COLLABORATIVE IT PLATFORM OF INSTITUTION PROJECT CENTER ITER

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All coordination and interactions between partners in ITER project are based on collaborative infrastructure (IT) of the Project IT infrastructure links together the Headquarters of ITER in Cadarache (France), seven national agencies located in Russia, Spain , India, China, Korea, U.S. and Japan. Infrastructure is based on a specially tuned (to reduce latency) communication lines and includes dozens of databases, hundreds of servers and thousands of users. Through collaborative network ITER coordinates the work of hundreds companies in different parts of the world (CRM system, video/audio and telephone connection, design works in real time, information security).

Russian staff is based on a collaborative IT platform of Project Center ITER (Russian Domestic Agency). Core of the platform is a virtual cluster based on virtualization Hyper-V. Major IT services provided to users are a broadband Internet, which security provides CISCO IronPort, the postal service on the platform of Microsoft Exchange 2010, videoconferencing rooms, communications system based on Microsoft Lync 2013, integrated with Polycom systems, etc. Document management system, information resource based on Microsoft SharePoint. Also the IT infrastructure has accounting system, as well as monitoring system, backup and restore system, antivirus and antispam protection.

To provide effective CAD work the completely independent network infrastructure was designed and implemented. This CAD system is based on the basis of IBM fail-over cluster servers, which are connected to the replica of design documentation database of ITER. It replicates once a day. This branch of network connects the most Russian organizations involved in the design of various components of ITER.

The report describes a part of IT Infrastructure of Project Center ITER, and highlights the experience of its creation and operation as a fault-tolerant computer complex.

The report will be interesting for ITER subsystem's developers, as well as for engineers and technical persons involved in the creation of large fusion installations