WARD HUANG

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PROFESSIONAL EXPERIENCE

RingCentral   Belmont, California, USA
Site Reliability Engineer (Ringcentral @ CNCF 2023)   May 2022 - July 2025

- Container operations
  - Preserved velocity of organization by keeping **kubelet** and **containerd** daemons in thousands of bare-metal and AWS worker nodes up to date.
  - Reduced operating expenses of VoIP service used by millions of customers by containerizing the service: adopted new network & storage drivers such as **Calico** and **NetApp Object Storage** as requirements of the containerization effort.
- Security hardening & compliance
  - Preserved two million in annual recurring revenue by implementing a process -- using **ansible** -- to remediate critical & high CVEs within 30 days.
  - Enabled RingCentral's **FedRAMP** market expansion by using **ansible** and **packer** to harden the Amazon Linux 2023 operating system to CIS L2 standards.
- On-call & Incident Response
  - 4 years of experience in incident response, mitigating RingCentral's longest service outage, which was (officially) caused by exhausted conntrack tables in two nodes out of several hundred.
  - Negotiated a resolution, between the frontend, backend, and product teams, of a two year-old "long tail" bug that was causing 60 second client timeouts for less than 1% of 2 million users.
- Monitoring & Observability
  - Cut minimum time to detection of incidents by 50% after introducing **prometheus** time series databases to dozens of **kubernetes** clusters.

Associate Engineer, DevOps & Site Reliability   May 2021 - April 2022

- Infrastructure as a Code & Automation
  - Cooperated with Network, Security, Architecture, IT, and feature teams to deliver 3 AWS accounts and 6 Kubernetes clusters within 3 months: accomplished in part by adopting **terragrunt** as a new technology to repurpose existing **terraform** root modules.
  - Eliminated 4 years of technical debt by automating the upgrade process for hundreds of **terraform** root modules from v0.12.31 to v1.5.7 using **Go**, **Bash**, and **awscli**.

TECHNICAL SKILLS

Programming: Go, Bash, Python.
Infrastructure/Configuration as a code: Terraform, Terragrunt, Ansible, Packer
Container Technologies: Docker, Containerd, Kaniko, Kustomize, Helm, Kubernetes
AWS (Amazon Web Services): EC2, S3, EKS, IAM, VPC, CloudWatch, CloudTrail, Route53, SES, SSM, ECR, Lambda
GCP (Google Cloud Platform): Key Management Service, Cloud Logging, Secret Manager, IAM, Billing
Monitoring/Logging: Prometheus, Fluentd, Grafana, Kibana
CI/CD: Gitlab CI, ArgoCD, Jenkins
Languages: Mandarin Chinese, English

PROJECTS

Hybrid cloud email system   Architecture & implementation details
- Hybrid cloud email system which supports creating "unlimited" email addresses.
- Balances tradeoffs when working with **object storage**: reverse indexing, forward indexing, and object manipulation.

Home networking   Architecture & implementation details
- Custom home networking solution to replace ISP router rental.
- Key benefits include reduced DNS query latency, monitoring & logging of network traffic, isolation of physical & wireless networks, and improved internal network speed.

EDUCATION

San Jose State University   San Jose, California
Master of Science - Software Engineering. Part-time instructional student assistant.   May 2021

University of California, Santa Barbara   Santa Barbara, California
Bachelor of Science - Computer Engineering. Focus on ASICs, embedded systems, and microprocessors.