

## SPI-4: Access resource information from an application

An **application developer** needs to add a feature to an application that retrieves and displays up-to-date description and status information about an XSEDE resource from all available XSEDE sources.

In most cases, **developer** wants to experience it as follows.

1. First, the developer accesses XSEDE's online information services documentation and locates the material describing application programmer interfaces (APIs) for resource information.
2. Then, the developer uses one of the documented APIs to add resource information to his/her application, configuring the information retrieved and displayed to the application's needs.
3. Finally, the users of the application view the resulting resource information while using the application.

We'll take any solution, as long as the following are true.

1. The API should enable applications to retrieve information in a web browser format (for direct inclusion in websites) or in machine readable form (for application processing).
2. The API should allow the developer to customize the information details to be retrieved and (for web browser formats) how the details are displayed.
3. The API should enable applications to retrieve (and optionally display) all available XSEDE resource description and status information, including information from RDR, XCDB, Outages, and Nagios/INCA testing status.
4. The API should enable applications to retrieve information about any XSEDE resource, including Levels 1-3 resources, both allocated and unallocated resources, tightly or loosely integrated resources, NSF-funded or otherwise, and campus resources that choose to publish resource information thru XSEDE.