

Position #012092

IS Systems Development Services Consultant/Admin.

DevOps Engineer

POSITION SUMMARY

Under the broad policy guidance of the Bureau of Information Technology Services (BITS) Development, Data and Middleware Supervisor, this position provides technical expertise and authority in the design, development and implementation of application delivery platform and the automation of ETFs development tool chain from inception to completion. This position provides coaching and leadership for developing 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 leadership 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 architect, automation and integrator, this position leads the middleware and development teams in the selection, design, adoption and integration of the development tool chain and also provides leadership in 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 role will lead 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 leading meetings and standups with technical teams/product owners to refine requirements for defining DevOps strategy, the selection of new tools and their implementation and adoption. In addition, this role will also lead and monitor 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 role will also lead efforts to continuously improve processes based on feedback from retrospectives, development and monitoring of key performance metrics and communication with major stakeholders. This position manages 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 serves as a project and technical decision maker and first-level authority for application hosting and system development tool chain activities. They will provide expertise to assist ETF 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. The incumbent of this position will help ensure that we meet our operational deliverables, while enhancing and modernizing ETF application hosting and delivery systems.

02/01/2021

Position #012092

IS Systems Development Services Consultant/Admin.

DevOps Engineer

This position participates in the application change control process, project meetings, and is a guest attendee to the Technical Architecture Review Committee (TARC). This position works with BITS management and key stakeholders to develop key performance indicators (KPI's) and metrics.

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

GOALS AND ACTIVITIES

- 40% GOAL A: Provide direction, guidance, and consultation in the development and implementation of the comprehensive strategy and technical 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. Lead 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. Lead 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. Direct the design of prototypes and tests for complex and emerging systems to provide the best integration and delivery of business solutions.
 - A4. Lead 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. Plan and budget for workflow and product deliveries by working with management, middleware, infrastructure, security, and development staff to assess project scope and objectives, return on investment, risk, and budget for continuous integration/continuous delivery (CI/CD) efforts.
 - A6. 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. Direct 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.
 - A9. Provide guidance and facilitate the adoption of test-driven and behavior-driven development methods and practices by coordinating the application developers in the selection and implementation of new development tools, procedures and processes.

02/01/2021

Position #012092

IS Systems Development Services Consultant/Admin.

DevOps Engineer

- 25% GOAL B: Serving as a project decision maker, perform advanced consulting services and leadership to middleware, database, and developers in identifying and adopting innovative approaches for providing business solutions including strategy, tooling, frameworks, practices and methodologies for mainframe, web, mobile, and cloud platforms.
- B1. Lead the development of project definitions and estimations with regards to DevOps efforts.
 - B2. Provide coaching on DevOps and cloud principles, ensuring compliance with established standards, and establishing task assignments and ongoing processes.
 - B3. 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.
 - B4. 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.
 - B5. Lead efforts 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.
 - B6. Work with the 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.
 - B7. Develop 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.
 - B8. Develop documentation templates, standards and processes for 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.
 - B9. Participate in preparing Request for Proposal or Request for Bids. Evaluate products, prepare bid specifications, rank proposals, recommend vendors and identify integrations with existing applications.
 - B10. 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.

02/01/2021

- 25% GOAL C: Direct and perform resolution of production issues with ETFs development tool chain through a formalized software maintenance process.
- C1. Provide direction and work with business representatives to refine and prioritize software maintenance issues and establishing processes for software development and deployment that resolve issues in priority order through timely releases, which may include emergency deploys.
 - C2. Provide advanced business systems analysis and technical design to identify customer requirements and user stories.
 - C3. Participate in business and IT change control, ensuring that all tickets go through the proper vetting and approval processes.
 - C4. Plan, schedule, and execute CI/CD tool chain software upgrades, managing human and fiscal resource for software maintenance.
 - C5. Work with product owners and business analysts on software maintenance issues, including reviewing for clarity, prioritization, and acceptance criteria.
 - C6. Track problems and their resolutions using ETF's IT request system.
 - C7. Monitor, manage and resolve service and incident requests in a timely manner.
 - C8. Prepare communications including status, root cause, timeline, testing process and deployment/implementation date.
 - C9. Coordinate the development of changes with other existing and developing systems or subsystems to ensure integration and compatibility.
 - C10. Control and document changes to custom- and vendor-delivered software, including reviewing proposals for changes, documenting actual changes made and monitoring the life-cycle of these changes through upgrades.
 - C11. 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, TARC, 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 consultation and technical assistance and recommend training, as needed, to increase staff effectiveness and productivity.
 - 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

Position #012092

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work place.

D7. Additional duties as assigned.

Knowledge, Skills, and Abilities

- Expert skills with web hosting and development tool analysis and design.
- Expert experience with Application and CI/CD security and associated vulnerabilities.
- Expert skills using scripting languages such as Windows batch, Unix shell, Python, and Perl.
- Expert skills 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.
- Expert 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.
- Advanced knowledge of automating CI/CD pipelines, containers and orchestration.
- Advanced knowledge of application systems, including multi-tier technologies and the application development life cycle processes.
- Advanced knowledge of Agile principles, including the Scrum methodology.
- Ability to manage 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 with cloud computing platforms such as Amazon Web Services, Microsoft Azure, Google Cloud Platform, etc.
- Knowledge and experience of industry standard best practices in a DevOps environment with regards to developing, deploying, supporting homegrown and 3rd party applications
- Knowledge of integrated development environments like My Eclipse, IntelliJ IDEA, etc.
- Knowledge of testing tools such as 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.
- Expert ability to work effectively with, lead and coordinate staff at all levels of responsibility and authority throughout the department and other state agencies, business partners, employers and third-party administrators.
- Highly effective verbal and written communication in small and large group settings, including public speaking.
- Expert ability to recommend, negotiate, direct and implement change and adoption of new technology.

02/01/2021

Position #012092

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- Highly effective time management, organizational, analytical and evaluation skills.
- Ability to take initiative to assertively represent business needs, to stand firm when necessary and to compromise when possible, to diplomatically challenge assumptions, and to make recommendations to business and technical staff at all levels of responsibility and authority throughout the department.