黃宇強 Yu-Chiang (Date) Huang

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SKILL SET

Primary Languages	Golang | Python | Shell (Bash) | C/C++ | X86/ARM Assembly
Notable Libraries	Libtorrent | gRPC
Containers/Virt	OpenStack | Kubernetes | VMware vSphere | Proxmox VE | Docker | KVM
Networking	Network Configuration and Trouble Shooting| Cumulus Linux | Linux Networking | Multi-tenant | IPSEC/Wireguard VPN | BGP Routing | BGP-EVPN | SONiC
Storage	ZFS | LVM | MD RAID | HW RAID | NFS
CI/CD	Travis CI | GitLab CI | Circle CI
Various	Nginx | Ansible| Git | Vim | Security | Auto Scripting | Kernel | Most Linux Distro | Hosted Service

WORK EXPERIENCE

Jan 2023 - Now, EZIO Project Maintainer

Contiguously develop new feature and tune provisioning performance. Support Clonezilla EZIO customers for different Linux environments and disk images. Help customers to trouble shoot the different network architecture in the cloud for Clonezilla EZIO.

Achievement:

One of Taichung School: Support and debug network switch in school's server room and help to re-configure network devices to avoid failure issues.

Contribute Kubernetes CNI Community Bridge Plugin: Add VLAN trunk support for the community bridge CNI plugin. https://github.com/containernetworking/plugins/pull/829

Jan 2022 - Jan 2023, Software Engineer – SUSE Rancher

Contribute Open Source Project Harvester HCI which is based on Kubernetes in SUSE Rancher team. Develop on OS, Installer, Networking of a HCI solution.
https://harvesterhci.io/

Achievement:

Internal Network Training: Provide internal trainings from basic to advance network. Introduce current common datacenter network and the basis guideline to design and choose protocol between servers and network devices. Share experiences from Network Devices users to provide better interoperability product.

Develop Network Mechanism: Design new VLAN and VXLAN Network implementation for flexibility to extend further network features.

Develop Storage Network Mechanism: Design new Storage Network for the HCI to isolate storage network traffic with other service traffic to ensure storage network have enough and proper bandwidth to synchronize with other nodes in the cluster.

Support Europe Cloud Provider: Support customers to configure their Cisco switches in the datacenter to fit Harvester network requirement.

May 2019 - Dec 2021, Senior Presales Engineer - Edgecore Networks

Develop solution architecture of data center networking. Work with Product team, RD team to create solution and communicate with customers for better solution for every different scenario.

Achievement:

One of US Storage Manufacturer: Design and configure high availability and robust storage network to emulate users' side scenarios.

One of US Datacenter Manufacturer: Design special out-of-band management network solution. Provide server side and software development experiences to design proper hardware and software. And also provide some new idea to develop new generation architecture.

One of Australia Telecom: Design and configure datacenter network and datacenter interconnect.

One of Korean Automobile Manufacturer: Help customers to configure router, switch, and Linux Servers for BGP-EVPN across different data centers.

One of Taiwanese Bank: Design and configure the high availability MLAG network solution for the bank's data center.

One of Taiwanese Government: Design and configure high availability network for the server farm. Help customers to trouble shoot interoperability issue with the different vendors and functions equipment.

One of Taiwanese Government: Design and configure BGP-EVPN high availability network for the government's HPC. Provide high bandwidth for the east-west traffic which is critical for the HPC. Trouble shoot for contiguous traffic disconnection and the network connectivity.

One of Taiwanese Telecom: Help customers to design and configure data center interconnect (DCI) to multiple private cloud in the different datacenter of multiple regions.

One of Taiwanese Telecom: Design and configure BGP-EVPN high availability network for the telecom private cloud, OpenStack and Ceph network.

One of Taiwanese Server Manufacturer: Design and configure BGP-EVPN high availability network for Kubernetes and Ceph Storage Networks.

OPEN SOURCE PROJECTS

STUNMESH-go - Full Mesh Wireguard VPN Helper in SD-WAN solution for Mobile Networks

Provide SD-WAN VPN solution that differs from traditional IPsec tunnel and bring more flexibility improvements in Mobile networks for Cloud, Office, IDC interconnect usage. STUNMESH-go could help and provide rich redundant, full mesh VPN topology in mobile networks without fixed public IPs needs. Native cross-architecture in X86_64 and MIPS. Simple to use in embedded system or network device.

https://coscup.org/2021/zh-TW/session/XV3NGT

https://github.com/tjjh89017/stunmesh-go

EZIO - BitTorrnet-based Bare-Metal Operating System Provisioning

Cooperate with National Center for High-performance Computing. Develop a brand new mechanism to deploy massive operating system to HPC. EZIO Project has integrated in CloneZilla Live to provide Peer-to-Peer system provisioning. It has much performance, reliability and flexibility improvements than Multicast deployment which is slow and unstable. The time of deployment via EZIO is more expectable that almost provides constant time complexity. And now, CloneZilla provides Direct Disk Deployment via EZIO. Don't need to create and store an image before deployment, just start to transfer disks to all the targets.

EZIO Project has published in MDPI Applied Sciences Journal, ISC High Performance 2018, TANET Conference 2018.

https://github.com/tjjh89017/ezio

https://www.mdpi.com/2076-3417/9/2/296

DozenCloud Project - OpenStack on ARM64

Provide an ARM64 Native Environment to debug for academic purposes. The DozenCloud Project, based on OpenStack, proposes a reasonably efficient model to construct low power virtual private cloud computing systems based on the customization of open source software technologies and cost-efficient ARM servers, such as GIGABYTE R150-T60. DozenCloud has been developing these simplified blade server chassis that offer density, low power, and lower cost, in the form of open source.

DozenCloud Project has published in Open Source Summit North America 2017 and OpenStack Day Taiwan 2016.

http://dozencloud.org

https://beta.dozen.cloud

https://ossna2017.sched.com/event/BDqU

EXPERIENCES - OPEN SOURCE PROJECT CONTRIBUTION

VyOS Project Contributor

Open Source Software Router on X86_64

https://vyos.io/

https://github.com/vyos/vyos-1x

flash-kernel Project Contributor

flash-kernel is a script which will put the kernel and initramfs in the boot location of embedded

devices.

https://salsa.debian.org/installer-team/flash-kernel

fish-shell Project Contributor

fish is a smart and user-friendly command line shell for macOS, Linux, and the rest of the family.

https://github.com/fish-shell/fish-shell

Cockpit Project Contributor

The easy-to-use, integrated, glanceable, and open web-based interface for your servers

https://cockpit-project.org/

Partclone Project Contributor

Partclone provides utilities to backup a partition smartly and it is designed for higher

compatibility of the file system by using existing library.

https://github.com/Thomas-Tsai/partclone

Clonezilla Project Contributor

Clonezilla is a partition and disk imaging/cloning program similar to True Image® or Norton

Ghost®.

https://clonezilla.org/

EXPERIENCES - CONFERENCE TALKS, PUBLIC SPEAKING

Aug 2021 - Conference for Open Source Coders, Users, and Promoters 2021 Speaker

Cloud Infrastructure Interconnect with Wireguard and OSPF

Dec 2019 - Taiwan Network Operators Group Conference 4.0

Next Generation IDC Network Solution Overview

Nov 2019 - Open Source Conference Tokyo Fall 2019 Speaker

Wireguard と BGP を使って信頼的なゲーミングネットワークを構築しました

Nov 2019 - China Open Source Conference 2019 Speaker

Build Redundant Gaming Network with Wireguard and BGP

Nov 2019 - OpenInfra Day Taiwan 2019 Speaker

Massive Bare-Metal Operating System Provisioning Improvement

Jun 2019 - Hong Kong Open Source Conference 2019 Speaker

Decentralized Bare-Metal Operating System Provisioning

Jun 2018 - ISC High Performance 2018 Project Poster Demo

The Design and Implementation of Bare Metal Cluster Deployment Using BitTorrent

Sep 2017 - Open Source Summit North America 2017 co-Speaker

Build Cloud Infrastructure with Cheap ARM Boards

Aug 2017 - OpenStack Day Taiwan 2017 Speaker

Combine Continuous Integration (CI) with OpenStack

Aug 2016 - OpenStack Day Taiwan 2016 Invited Speaker

OpenStack on ARM64

Feb 2016 - Students' Information Technology Conference SITCON Speaker

ARM Cloud Project

EXPERIENCES – PUBLICATION

Feb 2021 - IEEE Access

A BitTorrent Mechanism-Based Solution for Massive System Deployment

Jan 2019 - MDPI Applied Sciences - Open Access Journal

A Novel Massive Deployment Solution Based on the Peer-to-Peer Protocol

Dec 2017 – Master Thesis: Decentralized Image Deployment in Datacenter

EXPERIENCES – COMPETITION

Dec 2017 - Gold Shield Cybersecurity Skill Competition Third Place Award

SQLab_RETURN

Dec 2015 - Gold Shield Cybersecurity Skill Competition Third Place Award

bamboofox_DozenCloud

Jun 2015 – Taiwan Student Cluster Competition Honorable Mention

EDUCATION

National Chiao Tung University – Master Degree

Institute of Computer Science and Engineering - Software Quality Lab 2016 - 2018

National Central University – Bachelor Degree

Department of Computer Science and Information Engineering 2012 - 2016