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Developed by:GB
Reviewed by: GB, JP, DLJ
Approved by:LK
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UNIVERSITY OF RHODE ISLAND
Position Description

TITLE: Manager, High Performance Computing (HPC) Systems
DIVISION: Academic Affairs
REPORTS TO: Chief Information Officer (CIO)
GRADE: 15
SUPERVISES: Support staff, student employees as needed

BASIC FUNCTION:

Maintain responsibility for all systems administration of the University's high performance and general research computing environment that serves faculty, students, staff and external users.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

Administer, maintain, and program high performance and research computing environment that may include cloud-based systems, as well as local physical and virtual systems.

Proactively and reactively identify and solve operational and software problems.

Install and test new equipment and upgrades, as well as cloud-based solutions.

Install, patch, and test operating systems and software.

Install and develop tools as necessary for system administration.

Monitor HPC and research computing environment health and utilization.

Tune and configure the environment to maximize performance.

Design and administer backup of critical files, and restore when necessary.

Collaborate with URI Information Security to properly secure the environment.

Ensure regulatory and service level compliance, as necessary.

Partner with and assist researchers in grant applications, as appropriate.

Collaborate with HPC and Research Computing Advisory Council to ensure understanding of hardware and software needs, options and tradeoffs, as well as related financial needs and implications; Implement the committee's technical decisions.

Provide user training workshops and online documentation.

Respond to user problems and requests.

Assist the CIO and Advisory Council in budget development and with short and long-range planning for high performance and research computing.

Supervise staff and student workers, as needed.

OTHER DUTIES AND RESPONSIBILITIES:

Perform other duties as assigned by the CIO.

LICENSES, TOOLS AND EQUIPMENT:

Computer clusters and servers.

ENVIRONMENTAL CONDITIONS:

This position is not substantially exposed to adverse environmental conditions.

QUALIFICATIONS:

REQUIRED: Bachelor's degree; Minimum of five years' experience in Linux systems administration, including at least one years' experience in Linux HPC systems administration; Minimum of three years' experience in large, multi-user computer systems; Demonstrated strong interpersonal and verbal communication skills; Demonstrated proficiency in written communications skills; Demonstrated experience in troubleshooting skill; Demonstrated ability to function in a complex, multi-user and multi-function computing environment; Demonstrated ability to function in a mission critical computing environment; Demonstrated familiarity with data management and large (multi-Terabyte) file systems; and, Demonstrated ability to work with diverse groups/populations.

PREFERRED: Graduate degree in computer science or STEM discipline; Demonstrated experience with CentOS; Demonstrated experience in a large scale (1000+ CPU cores) high performance computing environment; Demonstrated experience in a university environment; Demonstrated familiarity with schedulers such as SLURM (Simple Linux Utility for Resource Management); Demonstrated familiarity with design of HPC systems; Demonstrated experience with networking and cyber security; Demonstrated experience scripting in Perl, Python or Bash; Demonstrated familiarity with virtualization environments for running background research applications; Demonstrated familiarity with Big Data applications; and Demonstrated experience with hardware installation.

ALL REQUIREMENTS ARE SUBJECT TO POSSIBLE MODIFICATION TO REASONABLY ACCOMMODATE INDIVIDUALS WITH DISABILITIES.