

RACF/SDCC Datacenter Transformation within the Scope of BNL CFR Project and Beyond

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The BNL Computing Facility Revitalization (CFR) project aimed at repurposing the former National Synchrotron Light Source (NSLS-I) building (B725) located on BNL site as the new datacenter for BNL Computational Science Initiative (CSI) and RACF/SDCC Facility in particular. The CFR project is currently wrapping up the design phase and expected to enter the construction phase in the first half of 2019. The new B725 data center is to become available in early 2021 for ATLAS compute, disk storage and tape storage equipment, and later during the year of 2021 - for all other collaborations supported by the RACF/SDCC Facility, including but not limited to: STAR and PHENIX experiments at RHIC collider at BNL, Belle II Experiment at KEK (Japan), and BNL CSI HPC clusters. Migration of the majority of IT payload from B515 based datacenter to the B725 datacenter is expected to begin even earlier, as the central networking systems and first BNL ATLAS Tier-1 Site tape robot are to be deployed in B725 starting from early FY21, and expected to continue throughout the period of FY21-23, leaving the B515 datacenter physically reduced down to a subset of areas it is currently occupying, and drastically reducing its power profile. In this talk I am going to highlight the main design features of the new RACF/SDCC datacenter, summarize the preparation activities already underway in our existing datacenter since FY18 needed to ensure a smooth transition B515 and B725 datacenters inter-operation period in FY21, discuss the planned sequence of equipment migration between these two datacenters in FY21 and gradual equipment replacement in FY21-24, and also show the expected state of occupancy and infrastructure utilization for both datacenters in FY25.

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