ISTI and OCIO
Rapid Response Familiarization Call for Proposals:
"Exploring Cloud Computing 2018"

Synopsis: In order to grow the number of LANL staff with cloud computing skills, the Information Science & Technology Institute (ISTI) and the Office of the Chief Information Officer (OCIO) solicit Rapid Response Familiarization Proposals on the topic of Cloud Computing in Amazon Web Services (see Introduction Video: https://youtu.be/ChJyr2wwT1c). Proposals should focus on demonstrations for how Cloud Computing can be leveraged for scientific computation. Demonstrations can range from deploying LANL-developed software in the cloud environment to leveraging established cloud-based analytics work flows (e.g. pandas, caffe, pytorch, tensor flow) for processing datasets of interest to LANL missions. Proposals are encouraged to leverage the breadth of features available in the Amazon Web Services platform, such as
   - Infrastructure automation (e.g. automatically standing up and breaking down a cluster, cloud formation / auto-scaling)
   - Distributed Computing Abstractions (e.g. MapReduce / Hadoop / Spark / Kinesis)
   - Serverless computation (e.g. Lambda / Batch)
   - Databases (e.g. RDS / DynamoDB / Neptune)
   - Leveraging the spot-instances market for affordable computation

For simplicity, these demonstrations will be conducted in the public Amazon Web Services cloud. Hence, the software and data used for these proof-of-concept demonstrations should **not** be OUO or higher in classification. The project should be feasible with <$1000 of Amazon Web Services compute, provide a rough quote using the cost calculator with your proposal (https://calculator.s3.amazonaws.com/index.html)

Budget: 15k of FY18 G&A funds per proposal (including AWS costs; budget covers about 120 hours for mid-career staff). If you require fewer funds, please note so in the proposal.

Rules of engagement: ISTI Rapid Response efforts form a cohort of participants who learn from each other. Participation in cohort events with the community is highly encouraged. Projects funded from this call will:
   1. Participate in the Rapid Response Kick-off meeting (early July)
   2. Report on their experience (through actual demonstrations if possible) to a general lab-wide audience on a cloud computing day at LANL in the second half of September 2018
   3. Document their work in a report with some format guidance from ISTI by the end of FY18, which ISTI/OCIO will compile into a LANL Cloud Computing Best Practices report and put on the internal website

Proposal format: .25 – 1.0 page, 11pt font as attachment emailed to eidenben@lanl.gov with subject line "ISTI Rapid Response G&A 2018 Cloud Computing Proposal: proposal title". Proposals should briefly describe (i) the application that will be demonstrated in the cloud, (ii) why this application is amenable to a cloud platform, and (iii) what AWS services are expected to be leveraged as part of the demonstration.

Evaluation process: A panel of internal experts will select proposals based on strategic portfolio composition and diversity.

Dates:
Proposal due: June 15, 2018
Funding decision: June 23, 2018
Project start: June 25, 2018
Project end: September 30, 2018

For questions regarding this call, contact Stephan Eidenbenz, eidenben@lanl.gov. For technical questions regarding AWS, contact Carleton Coffrin, cjc@lanl.gov.