Position #012092

IS Systems Development Services Specialist

DevOps Engineer

POSITION SUMMARY

Under the advanced level support of the Bureau of Information Technology Services (BITS) Development, Data and Middleware Supervisor, this position provides leadership in the design, development and implementation of the application delivery platform and the automation of ETFs development tool chain from inception to completion. This position provides input and facilitates development of highly complex development tool chain automation, application hosting and systems integration. This includes maintaining and systematizing legacy systems, developing new systems, and implementing commercial-off-the-shelf (COTS) software systems. This position provides coordination in all aspects of the development tool chain and DevOps including strategy, technical design, development, implementation, governance, and testing utilizing mainframe, web, mobile, cloud platforms and Software as a Service.

Serving as a DevOps automation engineer and integrator, this position leads the middleware and development teams in the selection, design, adoption and integration of the development tool chain. The role provides support with identifying, establishing, and adopting innovative approaches for development of business solutions including new tooling, frameworks, methodologies and the generation of initial procedures, policies, and standards for the adoption of DevOps at ETF. This position will coordinate efforts to design ETFs new development toolchain to enable continuous integration and continuous delivery to increase ETFs release velocity and deployment reliability by leading meetings with the middleware, DBAs and development teams on task estimation, sprint planning meetings, sprint review meetings, and sprint and project retrospectives. This includes facilitating meetings and standups with technical teams/architects/product owners to refine requirements for defining DevOps strategy, the selection of new tools and their implementation and adoption. This position coordinates and monitors multi-functional teams to achieve daily, sprint, and project goals for middleware and DevOps initiatives. This position will collaborate with technical staff at ETF, DET and other agencies, technical users, security, and technical product owners to make sure product acceptance criteria is clear, meets technical users' needs and requirements, and is implemented effectively. This position will lead efforts to continuously improve processes based on feedback from retrospectives, development and monitoring of key performance metrics and communication with major stakeholders. The position coordinates all aspects of assigned systems development tool projects and integrations; plans and budgets for product deliveries, manages human and fiscal resources; effectively negotiates timelines, products and other project concerns with top management positions this includes ETF leadership, the Division of Management Services Administrator, the Chief Information Officer, and other BITS Management. This position will also provide status and completion reports to management.

The position will participate in operational projects and will provide technical knowledge for application hosting and system development tool chain activities. They will provide assistance with delivering high quality software solutions for ETF Legacy systems, new systems development and the implementation of new business solutions expeditiously and efficiently. ETF is committed to serving our members and employers with the highest quality services possible while simultaneously pursuing new high-value initiatives. This position will help ensure that we meet our operational deliverables, while enhancing and modernizing ETF application hosting and delivery systems.

This position participates in the application change control process, project meetings. This position works with BITS management and key stakeholders to develop key performance indicators (KPI's) and metrics.

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As an employee of ETF, the incumbent will support and create a diverse and inclusive work force.

GOALS AND ACTIVITIES

35% GOAL A: Participate in the development and implementation of the strategy and design of the emerging and complex technologies within ETF for application delivery automation and orchestration of the application delivery pipeline, and modernizing the development toolchain involving mainframe, web, mobile, cloud, DevOps and Software as a Service to meet business and users' needs.

    A1. Participate in efforts to define, research, and select tools, techniques, standards, and methodologies while architecting innovative solutions for modernizing the application development toolchain and its automation and integration with existing and new systems.

    A2. Assist with the implementation of new development tools in the development tool chain and their integration with existing tools for new and legacy applications using agile methodology.

    A3. Participate in the design of prototypes and tests for complex and emerging systems to provide the best integration and delivery of business solutions.

    A4. Facilitate teams of middleware, application developers, infrastructure, and data professionals in the implementation and adoption of DevOps principals and cloud technology through various technical projects.

    A5. Provide budget information and product timelines for continuous integration/continuous delivery (CI/CD) efforts.

    A6. Provide input in the development of policies, procedures, and standards for the use of, and compliance with, complex or emerging DevOps and cloud technologies within ETF, including technological standards for application development, development tool chain, and integration methodologies. This may include tool selection and implementation, orchestration, containers, automated testing, coding standards, build and code promotion, source code management, and integration methodologies.

    A7. Bring together the definition of requirements and acceptance criteria for the development tool chain and middleware platforms, off-the-shelf software, cloud and software-as-a-service solutions, and integrations between systems.

    A8. Incorporate security policies, principles and practices into the development build and deployment pipeline automation, container, and orchestration requirements.

25% GOAL B: Serving as a technical lead, provide consulting services and collaboration with middleware, database, and developers in identifying and adopting innovative approaches for delivering business solutions including strategy, tooling, frameworks, practices and methodologies for mainframe, web, mobile, and cloud platforms.

    B1. Lead the development of operational project definitions and estimations with regards to DevOps efforts.

    B2. Provide instruction on DevOps and cloud principles, ensuring compliance with established standards, and establishing task assignments and ongoing processes.

B2.   Provide advanced technical design and development consulting to developers in the adoption of automation, containerization and orchestration of the CI/CD toolchain using DevOps and cloud technologies.

B3.   Coordinate project teams working on automating the promotion of code, application testing, and the delivery of applications from inception to completion. Project teams may be composed of IS System Development Services, IS Comprehensive Services, IS Technical Services, IS Data Services Professionals, Seniors, Specialists, and Consult Admins, contractors, business area managers, project vendors, and test team members.

B4.   Work with middleware and application development staff to develop actionable key performance indicators (KPI's) regarding the development tool chain, including setting goals and objectives, collecting measures, and calculating metrics.

B5.   Assist test team to identify, select and implement testing tools and the automation of testing plans that include performance and security. Develop strategies to remediate issues found during testing.

B6.   Provide input into programs and training recommendations to aid in the adoption of DevOps and cloud principles to include the creation/hosting of regular coaching and learning opportunities to examine and review innovative tools, frameworks, methodologies and practices for web, mobile, and cloud business solutions. Prepare and present materials to broad audiences including developers and managers.

B7.   Complete documentation templates for standards and processes as part of the recommendation of new tools and methodologies that ensures input from all impacted areas for the adoption of DevOps and the cloud consistent with industry standards.

B8.   Provide input in the preparation Request for Proposal or Request for Bids. Evaluate products, prepare bid specifications, rank proposals, recommend vendors and identify integrations with existing applications.

B9.   Represent the section, bureau, division, department and/or state on committees or in ventures to facilitate DevOps at ETF. Prepare and present materials as needed.

30%   GOAL C: Perform resolution of production issues with ETFs development tool chain through a formalized software maintenance process.

C1.   Perform advanced business systems analysis and technical design to identify customer requirements and user stories.

C2.   Participate in business and IT change control, ensuring that all tickets go through the proper vetting and approval processes.

C3.   Plan, schedule, and execute CI/CD tool chain software upgrades, managing human and fiscal resource for software maintenance.

C4.   Work with product owners and business analysts on software maintenance issues, including reviewing for clarity, prioritization, and acceptance criteria.

C5.   Track problems and their resolutions using ETF's IT request system.

C6.   Monitor, manage and resolve service and incident requests in a timely manner.

C7.   Prepare communications including status, root cause, timeline, testing process and deployment/implementation date.

C9.   Coordinate changes with other existing and developing systems or subsystems to ensure

integration and compatibility.

C10. Perform prime-shift and non-prime shift on-call support as directed.

10%   GOAL D: Performance of special assignments and/or miscellaneous tasks. Enhance business and technical knowledge and expertise with the development toolchain automation, tooling, frameworks, practices and methodologies. Participate in DevOps CoE, brown bags, and user groups providing training and assistance to others.

D1. Carry out special assignments that meet the needs of the agency including the preparation of special reports or documents as requested.

D2. Orient new employees to development tools, standards, procedures, policies, practices and major application areas.

D3. Provide the middleware team with assistance as required.

D4. Research and evaluate new tools and technologies. Utilize Gartner for innovative approaches, research and best practices

D5. Stay up-to-date on development processes and modern technologies utilizing web resources and independent study, online training, books, internal documents, attending in-house, local and out-of-state training seminars, conferences, and workshops.

D6. Carry out duties and responsibilities in such a way to create a diverse and inclusive work place.

D7. Additional duties as assigned.

Knowledge, Skills, and Abilities

- Experience with web hosting and development tool analysis and design.
- Experience with Application and CI/CD security and associated vulnerabilities.
- Experience using scripting languages such as Windows batch, Unix shell, Python, and Perl.
- Experience using project management methodologies, tools, and techniques including project/work plan development and management, preparation of project artifacts such as charter, scope, fiscal, status updates, cost-benefit, and risk analyses and the coordination of projects and people.
- Ability to debug and troubleshoot (both during development and in production) and the various troubleshooting approaches that can be used.
- Advanced knowledge of the administration, configuration and maintenance of tools in the application development tool chain such as CVS, Jenkins, Subversion, Hudson, Crucible, Fisheye, Git, GitHub, GitLab, Eclipse, Nexus, Maven, Gradle or Ant.
- Knowledge of automating CI/CD pipelines, containers and orchestration.
- Knowledge of application systems, including multi-tier technologies and the application development life cycle processes.
- Knowledge of Agile principles, including the Scrum methodology.
- Experience supporting, managing or designing solutions and people in a DevOps environment.
- Experience with collaboration tools such as SharePoint, MS TEAMs, Jira, and LucidCharts.
- Experience with testing of solutions including performance, integration, and regression testing.
- Knowledge and experience with cloud computing platforms like Amazon Web Services, Microsoft Azure, Google Cloud Platform, etc.

- Knowledge of industry standard best practices in a DevOps environment with regards to developing, deploying, supporting homegrown and 3rd party applications
- Knowledge of Java development practices and frameworks including Spring and Spring Boot, Angular, Rest and Soap.
- Knowledge of integrated development environments like My Eclipse, IntelliJ IDEA, etc.
- Knowledge of testing tools like JUnit, Mockito, BDDMockito, Jasmine, SoapUI, Smart Bear, Zypher, Cucumber or Selenium.
- Knowledge of Behavior-Driven Development (BDD) and Test-Driven Development (TDD).
- Knowledge of branching strategies such as pre/post commit, pull requests, patching, feature, hotfix, bugfix, maintenance, etc.
- Knowledge of IT Management frameworks and tools such as ITIL LEAN, value stream mapping and business process mapping
- Knowledge of the administration, configuration and maintenance of web application server software such as IBM WebSphere, JBOSS, Apache Tomcat, etc.
- Knowledge of Linux Operating System installation, configuration and administration.
- Ability to work effectively with, lead and coordinate staff at all levels of responsibility and authority throughout the department.
- Highly effective verbal and written communication in small and large group settings, including public speaking.
- Ability to recommend, negotiate, direct and implement change and adoption of new technology.
- Effective time management, organizational, analytical and evaluation skills.