

# Cray Performance Tools

## New Scalable Data Format

CScADS 2010

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# Goals

- Quicker processing of raw performance data
- More efficient data navigation
- Scale to handle more data
- Scale to handle larger jobs
- Quicker load time of data into Cray Apprentice2

# Overview

- Raw data collected in binary format
- Raw data post-processed to include symbol table information, create summary information, calculate derived metrics, etc.
- Processed data fed into Cray Apprentice2 and pat\_report for presentation to user

*Design of new format driven by how data will be managed to fit within memory constraints*

# Initial Results Before Tuning

Using profile of PFLOTRAN run on 65,520 MPI ranks, resulting in 800+ MB file:

.xf -> .ap2 conversion time reduced by almost 12X

- OLD
  - 402.83 seconds (a little more than 6 minutes)
  
- NEW
  - 34.50 seconds (about half a minute)
  
- OLD Apprentice2 load time: couldn't handle it
- NEW Apprentice2 initial load time: 17.66 seconds