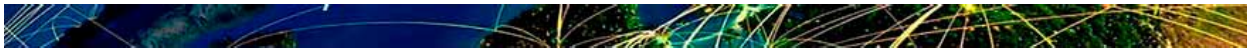


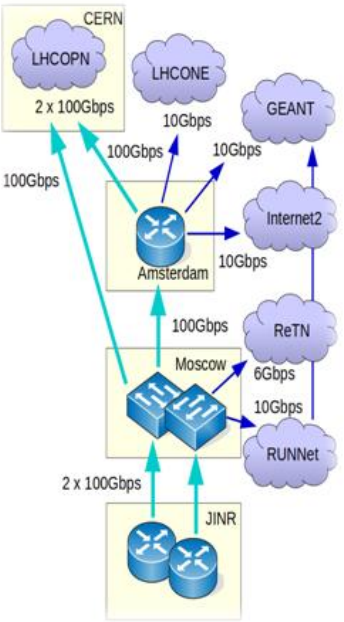
JINR external communication channels

An external optical telecommunication channel uses DWDM technology for data transmission. Ethernet frames are transmitted through DWDM (Dense Wave Division Multiplexing) carrier signals. The most attractive feature of DWDM technology in comparison with traditional optical technologies, in which one optical fiber is transmitted only one digital signal, is the parallel transmission of multiple digital signals over the same optical fiber.

To implement this scheme, the digital stream is cut into parts and transmitted over a number of optical channels , called lambdas (λ). **Each λ in one optical fiber has its own frequency, so there is no overlapping λ in frequency, there is no of data distortion.**

Optical equipment was installed at three points of the JINR-Moscow data channel: at the LIT JINR central telecommunications center, at the intermediate point of the optical highway (Radishchevo settlement), at the Moscow International Exchange (Moscow Internet Exchange) Site Internet.

Data links between JINR's IT infrastructure and external scientific networks, partners and clients.



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