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JINR TIER-1-Level Computing System for the CMS Experiment at LHC: Status and Perspectives

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The status and perspectives of the Tier1 CMS center in JINR, which was initiated by the project "Creation of an automated system for data processing of LHC experiments at Tier1 level and provision of grid-services for distributed analysis of these data", within the federal target program (FTP) of the RF Ministry of Education and Science "Research and developments on priority directions of the development of the scientific and technological complex of Russia on the years 2007-2013" were presented. The September 28, 2012 session of the WLCG Supervisory Council adopted the plan of creating a Tier1-level center in Russia. The project foresees a steep gradual implementation. The first stage ended on December, 2012. A Tier1 prototype was created at NRC "Kurchatov Institute" and at JINR. The next stage (November 2014) provides the final equipment of the complex and commissioning of the full-scale Tier1 center in JINR. Subsequently, it is necessary a regular increase of the computing capacities and data storage systems of the center in accordance with the needs of LHC experiments under the provision of 100% reliability and availability. Such parameters of reliability and availability can be provided uniquely by the creation of a top engineering infrastructure (uninterrupted power supply, climate control) together with a high-speed reliable network infrastructure over dedicated reserved data links to CERN (LHCOPN).

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