**SciServer: Collaborative Tools for Data-Driven Engineering and Science**

SciServer ([www.sciserver.org](http://www.sciserver.org)) is an IDIES-developed online system for scientific research and education with big data. The system offers access to several Petabyte-scale scientific datasets in fields ranging from astronomy to turbulence to genomics, along with a set of simple but powerful browser-based tools to visualize and analyze those datasets.

SciServer has grown over the past year to become even more powerful and flexible. The new SciServer Dashboard offers quick access to all SciServer tools and datasets, and to all your prior work within the system. Through the Dashboard, you can manage your uploaded data files, and you can create collaborative groups to share datasets and scripts publicly or with selected colleagues. SciServer makes it easy to share exactly the right data with exactly the right people.

SciServer’s Compute tool continues to enable online computational analysis of big data through Jupyter notebooks. With only a few clicks, you can create a customized environment on fast high-memory virtual machines hosted by IDIES, where you can write or upload Python, R, or Matlab scripts to perform all sorts of data-intensive tasks. The new release of SciServer allows these scripts to be run in either interactive or batch mode, meaning that even the most demanding data-intensive analyses can be completed with ease. To help you scale up your research quickly, SciServer Compute now features a mountable “getting started” data volume that contains example notebooks you can adapt to meet your needs.

In addition to SciServer’s obvious potential for data-intensive science and engineering research, the system has been used effectively in many educational settings, particularly as data-intensive lab activities for undergraduate science courses. Learners get immediate access to high-performance computing resources with no software to install or configure. A new set of “SciServer Courseware” notebooks creates an environment to manage learning activities by creating shareable user volumes and groups so that students and TAs can access files with appropriate permissions.

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