Research Associate Position
Center for Analysis and Prediction of Storms (CAPS)
University of Oklahoma

Date: January 6, 2021

Position Description:
The Center for Analysis and Prediction of Storms (CAPS) seeks a highly motivated individual to fill a research associate position that will manage an array of computational and storage hardware and related software, and contribute to research projects in effective utilization of these systems as well as external supercomputers. Most research projects within the Center involve the development, testing and application of complex weather modeling systems and software, storage and high-speed transfer of large volumes of data (up to petabyte scale), and some projects involves realtime data ingest, forecast generation, and product displays on the web.

Salary for the postion will be commensurate with qualification and experience of the successful candidate. The position will remain open until filled.

Job Duties:

- Manage clusters of Linux-based compute and data ingest servers, security gateways, user account authentication system, web servers within CAPS, and set up and configure new servers according project needs.
- Maintain existing Linux-based storage servers and ZFS-based storage subsystems having ~4 PB of data, expand the systems based on project needs while retiring older systems. Work with project principal investigators in transitioning towards OU central IT-based storage solutions.
- Get price quotes and coordinate purchase and installation of desktop computing and server hardware and software following OU IT guidelines and OU purchasing rules and regulations.
- Researching and evaluating emerging technologies suitable for CAPS projects and other needs. Guiding CAPS members in formulating requirements. Investigating available OU IT computing and storage solutions for potential use in CAPS.
- Coordinate with OU IT on CAPS systems and user account administration and meeting security requirements.
- Assist CAPS staff scientists and students in initial setup and maintenance of desktop computers and laptops and relate software.
- Develop and maintain hardware and software system documentations, and provide necessary user support. Install user requested software packages such as compilers and libraries.
- Modernize CAPS web display of realtime forecast products.
- Performing other related duties as assigned

Required Education and Experience
A BS degree or above in physical science or computer science is required.

Required Experience

- At least two years of experience with Linux system administration including configuring new hardware and troubleshooting and upgrading existing servers.
- Experience managing Linux-based storage servers and large file systems, particularly ZFS-based systems
- Experience in maintenance and troubleshooting of desktop computers and laptops.
- Experience with, at least, basic web site/page development.

Other Desirable Experience

- Experience with high-performance computing
- Experience with UNIDATA meteorological software tools for data ingest and management such as LDM.
- Experience with workflow scripting using Python, Perl and/or shell scripts
- Experience with weather modeling, data handling and assimilation

Skills: Demonstrated written and oral communication, and decision making skills. Computer, mathematical and analytical skills commensurate with the position.

GO2 – Detail oriented for accuracy of data and information
GO3 – Highly organized and able to handle multiple projects and deadlines
GO4 – Able to communicate well and build rapport quickly with students, faculty and staff
GO5 – Able to produce reports and complete work within deadlines
GO6 – Strong initiative to solve problems
RA1 – Must be able to perform basic data analysis

Instructions for Application: Please submit the following to Keith Brewster, Director of Operations (kbrewster@ou.edu): (1) a resume; (2) a brief statement describing relevant experience, skills, and qualifications, and interests in the current position. Please remit these by January 25, 2021. Candiates passing the initial screening will be contacted for an interview with the CAPS leadership.

Background Information on CAPS: CAPS (http://www.caps.ou.edu) was established more than 30 years ago as one of the first NSF Science and Technogogy Centers. It is a pioneer in the science and technology of thunderstorm prediction, and remains a leader in the field of numerical weather and environmental modeling, prediction and data assimilation spaning multiple spatial and temporal scales. CAPS's annual research expenditure is over $2 million, the majority of the projects involve complex modeling systems run on high-performance computers.