

Opportunity Title: ORNL Scalable Computing and Data User Support Post-Master's Research Associate Opportunity Reference Code: ORNL18-02-CCSD

Organization Oak Ridge National Laboratory (ORNL)

Reference Code ORNL18-02-CCSD

Description The National Center for Computational Sciences (NCCS) at Oak Ridge National Laboratory (ORNL) provides the nation's most powerful scientific computing resources to researchers across the world. With the fastest computer in the nation operating at 27 petaflops, High-Performance Computing (HPC) User Support Specialists at ORNL provide scientists with training, documentation, and scientific application support to enable their successful use of these resources. NCCS systems are typically the first and largest of their kind; applicants for the HPC User Support Specialist position must have strong problem-solving skills, strong communication skills, a commitment to excellent service, and a willingness to learn.

> CADES, a laboratory facing big data facility, is a unit within NCCS and is looking for a user assistance specialist who will facilitate user requirements and issue triaging, user training, and scientific application support.

Major Duties/Responsibilities:

• Take technical ownership of user reported problems and provide support for scientific applications and libraries and users of high performance computing systems and clusters.

- Compile and debug large science and engineering applications.
- Identify and resolve system-level bugs in conjunction with other technical staff.
- Work with vendors to resolve issues and implement changes as necessary.

• Install third-party software applications and tools and provide documentation for usage.

• Proactively ensure that users have up-to-date information about the system, including any changes and their impact on the users. HPC User Support staff is very involved in researching and developing documentation and reference material during system early-use and upgrade phases, as well as maintaining them throughout system operation.

• Participate in the development and maintenance of training materials for users.

• Respond to general administrative questions (e.g., system status, requests for access or special accommodation, etc).

• Implement special projects as requested (e.g., metrics, cyber security, policy discussions).

• Provide mentorship and guidance to interns.

Qualifications • Master's in Computer Science or related field

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- 1+ years of experience in at least one area of user support including:
 - o Operations
 - o Parallel processing and/or programming
 - o User training
 - o Software administration
 - o Software development, and/or hardware

• Requires practical experience with multiple programming languages and technologies including several of the following:

- o Fortran
- оC
- o C++
- o Perl
- o Python

o Shell scripting (e.g., bash, ksh, etc.) in a Linux or Unix environment

Preferred:

- · Experience with version control systems such as Git
- · Experience developing software applications for end users
- Experience using Atlassian tools such as Confluence, JIRA, and Service Desk
- · Experience installing scientific software on HPC systems
- · Understanding of the requirements of a DOE, DoD, or NSF HPC center

• Experience with scientific workflow tools such as Fireworks and/or Pegasus

- Experience with HPC schedulers and resource managers
- · Experience with NVIDIA GPU accelerators
- · Strong technical and analytical skills
- Strong verbal and written communication skills

• Ability to work with individuals at all levels and diplomatically manage customer expectations

· Willingness to accept personal responsibility for client satisfaction

• Maintains the highest level of professionalism at all times when interacting with internal and external customers

· Demonstrates a high-energy, positive attitude and commitment to quality



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customer service

• Contributes to a positive team environment within the center by demonstrating a strong work ethic, effectively communicating with others, and proactively anticipating center and user needs

- · Experience responding to and solving user reported issues
- · Experience in coordinating and leading user training activities

• Previous experience installing 3rd party software applications on high performance computing resources.

· Experience mentoring and providing oversight to interns

The ORNL Postgraduate Research Associates Program is administered by Oak Ridge Associated Universities through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education (ORISE).

Eligibility • **Degree:** Master's Degree received within the last 60 month(s).

- Requirements Discipline(s):
 - Computer, Information, and Data Sciences (16)
 - Engineering (1.)

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