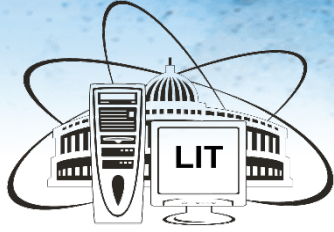




New stages of the HybriLIT development

Zuev M., Matveev M., Podgainy D., Streltsova O., Torosyan Sh.

Heterogeneous Computations team
LIT JINR



**“Govorun” Supercomputer –
revolutionary HPC solution**



A handwritten signature in black ink, appearing to be 'Govorun', located in the bottom right corner of the portrait area.

Nikolay N. Govorun **(1930 - 1989 yy.)**

-- is a corresponding member of AS (1972), professor (1971), Dr. Sci. in Physics and Mathematics (1969).

-- a specialist in the field of computational mathematics and informatics, automation of physical experiments, system and applied programming, appliance of ECM in scientific research, software and multimachine configuration, primary initiator of developing local information and computing network at JINR.

1958-1961 yy. – research fellow of the Laboratory of Theoretical Physics of JINR,

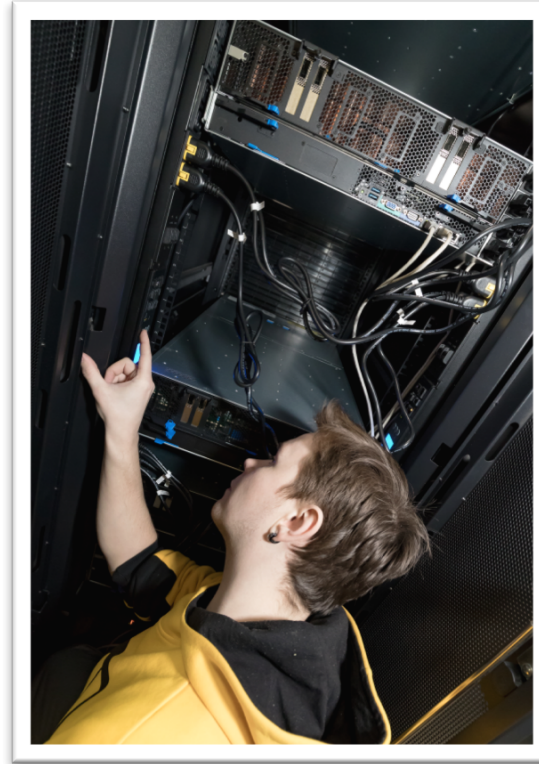
1961-1963 yy. – team leader in LTP JINR,

1963-1966 yy. – head of mathematical department of the computation center of JINR,

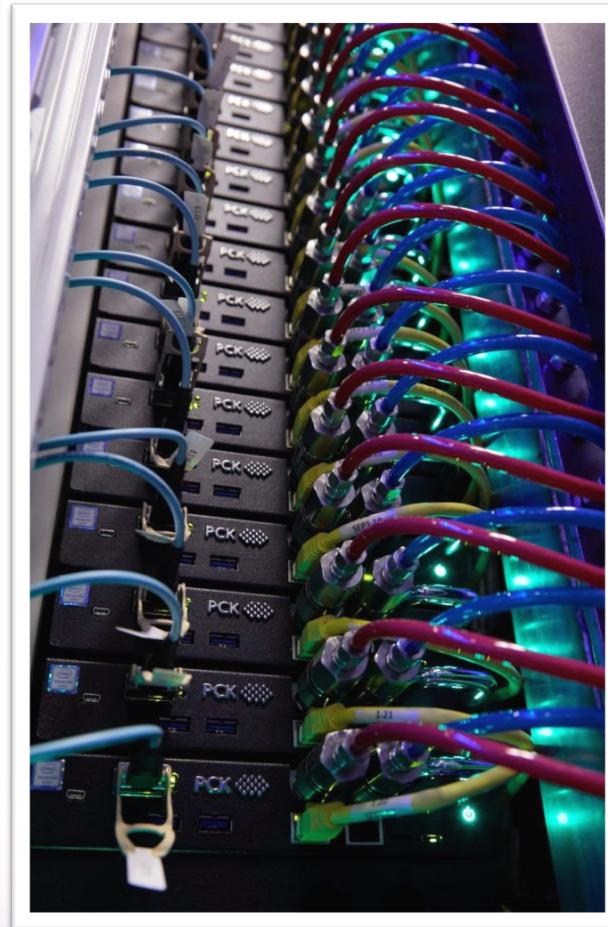
1966-1988 yy. – deputy director of the LCTA on scientific activity, and head of the department of mathematical processing of experimental data,

1988-1989 yy.- director of the Laboratory of computational technologies and automation of JINR.

GOVORUN Supercomputer. GPU component.



GOVORUN Supercomputer. CPU component

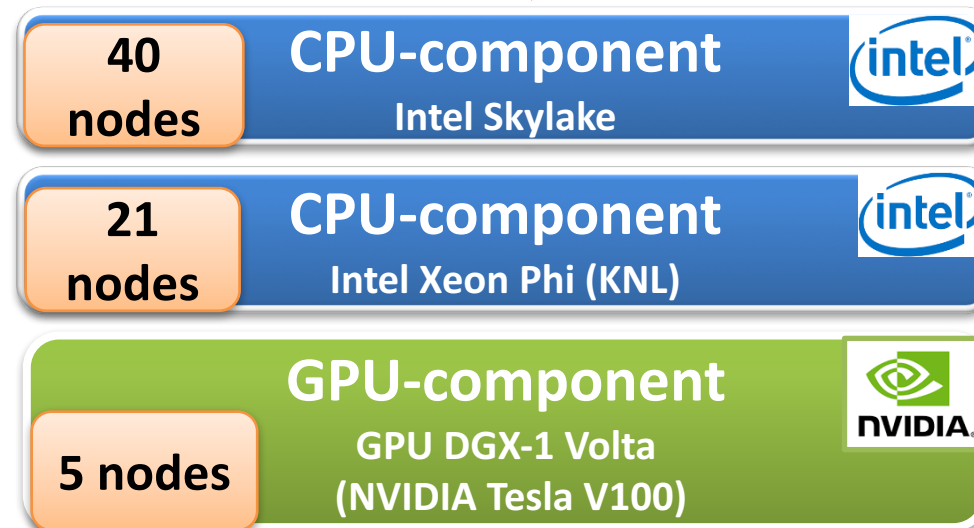
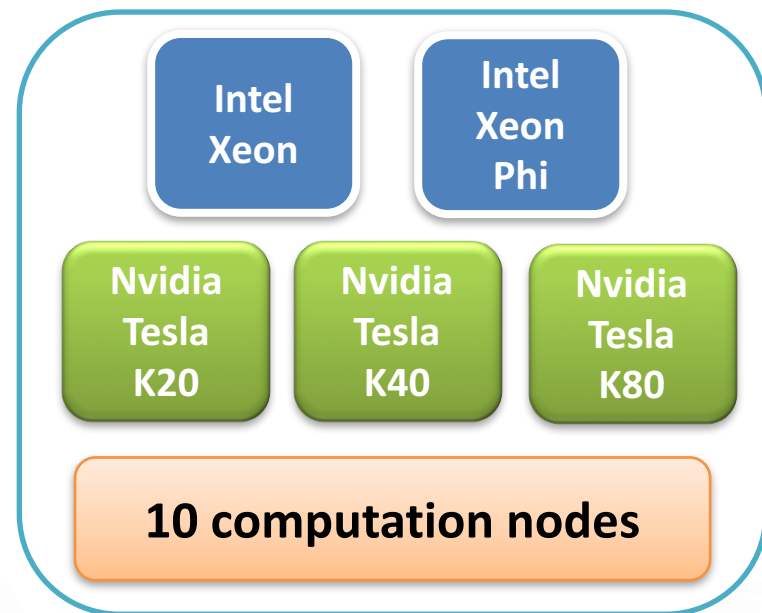


HybriLIT heterogeneous platform

Unified software and information environment

Training and testing polygon
“HybriLIT”

“Govorun” Supercomputer



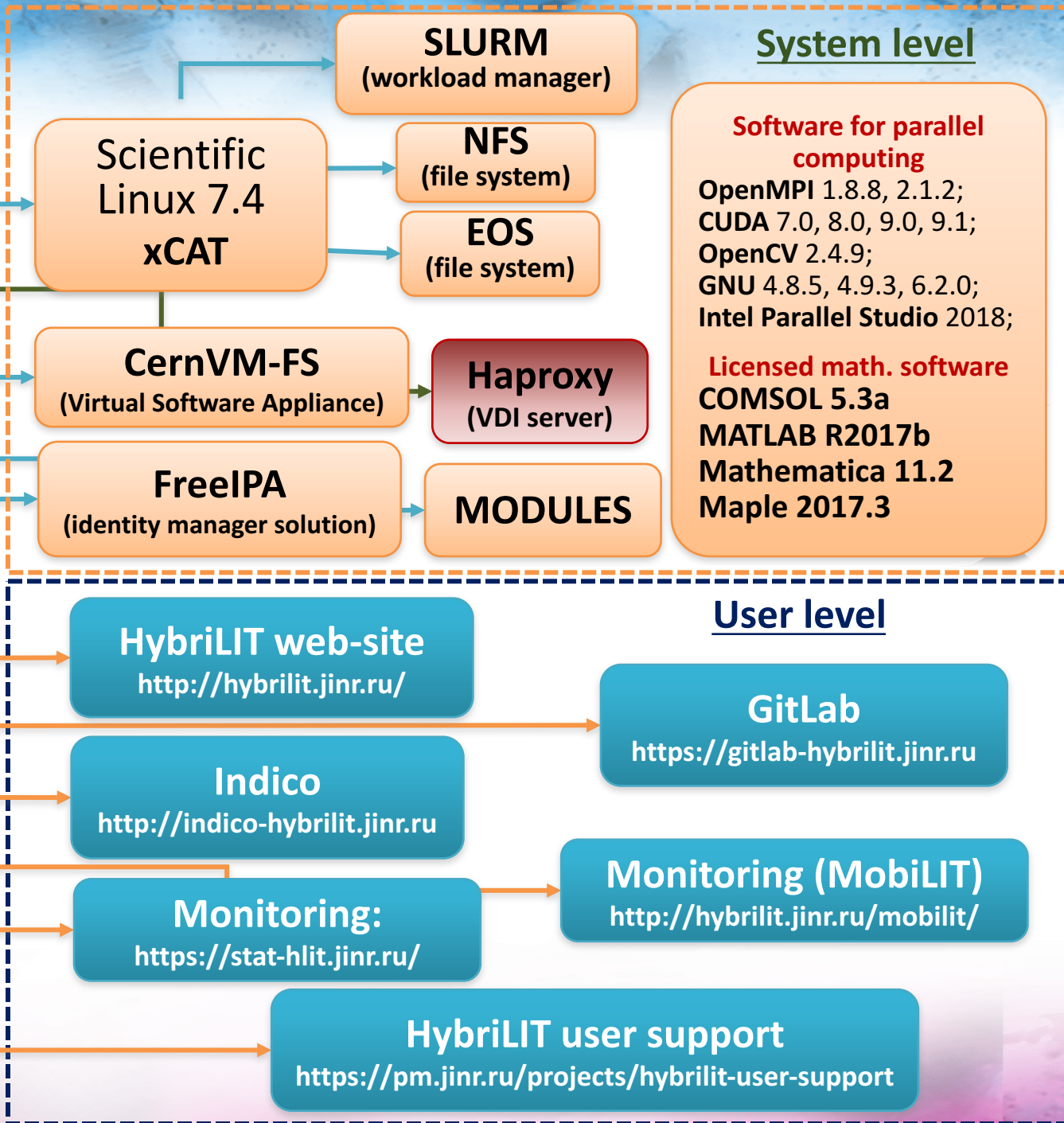
Skylake
1440 cores
KNL
1512 cores

Volta
205 000 CUDA cores
26 000 Tensor cores
K40, K80
78 000 CUDA cores

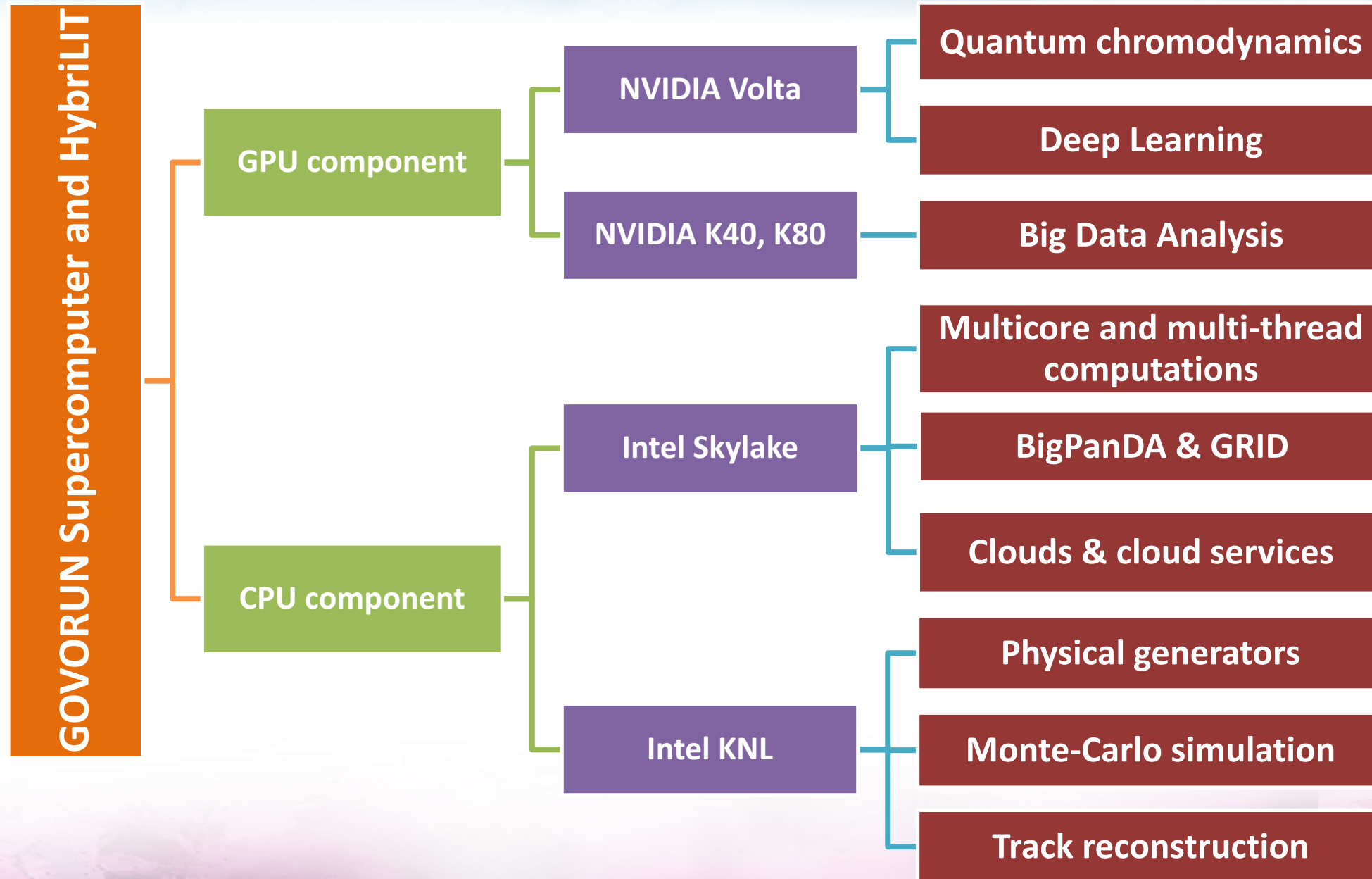
Peak Performance: 1 PFlops

HybriLIT

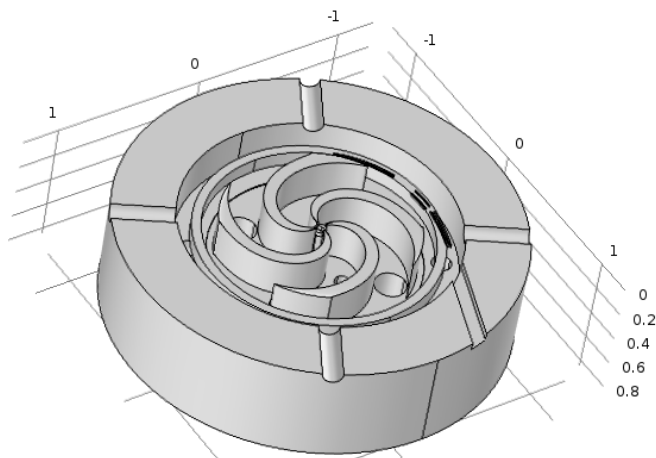
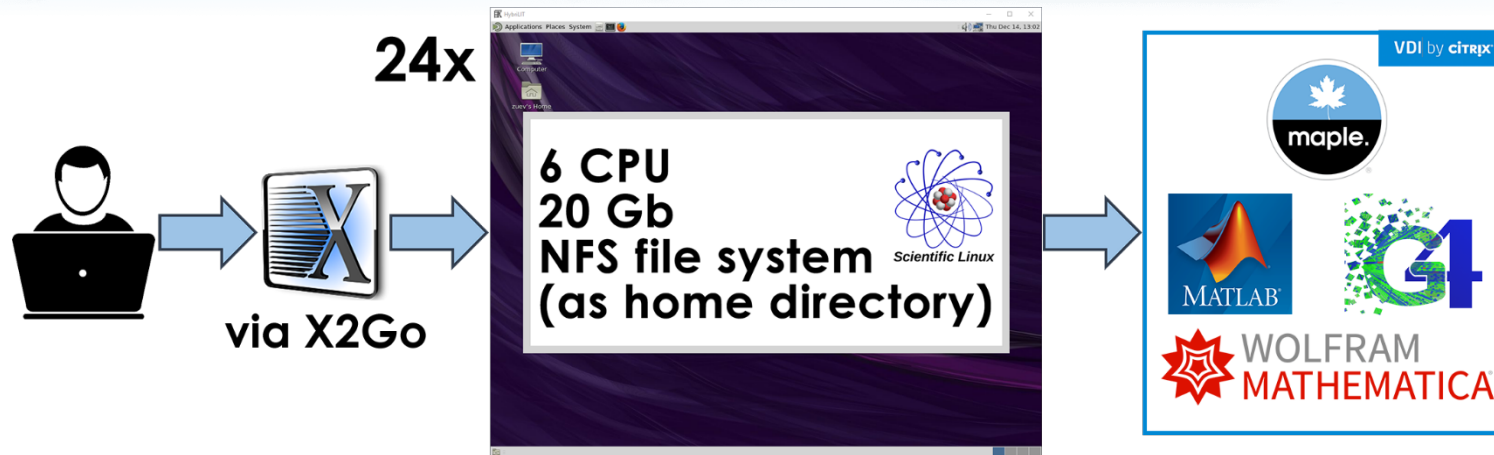
Software and Information Environment



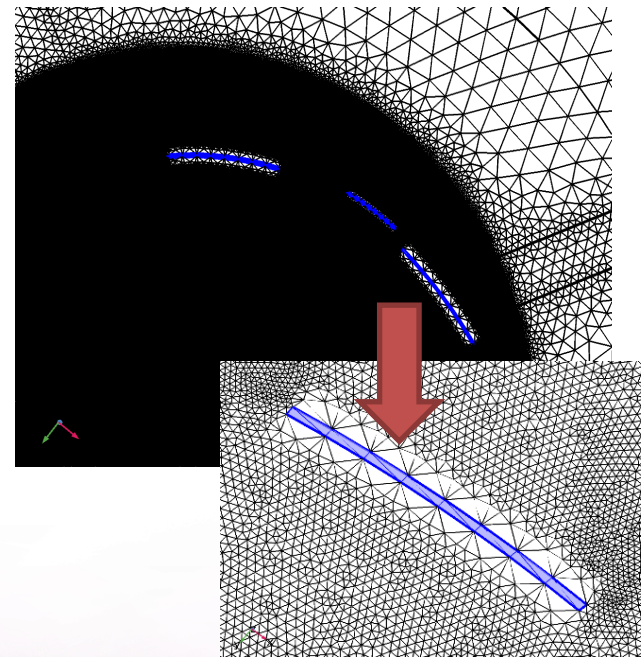
Heterogeneous computations in JINR



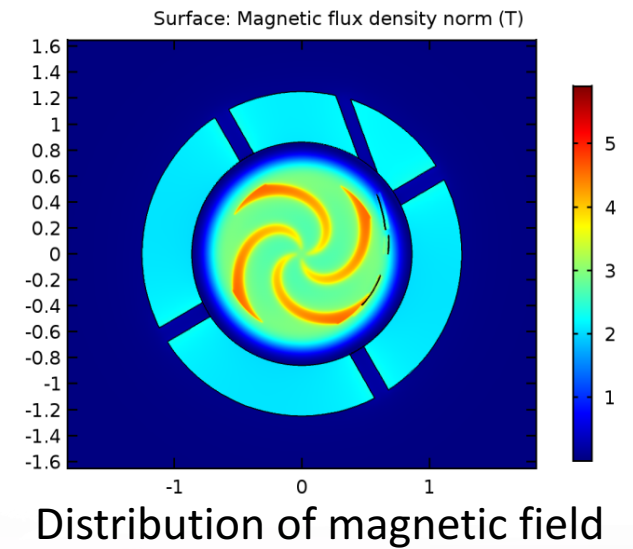
HLIT-VDI – system of virtual desktop interfaces



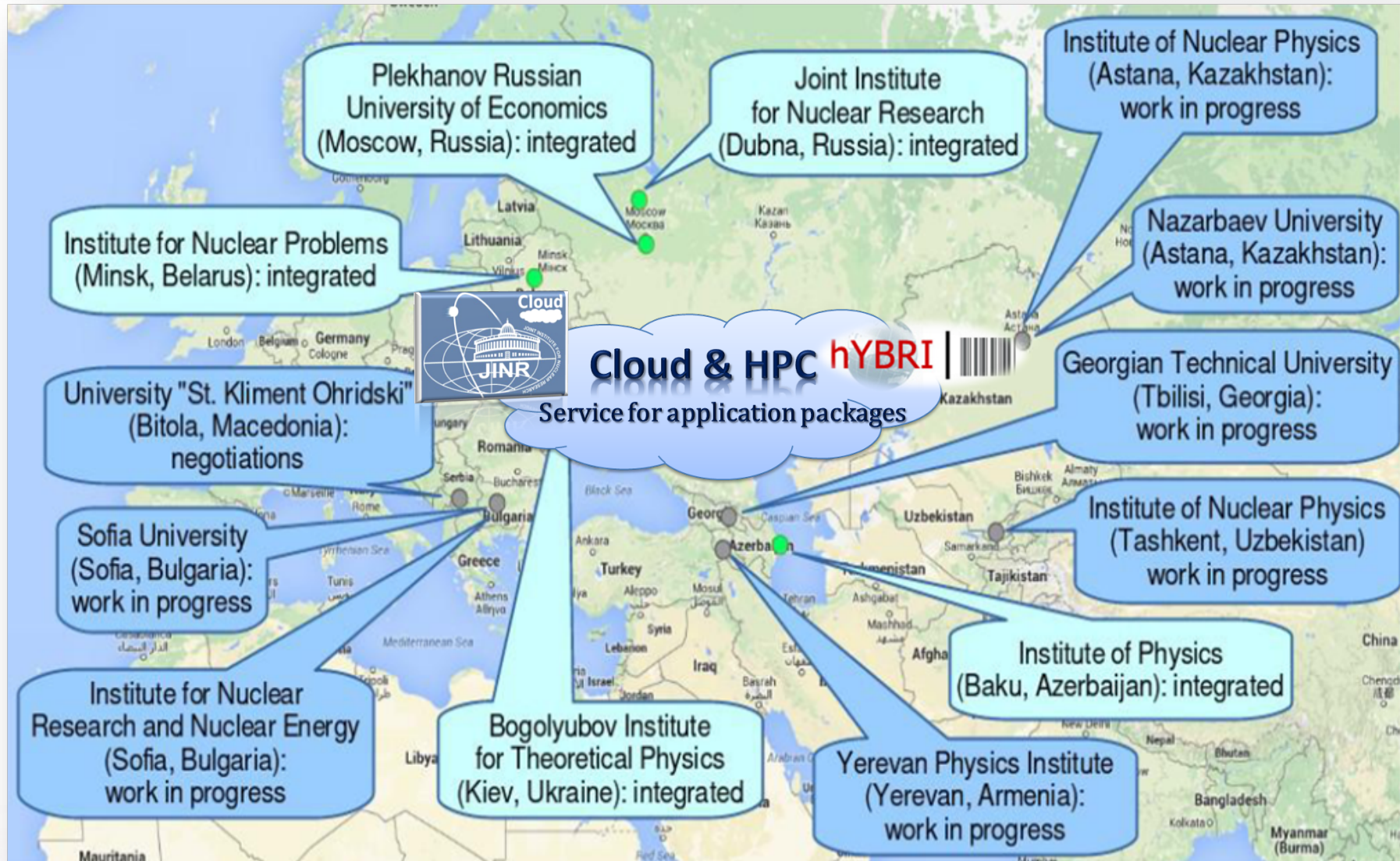
Superconducting magnet SC200
for medical researches



Computation grid



JINR Cloud + HPC





hYBRI | 

Questions?