



DCI services redundancy

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JUNO DCI availability and reliability

- JUNO DCI is based on DIRAC interware
- Review Committee recommendation is to have the maximum redundancy of DIRAC services
- Some other JUNO DCI services needs to be replicated as well

Possible solutions and issues

- Due the limitation of DIRAC, a complete and real-time service duplication both local and remote is not possible
- Two ways of redundancy can be done according to the experiences of other experiments:
 - duplication of ConfigurationService (CS) and WepApp services on sites
 - Share load of CS which is central service of DIRAC
 - Prepare for a offline backup of DIRAC
 - offline backup of DIRAC MySQL DB
 - In case the service or network is not available in IHEP take a few days, a new service can quickly set up in another sites
 - some possible loss of information is expected

JUNO DCI services replication

- IHEP DIRAC redundancy services are deployed at JINR (WebApp&ConfigurationService):
<https://dirac-ihep-replica.jinr.ru>
- Redundancy servers are monitored centrally by IHEP Nagios monitoring system using service ports

Host	Service	Status	Last Check	Duration	Attempt	Status Information
dirac-ihep-replica.jinr.ru	DIRAC replica.jinr.ru Ports	OK	2020-11-24 16:13:22	0d 0h 17m 28s	1/2	All ports [9135] opened.
	check_ping	OK	2020-11-24 16:12:43	0d 0h 17m 6s	1/2	PING OK - Packet loss = 0%, RTA = 183.96 ms

- Secondary VOMS server for JUNO VO was deployed at JINR
- Full replica of JUNO CVMFS Stratum-1 repository (/cvmfs/juno.ihep.ac.cn) and /cvmfs/dcomputing.ihep.ac.cn are deployed at INFN-CNAF and JINR CVMFS Stratum-1 servers

To be done

- Deploy two/one more DIRAC ConfigurationService at CNAF and/or IN2P3
- Mysql DB duplication