الأكاديمية السعودية الرقمية SAUDI DIGITAL ACADEMY | وزارة الاتصالات وتقنية المعلومات MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY | معسكرات همة الرقمية 2025 | مهارات المستقبل Clarusway

شهادة إتمام تدريب

CERTIFICATE OF COMPLETION

تبارك الأكاديمية السعودية الرقمية لـ

لمياء راكان الدوسري

Lamya Rakan Aldawsari

إتمام معسكر **همة لهندسة البنية التحتية** بنجاح بعد رحلة استمرت لمدة **13 أسبوع** في الفترة من **10 شعبان 1446** الى **24 ذو القعدة 1446**

تم إصدارها بتاريخ **24 ذو القعدة 1446**

On successfully completing **Infrastructure Engineer Bootcamp** in a journey that lasted **13 weeks** From **9 February 2025** to **22 May 2025**

Issue date **22 May 2025**

WISHING YOU A CONTINOUS SUCCESS

مع تمنياتنا بدوام التوفيق والنجاح

Amal A. Aljuhaiman

الرئيس التنفيذي للأكاديمية السعودية الرقمية

امل عبدالكريم الجهيمان

202502195

Bootcamp Plan

WEEK 0

Introduction

- Live Launch
- Tooling installation
- Pre-reading materials

WEEK 1

Computer Fundamentals

- Introduction to Cybersecurity
- The Need for Cybersecurity
- Attackers, Concepts, and Techniques
- Protecting Your Data and Privacy
- Protecting the Organization
- Understanding Personal Computers
- Personal Computers
- Power Supply and Motherboard
- CPU and Memory
- Adapter Cards and Expansion
- Storage and Peripheral Devices
- Storage Devices
- Ports and Cables
- Input Devices
- Output Devices
- System Boot and Maintenance

WEEK 2

Computer Fundamentals

- Boot the Computer
- Electrical Power
- Preventive Maintenance
- Troubleshooting Process
- Problem-Solving and Virtualization
- PC Problems and Solutions
- Virtualization
- Cloud Computing
- Number Systems
- Operating Systems Overview
- Operating Systems
- Windows OS
- Linux OS & Mac OS
- Mobile OS (Android OS & iOS)

WEEK 3

CompTIA Network+ Prep

- Explaining Network Topologies
- Supporting Cabling and Physical Installations
- Configuring Interfaces and Switches
- Configuring Network Addressing
- Configuring Routing and Advanced Switching
- Implementing Network Services
- Explaining Application Services

WEEK 4

CompTIA Network+ Prep

- Supporting Network Management
- Explaining Network Security Concepts
- Applying Network Security Features
- Supporting Network Security Design
- Configuring Wireless Networks
- Comparing Remote Access Methods
- Summarizing Cloud Concepts

WEEK 5

Operating Systems

- Windows Server & Power Shell Basics
- Introduction to Linux & Command Line Basics
- Using Directories and Listing Files
- Text Editors, ssh, curl, wget Commands
- File management

WEEK 6

Operating Systems

- Environment Variables
- Package Managers
- Managing Users and Groups
- Introduction to Git & Local Git Operations
- Branches & Merge & Conflicts
- Github

WEEK 7

Version Control Systems & Storage Devices

- Introduction to storage technologies: SAN (Storage Area Network), NAS (Network Attached Storage), DAS (Direct Attached Storage)
- RAID levels and their applications
- Backup strategies: full, incremental, and differential
- Disaster recovery planning
- Virtualization and Hypervisors

Bootcamp Plan

WEEK 8

Infrastructure as Code (IaC): Vagrant

- Encryption methods for data at rest and in transit
- Regulatory compliance (GDPR, HIPAA, etc.)
- Virtual Machine Management (VMware/VirtualBox)
- Vagrant Introduction & Installation & Basics & Network Configuration
- Vagrant Clustering

WEEK 9

Cloud Computing

- Cloud Fundamentals (AWS, Azure, GCP) & Cloud Service Models: IaaS, PaaS, SaaS
- AWS EC2 - SG, ELB, ASG, EBS
- AWS S3 - Azure Blob Storage
- VPC, Peering, direct connect
- IAM
- Introduction to Relational and Non-relational Databases - AWS RDS
- MySQL & DynamoDB
- Restore from snapshot

WEEK 10

Infrastructure as Code (IaC): Terraform

- Introduction to Infrastructure as Code (IaC) & Terraform Installation & Basic Operations
- Terraform Commands & Variables & Conditionals & Loops
- Terraform Data Sources & Remote Backends & Provisioners
- Terraform Modules & Import

WEEK 11

Configuration Management: Ansible

- Introduction & Installation & ad-hoc commands
- Playbooks
- Dynamic Inventory & Vault
- Roles and Ansible Galaxy

WEEK 12

Monitoring & Capstone Project

Deliverables:

- A fully functional virtual infrastructure with Active Directory domain controller and client machines and Properly configured private network with DNS/DHCP.
- Shared storage setup and automated backup solution.
- Monitoring dashboards displaying system performance metrics.
- Ansible playbooks for automated configurations.
- A detailed report with network diagrams and a summary of challenges faced.