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Summary

DevOps Engineer and Cybersecurity Enthusiast with strong proficiency in Linux, cloud platforms (AWS, Azure), and infrastructure automation. Experienced in deploying complex applications using CI/CD pipelines, Kubernetes, and Terraform. Creator of Exodia OS, with hands-on exposure to penetration testing, system programming, and open-source kernel development. Passionate about building secure, scalable, and automated systems.

Education

Bachelor of Computers and Artificial Intelligence, Cairo University **(Class of 2023)**

Projects:

Graduation Project: Exodia OS (**Excellent Grade**)

- Exodia OS is an Arch-based distribution designed for all cybersecurity fields. It also offers other special editions, such as the Home edition for daily use and the Acer Predator edition tailored for Acer Predator laptops, enabling control over CPU/GPU fans and keyboard RGB settings.

VProfile-GitOps

- VProfile is a website written in Java and consists of multiple services, forming a Multi-Tier Web Application. The services include: MySQL - Memcached - RabbitMQ - Tomcat - Nginx
  This project aims to deploy VProfile using GitHub Actions, comprising two workflows:
  - Terraform Workflow(for development): Fetch the code and test it on AWS.
  - Application Workflow(for production): Upon a successful build, it will create Docker images and deploy them on Amazon ECR. Subsequently, Helm will be utilized to fetch the Docker images to the EKS Cluster and run the application.

VProfile - Kubernetes

- Deploying VProfile on K8s Cluster:
  We will install Kops on an EC2 instance, containerize the VProfile app, create an EBS volume for the DB Pod to manage the database, and label nodes with zone names.

VProfile - Jenkins(using CI/CD)

- Deploy VProfile on AWS using Jenkins CI/CD:
  The process involves fetching the code from GitHub, building the code using Maven, testing the code using Maven UnitTest, analyzing the code with Maven Checkstyle, analyzing the code with SonarQube, and finally building Docker images and deploying them to the AWS ECR Registry.

VProfile app deployment on local host

- deploy the VProfile on LocalHost:
  In this process, we will deploy the application on our local host using Vagrant, a tool that facilitates the creation of VMs using a Ruby script. Next, we will create scripts to install all services, with each service having its own script (e.g., a script to install and enable the MySQL service, another script for Nginx, another for Memcached, etc.). Finally, we will create a Vagrantfile and configure all VMs, assigning five VMs for the five different services.

Collaborators at acer-predator-turbo-and-rgb-keyboard-linux-module

- It's a kernel module for Acer Predator laptops designed to control GPU/CPU fan speed, keyboard RGB, and TURBO mode. We reverse-engineered the official Predator Series App and subsequently wrote a C-based kernel module for Linux.

Ransomware

- This is a basic implementation of ransomware using Python, consisting of two programs: a server and a client. The server is used to control the client (ransomware) and is hosted on the attacker's machine. The client, which functions as the ransomware, connects to the server and awaits commands to encrypt/decrypt files. The client is deployed on the victim's machine.

Exodia OS Assistant App

- A PyQt5-based GUI application for Exodia OS, featuring a custom-shaped window with dynamic buttons for accessing system information, settings, and tips. It incorporates custom fonts, styles, and shapes to align with Exodia OS's branding. The app is designed with modular architecture for scalability and ease of maintenance.

PredatorSense GUI App For Linux

- The GUI app that controls the fan, turbo mode, and RGB keyboard for Acer Predator laptops on Linux, designed to look like PredatorSense, is the GUI implementation of the acer-predator-turbo-and-rgb-keyboard-linux-module.

Experience:

Cisco CyberOps Associate Trainee – NTI (1 month in Aug – Sept 2021)

- National Telecommunication Institute summer Cisco CyberOps Associate Training .

CCNA Training - FCAI (1 month in Aug - Sept 2020)

- Faculty of Computers and Artificial Intelligence Cairo University summer CCNA Training

Incident Response - CyberTalents (3 months in Jun - Aug 2021)

- Reverse Engineering
- Digital Forensics

Skills:

- **Linux:** Debian-based, Arch-based, RHEL-based
- **Version Control:** Git, Git LFS, GitHub, GitLab
- **Programming & Scripting:** C/C++, java, python, Bash, PowerShell
- **containerization & Orchestration**: Docker, podman, OpenShift, Kubernetes
- **CI-CD & Pipelines**: Jenkins, GitHub Actions, GitLab CI
- **Tools & Monitoring & Config management** : Ansible, vagrant, Grafana
- **Data Serialization & DSL & IaC**: JSON, YAML, TOML, Terraform, Helm
- **Cloud**: AWS, Azure
- **Penetration Testing**: web App, mobile App

Courses:

- **DevOps:** DevOps with Projects - udemy, RealTime DevOps & GitOps Projects - udemy
- **CI-CD & Pipelines**: Terraform - udemy, GitLab CI - udemy, GitHub Actions - udemy
- **Penetration Testing**: PNPT - TCMSec, Mobile PenTesting - TCMSec, Web PenTesting - TCMSec
- **containerization & Orchestration**: Docker & Kubernetes - udemy, Helm Masterclass - udemy
- **IBM QRadar: :** Detection-as-Code in IBM QRadar, Modern IBM QRadar 7.5 SIEM Administration

Certificates:

- **CyberSecurtiy:** Incident Response, NTI CyberOps, PNPT
- **DevOps:** DevOps with Projects
- **Networks:** CCNA
- **Programming:** C With linux