Rabie Rabie

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CLOUD SOFTWARE ENGINEER

Skilled Cloud Software and infrastructure Engineer with an MS in Computer Science and expertise in software development and automation, platform/network performance analysis, and infrastructure management. Hands-on experience across the cloud ecosystem, including integrated infrastructure management tools, virtualization/containerization technologies, operating systems and centralized management and monitoring as well as networking, storage, and backup solutions.

AREAS OF EXPERTISE

Cloud Architecture | Terraform | Automation | Virtualization | Containerization | kubernetes | AWS | SQL | IOMMU|VT-D | Linux | Computer Networks | NFV | SDN | Integrated Infrastructure | Performance Analysis |SAN Storage | Backup

PROFESSIONAL EXPERIENCE

INTEL, Inc., Oregon, USA   **May 2020 – October 2024**
Cloud Software Development Engineer, May 2021 – October 2024
Develop and automate different workloads to test the functionality and performance of Intel IOMMU/VT-d plus intel new features and accelerators. Test SR-IOV and SIOV technologies with different PCIe devices e.g., NIC, NVME, DSA, IAX, and QAT.
- Automated the creation and deployment of Docker containers using Python and Cloud-Init, running workloads concurrently across 50+ VMs or directly on Linux hosts; collected and processed results for downstream parsing and analysis
- Validate the functionality and compare the performance of host vs guest in various VT-d modes to identify bugs.
- Collaborate with different teams to debug, fix, and validate the solutions for the discovered bugs.
- Collaborating with the team on a patient draft on VT-d.

Cloud Solutions Engineering Intern, May 2020 – May 2021
Contributed to the development of 3 workloads to showcase the benefits of using intel speed select technology with OpenMP parallel computing.
- Led and collaborated with the team to draft a white paper of the results of the three workloads.

UNIVERSITY OF MEMPHIS, Tennessee, USA   **January 2019 – May 2020**
Graduate Assistant
Helped individuals with disabilities to learn assistive technology.

ORANGE BUSINESS SERVICES, Inc.   **August 2018 – December 2018**
Shared cloud Engineer
Conducted daily operational tasks/troubleshooting on the VMware based shared cloud of Orange.
- Created new organization and VDCs for the new customers on v-sphere, v-cloud directory, and NSX.
- Implemented any changes on the current customer organizations.
- Managed and monitored the underlying cloud hardware blades, storage, and network (HPE, Cisco).

VODAFONE EGYPT, Inc.   **June 2017 – July 2018**
NFV Infrastructure Engineer
Handled daily operational tasks on VMware and Open stack Vodafone NFV including the implementation of customer requests at the virtualization or the OneView and VC networking layers and t-shooting of any related issues. Monitored the cloud HW (Blades, storage, TOR) from different vendors (HPE, EMC, Cisco).
- Managed the company backup with EMC networker and developed custom scripts for network nodes backup.
- Saved around 45% of storage by automating data domain cleaning.

ORANGE EGYPT, Inc.   **March 2016 – May 2017**
IP Network Optimization Engineer
Utilized OPNET tools to simulate the MPLS telecom network with traffic, enabling proactive planning for potential failures, outages, or capacity issues. Monitored all MPLS network devices for performance and reliability.
- Planned the capacity to prevent network congestion due to the integration of new services.
- Achieved a 30% reduction in transmission costs by optimizing network design to minimize failure impact.

- Performed network failure analysis to limit node/link failure impact within predefined margins.
- Validated configuration changes using OPNET before production deployment to prevent misconfiguration outages.

PHILIPS HEALTHCARE, Inc., Cairo, Egypt   **December 2014 – February 2016**
Support Engineer for PACS
leading PACS delivery and integrations with the hospitals RIS, HIS, modalities and network as well as T-shooting application or integration issues. Performed upgrade and maintenance of IBM servers and Storwize storage.
- Led and initiated the first local integration of PACS with RIS, reducing time and enhancing customer satisfaction.
- Delivered 3 projects that had been delayed for 4 years due to technical and management challenges.
- Managed the configuration of the IPVPN to integrate with Philips network for remote support.
- Oversaw system implementation on VMware V-sphere.

ARROW ELECTRONICS, Inc., Cairo, Egypt   **September 2012 - September 2013**
Computer Engineer
- Automated bulk data uploads to the company website using iMacro and Excel VBA, cutting task time by 95%.
- Crawled data from the internet, streamlining the process for other teams and reducing task time by 95%.
- Ran Queries on Oracle DB to create Excel dashboard reports, assisting top management in informed decision-making.

EDUCATION

Master of Science (MS) in Computer Science | GPA:3.85
Graduation Project: Network Attacks Dataset
Developed an AWS testbed simulating network services as honeypots. Utilized MHN software to collect and refine 1 million global attack records into a real network attack dataset. Analyzed the dataset using Splunk for insights and interesting facts.
University of Memphis, Memphis TN

Diploma of System and Network Administration | GPA: B
Graduation Project: Software Defined Network (SDN)
IBM-backed research project on SDN and its applications as next-gen auto-provisioned networking in cloud and dev-ops. Built a Mininet testbed controlled by OpenDaylight via OpenFlow protocol and tested some network and security policies.
Information Technology Institute (ITI)

Bachelor of Electronics and Electrical Communication Engineering (Honors) | GPA:3.6
Graduation Project: Blind Signal Separation (BSS)
Research project on BSS, a technique for separating mixtures of signals without prior knowledge of the source signals or the mixing process. Applied in audio processing and telecom. used MATLAB to demonstrate the algorithm.
Faculty of Electronic Engineering, Menoufia University

PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS
- CCNA (ID: CSCO12058433) (November 2011)
- SSE IBM Storwize V7000 SAN Storage (IBM Attendance) (August 2015)
- CCNP Routing & Switching (ID: CSCO12058433) (February 2016)
- VMWare VCP6-DC (ID: VMW-01698285X-00569465) (December 2016)
- Huawei Fusion Sphere NFVI (Huawei Attendance) (July 2017)
- HPE Virtual Connect (HP attendance) (August 2017)
- HPE One-View (HP attendance) (November 2017)
- Terraform Certified Associate (ID: HCP00238400) (October 2024)

TECHNICAL SKILLS
Python | Bash Scripting | Infrastructure as Code IAC | Jenkins CI/CD| Linux | SRIOV | SIOV | Computer Architecture | Data Structure |Debugging | QEMU-KVM | VMware V-sphere | VMware NSX | VMware vROps | VMware v-cloud director | Active Directory | Cisco UCS | HPE C7000 | HPE OneView | HPE VC| | ITIL | Ansible | MPLS | Networker Backup | IBM Storwize Storage | Data Domain | Opnet Technologies