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Construction of a New Data Center at BNL

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Computational science, data management and analysis have been key factors in the success of Brookhaven Lab's scientific programs at the Relativistic Heavy Ion Collider (RHIC), the National Synchrotron Light Source (NSLS-II), the Center for Functional Nanomaterials (CFN), and in biological, atmospheric, and energy systems science, Lattice Quantum Chromodynamics (LQCD) and Materials Science as well as our participation in international research collaborations, such as the ATLAS Experiment at Europe's Large Hadron Collider (LHC) and Belle II Experiment at KEK (Japan). The construction of a new data center is an acknowledgement of the increasing demand for computing and storage services at BNL.

The Computing Facility Revitalization (CFR) project is aimed at repurposing the former National Synchrotron Light Source (NSLS-I) building as the new datacenter for BNL. The new data center is to become available in early 2021 for ATLAS compute, disk storage and tape storage equipment, and later that year - for all other collaborations supported by the RACF/SDCC Facility, including: STAR, PHENIX and sPHENIX 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 the existing datacenter to the new datacenter is expected to begin with the central networking systems and first BNL ATLAS Tier-1 Site tape robot in early FY21, and it is expected to continue throughout FY21-23. This presentation will highlight the key MEP facility infrastructure components of the new data center. Also, we will describe our plans to migrate IT equipment between datacenters, the inter-operational period in FY21, gradual IT equipment replacement in FY21-24, and show the expected state of occupancy and infrastructure utilization for both datacenters in FY25.

Consider for promotion

Yes

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