UTSAV ROY

GOLANG DEVELOPER

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WORK EXPERIENCE SUMMARY

- Having a total of **8+ years of work experience** (**5+ years as Golang Developer** in Infosys and 3 years as on HP Exstream in HCL Technologies)

- Worked as Developer of **Backend Virtualized Network Services** using **Golang** as the **primary programming language** of development

- Development of applications done following coding standards; unit testing done for each new feature implemented in the respective module and also for the updated features

- Have working knowledge on **Go, Docker, Kubernetes, Helm, Bash scripting, Linux**

- Worked on automation of services and processes using shell scripting

TECHNOLOGY/DOMAIN SKILLS

- **Domain:** SDN (Software Defined Networking), Insurance
- **Operating Systems:** Windows, Linux. Mac
- **Programming/Scripting Language:** Go, Bash, Echo Web framework, gRPC framework
- **Ticket Management:** JIRA, Rally, HP Application Lifecycle Management (ALM), Service Now
- **Credentials Management:** Hashicorp Vault
- **Build & Deployment:** Docker, Rancher, Kubernetes, Jenkins, Concourse, Helm, Nexus Repository, Artifactory
- **Versioning System:** Git, GitHub, BitBucket
- **Database/Storage**: MySQL Server, Couchbase, ElasticSearch, Apache Kafka, Etcd, Hazelcast IMDG
- **Monitoring:** Prometheus, Grafana, Netdata, Node Exporter, Splunk
- **Code Editors:** Vim, Eclipse, Microsoft Visual Studio Code

WORK EXPERIENCE

Project #1: Rubicon   **Employer:** Infosys Limited
Client: Comcast   **Designation:** Technology Lead
Role: Go Backend Developer   **Work Duration:** March 2023 – December 2023

Project Summary:
Rubicon Platform provides a collection of containerized micro-services for delivering scalable, rapidly deployable, tools for Comcast employees. Rubicon Platform currently supports 30 services, 4k+ users, and is used by 60 plus teams. Running in 6 data centres across OpenStack (ElasticCloud CH2) and VIVA CH2. Supporting CI/CD pipeline, Kubernetes/Rancher orchestration, and Docker containerization.

Key functions of Rubicon team: AUDITING Tools (BroadSoft: User access audit / report, ADTRAN: Customer device audit / report, CDR: Customer call records audit / report), GATEWAY APIs (BroadSoft: Application Server / Network Server gateway, ADTRAN: Device management gateway), PROVISIONING Tools (BroadSoft: account & user configuration management, ADTRAN: configuration management, device reboot, firmware update, User Access Control: Internal, employee only, tool for managing access to BroadSoft Servers. Tool links employee account to LDAP. Allowing supervisor to manage access.)

Key Responsibilities:

- Worked on **development** team for various **APIs** under the Rubicon project. These APIs are consumed by other projects in Comcast; Prime role was as Go developer to **implement new features** and **update existing features (based on client requirements)** on various Rubicon applications; All Rubicon applications are based on the **Echo web framework** of Go
- Exchange of **JSON** data using **REST APIs** within Rubicon applications and also with applications from other projects; **CRUD (Create, Read, Update, Delete)** operations implemented to interact with data stored in backend **ElasticSearch** database server
- **Hazelcast IMDG** is used for **caching** data inside Rubicon applications; **Credentials management** for Rubicon applications using **Hashicorp Vault**; **Task management** in Rubicon project is done using **Rally**
- Worked on Bash scripting to automate certain processes in Rubicon apps
- Unit Testing of newly implemented features and corrected features
- The **Rubicon Kubernetes clusters** are installed and configured with the **Rancher Kubernetes Engine (RKE)**.
- **CI/CD pipeline** is configured and managed using **Concourse**.
- **Tools and Technologies used:** Go, Bash, Docker, Kubernetes, Helm, Rancher, Concourse, Artifactory, Git, GitHub, ElasticSearch (DB), Hazelcast IMDG (cache), Postman, Splunk

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Project #2: Mavenir Telecom Cloud Integration Layer (MTCIL)   **Employer:** Infosys Limited
Client: Mavenir   **Designation:** Technology Analyst
Role: Go Backend Developer   **Work Duration:** July 2020 - February 2023

Project Summary:
MTCIL is a layer in the Mavenir Webscale Platform (MWP) that provides 3GPP and cloud-native compliant northbound and southbound interfaces for OSS, ORAN, SMO and PaaS integrations. It delivers the high levels of reliability, agility and scalability that are expected of distributed and cloud-native systems. **MTCIL backend is used by telecom companies providing 3G, 4G and 5G services.**

Key Responsibilities:

- Worked on **LIMaaS (Lawful Interception Management as a Service)** module of MTCIL; LIMaaS feature is **used by 5G and 4G networks** to provide **Lawful Interception** functionality to **Law Enforcement Agencies**
- Prime role was as **Go developer** to **implement new features** and **update existing features** (based on client requirements) on the two **sub-modules of LIMaaS – LI Manager and LI Proxy**
- Exchange of **JSON** and **XML** data using **REST APIs** and between LIMaaS components and other MTCIL components; **CRUD (Create, Read, Update, Delete)** operations implemented to interact with data stored in backend **Couchbase server**
- Security of application interfaces using TLS
- Worked on Bash scripting to automate certain processes in LI modules
- Used **Kafka** as **Message Queue** for Interfacing between 5G/4G CNFs and LI proxy
- Unit Testing of newly implemented features and corrected features
- Worked on bug fixes for both LI modules
- **Tools and Technologies used:** Go, Bash, Docker, Kubernetes, Helm, Git, Bitbucket, Couchbase, Kafka, Etcd, Postman

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Project #3: Business Continuity Platform (BCP)   **Employer:** Infosys Limited
Client: Comcast   **Designation:** Technology Analyst
Role: Go Backend Developer   **Work Duration:** April 2018 – June 2020
Project Summary:
The project involves development of a business cloud platform that allows zero-touch provisioning of network-services at end-customer premises and the cloud infrastructure. **BCP** is Comcast's platform for serving next-generation business product portfolio, providing native capabilities, withing Comcast to innovate on behalf of customers and for the customers.

This involves solving the customers' pain points of maintaining and expanding infrastructure physically within the branch or virtually within a cloud or geographically. The focus for this platform and team is to build, develop and integrate solutions that enable orchestration and control of services and underlying resources such as compute, network and storage of every customer.

Key Responsibilities:

- Involved in the development & maintenance of an end-to-end **Telemetry Framework** consisting of separate components running on separate servers; Development tasks mostly involved consistent development, maintenance, bug fixing and updating of the components based on client requirements
- **Components developed: Monitoring Probe, CPE Exporter, Metrics Collector**
- **A. Monitoring Probe** (developed using Golang) - collects system metrics using **REST API** exposed by **Netdata** exporter, **CPE Exporter** and some other 3rd party APIs, streams them periodically through **gRPC** to Metrics Collector, and runs on docker; **B. CPE Exporter** (developed using Golang, runs as Linux service) - collects some specific **service metrics** and exposes them as **REST API** for Monitoring Probe to consume; **C. Metrics Collector** (developed using Java) – runs on the cloud; receives metrics through gRPC from Monitoring Probe and exposes them to **Prometheus DB** which then are queried and displayed by **Grafana Web UI**
- Other tasks included: Installer development in Bash Scripting for CPE Telemetry Deployment, Task and Bug tracking and fixing using JIRA, monitoring metrics in Grafana, Telemetry package release management, building packages using CI/CD pipeline
- **Tools and Technologies used:** Go, Bash, Git, GitHub, Jenkins, Docker, Docker Compose, Maven, Kubernetes, Nexus Repository, Prometheus, Couchbase, Netdata, Grafana, Node Exporter

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<u>**Project #4: Content Publishing (CP)**</u>   **Employer:** HCL Technologies Limited
Client: Great American Insurance Corporation (GAIC)   **Designation:** Software Engineer
Role: Exstream Developer   **Work Duration:** May 2015 - March 2018

Project Summary:
This project involves creation (using HP Exstream) and delivery of Insurance policy forms for customers of GAIC.

Key Responsibilities:

- Worked on GAIC's CP project under HCL Technologies
- Involved in development and maintenance of Web Application using Core Java as the primary language for Automating the generation of Insurance forms (using Exstream engine in the background)
- Insurance forms development using HP Exstream
- Tools and Technologies used: HP Exstream, HP Application Lifecycle Management (ALM), Service Now, JIRA, SOAP UI, Core Java, JSP, Servlets, Eclipse, MySQL Server

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Academic Qualification:

1. B.Tech. in Computer Science & Engineering (passed in 2014) from Brainware Group of Institutions (under West Bengal University of Technology) with GPA 7.88 (71.30%)
2. Passed 12th Grade (ISC) (in 2010) in Science stream from St. Joseph's Collegiate School, Kolkata (under Council for the Indian School Certificate Examinations) with 72.14%
3. Passed 10th Grade (ICSE) (in 2008) in General stream from St. Mary's Orphanage & Day School, Kolkata (under Council for the Indian School Certificate Examinations) with 78%

Trainings/Certifications:

- Golang training from Udemy
- Oracle 11g Database Administration Training Course with SQL and Unix Shell Scripting (from DTech IT Education, Bangalore)
- Certified Ethical Hacking Expert Workshop (held at Jadavpur University, Kolkata organized by TechDefence Pvt. Ltd.)
- Ethical Hacking Workshop (organized by Indian School of Ethical Hacking (ISOEH) held at Kolkata)
- WebApp Development Workshop using Java (from Simoco Education Development & Application Initiative, Kolkata)
- Enterprise WebApp Development Training using C# .NET (from Globsyn Skills, Kolkata)

Language Proficiency:

- English (Read/Write/Speak)
- Bengali (Read/Write/Speak)
- Hindi (Read/Speak)