COLUMBIA CENTER OF EXCELLENCE

Cloud COE: Role Descriptions

Abstract

Job Descriptions for key Roles Targeted for Columbia; This draft currently outlines technology Focused Roles.

In case of campus hires, we will use these descriptions as a guideline given that the candidates may not have depth in technologies or the industry experience as yet.

Achanti, Venkata B

Venkata.Achanti@capgemini.com

Table of Contents

Contents

Cloud Native Developer
Level: Programmer/Analyst

Role Description
Write software programs using specific programming languages/platforms such as Java or MS .NET, and related tools, platform and environment. Write, update, and maintain computer programs or software packages to handle specific jobs, such as tracking inventory, storing or retrieving data, or controlling other equipment. Consult with managerial, engineering, and technical personnel to clarify program intent, identify problems, and suggest changes. Perform or direct revision, repair, or expansion of existing programs to increase operating efficiency or adapt to new requirements. Write, analyze, review, and rewrite programs, using workflow chart and diagram, and applying knowledge of computer capabilities, subject matter, and symbolic logic. Write or contribute to instructions or manuals to guide end users. Correct errors by making appropriate changes and then rechecking the program to ensure that the desired results are produced. Conduct trial runs of programs and software applications to be sure they will produce the desired information and that the instructions are correct. Compile and write documentation of program development and subsequent revisions, inserting comments in the coded instructions so others can understand the program. Investigate whether networks, workstations, the central processing unit of the system, and/or peripheral equipment are responding to a program's instructions. Prepare detailed workflow charts and diagrams that describe input, output, and logical operation, and convert them into a series of instructions coded in a computer language. Perform systems analysis and programming tasks to maintain and control the use of computer systems software as a systems programmer. Consult with and assist computer operators or system analysts to define and resolve problems in running computer programs. Perform unit testing Assist in system and user testing Fix errors and bugs that are identified during testing.

Day to Day Responsibilities:
- Design, Develop and support Cloud-Native applications and API development using Java and Spring Boot, NodeJS, and Containers
- Contribute to application development on multiple large-scale, mission-critical systems.
- Work collaboratively as a key contributor on a high performing team which ships code and delivers value

Qualifications:
- 3-9 years of experience with object–oriented languages, including Java or C#
- Must have 1+ years of experience on any cloud platform (AWS, Azure, Google Cloud, Cloud Foundry, PCF, BlueMix, etc.)
- 4+ years professional experience as developer or software engineer
- Good understanding of Cloud computing concepts and technologies, such as IaaS/SaaS/PaaS, load balancing, Storage, etc.
- Hands on experience in implementing RESTful webservices and SOAP services in cloud

- Hands on experience in PaaS architecture and implementation using frameworks like Spring Boot, NodeJS, Spring Cloud, and Spring Dataflow, etc.
- Experience in UI development, integrating UI with REST service is a plus
- Experience with messaging frameworks (ActiveMQ, RabbitMQ, Kafka etc.).
- Experience using one or more NoSQL databases such as Cassandra, Mongo, AWS DynamoDB
- Experience building and deploying applications on the Cloud, using CI/CD frameworks; Jenkins, Sonar Cube, JUnit
- Experience with Docker, Cloud Foundry, Kubernetes, or 12 factor app.
- Experience with using development tools, including JIRA, GitHub, and Jenkins.
- Excellent verbal and written communication skills coupled with analytical problem-solving skills.
- Ability to write quality unit and end–to–end tests; debug and optimize existing and new code.

MuleSoft Developer

Role Description

Middleware/Integration Developer works with the Engagement Manager, customers, architects and partners to implement MuleSoft's AnyPoint platform to solve mission-critical business challenges. The individual will build and maintain integrations for multiple on premises and/or cloud systems and must be capable of understanding business requirements, working with end users and developing and deploying the integrations.

This individual must be able to provide technical expertise in large, complex environments and must have a track record of successful and reference-able customer projects. This position requires knowledge and experience with J2EE, MuleSoft product suite as well as experience in detailed requirements analysis, software design, development, testing, and deployment.

Day to Day Responsibilities:

- Identify, analyze and develop interfaces and integration flows using Mule ESB Anypoint platform including Mule Runtime, Connectors, Design Center and API management
- Responsible for programming and software development using various programming languages and related tools and frameworks, reviewing code written by other programmers, requirement gathering, bug fixing, testing, documenting and implementation.
- Explain complex technical issues to project managers, developers, team leads and architects in an easy to understand manner, and recommend clearly thought out solutions.
- Deep understanding of Synchronous / Asynchronous communication patterns and Problem-solving abilities w.r.t. Message Sequencing, Correlation, Queuing.
- Knowledge of Integration Design patterns for building middleware systems ground up using Message Routing, Content Enrichment, Message Filtering, Message Transformation, Guaranteed delivery, Message sequencing, Batch message processing, error handling and reconciliation mechanisms.
- Knowledge of Web Services Interoperability, WS-* standards and ability to suggest, criticize and formulate solutions in a multi-vendor and architecture committee meetings.
- Develop solutions by designing system specifications, standards and programming
- Troubleshoot issues and provide bug fixes.
- Good knowledge of SOA architecture and fluency in web service standards such as WSSE and technologies (XML, SOAP, WSDL, XSD, UDDI, REST) is a must.
- Good understanding of relational databases; experience working with different adaptors and JMS queues required.
- Implementation experience with Mule API management portal or another framework is preferred.
- Some implementation experience with framework-based J2EE solutions is preferred.

- Knowledge of Security, Logging, Auditing, Policy Management and Performance Monitoring and KPI for end-to-end process execution.
- Lead large to small development teams in multi-phase, heterogonous work environments, with multiple work streams.
- Provide status updates and reporting metrics to the program leadership and contribute towards on-time and on-budget delivery.

Qualifications:

- 2+ years of experience working with the MuleSoft Anypoint platform as a Developer
- 3-8 years of software development experience. Software integration and/or other ESB experience are a must.
- Experience in small to large size implementations, working with geographically distributed teams.
- Intermediate level Java development experience is a must.
- Strong knowledge of EAI/SOA best practices, development methodologies & standards.
- Has strong experience in the Application Integration Architecture, Solution Design, and Development using SOA/EAI solutions.
- Experience with SOAP and RESTful API is a must.
- Solid Programming skills using J2EE, Design Patterns, JMS, SOAP / REST Web Services, XSLT, CXF, Spring Framework, etc.
- Experience with Mule administration, configuration and tuning.
- Demonstrated experience implementing Mule ESB architecture, rules, caching, etc.
- Experienced troubleshooting Mule ESB, including working with debuggers, flow analyzers and configuration tools.
- Have expertise in large distributed systems, legacy experience is considered an asset.
- Background in both agile and waterfall methodologies.
- Excellent interpersonal, verbal and written skills and the ability to interact with all level of stakeholders, support personnel, and clients.
- Strong documentation, analytical and problem-solving skills.
- Bachelor's degree in Computer Science or any related field and a minimum of 6 years relevant experience providing IT enable solutions.

Cloud Engineer

Role:

Cloud Engineer - Programmer/Analyst

Level

Senior Consultant

Role Description

The Cloud Engineer is a cloud role in the project delivery cycle with hands on experience migrating customers to the cloud and designing DEVOPS operational processes, deployment checklists, etc. This role will work closely with clients, partners and other business units to ensure consulting engagements are successful. He/she must be fully flexible and mobile across the US and possibly EMEA for extended periods and potentially across the Capgemini Group.

Day to Day Responsibilities:

Proven experience in cloud infrastructure project deals for hands on migration to public clouds such as AWS and Azure.

- Strong background in linux/Unix and/or Windows administration
- Ability to use wide variety of open source technologies.
- Experience in automation/configuration management using Puppet, Chef, Ansible, Saltstack, Bosh, Terraform or an equivalent
- Experience with source code management tools such as GitHub, GitLab, Bitbucket or equivalent
- Experience with SQL and NoSQL DBs such as SQL, MySQL, Amazon DynamoDB.
- Solid understanding of networking and core Internet Protocols such as TCP/IP, DNS, SMTP, HTTP and routing in distributed networks.
- A working understanding of code and script such as: PHP, Python, Perl and/or Ruby.
- A working understanding with CI/CD tools such as Jenkins or equivalent
- A working understanding of scheduling and orchestration with tools such as: kubernetes, Mesos swarm or equivalent.
- Extensive knowledge about AIPs designing RESTful services and integrated with other providers.
- Have a fully-flexible approach to working hours and working away from home during the week; willing to work nationally, with the potential to work internationally if desired.

Qualifications:

- AWS Architecture / Azure Architecture experience ideally with the appropriate vendor certification
- Understanding of hybrid cloud solutions and experience of integrating public cloud into tradition hosting/delivery models
- Strong understanding of cloud migration techniques (on premise to Cloud Platforms)
- Configuration and deployment experience in three or more of the following:
    - AWS apps technologies such as RDS, Elastic Beanstalk
    - Azure or AWS IaaS Technologies
    - Deployed applications with Web UI frontends
    - Deployed application with RESTful/SOAP services interfaces

- • Experience building private AMI's on VPC's
- • LAMP Stack and Linux experience
- • High Availability and Disaster recovery implementations
- • Experience of designing and implementing application and infrastructure monitoring solutions
- Experience architecting and deploying multi-tiered applications.
- Experience in architecting security architectures across infrastructure and applications
- Experience building and deploying multi-tier, scalable, and highly available applications using Java, Microsoft and Database technologies
- Experience in performance tuning, including the following; (load balancing, web servers, content delivery Networks, Caching (Content and API))
- Experience as principal technical lead on at least one major project.
- Good understanding of application architectures
- Demonstrable experience in the elicitation & specification of architectural, functional and non-functional requirements
- A good appreciation of the cost drivers in systems delivery and operations and the commercial consequences of the technical decisions made by you and/or others
- Ability to develop productive client relationships at different management levels and identify and develop opportunities for new business.

DEVOPS Developer

Role

DEVOPS Engineer

Level:

Senior Consultant

Role Description

Responsible for programming and software development using various programming languages and related tools and frameworks, reviewing code written by other programmers, requirement gathering, bug fixing, testing, documenting and implementing software systems. Experienced programmers are also responsible for interpreting architecture and design, code reviews, mentoring, guiding and monitoring programmers, ensuring adherence to programming and documentation policies, software development, testing and release.

You assign, coordinate, and review work and activities of programming personnel. Collaborate with computer manufacturers and other users to develop new programming methods. Supervise, train, mentor junior level programmers in programming and program coding. Represent team in project meetings. Work with business and functional analysts, and software & solution architects in ensuring that programs and systems function as intended Supervise, mentor and manage large teams of programmers in one or more projects. Represent project teams in project/program meetings or in meetings with sponsor.

Qualifications

Experienced DevOps Developer to perform development and operations on our Cloud applications. We want someone who is passionate about using best practices on e-commerce platform log data to revolutionize the efficiency and effectiveness.

Required Experience:

- Centralized Monitoring and performance tuning experience
- Managing capacity and performance to help scale the infrastructure both on public and private clouds around the world
- Utilizing your strong programming (Python) and strong Linux skills
- Working with Chef and Ansible for automation
- Design, build and operate a subset of our technologies stack: AWS and AWS related DevOps (on VPC, Microservices, Security Group, VPN, ELB, NAT, Monitoring tools etc.), Monitors for open source tools Redis, Casandra, RabbitMQ, ELK stack, New Relic, Jenkins/Nexus reliability, automation, operability and performance
- Develop software solutions to enable operability of large scale distributed systems handling petabytes of log data for analysis
- Collaboration & Communications:
    - Demonstrated design leadership
    - Effective verbal and written communicator
    - Strong collaboration and listening skills

        o   Patient, calm, and respectful work demeanor

Other Experience:

- A strong data-driven/fact-based decision maker
- Comfortable interacting with developers
- Prefers working in fast-paced environment
- Experience working with remote engineering teams

MuleSoft Developer

Level: Programmer/Analyst

Role Description

Middleware/Integration Developer works with the Engagement Manager, customers, architects and partners to implement MuleSoft's AnyPoint platform to solve mission-critical business challenges. The individual will build and maintain integrations for multiple on premises and/or cloud systems and must be capable of understanding business requirements, working with end users and developing and deploying the integrations.

This individual must be able to provide technical expertise in large, complex environments and must have a track record of successful and reference-able customer projects. This position requires knowledge and experience with J2EE, MuleSoft product suite as well as experience in detailed requirements analysis, software design, development, testing, and deployment.

Day to Day Responsibilities:

- Identify, analyze and develop interfaces and integration flows using Mule ESB Anypoint platform including Mule Runtime, Connectors, Design Center and API management
- Responsible for programming and software development using various programming languages and related tools and frameworks, reviewing code written by other programmers, requirement gathering, bug fixing, testing, documenting and implementation.
- Explain complex technical issues to project managers, developers, team leads and architects in an easy to understand manner, and recommend clearly thought out solutions.
- Deep understanding of Synchronous / Asynchronous communication patterns and Problem-solving abilities w.r.t. Message Sequencing, Correlation, Queuing.
- Knowledge of Integration Design patterns for building middleware systems ground up using Message Routing, Content Enrichment, Message Filtering, Message Transformation, Guaranteed delivery, Message sequencing, Batch message processing, error handling and reconciliation mechanisms.
- Knowledge of Web Services Interoperability, WS-* standards and ability to suggest, criticize and formulate solutions in a multi-vendor and architecture committee meetings.
- Develop solutions by designing system specifications, standards and programming
- Troubleshoot issues and provide bug fixes.
- Good knowledge of SOA architecture and fluency in web service standards such as WSSE and technologies (XML, SOAP, WSDL, XSD, UDDI, REST) is a must.
- Good understanding of relational databases; experience working with different adaptors and JMS queues required.
- Implementation experience with Mule API management portal or another framework is preferred.
- Some implementation experience with framework-based J2EE solutions is preferred.
- Knowledge of Security, Logging, Auditing, Policy Management and Performance Monitoring and KPI for end-to-end process execution.

- Lead large to small development teams in multi-phase, heterogonous work environments, with multiple work streams.
- Provide status updates and reporting metrics to the program leadership and contribute towards on-time and on-budget delivery.

Qualifications:
- 2+ years of experience working with the MuleSoft Anypoint platform as a Developer
- 3-8 years of software development experience. Software integration and/or other ESB experience are a must.
- Experience in small to large size implementations, working with geographically distributed teams.
- Intermediate level Java development experience is a must.
- Strong knowledge of EAI/SOA best practices, development methodologies & standards.
- Has strong experience in the Application Integration Architecture, Solution Design, and Development using SOA/EAI solutions.
- Experience with SOAP and RESTful API is a must.
- Solid Programming skills using J2EE, Design Patterns, JMS, SOAP / REST Web Services, XSLT, CXF, Spring Framework, etc.
- Experience with Mule administration, configuration and tuning.
- Demonstrated experience implementing Mule ESB architecture, rules, caching, etc.
- Experienced troubleshooting Mule ESB, including working with debuggers, flow analyzers and configuration tools.
- Have expertise in large distributed systems, legacy experience is considered an asset.
- Background in both agile and waterfall methodologies.
- Excellent interpersonal, verbal and written skills and the ability to interact with all level of stakeholders, support personnel, and clients.
- Strong documentation, analytical and problem-solving skills.
- Bachelor's degree in Computer Science or any related field and a minimum of 6 years relevant experience providing IT enable solutions.