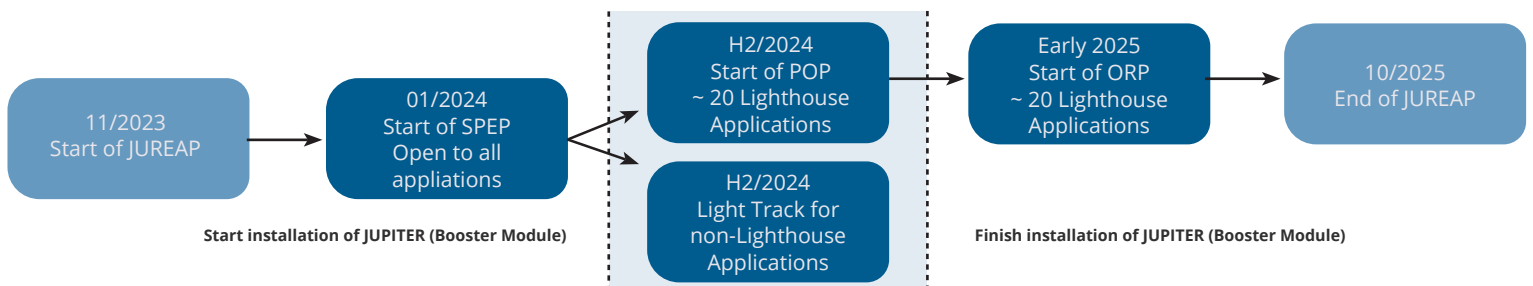
JÜLICH Forschungszentrum | **ParTec** MODULAR SUPERCOMPUTING | **EVIDEN** | **NVIDIA** | **SIPEARL**

It aims to maximize the success of Europe's first exascale computer JUPITER. JUREAP will work with domain scientists and HPC experts to enable groundbreaking results. It relies on four pillars:

SMOOTH START-UP	VISIBILITY	SCIENTIFIC OUTPUT	PRODUCTIVE STRUCTURES
Stable software stack	Webpage	Publications	CI benchmark infrastructure
Stable hardware/network	Talk/tutorial series	Large-scale runs	"HighQ 2": European Code Olympus (EuCO)
Working and fully utilized machine (from day one)	ISC/SC/EuroHPC Summit/ Workshops	High-profile Grand Challenges	
	Mainstream media		

3 Timeline, participants & how to apply

JUREAP consists of 3 phases: Scalability and Performance Evaluation Phase (SPEP), Porting and Optimizing Phase (POP), Outstanding Research Phase (ORP).

11/2023 Start of JUREAP → 01/2024 Start of SPEP Open to all appliations → H2/2024 Start of POP ~ 20 Lighthouse Applications → Early 2025 Start of ORP ~ 20 Lighthouse Applications → 10/2025 End of JUREAP

H2/2024 Light Track for non-Lighthouse Applications

Start installation of JUPITER (Booster Module)

Finish installation of JUPITER (Booster Module)

Duration is 2 years, overlapping with the normal operation of JUPITER. SPEP is open to everyone, most promising candidates will be selected for POP and ORP. Initial focus: JUPITER Booster. Applications welcome from any scientific domain, all computational methods (incl. AI).

Please submit your application via the INDICO portal scanning the code on the right to apply! SPEP opened on 15th January, 2024, and the call for participation will close in summer 2024. Applications need to show potential for scientific large-scale cases.