Position Type: Exempt

Position Title: Lead DevOps Engineer

Division: Digital Services and Technologies (DST)

Department: Software Systems Development and Research (SSDR)

Reports to: Ben Wallberg

Prepared by: Ben Wallberg

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As the largest university library system in the Washington D.C.-Baltimore area, the University of Maryland (UMD) Libraries serves more than 41,000 students and 14,000 faculty and staff of the flagship College Park campus. The Libraries' extensive collections, programs, and services enable student success, support teaching, research, and creativity, and enrich the intellectual and cultural life of the community. A member of the Big Ten Academic Alliance and the Association of Research Libraries, the UMD Libraries were honored with the 2020 Excellence in Academic Libraries award in the university category from the Association of College and Research Libraries.

The University of Maryland Libraries are committed to advancing diversity, equity, inclusion, and accessibility. We support university and library efforts to create a more just campus environment, understanding the unique, interdisciplinary focus of libraries and archives as collectors and curators of the historical, literary, artistic, and scientific record. We provide collections, services, and programs that reflect the diversity of our community, heighten cultural awareness, and incorporate the histories, experiences, and expressions of those who have been historically marginalized and/or underrepresented. We work to ensure equitable access to our facilities, resources, and services.

NATURE OF WORK

The Lead DevOps Engineer is responsible for building and maintaining the University of Maryland Libraries' application deployment environments. The Lead DevOps Engineer utilizes software development techniques to automate application deployments and to automate system monitoring and notifications. This work is performed in close collaboration with software developers and leads to high availability and performance of applications as well as an agile deployment lifecycle. The incumbent maintains applications and systems through monitoring,

troubleshooting and tuning resources such as cpu, memory, disk, and network, and will ensure systems are properly redundant, backed up and prepared for disaster recovery.

The current deployment environment is a physical hardware infrastructure based on Dell/VMWare ESXi servers for vSphere management and VEEAM backups, DELL Compellent Storage, SAN fibre switches, and network switches. The incumbent maintains this physical hardware infrastructure as well as the vSphere virtual environment which runs RHEL Linux, Kubernetes, Docker, and Windows based technologies. The incumbent provides systems administration for the RHEL Linux, Kubernetes, and Docker based virtual environments.

The incumbent will also participate in investigating a cloud based deployment solution such as Amazon Web Services. If the project is approved, the incumbent will be responsible for migrating our existing applications and managing the cloud deployment environment.

DUTIES AND RESPONSIBILITIES

20% - Provide leadership to SSDR DevOps Engineers and Software Developers in the area of application deployment. Research and recommend best practices for secure, highly available deployments. Document and promote selected best practices and procedures. Develop plans for updating and migrating technologies, and lead the implementation of those projects.

20% - Build and maintain deployment environments to support RHEL Linux, Kubernetes, Docker, and Windows based technologies. Install, configure, and monitor physical hardware. Manage resources in a virtual environment using vSphere. Build and administer RHEL Linux VMs, including managing Kubernetes/Docker clusters.

20% - Research, plan and introduce continuous integration, automated builds, continuous deployment, application monitoring, etc. Plan and implement robust production environments and contribute to high uptime/availability of library applications. Support the deployment lifecycle for development, testing, quality assurance, and production (DTAP) environments.

20% - Troubleshoot system problems across platform and application domains. Suggest architecture improvements and recommend process improvements. Evaluate new technology options and vendor products. Ensure critical system security through the use of best in class cloud security solutions. Assists in incident response efforts, including on premise troubleshooting and triage, which occasionally occur outside of normal business hours.

15% - Utilize project management tools such as Jira and Sysaid to record and monitor progress; manage code using Git; monitor ticket-tracking systems for troubleshooting; produce and maintain thorough application and change management documentation.

5% - Other Duties and Activities:
- Engages in shared-governance and/or service activities, as appropriate and/or in areas in which the individual is interested in volunteering.
- Participates in library-, consortial- or campus-related task forces, committees, and initiatives, as assigned.

- Participates in training related to promoting diversity, equity, inclusion, and accessibility, as provided by the University, the Libraries, and/or other recognized higher education or community organizations.
- Contributes to achieving the University's and/or the Libraries' diversity, equity, inclusion, and accessibility goals.
- Performs other duties, as assigned.

PHYSICAL DEMANDS

The position entails primarily sedentary work that involves remaining in a stationary position for long periods of time and the ability to occasionally transport up to 50 pounds

Must be able to operate computers, objects, tools, or controls.

Must be able to commute to the UMD campus and to the offsite data center, sometimes to deliver and install hardware and occasionally on short notice for emergency responses.

SUPERVISORY RESPONSIBILITIES

None

QUALIFICATIONS

Required:

- Demonstrated ability to research and learn new technologies
- Demonstrated ability to systematically analyze and solve complex technical problems
- Strong service orientation
- Ability to work independently and collaboratively as a member of a team
- Excellent interpersonal skills
- Excellent troubleshooting skills.
- Excellent written and verbal communications skills

EDUCATION

Required: Bachelor's degree

Preferred: Bachelor's Degree in a field related to information sciences, computer sciences and engineering, or information management

EXPERIENCE

Required:
- Minimum of five years experience as a DevOps Engineer, Systems Administrator, or Software Developer.

Preferred:
- Experience researching, testing and evaluating vendor hardware and software products
- Experience using or administering RHEL Linux servers
- Experience developing, managing, and deploying using Docker or Kubernetes.
- Experience managing and deploying applications in a cloud environment, such as Amazon Web Services
- Experience with Ansible, Chef or Puppet and open source CI tools
- Experience with SAN/NAS infrastructure.
- Experience with a programming language like Python or Ruby
- Experience using version control systems, such as Git

Offers of employment are contingent on completion of a background check. A prior criminal conviction or convictions will not automatically disqualify a finalist from employment. Prior to any adverse decision, you will have an opportunity to provide information to the University regarding your background check. You will also be provided an opportunity to appeal any decision prior to a final outcome.