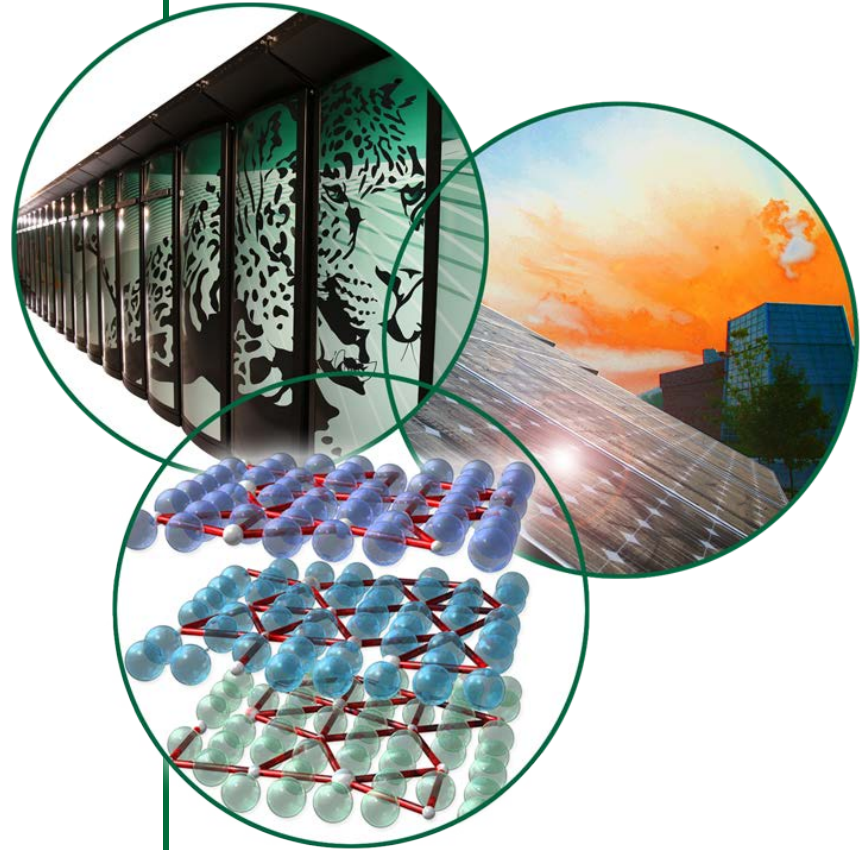


ICAT4 Experience at SNS

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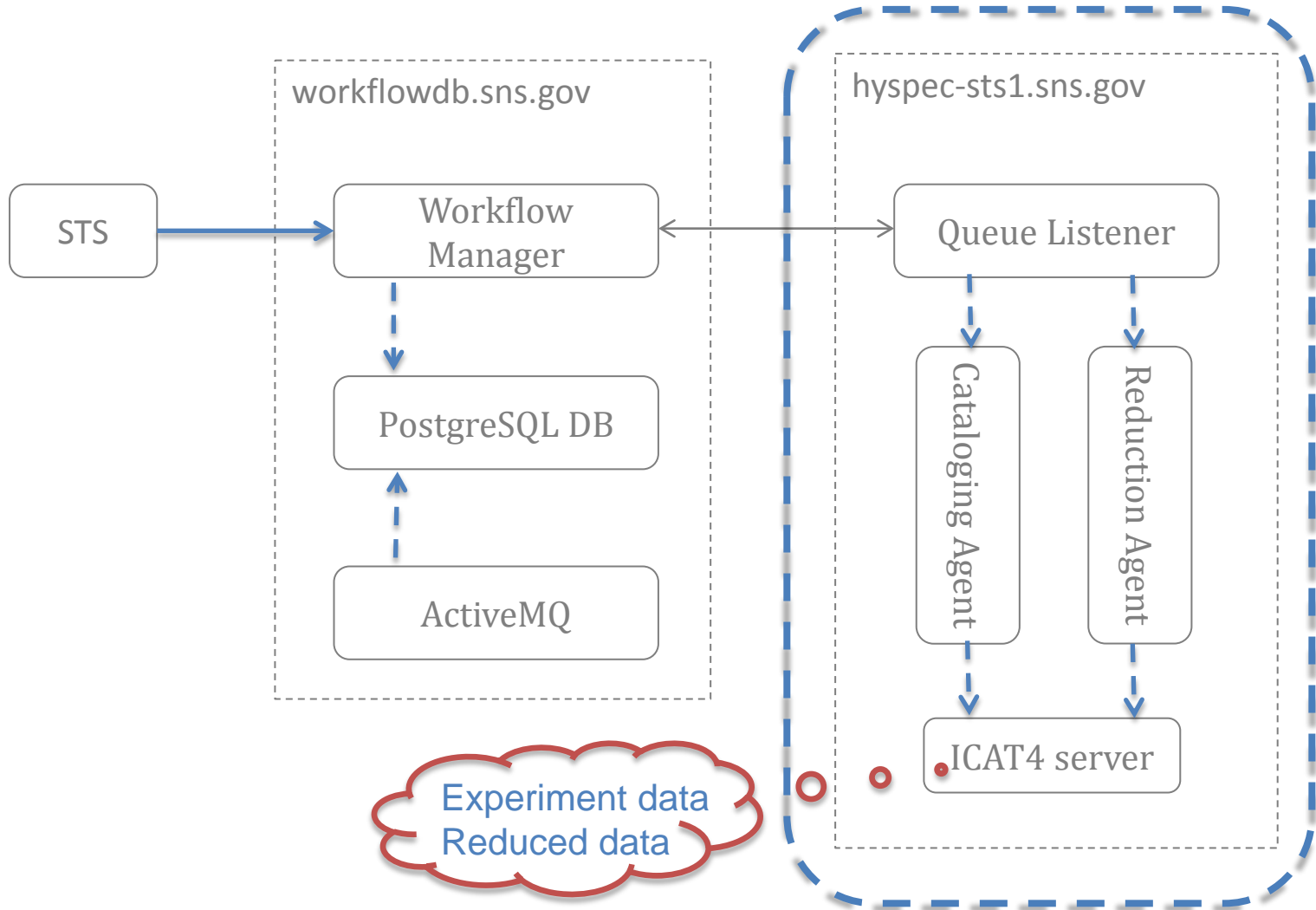
March 12, 2013



ICAT4 Experience at SNS

- In production to catalog experiment data for 12 SNS instruments that are available in the user program
- Provide restful web service to software applications that need to access SNS experiment data
- Support 3 ongoing projects:
 - a. ADARA – added auto reduced data to ICAT4
 - b. Mantid - connected to ICAT4 to search for experiment and reduced data
 - c. CAMM – to add simulation results to ICAT4, our goal is to utilize modeling/simulation results to enhance the analysis of experimental data and to better design future experiments

Accelerating Data Acquisition, Reduction and Analysis





A framework that supports high-performance computing and visualization of scientific data.

The screenshot displays the MantidPlot Python Window interface. The main window shows a Python script named 'StripPeaks.py' with the following code:

```
2 #  
3 # Using StripPeaks + dialog boxes  
4 #  
5  
6 LoadRawDialog(OutputWorkspace="GEM40979")  
7 alg = AlignDetectorsDialog("GEM40979", "aligned")  
8 mtd.deleteWorkspace("GEM40979")  
9 calfile = alg.getPropertyValue("CalibrationFile")  
10 DiffractionFocussing("aligned", "focussed", calfile)  
11 mtd.deleteWorkspace("aligned")
```

The script execution output shows the following status:

```
Script Output - Status: Running ...  
Tue Dec 15 16:58:01 2009: Script execution started.  
Done!  
Tue Dec 15 16:58:23 2009: Script execution completed successfully.  
Tue Dec 15 16:59:31 2009: Script execution started.
```

A 'LoadRaw Output dialog' box is open, showing the following fields and options:

- Select a file to load: [Empty field] [Browse]
- Enter name for workspace: GEM40979
- Spectra Options: Start: [Empty field] End: [Empty field] List: [Empty field]
- Cache file locally: If Slow [Dropdown] [Checked] Load Log Files [Checked] Monitors: Include [Dropdown]
- [?] [Load] [Cancel]

A red cloud-shaped callout contains the text 'EQSANS 1234'.

The background shows a plot with a scale from 0.5 to 2.0. The right sidebar shows the 'Mantid Algorithms' panel with a list of algorithm categories: Arithmetic, CorrectionFunctions, CurveFitting, DataHandling, Diagnostics, Diffraction, Examples, General, Muon, Nexus, Rebin, SANS, and Units. The status bar at the bottom indicates 'Running 0' and 'Details'.



A framework that supports high-performance computing and visualization of scientific data.

WORK IN PROCESS:

- Login: enable users to connect to multiple facilities via a set of facility credentials
- Browse: display aggregated ICAT4 search results in a table workspace from multiple facilities
- Advanced Search: find data by instrument, start and end run numbers, start and end date, and keyword for authorized users
- Download: create a single zip file on demand to enable offline data reduction, analysis, and visualization