RESEARCH INFRASTRUCTURE
CELL TECHNOLOGIES IN BIOMEDICINE
INFRAACT

National Roadmap for Research Infrastructures 2017 - 2023
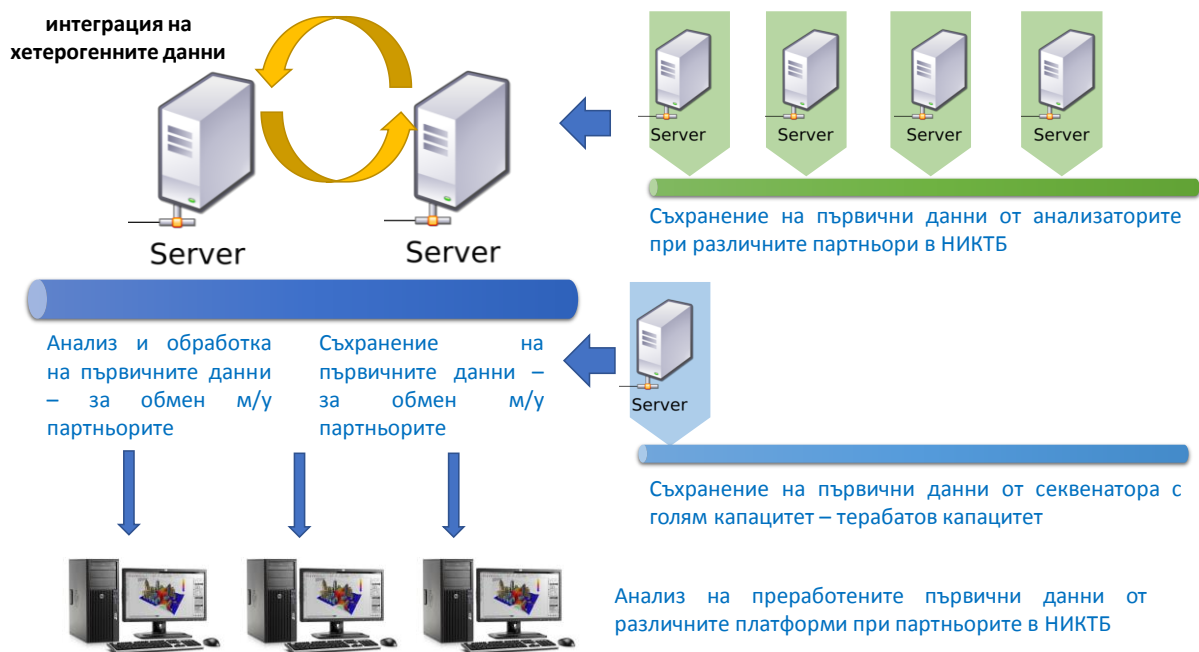
PLATFORM BIOINFORMATICS

The bioinformatic support platform has the challenging task of maintaining the storage and distribution of data between the different partners and the elements of the platforms that are located there. The second main task is the primary analysis of the experimental information obtained from the analytical equipment and the subsequent analysis of heterogeneous data, including large data.

The platform is distributed between three nodes, with installation of one central node for storing large volumes of sequencing and imaging data, incl. workstations / computing server for bioinformatic analysis of derived heterogeneous data, extraction of biologically meaningful information, analysis of signal pathways, etc .; second node is envisagedfor storage and image analysis of the high-performance image analysis system; third node is for storage and processing of proteomics and lipidomics information.
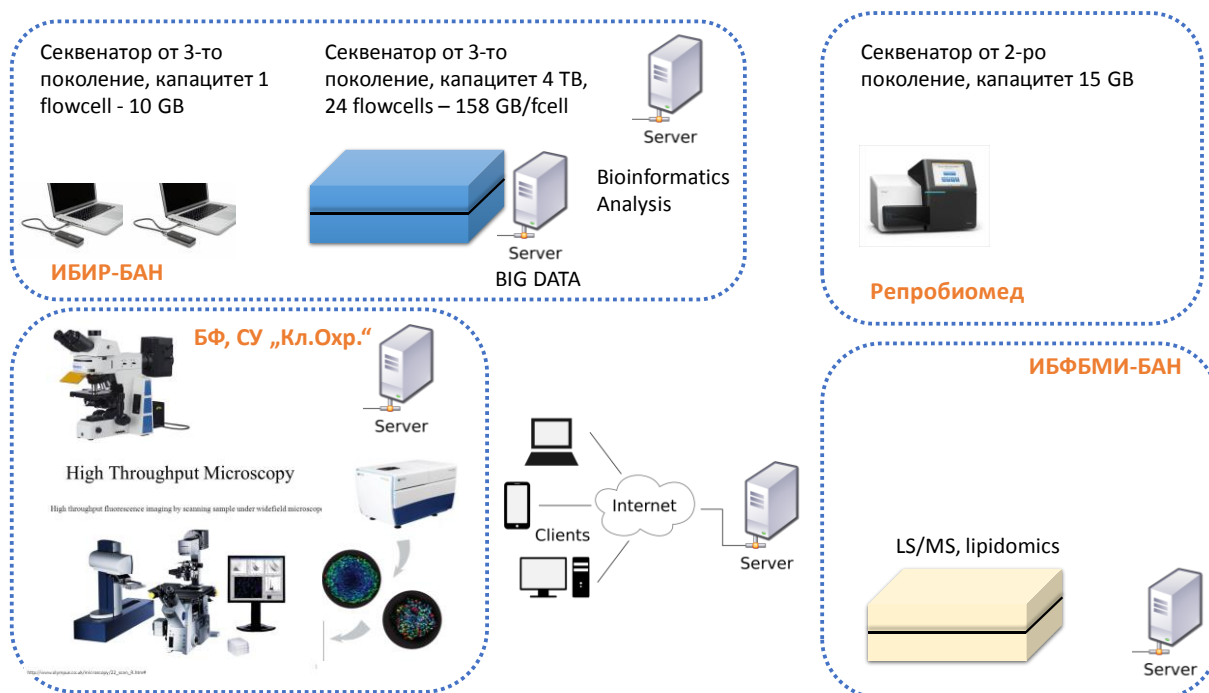
The structure is hierarchical, with each analyzer for large volumes of data generated from sequencers, microscopic systems, image analysis systems, protein detection systems, metabolites etc. having a limited resource for storing primary data - a data server, a disk array, a file server etc.

интеграция на хетерогенните данни

Server   Server

Server   Server   Server   Server

Съхранение на първични данни от анализаторите при различните партньори в НИКТБ

Анализ и обработка на първичните данни – за обмен м/у партньорите

Съхранение на първичните данни – за обмен м/у партньорите

Server

Съхранение на първични данни от секвенатора с голям капацитет – терабатов капацитет

Анализ на преработените първични данни от различните платформи при партньорите в НИКТБ

Through the network of the organization in which the information resource and the analyst are located, primary or processed data is also stored on a central server with shared resources and access mode, time signature during data storage. Sources of extremely large volumes of data (sequencers, imaging) - gigabytes and terabytes data from one study have a larger local resource (a dedicated data server) that is connected to a dedicated data channel with the central data server (gigabit network). Processed heterogeneous data is integrated into a high-capacity computing server that analyzes and integrates data and locates biologically relevant information. The data obtained can be processed by workstations at individual partners to extract and analyze "sections" of heterogeneous integrated data at the discretion of researchers from individual sectors.