**Engineering Director**

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| **Tools, Skills and Technologies** |

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| **Operating Systems**  **E-mail services**  **WEB/ Cache**  **Domain Name Server**  **Virtualization and Container**  **Firewalls, Antivirus, and IDS**  **Security**  **Télécom et transmission**  **Tunneling**  **Monitoring and Supervision**  **Troubleshooting**  **Deployment, orchestration, and build**  **Languages (computer)**  **Java Programming**  **Graphics User Interfaces**  **Configuration management**  **Continuous integration**  **Issue tracking**  **Databases**  **Message Broker**  **Emulator**  **Backup & storage**  **Documentation**  **Text Editor and IDE**  **Project management**  **SCM and Revision control platform**  **Cloud provider**  **Languages (naturals)**  **Research papers deposit** | Linux (all major distributions: Debian, Redhat), UNIX (FreeBSD, HP UX, MAC OS X), Cisco IOS, Vyatta, Quagga, JunOS, Busybox  Postfix, Qmail (Mastering), Dovecot, Procmail, Fetchmail, Greyfix  Apache, nginx, Tomcat, Squid, Varnish, Haproxy, Radware  Bind9, tinyDNS, aDNS, participation aux tests de Bind10 ( isc.org )avec Buildot  VMware, Citrix, Docker, Kubernetes, Vservers  Netfilter, Ipfw, Tripwire, Cisco ASA, Huawei Eudemon, Netscreen, McAfee  Iso27001, Mehari, OpenSCAP, SIMS (Mastering), UTM (Mastering)  Technologie VSAT, MPLS, Téléphonie ( SIP), SMSC, Twilio, Wireless, Mastering all kind of terminals  Cisco IPSec, GRE, VPN ( PPTP, IPIP, OpenVPN ), Tunnel broker (6in4), BGP  Nagios, Cacti, Munin, ntop, Monit, HPOM, Prometheus and Grafana  vmstat, iotop, tcpdump, ethereal, htop, sar, glances, ltrace, strace, dtrace  Fabric, Capistrano, Vagrant, Terraform  Basic, Bash (shell scripting), C, Ada95, TCL, Perl, Lua, Golang, Python (Flask),  Ruby (Sinatra), Z, Prolog, C++, Scala  Java EE, Spring Boot, Hibernate, Maven  Gtk, TK, WxWidget, Qt  Ansible, Salt, HPSA  Travis-ci  Atlassian Jira, RT, OTRS, HPSM  MySQL, PostgreSQL, Memcached, Redis, Cassandra  RabbitMQ, Gearman, Beanstalkd  Kannel, SMPPSim, Qemu ( MIPS, x86, ARM )  Netbackup, Bacula, Rsnapshot, Rsync  XMind, Sharepoint, Ms Visio, Dia, Wikimedia, Confluence  Vim, Emacs, IntelliJ IDEA: PyCharm  Trello, Agile : ScrumBan, Kanban  Git, RCS, Bitbucket, Github Enterprise  Amazon Web Services, HP Helion, DigitalOcean, Vultr, Civo  Arabic, Amazigh, English, German(Novice)  Acm, ResearchGate, Academia.edu, IETF |

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| **Current Professional Experience** |

**Native LABs**  **(Research in Interactive IT Laboratories) – (April 2019 - Present) - Rabat**

### Engineering Director

IT Infrastructures and Net-cops

Internet Protocol next generation and tunnels mastering

National network's watch-guard: CERT, NTP, K-root-servers, Debian security, Kernel, GNU, DNS, IPv6

Architecting software with turing machine and automatos

Creator of imperative programming languages ( LALR, LR, LL ) and reviewer of code ( Semantic expert )

Laboratories of interactive technologies: mnx.technology, S.A.S

Cryptography and architecting networks

Cybersecurity intelligence solutions

TCP/IP and hole of Internet protocol tuning and mastering

Appliances creator and architect: NLX, NLV, NLB, NL-FW, NLR

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| **Previous Professional Experiences** |

**DXC Technology (Hewlett Packard Enterprise and CSC) – (February 2015 - Present) - Rabat**

### Senior Delivery Lead Linux

Proficiency with HP SRA tools and ITO ecosystem

Mentoring and leading a team of Linux System Administrator

Technical meetings animation (Daily Stand-up, Retro)

Delivery management using the Kanban methodology

Managed cloud, build and provisioning of customer instances in the HP Helion cloud platform

Perform day-to-day system administration duties on RHEL 7.x Linux servers and PaaS services, supporting business-critical systems

Automation using HPSA, deployment, and orchestration with Ansible

Respond to and resolve incident tickets and monitoring alerts

Much development of tools in Python, Perl, Bash, and Golang ( anti MITM attacks in LANs for PCI DSS certification )

Mastering ITIL process

Maintain Docker Staging and Production environment

Analysis and Prediction of CI Capabilities and Performance with the QlikView Based HP NGDM Tool

Automate common procedures used to resolve incidents and monitoring alerts

Drafting of procedures and technical manuals

Technical studies of projects, change Processing (RFC)

Remediation of Red Hat Server Vulnerabilities

Preventive maintenance N3 and customer support according to ITIL processes

Maintain collaboration tool Atlassian Jira and Confluence

**Capgemini - (February 2014 - January 2015) - Rabat**

### Senior Infrastructure and security Consultant

Managed Linux servers within a shared team

Installation of new Linux production machines according to Capgemini standards

Maintain backup of servers and troubleshooting NetBackup servers

Monitoring and supervision with Nagios and HPOM (A fork of Cacti)

Administered and maintenance of Red Hat, Debian, Centos servers (physical and virtual)

Analysis of machine performance and resource management (memories, CPU (s), disks)

Write interactive, self-documenting, and user-friendly console-based program

Technical studies, diagnosis of anomalies and remediation

Virtualization with VMware

Technical Support N3

Capacity planning, Bottleneck identification

Processing of work requests in the framework of mini projects

Network and security engineering backup: Cisco, ASA, Fortigate, Juniper, IPSec VPN

**Native LABS - (June 2011 - Present) – Rabat**

### Co-Founder and CTO

Project management an agile environment: Scrumban methodology

Mentoring and leading the dev team and ops

Managing resources, portfolio and project budget

Define the company's strategy at the technical operations level

Training and facilitation of teams

Technical meetings animation (Daily Stand-up, Retro)

Incident Management, Investigation and Resolution Tracking with the OTRS Tool

Build of a VPN Web platform beyond the Internet protocol for connecting remote cloud sites

Maintain technologies stack of the main application:

Ubuntu, Laravel, beanstalkd, Redis, Apache, PHP, Nodejs, Gearman, IPv6, REST API, AngularJS

Operating in high-traffic web applications based on Linux

Maintain of a web cluster consisting of thirty Linux machines, Nginx, MySQL, Haproxy

Audit System and infrastructure analysis

MySQL replication and Linux Ubuntu tuning and Hardening

Development of solutions in Bash, Python, Makefile

Administering the Netfilter firewall using ufw

Supervision and monitoring with Nagios, Munin

Writing internal documentation in MediaWiki

**AL Baraka - (December 2007 - April 2010) - Rabat**

### [Chief information security officer](https://en.wikipedia.org/wiki/Chief_information_security_officer) - CISO

Definition and implementation of a security perimeter within the institution

Training and awareness-raising for employees

Network security, review and validation of firewall rules, intrusion testing

The accompaniment of the business on its sensitive projects to enable it to apprehend and to control its risk

in accordance with shared objectives

Architecting and Deployment of new financial information systems (T24 – Temenos product)

Performs web application intrusion tests, infrastructure, networks

(Internal / external), physical security, wireless technologies

Performs safety escort and inspection

Safety throughout the project life cycle (feasibility, planning, implementation, post-implementation).

Deploying an MPLS VPN Network

Set up an open source solution against ARP attacks (man in the middle)

Implementation of secure structures, maintenance of backups

Migrating from Institutional Infrastructure to Linux, Cisco Appliance

Review and validation of institutional tender documents

Deployment and foundation of a DMZ

Setting up an open source IDS (Snort + ACID)

Other systems administrating exercises:

Administration of headquarters and branch networks (more than 1000 users)

Installing Spark instant messaging solution based on Java, Jabber, MySQL

Installing Request Tracker Ticketing Tools and Reporting in Perl / Bash / PostgreSQL

Installing a master and slave DNS server with internal and external zones

Installing Nagios with a notification system via SMS

Tuning and Hardening of Debian and Centos for production Servers

**AFNIC - (December 2005 – July 2006) – Paris**

### Senior Network and Security Engineer

Administered Domain name servers (BIND) and NSD

Maintenance of the association's network in different sites

Postfix-based messaging administration

Supervision and monitoring with Nagios and Cacti

Technical Support and Helpdesk Engineering

Participated in the Migration of the institution Network from Cisco Platform to Juniper

Setting up the Netscreen firewall, generating the Matrix Flow

Significant experience with Nortel, Cisco, Juniper, Netscreen, HP Procurve

Technical Audit

Extensive interviewing responsibilities with French NIC

Ecosystem: BGP, Peering, VLAN, Perl, Python, Postfix, JunOS

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| **Education** |

**Institute of Engineering in Mathematics and Computer Sciences - University of Valenciennes, France (June 2003)**

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| Distributed Systems  Operating Systems  Software Engineering | Computability and Complexity  Advanced Networking  Data Structures | Compilers using Lex and Yacc  Graphs advanced  Automatas |

**Thesis :**

Strength of Bipartite networks against attacks and failure

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| **Personal interests** |

Meetup organizer of Rabat groups: CTO, Golang, Blockchain

Debian/Ubuntu Maintainer and participation in various Debian files

Reading, writing technical articles and publishing on international blogs

Active member of Nagios exchange community plugin (Wol, ovpnview, whois)

Technical reviewer of books (Haskell, Docker patterns, Nagios 3)

Participation in various community activities Open Source, Github, ACM, IETF, IPv6

Passive member of Moroccan security team ( morx.org ), hacker and national watcher

National security guard : CERT, NTP, Root servers -K, RIPE, DNS, Debian security, BGP, IPv6

Active member of RIPE Network Coordination Center Morocco

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| **Publications** |

**Publication In Progress :**

2019 : LALR for imperative language named PASP and reverse engineering of ADA compiler GNAT

2019 : Reinventing head overflow in MIPS, ARM, and x86 architectures

2019 : Creating and design of the protocol embedded IRIZ as header in Babel

2019 : Continuity and Re-design of the Operating system Noor for Babel services on MIPS appliances

2019 : Creating and modeling secure infrastructure for root servers -K in Morocco

2019 : Importing and implementing k-root.servers.net, debian.mil.ma, ntp.mil.ma, cert.mil.ma in Morocco

**Draft Published :**

2019 : Strength of root servers against attacks and failure (Ripe, Academia, ResearchGate)

**Practices and Design during professional :**

2003 : Development of a search engine in (PHP, MySQL)

2003 : Development of a translator with hachage functions in PHP

2004 : Development of RESA application in (PHP4, MySQL, XML and POP3) modelling in Umbrella

2005 : Development of a Puzzle Game over network for two person over Internet protocol in Java

2007 : Development of a scanner web application in Python (Social media, Json, XML, Intelligent threat of exception, injective,

surjective functions as example of kind of scanning)

2008 : Development of a browser in C++ and Qt based on Webkit Mozilla engine

2009 : Development of noor operating system based on Linux Kernel for ARM architecture (Qemu Simulator)

2010 : Development and design of a platform for SMS pushing using Kannel for a Banking structure

2011 : Development and objects modeling an IUTMS (Intelligent Unified Threats Management System) modelling in XMind

2013 : Development of a web platform: Tunnel Broker IPv6 / IPv4 as a Transition methods (RFC 3053) (Python, C, Makefile)

2013 : Development of the web social media platform Dikr for monajat sharing in (PHP, MySQL) with vote option and chat plugin

2014 : Modeling SDN libraries in Laravel framework and creating a platform for interconnecting remote networks (Iot, cloud

platform, routing engines, ...)

2018 : Development of harp tool to stop MITM attacks and notifier in Bash, Perl and Python for Citrix infrastructures