

SDCC Operations During Transition to the New Data Center

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The BNL Computing Facility Revitalization (CFR) project is aimed at repurposing the former National Synchrotron Light Source (NSLS-I) building (B725) located on BNL site as a new data center for Scientific Data and Computing Center (SDCC). The CFR project has finished the design phase in the first half of 2019 and then entered the construction phase in the second half of 2019 which is currently projected to be finished in May-June 2021 timeframe. The occupancy of the B725 data center for CPU, DISK and TAPE resources of the ATLAS Experiment at the LHC at CERN is expected to begin in June 2021, and for all other collaborations supported by the SDCC Facility including STAR, PHENIX and sPHENIX experiments at RHIC Collider at BNL, the Belle II Experiment at KEK (Japan) in July 2021, hence before the end of FY2021. The new HPC clusters and storage systems of BNL Computational Science Initiative (CSI) are expected to be deployed in B725 data center starting from early FY2022. The period of migration of IT equipment and services to the new data center is going to start with the installation of the new central network equipment and deployment of fiber and copper Ethernet connectivity infrastructure in B725, and then followed by the installation of the new tape library for BNL ATLAS Tier-1 site in 2021Q3. This transition period is expected to continue until the end of FY2023, at which stage the majority of CPU and DISK resources hosted by the SDCC Facility are expected to be located on the floor of B725 and only TAPE resources are to remain split between the old and the new data centers. In this talk I am going to highlight the main design features of the new SDCC datacenter, summarize the preparation activities already underway in our existing data center since FY2018 that are needed to ensure a smooth transition into B515 and B725 datacenters inter-operation period starting in 2021Q3, discuss plans to migrate a subset of IT equipment between the old and the new data centers in CY2021, plans to perform a gradual replacement of IT equipment hosted in the old data center during CY2021-2024 period, and show the expected state of occupancy and infrastructure utilization for both data centers up to FY2026.

Speaker release

Yes

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