Position # 031370
IS Systems Development Services Specialist
Division of Technology, Security & Data Services
Bureau of Information Technology Services / Development, DBA & Middleware Section
Middleware Architect

POSITION SUMMARY

Under the general review of the Bureau of Information Technology Services (BITS) Development, DBA, and Middleware Supervisor, this position provides advanced-level support in the design, development, and secure implementation of Middleware platforms. This includes the collaboration, integration, and observation needs of middleware platforms and the automation and integration with ETFs data and development systems from inception to completion. The position serves as a project and technical subject matter expert (SME) for application hosting and system development tool chain architectures and activities. This position will provide insight 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.

As a Middleware Architect, automation, and integration educator, this position provides leadership and guidance for implementing highly complex secure application hosting, Middleware automation, collaboration and observability frameworks, and systems integration. It focuses on creating choices for BITS' business and technical partners by means of research, experimentation, and recommendations. This position provides Middleware administration in identifying, establishing, and adopting innovative approaches for development of business and/or technical solutions including new tooling, frameworks, methodologies, and the generation of procedures, policies, and standards for the Middleware platform and collaboration and observability frameworks at ETF. This position will support efforts to maintain, modernize, and enhance ETF's Middleware platform and collaboration and observability frameworks to enable integration and delivery of solutions. This includes representing Middleware at meetings and standups with technical teams/product owners to refine requirements for defining strategy, the selection of new tools, and their implementation and adoption.

This position works to resolve technical and solution issues and makes recommendations on suggested alternatives to resolve issues and problems. Specifically, this position provides technical support, administration, disaster recovery, and security configuration of the Middleware platforms including the collaboration, integration, and observability aspects. This position delivers all aspects of Middleware including technical design, development, implementation, governance, and testing utilizing mainframe, web, mobile, cloud platforms and Software as a Service. This position will collaborate with technical staff at ETF, ETFs enterprise architects (EA), DET and other state agencies, security, product owners, and vendors to make sure product acceptance criteria is clear, meets technical users' needs and requirements, and is implemented effectively.

This position will support efforts to continuously improve processes based on feedback from retrospectives, development and monitoring of key performance metrics, and communication with major stakeholders. The position provides representation on enterprise-wide committees and interagency work groups and has the responsibility for implementing and managing the department's solutions architecture in partnership with ETFs enterprise architects and DET's architects to comply with state and ETF policies and procedures. ETF is committed to serving our members and employers with the highest quality services possible while simultaneously pursuing new high-value initiatives. This position participates in the application change control process, project meetings, and application development Scrums. This position will also work with BITS management and key stakeholders to develop key performance indicators (KPI's) and metrics.

GOALS AND ACTIVITIES

35%   Goal A.   Implementation of Middleware solutions.

A1.   Provide input on Middleware and cloud principles, ensuring compliance with established standards, and establishing task assignments and ongoing processes.

A2.   Provide knowledge and guidance to developers in the adoption of automation frameworks for containerization, observability, and orchestration of Middleware and cloud technologies.

A3.   Provide input to BITS staff, including applications development, enterprise architects, security, technical, and managers regarding technology solutions and services, and configuration standards.

A4.   Assist with technical projects that cross multiple technology platforms.

A5.   Provide technical and subsystem-specific information and advice to both user and vendor staff for the implementation of technology projects which have significant impact on the technologies in use at ETF. Interact with technical support, operations, and vendor staff to ensure coordination of their efforts with project team efforts.

A6.   Evaluate and provide feedback on recommendations for disaster recovery/COOP designs, strategic plans, and solutions to foster a pro-active, customer centric systems approach.

A7.   Evaluate new technology services and solutions as part of the continuous improvement and modernization of Middleware and our applications development and deployment platforms.

A8.   Prepare operational reports and management presentations to concisely inform management and other interested parties of technical capabilities.

A9.   Provide input on project and technical architecture review documentation that will flow through the governance process.

A10.   Administer technical policies and standards through partnership with the enterprise architects to identify and adopt best practices on technical architectural design and selection. Communicate these items to both technical and non-technical stakeholders.

A11.   Collaborate with enterprise architects in standardizing the architectural design and selection process that ensures input from all impacted areas for the adoption of a modernized Middleware platform and the cloud consistent with industry standards.

A12.   Participate in the development of policies, procedures, and standards for the use of, and compliance with, complex or emerging Middleware 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, observability, containers, automated testing, coding standards, build and code promotion, source code management, and integration methodologies.

A13.   Work with BITS management and sections to foster an environment of providing business solutions through technical innovation.

A14.   Collaborate with the BITS technical architect and BITS technical leads to maintain the technical reference model which provides a set of standard technologies which reduces overall complexity and increases cost efficiency.

A15.   Provide input on long range strategic technology planning.

A16.   Participate as a technical SME in preparing Request for Proposal or Request for Bids. Evaluate products, prepare bid specifications, rank proposals, recommend vendors and identify integrations with existing applications.

A17.   Represent the section, bureau, division, department and/or state on committees or in ventures to facilitate the provision of information and technology. Prepare and present materials as needed.

35%   Goal B: Provision of leadership and guidance in the implementation of Middleware technologies and platforms.

B1.   Participate in efforts to define, research, and select tools, techniques, standards, and methodologies for innovative Middleware solutions.

B2.   Assist in the design and development of innovative and secure Middleware solutions for modernizing ETFs application hosting, collaboration, and observability frameworks and its automation and integration with existing and new systems.

B3.   Lead the implementation of new tools in application hosting and their automation and integration with existing tools for new and legacy applications using agile methodology.

B4.   Partake in the design of prototypes and tests for complex and emerging systems to provide the best integration and delivery of business solutions.

B5.   Facilitate teams of Middleware, application developers, infrastructure, and data professionals in the implementation and adoption of Middleware principals and cloud technology through various technical projects.

B6.   Contribute to the definition of requirements and acceptance criteria for application hosting automation and the Middleware platforms for off-the-shelf software, cloud and software-as-a-service solutions, and integrations between systems.

B7.   Incorporate security policies, principles, and practices into ETF's Middleware platform and collaboration and observability frameworks as well as the application hosting automation, container, and orchestration requirements.

B8.   Work with Middleware and application development management staff to develop actionable KPI's and observability regarding the Middleware platform and application hosting automation, including setting goals and objectives, collecting measures, and calculating metrics.

B9.   Design and write scripts to perform data extraction, transmission, conversion, or other utility needs within the backend systems.

B10.   In cooperation with other server technicians, install and support server hardware and software systems, operating systems, management software, and server-based applications.

B11.   Coordinate the development of changes with other existing and emerging systems or subsystems to ensure integration and compatibility.

B12.   Assist with the preparation and presentation of materials to broad audiences including developers and managers to aid in the adoption of Middleware 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.

25%   Goal C.   Provision of technical support in the resolution of production issues.

C1.   Maintain and support the standard Middleware platform and the collaboration, integration, and observability frameworks in cooperation with agency technical staff and architects. Examples of this service side software and tools include IBM Liberty Web Application Server, Apache TomCat, Red Hat Linux, Dynatrace, GitHub, Jira, MuleSoft, Okta, SoCure, etc.

C2.   Ensure effective operation of critical systems by timely – often immediate response to – system malfunctions and problems; respond to business users' problems, requests, and plans.

C3.   Perform research and analysis of technical architecture issues that impact the deployment of new or existing infrastructure or application architectures.

C4.   Facilitate technical issues for other technical areas as it relates to Middleware,

application hosting, Linux, and observability architectures, integrations, solutions, and troubleshooting.

C5.   Work with product owners and business analysts on software maintenance issues, including reviewing for clarity, prioritization, and acceptance criteria.

C6.   Collaborate with customers/end-users and technical staff, both vendor and internal, including tracking problems and resolutions.

C7.   Prepare status reports and/or communications for management to highlight progress, identify obstacles, root cause, timeline to resolution, and recommended actions for incidents and/or problems.

C8.   Track system problems and their resolution using ETF's IT request system.

C9.   Monitor, manage and resolve service and incident requests in a timely manner.

C10. Crosstrain with Middleware staff on the use of Linux and Middleware tools and technologies, the implementation of applications with application server software, and advance troubleshooting techniques including observability tools and problem resolution.

C11. Work with BITS management and the technical architect to create and maintain a schedule/roadmap of general ETF technology upgrades with consideration for vendor dependencies to help plan for current and upcoming budgets.

C12. Monitor ETF, DET, and other state agency technology choices and trends in IT hardware and software and consult with appropriate ETF staff on the impacts of those decisions.

C13. Participate in business and IT change control, ensuring that all tickets go through the proper vetting and approval processes.

C14. Perform prime-shift and non-prime shift on-call support as directed.

5%   Goal D.   Performance of other duties as assigned

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

D2.   Meet with BITS management and staff to evaluate progression on tasks, identify and resolve issues, and plan for future projects and initiatives.

D3.   Research and evaluate new tools and technologies. Utilize Gartner for innovative approaches, research and best practices

D4.   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.

D5.   Participate on technical governance groups and Scrums as assigned.

D6.   Perform additional duties as assigned.

KNOWLEDGE, SKILLS, AND ABILITIES

1. Advanced skill and knowledge of the administration, configuration, and maintenance of web application server software such as IBM WebSphere, Liberty, Apache Tomcat, etc.
2. Advanced skill and knowledge of the administration, configuration, and maintenance of http servers such as IBM HTTP Server, Apache etc.
3. Advanced skill and knowledge of the administration, configuration, integration, and maintenance of Middleware platform tools such as Dynatrace, MuleSoft, OpenShift, Kubernetes, Okta, SoCure, etc.
4. Advanced skill and knowledge of Linux Operating System installation, configuration, and administration.
5. Advanced skills using scripting languages such as Windows batch, Unix shell, Python, and Perl.
6. Advanced skills and knowledge of automating CI/CD pipelines, containers, and orchestration.
7. Advanced ability to troubleshoot application servers on local and wide area networks including support of DNS, firewalls, directories, and SSL Certificates and tools such as Snort and WireShark.
8. Advanced skills with automation, observability frameworks, and Middleware tools design, configuration, and sustainability.
9. Advanced knowledge of web security and associated vulnerabilities.
10. Advanced ability to debug and troubleshoot (both during development and in production) and the various troubleshooting approaches that can be used.
11. Advanced knowledge of modern cloud (IaaS, PaaS, SaaS) concepts, architecture, and service models.
12. Intermediate skills using development software such as Java, React, C, C#, C++, etc.
13. Intermediate skills gathering requirements and evaluating new technologies in the marketplace.
14. Intermediate knowledge of application systems, including multi-tier technologies and the application development life cycle processes.
15. Intermediate knowledge of Agile principles, including the Scrum methodology.
16. Intermediate 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.
17. Skilled in supporting and managing solutions and working with teams in a DevOps environment.
18. Knowledge of collaboration tools such as SharePoint, MS TEAMs, Jira, and LucidCharts.
19. Knowledge of build automation tools such as Maven and/or Gradle.
20. Knowledge of testing solutions including performance, integration, and regression testing.
21. Knowledge and experience with cloud computing platforms like Amazon Web Services, Microsoft Azure, Google Cloud Platform, etc.
22. Knowledge and skill applying industry standard best practices in a Middleware environment with regards to developing, deploying, hosting, observing, securing, supporting homegrown and 3rd party applications.
23. Knowledge of the administration, configuration, and maintenance of tools in the application development tool chain such as Git, GitHub, Bit Bucket, Jenkins, Subversion, Selenium, Junit, Crucible, or Fisheye.
24. Knowledge of integrated development environments like My Eclipse, IntelliJ IDEA, etc.
25. Knowledge of business analysis and application design techniques and prototyping.
26. Knowledge of relational databases like DB2 and SQL Server (includes logical/physical data modeling and writing SQL).
27. Knowledge of branching strategies such as pre/post commit, pull requests, patching, feature, hotfix, bugfix, maintenance, etc.
28. Knowledge of IT Management frameworks and tools such as ITIL LEAN, value stream mapping and business process mapping
29. Expert ability to work effectively with staff at all levels of responsibility and authority throughout the department and other state agencies, business partners, employers and third-party administrators.
30. Excellent verbal and written communication skills, including highly effective communication in small and large group settings, including public speaking.
31. Ability to recommend, negotiate, direct and implement change and adoption of new technology.
32. Highly effective time management, organizational, analytical and evaluation skills.

33. Ability to assess and articulate strengths and weaknesses of vendors/offerings.
34. Skilled in managing technological vendor partnerships and solutions.
35. Knowledge of large organization / government evaluation, procurement, design, implementation, support and end-of-life process(es).
36. Ability to maintain confidential information in accordance with policies, guidelines, and direction from manager.
37. Ability to understand and comply with all ETF and enterprise security standards, policies, processes, and procedures.