Claud D.Park Site Reliability Engineer · $Software Architect 235, World Cup buk-ro, Mapo-gu, Seoul, 03936, R$
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"Be the change that you want to see in the world."

Education

B.S. in Computer Science and Engineering POSTECH(Pohang University of Science and Technology) Pohang, S.Korea Mar. 2010 - Aug. 2017

Got a Chun Shin-Il Scholarship which is given to promising students in CSE Dept.

Skills

DevOps AWS, Docker, Kubernetes, Rancher, Vagrant, Packer, Terraform, Jenkins, CircleCI

Back-end Koa, Express, Django, REST API

Front-end Hugo, Redux, React, HTML5, LESS, SASS

Programming Node.js, Python, JAVA, OCaml, LaTeX

Languages Korean, English, Japanese

Experience

Founding Member & Site Reliability Engineer & Infrastructure Team Lead Danggeun Pay Inc. (KarrotPay) Seoul, S.Korea Mar. 2021 - Present

Everything that matters.

Designed and provisioned the entire infrastructure on the AWS cloud to meet security compliance and acquire a business license for financial services in Korea.

Continuously improved the infrastructure architecture since launching the service. (currently 3.6 million users)

Established a standardized base for declarative management of infrastructures and service deployments, enabling operational efficiency and consistency. Over 90% of AWS resources were all managed through standardized terraform modules. All add-ons and service workloads on the Kubernetes cluster were managed on a GitOps basis with Kustomize and ArgoCD.

Saved over 30% of the overall AWS costs by establishing a quarterly purchasing strategiy for RI (Reserved Instance) and SP (Savings Plan) and by introducing Graviton instances.

Established a core architecture for regulating of outbound DNS traffic in multi-account and multi-VPC environments utilizing AWS Route53 DNS Firewall and FMS. This significantly increased the level of security confidence in the financial sector's segregated environment.

Introduced Okta employee identity solution in the company, establishing security policies and configuring SSO integration with over 20 enterprise systems including AWS, GitHub, Slack, Google Workspace. Set up a Hub and Spoke architecture, enabling a collaborative account structure with the parent company, Daangn Market.

Site Reliability Engineer Danggeun Market Inc. Seoul, S.Korea Feb. 2021 - Mar. 2021

Founding Member & Director of Infrastructure Division Kasa Seoul, S.Korea Jun. 2018 - Jan. 2021

Designed and managed complex network configurations on AWS with 4 VPC and 100+ subnets. Separated the development network and operation network according to financial regulations. Established dedicated network connections from AWS VPC to partners' on-premise network based on AWS Direct Connect with secure connection using IPsec VPN. Provisioned OpenVPN servers with LDAP integration.

Provisioned a observability system with Kafka, Elastic Stack(Filebeat, Heartbeat, APM Server, Logstash, Elasticsearch, Kibana). Collected log, uptime, tracing data from hosts, containers, pods and more. The ES cluster which has 9 nodes processed more than 1 billion documents per month. Wrote Terraform module to easily provision ES cluster on AWS EC2 instances.

Provisioned a monitoring system with Kafka, Telegraf, InfluxDB, Grafana. Collected metrics from hosts, containers, pods and more. Wrote Terraform module to easily provision InfluxDB with HA on AWS EC2 instances.

Introduced Kong API Gateway to easily connect all API microservices with a declarative management method based on Terraform and Atlantis to collaborate and audit change history.

Provisioned the Directory Service for employee identity management based on OpenLDAP which guarantees HA with multi-master replication.

Implemented Worker microservices consuming Kafka event topics for email, SMS, Kakaotalk and Slack notification. Developed in-house framework to easily build Kafka consumer microservice with common features including retry on failure, DLQ(Dead Letter Queue), event routing and more.

Introduced Elastic APM to help distributed tracing, troubleshooting and performance testing in MSA.

Software Architect Omnious. Co., Ltd. Seoul, S.Korea Jun. 2017 - May 2018

Provisioned an easily managable hybrid infrastructure(Amazon AWS + On-premise) utilizing IaC(Infrastructure as Code) tools like Ansible, Packer and Terraform.

Built fully automated CI/CD pipelines on CircleCI for containerized applications using Docker, AWS ECR and Rancher.

Designed an overall service architecture and pipelines of the Machine Learning based Fashion Tagging API SaaS product with the micro-services architecture.

Implemented several API microservices in Node.js Koa and in the serverless AWS Lambda functions.

Deployed a centralized logging environment(ELK, Filebeat, CloudWatch, S3) which gather log data from docker containers and AWS resources.

Deployed a centralized monitoring environment(Grafana, InfluxDB, CollectD) which gather system metrics as well as docker run-time metrics.

Co-founder & Software Engineer PLAT Corp. Seoul, S.Korea
Jan. 2016 - Jun. 2017

Implemented RESTful API server for car rental booking application(CARPLAT in Google Play).

Built and deployed overall service infrastructure utilizing Docker container, CircleCI, and several AWS stack(Including EC2, ECS, Route 53, S3, CloudFront, RDS, ElastiCache, IAM), focusing on high-availability, fault tolerance, and auto-scaling.

Developed an easy-to-use Payment module which connects to major PG(Payment Gateway) companies in Korea.

Researcher Undergraduate Research, Machine Learning Lab(Prof. Seungjin Choi) Pohang, S.Korea Mar. 2016 - Exp. Jun. 2017

Researched classification algorithms(SVM, CNN) to improve accuracy of human exercise recognition with wearable device.

Developed two TIZEN applications to collect sample data set and to recognize user exercise on SAMSUNG Gear S.

Software Engineer & Security Researcher (Compulsory Military Service) R.O.K Cyber Command, MND Seoul, S.Korea Aug. 2014 - Apr. 2016

Lead engineer on agent-less backtracking system that can discover client device's fingerprint(including public and private IP) independently of the Proxy, VPN and NAT.

Implemented a distributed web stress test tool with high anonymity.

Implemented a military cooperation system which is web based real time messenger in Scala on Lift.

Game Developer Intern at Global Internship Program NEXON Seoul, S.Korea & LA, U.S.A Jan. 2013 - Feb. 2013

Developed in Cocos2d-x an action puzzle game(Dragon Buster) targeting U.S. market.

Implemented API server which is communicating with game client and In-App Store, along with two other team members who wrote the game logic and designed game graphics.

Won the 2nd prize in final evaluation.

Researcher for <Detecting video's torrents using image similarity algorithms> Undergraduate Research, Computer Vision Lab(Prof. Bohyung Han) Pohang, S.Korea Sep. 2012 - Feb. 2013

Researched means of retrieving a corresponding video based on image contents using image similarity algorithm.

Implemented prototype that users can obtain torrent magnet links of corresponding video relevant to an image on web site.

Software Engineer Trainee Software Maestro (funded by Korea Ministry of Knowledge and Economy) Seoul, S.Korea Jul. 2012 - Jun. 2013

Performed research memory management strategies of OS and implemented in Python an interactive simulator for Linux kernel memory management.

Software Engineer ShitOne Corp. Seoul, S.Korea Dec. 2011 - Feb. 2012

Developed a proxy drive smartphone application which connects proxy driver and customer. Implemented overall Android application logic and wrote API server for community service, along with lead engineer who designed bidding protocol on raw socket and implemented API server for bidding.

Freelance Penetration Tester SAMSUNG Electronics S.Korea Sep. 2013, Mar. 2011 - Oct. 2011

Conducted penetration testing on SAMSUNG KNOX, which is solution for enterprise mobile security.

Conducted penetration testing on SAMSUNG Smart TV.

Extracurricular Activity

Core Member B10S (B1t 0n the Security, Underground hacker team) S.Korea Nov. 2011 - PRESENT

Gained expertise in penetration testing areas, especially targeted on web application and software.

Participated on a lot of hacking competition and won a good award.

Held several hacking competitions non-profit, just for fun.

Member WiseGuys (Hacking & Security research group) S.Korea Jun. 2012 - PRESENT

Gained expertise in hardware hacking areas from penetration testing on several devices including wireless router, smartphone, CCTV and set-top box.

Trained wannabe hacker about hacking technique from basic to advanced and ethics for white hackers by hosting annual Hacking Camp.

Core Member & President at 2013 PoApper (Developers' Network of POSTECH) Pohang, S.Korea Jun. 2010 - Jun. 2017

Reformed the society focusing on software engineering and building network on and off campus.

Proposed various marketing and network activities to raise awareness.

Member PLUS (Laboratory for UNIX Security in POSTECH) Pohang, S.Korea Sep. 2010 - Oct. 2011

Gained expertise in hacking & security areas, especially about internal of operating system based on UNIX and several exploit techniques.

Participated on several hacking competition and won a good award.

Conducted periodic security checks on overall IT system as a member of POSTECH CERT.

Conducted penetration testing commissioned by national agency and corporation.

Member MSSA (Management Strategy Club of POSTECH) Pohang, S.Korea Sep. 2013 - Jun. 2017

Gained knowledge about several business field like Management, Strategy, Financial and marketing from group study.

Gained expertise in business strategy areas and inisght for various industry from weekly industry analysis session.

Honors & Awards

International Awards

2nd Place AWS ASEAN AI/ML GameDay Online 2021

Finalist DEFCON 28th CTF Hacking Competition World Final Las Vegas, U.S.A 2020

Finalist DEFCON 26th CTF Hacking Competition World Final Las Vegas, U.S.A 2018

Finalist DEFCON 25th CTF Hacking Competition World Final Las Vegas, U.S.A 2017

Finalist DEFCON 22nd CTF Hacking Competition World Final Las Vegas, U.S.A 2014

Finalist DEFCON 21st CTF Hacking Competition World Final Las Vegas, U.S.A 2013

Finalist DEFCON 19th CTF Hacking Competition World Final Las Vegas, U.S.A 2011

6th Place SECUINSIDE Hacking Competition World Final Seoul, S.Korea 2012

Domestic Awards

2nd Place AWS Korea GameDay Seoul, S.Korea 2021

3rd Place WITHCON Hacking Competition Final Seoul, S.Korea 2015

Silver Prize KISA HDCON Hacking Competition Final Seoul, S.Korea 2017

Silver Prize KISA HDCON Hacking Competition Final Seoul, S.Korea 2013

2nd Award HUST Hacking Festival S.Korea 2013

3rd Award HUST Hacking Festival S.Korea 2010

3rd Award Holyshield 3rd Hacking Festival S.Korea 2012

2nd Award Holyshield 3rd Hacking Festival S.Korea 2011

5th Place PADOCON Hacking Competition Final Seoul, S.Korea 2011

Community

AWS Community Builder (Container) Amazon Web Services (AWS) 2022

HashiCorp Ambassador HashiCorp 2022

Certificates

AWS Certified Advanced Networking - Specialty Amazon Web Services (AWS) 2023

AWS Certified Developer – Associate Amazon Web Services (AWS) 2023

AWS Certified Cloud Practitioner Amazon Web Services (AWS) 2023

AWS Certified Security - Specialty Amazon Web Services (AWS) 2022

AWS Certified Solutions Architect – Professional Amazon Web Services (AWS) 2022

AWS Certified Solutions Architect – Associate Amazon Web Services (AWS) 2019

AWS Certified SysOps Administrator – Associate Amazon Web Services (AWS) 2021

Certified Kubernetes Application Developer (CKAD) The Linux Foundation 2020

HashiCorp Certified: Consul Associate (002) HashiCorp 2023

HashiCorp Certified: Terraform Associate (003) HashiCorp 2023

HashiCorp Certified: Terraform Associate (002) HashiCorp 2020

Presentation

Presenter for <Hosting Web Application for Free utilizing GitHub, Netlify and CloudFlare> DevFest Seoul by Google Developer Group Korea Seoul, S.Korea Nov. 2017

Introduced the history of web technology and the JAM stack which is for the modern web application development.

Introduced how to freely host the web application with high performance utilizing global CDN services.

Presenter for <DEFCON 20th : The way to go to Las Vegas> 6th CodeEngn (Reverse Engineering Conference) Seoul, S.Korea Jul. 2012

Introduced CTF(Capture the Flag) hacking competition and advanced techniques and strategy for CTF

Presenter for <Metasploit 101> 6th Hacking Camp - S.Korea S.Korea Sep. 2012

Introduced basic procedure for penetration testing and how to use Metasploit

Writing

Founder & Writer A Guide for Developers in Start-up Facebook Page Jan. 2015 - PRESENT

Drafted daily news for developers in Korea about IT technologies, issues about start-up.

Undergraduate Student Reporter AhnLab S.Korea Oct. 2012 - Jul. 2013

Drafted reports about IT trends and Security issues on AhnLab Company magazine.

Program Committees

Problem Writer 2016 CODEGATE Hacking Competition World Final S.Korea 2016

Organizer & Co-director 1st POSTECH Hackathon S.Korea 2013

Staff 7th Hacking Camp S.Korea 2012

Problem Writer 1st Hoseo University Teenager Hacking Competition S.Korea 2012

Staff & Problem Writer JFF(Just for Fun) Hacking Competition S.Korea 2012