

Opportunity Title: EPA Database and UNIX Administrator Associate

Opportunity Reference Code: EPA-SSP-0012-8

Organization U.S. Environmental Protection Agency (EPA)


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Description The EPA Environmental Research and Business Support Program has an immediate opening for an EPA Database and UNIX Administrator Associate with the Office of Research and Development at the EPA Research Triangle Park facility in Raleigh Durham, NC.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

The National Center for Computational Toxicology (NCCT) is responsible for developing computational tools and solutions for improving environmental risk assessments and regulatory decisions pertaining to chemical safety and sustainability. The NCCT ToxCast and Tox21 projects are testing thousands of chemicals in a wide range of state-of-the-art high-throughput biological assays, with the goal of building computational models for predicting toxicity. Supporting this effort are various databases tracking massive amounts of information related to bioassay outputs, chemical structures and identifiers, and detailed tracking of the chemical samples undergoing testing. The team is seeking an individual, at least 18 years of age who has completed a Master's degree, preferably in computer science/engineering, bioinformatics, math, library science, information science or a related field of study, to provide database administration, database performance modelling and tuning, and UNIX system administration support for NCCT's database management systems and Linux servers. This effort is expected to begin approximately November 2015.



The selected applicant shall provide database and UNIX system administration support for NCCT's database management systems and Linux server environment. The applicant will work closely with NCCT's Application Architect and Data Architect to provide support of the Center's database and server environments. Training will be provided on current database management systems, database and server tuning and performance monitoring, and backup strategy, planning and execution. The candidate will be a member of a multi-disciplinary research team and will be trained to support the design, development, programming, testing and maintenance of multiple database management systems and servers requiring access to chemical and biology schemas that provides a foundation for all of NCCT's programs.


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Database Administration responsibilities will include:

- Monitoring, and improving existing database schemas and queries,
- Executing performance tuning of database management systems,
- Documenting entity relationship models for new and existing schemas,
- Assisting NCCT application team in transformation of data into tabular, relational and graph systems,
- Creating/Documenting/Maintaining scripts to perform database backups,
- Creating scripts to transform data from one format to another, example: comma separated value text file to JSON or XML, and
- Creating new schemas and users to interact with applications and support scientific research.

Server Administration responsibilities will include:

- Maintaining user and group management,
- Monitoring system logs and performing troubleshooting tasks,
- Installing scientific software packages,
- Creating/Documenting/Maintaining scripts to perform systems tasks,
- Participating in team code reviews, and
- Maintaining records of meetings, correspondence, action documents, and maintaining a system to track projects in progress.

Communications-related responsibilities will include:

- Participating as a member of a multi-disciplinary research team,
- Interacting with other members of the development team as well as EPA scientists, and
- Documenting code and database development efforts.

Selected candidate may be asked to present work performed as a poster at a scientific conference.

Location: This job will be located at EPA's Research Triangle facility in Raleigh-Durham, NC.

Salary: Selected applicants will become temporary employees of ORAU and will receive an hourly wage of \$27.31 for hours worked.

Travel: Occasional overnight travel may be required.

Expected Start Date: The position is full time and expected to begin November 2015. The initial project is through May 14, 2016, followed by up to four (4) 12-month optional periods.

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For more information, contact EPAjobs@orau.org. Do not contact EPA directly.

Qualifications Eligible applicants must:

- Be at least 18 years of age and
- Have earned a master's degree computer science/engineering, bioinformatics, math, library science, information science or a related field of study, from an accredited university or college within the last 24 months and
- Be a citizen of the United States of America or a Legal Permanent Resident.

EPA ORD employees, their spouses, and children are not eligible to participate in this program.

Required Knowledge, Skills, Work Experience, and Education

The applicant shall:

- Have education and/or experience in organization of information, database systems, and Linux server environment,
- Have demonstrated leadership skills and have experience working in teams, and
- Have strong written, oral and electronic communication skills.

Desired Expertise, Skills, Education, and/or Experience

It is desirable for the applicant to have:

- Proficiency in at least one modern general purpose programming language and completed computer programming or web programming course or experience,
- Completed two courses in Database design/concepts/systems,
- Proficiency with Microsoft Office applications (i.e., Excel, PowerPoint, Word, Outlook), desktop publishing, and the Internet,
- Familiarity with command line interface on linux operating system,
- Knowledge of Linux shell (bash) scripting concepts,
- Knowledge of database design and development practices,
- Familiarity with MySQL, MongoDB, and/or a graph database such as Stardog or Allegrograph, and
- Knowledge of information management concepts.

How to apply:









Submit application and supporting documents by clicking on Apply Now button.

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**Eligibility
Requirements**

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree or Doctoral Degree received within the last 24 month(s).
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (12 )
 - **Computer, Information, and Data Sciences** (16 )
 - **Earth and Geosciences** (21 )
 - **Engineering** (27 )
 - **Environmental and Marine Sciences** (14 )
 - **Life Health and Medical Sciences** (45 )
 - **Mathematics and Statistics** (10 )
 - **Other Non-Science & Engineering** (1 )

Affirmation

I certify that I am at least 18 years of age; a recent graduate with a master's degree computer science/engineering, bioinformatics, math, library science, information science or a related field of study; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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