NSF Program: CC*

Program Area: Campus Computing   Award Number: 192558

PI: Ron Hawkins

co-PIs: Robert Sinkovits, Subhashini Sivagnanam, Mary Thomas

Project Title: CC* Compute: Triton Stratus

Ron Hawkins

TSCC Program Manger

SDSC / UCSD

rbhawkins@ucsd.edu

Robert Sinkovits

Director, Scientific Applications Group

SDSC / UCSD

sinkovit@sdsc.edu

Subhashini Sivagnanam

Principal Scientific Computing Specialist

SDSC / UCSD

sivagnan@sdsc.edu

Mary Thomas

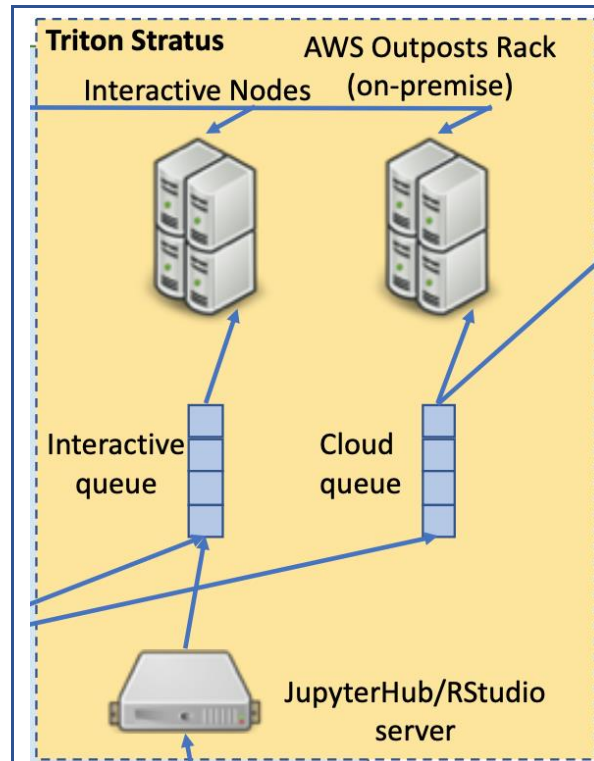Computational Data Scientist

SDSC / UCSD

mthomas@sdsc.edu

Quad Chart for: *CC* Compute: Triton Stratus*

Challenge Project Seeks to Address:

- Increasing use of interactive tools such as Jupyter Notebooks and RStudio
- Attracting researchers used to GUI/portal-driven interfaces
- Facilitating, simplifying use of cloud computing for campus researchers
- Integrating with and scaling to commercial cloud resources for elastic HPC

Deliverables:

- 28 new cluster nodes for interactive use
- Software for migration of scientific apps to commercial clouds
- User GUI (JupyterHub, Open OnDemand)
- Cloud integration for scaling tested notebooks/scripts
- On-premise cloud appliance (Amazon Outposts) for low-latency cloud testing and access
- OSG integration to campus cluster

Broader Impact:

- Reach new generation of researchers
- Support reproducible research
- Improve training & outreach for scientific computing
- "Living" documentation as means of communicating research broadly

Metadata tag:

- *< https://www.sdsc.edu/services/hpc/hpc_systems.html#tscc >*
- *< Just getting started! >*
- *< Your input welcome! >*
- *< Student engagement >*

Triton Stratus — AWS Outposts Rack (on-premise) — Interactive Nodes — Interactive queue — Cloud queue — JupyterHub/RStudio server