

High Performance Computing (HPC) Systems Administrator
The University of Iowa

The University of Iowa Information Technology Services organization (ITS), a campus-wide provider of technology services for academic, research, and service missions, is seeking a High Performance Computing (HPC) Systems Administrator which functions under the direction of the manager for Research Services. This core position works in collaboration with the campus research support community to manage HPC systems, policy development, and make configuration and purchase recommendations. Individuals at this level work independently, with guidance from the manager, to perform routine and advanced administrative tasks and provide formal and informal training in assigned areas.

The position will be filled as a Systems Administration & Systems Programmer, Level II (PC37, pay grade 09), or Level III (PC38, pay grade 11) based on the qualifications of the successful candidate.

To be eligible for Level II, the candidate will typically have:

- Reasonable systems administration and/or systems programming experience (typically 3-5 years)
- Reasonable experience in high performance computing (HPC) applications and Linux clustering technologies
- Reasonable experience in developing or managing programmatic solutions in a homogeneous environment

To be eligible for Level III, the candidate will typically have:

- Considerable systems administration and/or systems programming experience (typically 5-7 years)
- Considerable experience in high performance computing (HPC) applications and Linux clustering technologies
- Considerable experience in developing or managing programmatic solutions in a heterogeneous environment

CHARACTERISTIC DUTIES AND RESPONSIBILITIES

- Designs, configures, documents, and provides highly specialized expertise in the installation, deployment, and operation of high performance computing (HPC) and storage systems. Guidance and support is provided for testing activities, and migration of applications from test to production environments.
- Guides and mentors junior support staff and University of Iowa student workers (graduate and undergraduate) in support of campus eResearch community.
- Software selection, install and support
 - Tests and recommends viable software in order to solve researcher's problems.
 - Installs software in an easily maintainable manner with supportability in mind.
 - Analyze and resolve issues relating to software compatibility, usage, or bugs.
 - Performs system upgrades and maintenance to maintain system integrity
 - Explores new options regarding system capabilities.
 - Helps develop and administers user and system software for equitable system usage.
- Researcher consulting
 - Educate researchers on system usage and policies.
 - Facilitate system overview classes for groups of new researchers.
 - Assess new researcher's needs and assure system compatibility.

- Troubleshoot and resolve researcher problems with system or code usage.
- Intra-institutional collaboration
 - Works in close collaboration with other campus research constituents to further University Strategic Plan.
 - Assists with HPC policy development and implementation of those policies.
 - Working in a matrix environment, continues to build cross campus relationships in order to further research on campus and support inter-disciplinary research efforts.
- Inter-institutional collaboration
 - Utilizes inter-institutional HPC relationships to solve complex issues.
 - Continuously develop new contacts to further collaboration efforts.
- As part of a team, researches vendor options and makes purchase recommendations regarding vendor service relationships, technology and tools.
- Position assists with management and maintenance of research data center facilities.

BASIC QUALIFICATIONS REQUIRED

- Bachelor's degree in Engineering, Computer Science, or a related field. An equivalent combination of education and related experience in technical support may also serve to meet these minimum requirements.
- Experience in administration of Linux or Unix Operating Systems for production services is necessary.
- Knowledge and experience with system hardware installation, networking, system security, and system software maintenance is required.
- Knowledge and experience of Linux/Unix high performance computing (HPC) applications, and Linux clustering technologies.
- Knowledge of parallel file system technologies.
- Knowledge and experience in designing and operating HPC networked multi-user systems.
- Ability to consult with and train HPC users in application and operating system fundamentals.
- In depth knowledge of queuing systems and resource managers.
- In depth understanding of fair-share policies, reservation mechanisms and batch processing.
- Ability to troubleshoot and resolve scheduling issues in a timely manner for mission critical job runs.
- Knowledge of system processes to maintain smooth system operation and throughput.
- Ability to guide and effectively leverage undergraduate and graduate students in supporting multi-user HPC systems.
- Ability to communicate effectively, both orally and in writing, with technical and non-technical staff.
- Ability and willingness to perform new tasks in a quickly changing environment.

DESIRABLE QUALIFICATIONS

- Knowledge of web design and programming.
- In depth knowledge of condor scheduling and systems.
- Skill in planning for large conference presentations.

ADDITIONAL INFORMATION

- About ITS Campus Technology Services , visit: <http://www.its.uiowa.edu/>
- ITS offers competitive salaries, and an attractive, flexible and friendly work environment. As an institution of higher education, we encourage and support your professional growth. The University's comprehensive benefits package includes:

- The UI offers regular employees a variety of [health insurance](#) plans including both traditional indemnity and managed care plans.
 - The UI contributes 5-1/3% and you contribute 3 -1/3% on the first \$4,800 of salary. Thereafter, the University contributes 8% of your budgeted salary, while you contribute 5%.
 - UI regular employees enjoy a liberal vacation and sick leave policy:
 - Vacation accrues at 16 hours/month after the first day of hire.
 - Sick leave accrues at 12 hours/month after the first day of hire.
 - All regular employees receive 11 paid holidays: 9 scheduled holidays and 2 personal holidays that accrue and are taken as vacation.
 - Accrued sick leave in certain circumstances can be converted to vacation leave.
 - The flexible benefits program for Professional & Scientific staff allows you to direct your money where you want it to go, e.g., dependent care, choice of health care plans, dental, life insurance, etc.
 - More detailed information is available on the [Benefits Office website](#).
- The selection process will include a credential and criminal background check on final candidates.
 - To apply, please visit: <https://jobs.uiowa.edu/> and reference the position by classification of Systems Administrator & Systems Programmer, **Requisition #57996**.

WHY the University of Iowa? We encourage you to consider a career at the U of I, Iowa's largest employer and a university with a world-renowned reputation. From the health sciences to the arts, our aim is to provide a diverse and technologically advanced community where all can work and learn together to achieve excellence. We strive to realize the Iowa Promise to become one of the ten most distinguished public universities in the country.

**The University of Iowa is an Affirmative Action/Equal Opportunity Employer
Women and minorities are encouraged to apply**