

# BEACON / PYCOOLR

Observe  
Performance  
Variables

Tune  
Control  
Variables

Publish  
Control  
Variables

Publish  
Performance  
Variables

User (Non-interactive and interactive report analysis modes)

MPI Applications (P3DFFT, HPCG, Amber, 3DStencil)

TAU

MVAPICH

MPI-T  
Interface

Report and  
recommendations

Interactive  
User  
Dashboard

Control  
policies

Get  
Performance  
Variables

Set  
Control  
Variables

Performance  
Variables

Control  
Variables

Advanced  
Performance  
Counters

Topology  
Information

C/R, Migration  
and compaction

Communication  
Mechanisms/  
Algorithms  
selection

Multi/many-cores, hierarchy and heterogeneity, RDMA networks  
(HW Performance counters: CPU, Memory and Network)