

# Ra'ad Aldakhil

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## EXPERIENCE

### Site Reliability Engineer

Sept 2019 – Present

*Saudi Aramco*

*Dhahran, KSA*

- Developed an application in **Python** to provide vendor-agnostic Storage-as-a-Service to *80,000+ users*, automating CIFS and NFS share provisioning that reduced deployment time from hours to minutes, equal to a *98%* time reduction resulting in *1200+ hours* of annual operational savings
- Developed and maintained comprehensive **Ansible** automation suite for storage operations, including automated NFS discovery, synchronization workflows, and migration orchestration, reducing manual intervention, and potential configuration errors. Also developed playbooks to streamline Linux system patching, data migrations, and routine operational tasks including automated removal of deprecated packages and space management
- Architected critical components of a **Powershell** tool to perform NAS Windows share (SMB) migrations, added features to monitor failed files copies and prune false failures from log files and sending completion emails of successful migration to users to perform the final switchover to the new storage path
- Created a **Bash** tool to simplify NAS Linux share (NFS) migrations for team members to reduce human error and reduce time to complete migration efforts, the tool centralizes rsync logs from multiple migration jobs and sends completion emails and failed files to administrators to resolve before performing the final switchover to the new storage path
- Architected and implemented comprehensive observability solutions using **Grafana** and **VictoriaMetrics**, including custom dashboards and automated alerting systems that improved system uptime by enabling proactive incident detection and rapid root cause analysis
- Architected and maintained multi-petabyte storage infrastructure with 99.99% uptime, performing complex **Block (SAN), File (NAS), and Object Storage** operations including zoning, masking, mapping, and synchronous/asynchronous replication while ensuring 24/7 system availability for business-critical operations
- Performed multiple successful large-scale data migrations (100PB+) with zero data loss, leveraging custom automation tools, maintaining 100% data integrity while minimizing business and user impact
- Led comprehensive data security initiatives, including implementation of data-in-transit protocols for SMB/NFS shares, data-at-rest encryption testing and deployment, vulnerability remediation, and system hardening
- Orchestrated and led multiple disaster recovery drills and incident response operations, successfully maintaining business continuity during critical outages through on-call support and rapid incident resolution
- Managed enterprise-wide Linux infrastructure, providing critical system maintenance, resolving service interruptions, and ensuring continuous operation of mission-critical systems across the organization
- Led the commissioning and deployment of multiple new storage systems, including comprehensive SAN network layout design, system configuration, and seamless integration with existing infrastructure
- Implemented and configured Cloudera Data Science Platform (CDP Private Cloud Base), preparing enterprise-wide rollout for data scientists while ensuring optimal performance and security
- Developed VR Digital Twin experiences for Data Centers and Compliance, Health, and Safety courses, integrating virtual reality technology with practical applications

## EDUCATION

### University of Manchester

Manchester, UK

*Master of Engineering with Honours - MEng (Hons) in Software Engineering*

*Sep. 2015 – June 2019*

## PROJECTS

### Homelab | Python, Go, Kubernetes, Docker, Terraform, Ansible

Sep. 2019 – Present

- Running NAS and SAN (iSCSI) storage with scheduled backups
- Managing Kubernetes cluster with 3+ nodes, running dozens of pods

## CERTIFICATIONS

Unity Certified Professional: Programmer

Udacity Site Reliability Engineer Nanodegree

Udacity Data Engineer Nanodegree