NGUYEN VAN CA

PERSONAL DETAILS

- Full Name   NGUYEN VAN CA
- Designation   Cloud Solution Architect & DevOps Consultant
- Gender   Male
- Citizenship   Vietnamese
- Country of Residence   Seoul, Korea

PROFESSIONAL SUMMARY

A solution architect and software engineer with 10 years of networking and 4 years of industry experience. Proficient in computer science and programming skills. Strong knowledge and experience in telecommunication and network systems. Possessor critical thinking and eagerness to learn state-of-the-art technologies.

TECHNICAL SKILL

- **AWS Certified Solutions Architect - Professional**
- **Solid Network protocol knowledge**: OSI model and TCP/IP
  - Network security: IPsec, VPN, Firewall, WAF
- **Languages & Scripting:** C/C++, Java, Shell, Bash
- **Frameworks:** ZebOS, Java Springboot
- **Operating Systems:** Linux (Ubuntu, CentOS), Windows, macOS
- **Databases:** RDS (MySQL, MariaDB), non-RDS (MongoDB, DynamoDB)
- **Web Servers:** Apache Tomcat and NGINX
- **DevOps:** Jenkins, GitLab CI/CD, Grafana, Prometheus, Loki
- **Server Virtualization & Cloud Computing:** AWS, Azure, VMWare, OpenStack
- **Container Technologies:** Docker, Kubernetes, Elastic Kubernetes Service, Azure Kubernetes Service
- **Network Design, Administration, & Security:** OpenLDAP, Microsoft Active Directory
- **Source Code Management:** GitHub, Gitlab, SVN, GitTea
- **Chip Families**: Familiar with Broadcom Chip

PROFESSIONAL EXPERIENCE

Position: Cloud Solution Architecture/DevOps Consultant
Duration: *Feb 2023 – Currently*

Responsibilities:
- Collect customer requirements, and co-work with the offshore team for estimation and propose a plan for customers (SKCC, LGCNS, LF, LS-Electric…)
- Analyze the principle of services and customer systems then transfer to the offshore team to propose an integrated software development direction.
- Present the proposal to the customer.

Project: Asset Management Solution
Duration: August 2023 – December 2023

Position: Cloud Solution Architecture/DevOps Engineer
Project size: 10 members

Project Description: Develop the enhancement functions and new functions for the Asset Management Solution. Set up an on-premises Kubernetes cluster following customer's requirement and also deploy full monitoring and logging solution for the new system.

Responsibilities:
- Design and propose the solution for the deployment of the on-premises Kubernetes cluster.
- Propose a full solution for monitoring and logging using open-source projects.
- Support system engineer to deploy the on-premises Kubernetes cluster and monitoring and logging solution.
- Consult and coordinate with the development team and customers to deliver a timely high-quality product.
- Carry out debugging, troubleshooting, modifications, and unit testing of custom solutions built on the organization/client's platform.

Technologies Used:
- Ansible, Kubernetes, MetalLB, Grafana, Loki, Prometheus
- Java Springboot, NodeJS, MongoDB, MySQL
- Jenkins CICD

Project: E-commerce Application Modernization
Duration: September 2023 – December 2023

Position: Cloud Solution Architecture/DevOps Consultant
Project size: 5 members

Project Description: Discovery, evaluate the feasibility then propose a solution to migrate 10 applications from VMs to Kubernetes.

Responsibilities:
- Discovery and analysis of the customer's system architecture of 10 applications.
- Propose a new architecture and optimized solution for cloud presence, performance, and security to meet customer's requirements.
- Coordinate with the development team and customers to make the PoC demonstrations to evaluate the proposed solution for migration in the future.
- Support to debugging, and troubleshooting the issues while deploying and testing on the customer's platform.

Technologies Used:
- Linux, Kubernetes, MetalLB, Grafana, Loki, Prometheus, HA Proxy
- AWS Route 53
- Tomcat Server, Apache
- Java Springboot
- Jenkins CICD

Project: Nokia SI Suite Replacement
Duration: *August 2022 – July 2023*

Position: Cloud Solution Architecture/DevOps Engineer
Project size: 20 members

Project Description: Receiving technical transfer from Nokia America. Analyzing the existing customer's system then refactoring and integrating the Nokia system into the customer's system and migrating the existing customer's system from AWS using Cloud Foundry to Azure using Azure Kubernetes Service.

Responsibilities:
- Receive technical transfer from Nokia and assess the Nokia platform.
- Analyze and assess the existing system of customers.
- Gather customer requirements for migrating the Nokia platform into the customer's existing system.
- Co-work with other Solution Architecture to design and propose the new microservice architecture for the new part of the customer's system.
- Design and propose the new deployment architecture for the customer's system on Azure while optimizing customers' cloud presence, performance, security, and cost.
- Implement and deploy the proposed architecture of the new system on AKS Azure.
- Carry out debugging, troubleshooting, modifications, and unit testing of custom solutions built on the organization/client's platform.

Technologies Used:
- Azure Kubernetes Service, Azure Cloud Service
- AWS, Cloud Foundry
- Tomcat Server, MSSQL
- Java Springboot, NodeJS, MongoDB, MySQL
- Jenkins CICD

Project: VMware Management Platform – VMP
Duration: *Sep 2021 – July 2022*

Position: Cloud Solution Architecture/Project Leader
Project size: 15 members

Project Description: Build a management platform for multi-tenant, managing users, cost, configuring networks and computes, then provisioning services for a VM of the on-premises cloud. It targets to provide more powerful features allowing to manage and operate distributed on-premises cloud assets effectively by leveraging with micro-services architecture, AWS managed-service (such as EKS, Document DB.)

Responsibilities:
- Analysis of the principle of network services and system of customers then guides the development team for software development.
- Work with customers to design a full-stack solution using software that fully integrates with the customer's existing cloud infrastructure.
- Propose suggestions and best practices to optimize customers' cloud presence, performance, security, and cost.
- Implement and deploy the proposed architecture of the new system on EKS AWS.
- Consult and coordinate with the development team and customers to deliver a timely high-quality product.
- Carry out debugging, troubleshooting, modifications, and unit testing of custom solutions built on the organization/client's platform.
- Evaluate applications, hardware, and software at regular intervals.
- Perform product demos to customers.

Technologies Used:
- Elastic Kubernetes Service, MongoDB, MariaDB
- VMware (vCenter, NSX-T)
- Java Spring, Gitlab CICD, ReactJS

Project: VMware Control Management Platform – CMP
Duration: *Nov 2021 – June 2022*

Position: Cloud Solution Architecture/Sub-Project Leader
Project size: 10 members

Project Description: Build a control management platform for managing users, multi-tenant, networks and computes, and services on VMs and containers of the on-premises cloud. This platform will provide more powerful features allowing to control and manage on-premises cloud assets effectively by leveraging micro-services architecture.

Responsibilities:
- Analysis of the principle of network services and system of customers then guides the development team for software development.
- Propose suggestions and best practices to optimize customers' cloud presence, performance, security, and cost.
- Implement and deploy the proposed architecture of the new system on the customer's on-premise cloud.
- Carry out debugging, troubleshooting, modifications, and unit testing of custom solutions built on the organization/client's platform.
- Perform product demos to customers.

Technologies Used:
- Docker-compose, Container.
- VMware (vCenter, NSX-T), vRealize Automation and Operation
- Java Spring, React, MongoDB, MariaDB

Project: POTN - Packet-Optical Transport Network
Duration: *March 2018 – September 2021*

Position: Senior Software Developer
Project size: 15 members

Project Description: Designing, developing, and maintaining the layer 2, and layer 3 network protocols and network services for the centralized/distributed core network devices providing for Korea Telecom (KT) mobile's transport network and developing a centralized management tool for managing and orchestrating the KT's network devices.

Responsibilities:
- Design software architecture of network services for distributed/centralized core network devices.
- Implement the Layer 2 (OAM, VPN) network protocol services based on networking standards, and maintain for distributed/centralized core network devices.
- Implement and maintain Linux system utility (Telnet, SSH, FTP, NTP, Log system) of network devices for software package management, accessing management, log monitoring, and configuration the core devices network.

- Co-work with the Front-End team to define the standard protocols and develop the centralized management tools (OAM, VPN, FTP functions) for managing, monitoring, and upgrading software for the network devices.

Technologies Used:
- ITU-T and IEEE network protocol standards
- Linux, ZebOS, and C programming
- Broadcom chip families
- Jenkins CICD

Project: Network Function Virtualization (NFV)
Duration: *August 2016 – February 2018*

Position: Researcher & Software Developer
Project size: Opensource community

Project Description: Research and contribute to developing frameworks for Network Function Virtualization (NFV), and Service Function Chaining (SFC) running on OpenStack.

Responsibilities: - Designing and developing a part of the alarm feature for management and orchestrator frameworks (Tacker) to improve reliability when using OpenStack.
- Contribute to developing the OpenDaylight framework for the management of SFCs.
- Integrate and deploy the system following the DevOps process (Jenkins, Kubernetes)

Technologies Used:
- OpenStack, Tacker, Java, Python
- OPNFV, Kubernetes, Jenkins

Project: Information-centric Networking (ICN)
Duration: *August 2017 – February 2018*

Position: Main Software Developer
Project size: 3 members

Project Description: Design and propose a new routing mechanism for the ICN network in case natural disasters occur and network links are interrupted. Implement the solution of the ICN network in an NFV environment based on OpenStack.

Responsibilities: - Design a new deployment architecture and implement a new routing mechanism for the ICN network in case natural disasters occur and network links are interrupted
- Bring up the forwarding and routing of ICN components to NFV environments based on OpenStack.

Technologies Used
- OpenStack
- C, Shell script
- VPP, CICN, DPDK

Project: Digital Signage
Duration: March 2016 – September 2016

Position: Main Software Developer
Project size: 4 members

Project Description: Develop and integrate a gender-recognition function by leveraging the Open Computer Vision (OpenCV) framework into the advertising system. Deploy the advertising system on OpenStack.

Responsibilities: - Design system architecture and solutions for function integration.
- Develop a gender-recognition function for OpenCV and integrate functions into the advertising system.
- Collect and standardize the training data for OpenCV.
- Deploy the advertising system by leveraging OpenStack.

Technologies Used:
- Java, C
- OpenCV
- OpenStack

EDUCATIONAL BACKGROUND
- Degree: **Master of Engineering**   Grade: 4.2/4.5 (Excellent)
- Major: *Information and Communication Engineering*
- University: Soongsil University, Seoul, Republic of Korea
- Thesis: A design of ICN service in a Network Function Virtualization environment

- Degree: **Bachelor of Engineering**   Grade: 3.31/4.0 (Very Good)
- Major: *Electronics and Telecommunications Engineering*
- University: Hanoi University of Sciences and Technology, Hanoi, Vietnam
- Thesis: A design and implementation of a resource management system using Network Virtualization in a Software-defined Networking (SDN) platform

ACHIEVEMENTS

- Successful delivery of 600k USD project with 100 points of Customer Satisfaction Survey, S1 2023
- Support to win 250k USD in total revenue in S2 2023.
- Excellent Member of Department in S1 2023.
- Excellent Member of Department in S2 2022.
- Delivery of 100% of projects on time with high Customer Satisfaction Survey (100% of projects higher than 95 points, 50% of projects with 100 points)
- Technology Journal: A Distributed NFV-Enabled Edge Cloud Architecture for ICN-Based Disaster Management Services.
DOI: https://doi.org/10.3390/s18124136
- Full scholarship for master's degree at Soongsil University.
- Best Student Paper Award at 40th Asia Pacific Advanced Network Meeting, August 2015
- First Award in the Student's Scientific Research Contest, Hanoi University of Sciences and Technology.
- Scholarship for excellent students of HUST