

#### MOHD AZLAN BIN ZAINUDIN

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# **Profile Summary**

18 years experience in telco and ICT industry with various scope exposure; which includes strategic business-technology planning, technical/technology management, E2E architecture design, infrastructure engineering and operation, service delivery, product development & management, R&D, presales/marketing and technology consulting. Background in both systems and networks; with recent experience in integration and software based infra technology Strong interest in technology planning and strategy, especially in future carrier architecture (5G, FMC, Telco Cloud, IoT) and end-to-end enterprise architecture. Have broad and deep technical ICT knowledge, regional work experience covering SEA & APAC, proficient in high level communication to deep-technical level architecture and solution design.

#### **Personal Particulars**

Age : 42 years Sex : Male

Nationality : Malaysian

Race : Malay Health : Excellent

Language Spoken : English/Malay Language Written : English/Malay/Arabic

## **Education Background**

#### 2001-Nov 2005: University Putra Malaysia

• Bac. Degree, Eng. of Computer System & Communication (UPM), 2<sup>nd</sup> class

1998-2000 : Alam Shah Matriculation Centre, Cheras.

Universiti Kebangsaan Malaysia Matriculation Program

1996-1997 : Sultan Alam Shah Islamic College, Klang, Selangor

• Sijil Pelajaran Malaysia, 1st Grade, 11 Agregate

1993-1995 : Zaa'ba Secondary School, Kuala Pilah, Negeri Sembilan.

• Penilaian Menengah Rendah, 9As

#### **Course Attended:**

ITIL v3 Foundation For IT Service Management.

Fresnel Microwave System Workshop.

DNS and IPv6 Workshop. MyNIC

APRICOT 2010 MPLS Workshop, Cisco

Ethical Hacking and Countermeasure, Certified Ethical Hacker (CEH)

## **Employment History**

May 2021-Current: Head, Network Technology. Group Engineering and Technology EDOTCO Group Sdn Bhd

# **Position Level: Head of Department**

- Lead technology planning and strategy for Edotco overall telecom infrastructure which includes tower structure, energy and and end-to-end network.
- Lead Edotco Innovation Council that will look into feasibility study, assessment, planning & development of emerging network technologies that are relevant to be further developed as product/ service/ business solutions for Edotco.
- Lead network architecture & design, network planning and implementation which expands through areas such as RAN, transport, core, data center, IoT and enterprise networks.
- Lead product technical design and technology POC/service trial according to product /service / solution development and new business development
- Technology vendor scanning, assessment, recommendation for product/ services / solution development and partnership.
- Lead on thought leadership and industry influence by active participation in regulatory technical workgroup, steering committee and standard development organization (SDO)
- Key contribution includes infra solution development & implementation of 5G active DAS IBS, neutral host 5G in-building smallcell, 5G neutral host infra architecture, 5G fiber transport, rural NaaS (network as a service) solution, LoRA-WAN IoT network, edge DC and satellite backhaul.

# February 2021-May 2021: Senior Manager, Technology Strategy & Architecture Accenture Consulting SEA, Telecom Technology Strategy and Consulting Position Level: Senior Manager / Malaysia Office Telecom Technology Consulting Director

- Technology strategy and architecture consulting director for Malaysia telecom market segment.
- Opportunity exploration, planning, qualification, consulting strategy and execution.
- Consulting strategy alignment with SMEs across SEA to strategize technology consulting proposal and project execution.

#### Projects/Engagement Director Experience.

- 1. Telekom Malaysia Telco Cloud (includes 5G use cases)
- 2. Telekom Malaysia Operation Optimization (include tower, DC, legacy infra modernization)
- 3. Globe Philippine Cloud Transformation (includes organization structure, workforce, process and technology transformation)

# September 2019-May 2020: Subject Matter Expert Manager, Technology Strategy&Transformation Deloitte SEA Consulting, Technology, Media and Telecommunications. Position Level: SME Manager/COE Project Director

- Technology consulting lead for Deloitte Consulting SEA telco architecture and technology strategy Center of Excellence (CoE) to enhance Deloitte Consulting brand value in telecommunication industry
- Lead technical steering committee with customer IT and network top management (CTO and CIO)
  to align end-to-end telco architecture to enterprise architecture implementation and digital transformation strategy.
- Lead digital transformation and infrastructure planning project that covers end to end telco architecture which includes OSS/BSS, SDN, NFV, telco cloud, analytics and security technology domain, with long term plan moving towards supporting 5G.
- Business-technology strategy consulting related to digital transformation and architecture evolution to ensure telco business competitiveness.

- Engagement from high level to deep-technical level communication and solution design, covering
  high level communication with CxO on business-technical strategies and how to address business
  requirement through optimized architecture.
- Proposed business case/use case to drive technology adoption, which translated to mid-long term technology roadmap.
- Proposed a business-technical forum among customer C-level executive to realize business benefits from product development, revenue generation and cost reduction perspective.
- Consulting on business operation transformation and organizational changes according to new technology adoption and transformation strategy.

### Projects/Engagement Director Experience.

- 1. End-to-end Service Orchestration Project (includes 5G)
- 2. Telco Cloud (NFVi and Data Center)
- 3. API gateway OSS/BSS integration
- 4. NFV network architecture and transformation
- 5. Service assurance upgrade project
- 6. Unified inventory, asset management and tracking project
- 7. SDN for Data Center and Service Modernization
- 8. E2E Security architecture and evolution (SIEM to SOAR)
- 9. 5G End-to-end Architecture, Business Strategy and Spectrum Bidding

# April 2019-Sept 2019: Solution Architecture Specialist, MeTRO Strategic Business Unit Edotco Group Corporate Center

## **Position Level: Senior Manager**

- End-to-end architecture expert consultant for E.co service and architecture evolution including 5G infra sharing, network densification through small cells, high capacity transport for 5G and edge computing concept such as MEC (Multiaccess Edge Computing) for 5G
- Lead strategic technology exploration project and initiatives such as smallcell overlay for mobile capacity, in-building coverage evolution towards 5G, cloud RAN and tower DC as part of MEC
- Lead service evolution and strategy for in building wireless coverage including distributed antenna, distributed radio, IoT and integrated solution for Smart Buildings.
- Smart City and township solution consulting that includes Smart services, wireless coverage and transport network.
- Initiate joint planning initiative with carriers/ISP for 5G architecture evolution and exploration, which includes introduction of E2E virtual networks through network slicing and virtualization (SDN and NFV)
- Business expansion strategy and technology planning for E.co group across regional countries; Malaysia, Myanmar, Cambodia, Philippine, Vietnam, Laos, Pakistan, Sri Lanka and Bangladesh.

# Dec 2014-Dec 2018 : Network Solution Architect, Solution and Network Strategy Huawei South Pacific Region, Carrier Business Group

# **Position Level : Senior Manager**

- Act as the technology subject matter expert (SME) for Huawei technology solutions and solution
  architect for carrier/ISP business customer (solution pre-sales, solution consulting, infrastructure
  architecture design professional service)
- Become the technology strategy and planning advisor counterparts to carrier/ISP and large enterprise customer, to guide them on high level technology planning and business strategy.

- Business and network consulting scope in critical solution technology breakthrough projects such
  as CaaS (Communication as a Service), Fixed Mobile Convergence & Content (FMC), Internet of
  Things (IoT) and Software Defined Network/Network Function Virtualization (SDN/NFV)
- Engagement in Deep-Technical Level communication and solution design, experienced in high level communication with CxO on business-technical strategies and how to address business requirement through optimized architecture.
- Key member in joint innovation project and provide suggestions to overall solution and technology roadmap.
- Achievements:
  - O Core member of SP region SDN NFV and network architecture transformation task force
  - O Lead architecture approach solution marketing and consulting such as 5G, FMC and IoT
  - O Key expert member and solution consulting in more than 20 SDN NFV related projects and initiatives for multiple operators across South Pacific region countries
    - i. Architecture: 5G, FMC, IoT, DC, SDN NFV planning and strategy
    - ii. SDN Carrier SDN E2E, SD-WAN, SD-LAN, Service chaining, IP RAN SDN,

Transport SDN, DC SDN, DCI and Border Gateway Optimization (BGP TE, Flowspec)

- iii. NFV Carrier NFV, vIMS, vEPC (Architecture), vCPE, vFW, MANO
- iv. NFVi Openstack, Integration, Security, Management, Cloud Platform, Telco Cloud
- v. DC DC SDN to IT infra integration, virtual services, DCI optimization
- vi. Orchestration MANO, Service Orchestration and automation,
- vii. Management & Automation IoT, IR 4.0, E2E carrier infra and service orchestration viii. Security Security architecture
- Lead IoT architecture and deployment strategy for operator in Indonesia & Malaysia
   Lead enterprise managed services transformation projects

Jan 2013-Dec 2014: Manager, Product Development and Solution (Network) Sept 2012-Jan 2013: Manager, Network Engineering and Operation, VADS Berhad

#### **Position Level: Manager**

- Become the technology expert within network based product domain which cover Managed LAN & WAN, Managed Wireless, Managed Business Internet (VADS ISP Network), WAN Optimization, Network Visibility, Network Management and Optical network solution.
- Plan, design and produce product designs meeting specified product concept and market requirements. Identify comprehensive cost structure in solution spectrum needed for developing specific product concept.
- Develop service specifications, integration requirements, identify and test relevant technology within the target product domain.
- Assess, design and develop product service platform taking development cost efficiency, operational effectiveness and best of class in product features as development principle.
- Develop Product Operating Plan and other relevant product operation documentations. Plan and execute proper transfer of knowledge program to target operation and support teams.
- Provide consultation and professional services for complex and large network solution projects which scope includes network architecture design, routing and switching, security etc
- Manage ISP network business for VADS under AS number 18206 and network infrastructure for VADS Managed Internet Business customer which includes service provisioning, troubleshooting, capacity planning, operation cost optimization and act as the highest escalation level for NOC.
- Presales and consulting for MBIS business. Lead in pre-sales activity such as customer requirement discussion, consultation, network design and solution proposal.

- Lead technical compliance project to ensure network design and implementation complies with technical regulations such as national IPv6 initiative compliance and ISO27001/ISMS.
- Technical lead and committee for significant technical projects include Vads Virtual Data Center, Cloud Infrastructure, 1GovNet Managed Internet Gateway, Smart Educity Nusajaya,

# April 2010-Sept 2012: Network Architect, Network Fundamental and Planning. Principal Engineer, Technology Planning and Competency Development. TIME DotCom Berhad

# Position Level: Manager

- Act as the technology subject matter expert (SME) for any technology that will be implemented in the company which cover IP networks, optical networks, OSS & BSS, security and technical standards compliance.
- Develop master technology road map blueprint as the long term technology strategy for the company which cover both technology and business aspects.
- Develop high level, fundamental technical guide documents for company-wide reference such as standard deployment model that covers network design, service design, security policy, operation and maintenance procedure.
- Defining network KPI and how to achieve it through high level design conception and capacity planning.
- Technical and technology evaluation on all equipment and systems to be implemented in the company, and also considering cost-benefits optimization to the company
- Oversee overall technical operations e.g daily operations, projects, developments should comply with the already defined standard deployment model, policy and guideline (audit function).
- Oversee company-wide technical skill set competency and requirements, and advise HR to provide training accordingly
- Work with engineering team to provide detailed technical solutions and operational standard such
- Develop technical business case for company wide operational technology initiatives as a direct response to business drivers.
- Provides effective strategic direction to company wide technical operations and technology strategy; through technology proposal and technology audit exercise.
- Organize technical talk and seminar, and also as a speaker. Writes technical articles on security, networks, systems, technology and strategic planning for company web portal.

# Jan 2009-April 2010 : Network Consultant (Service Provider), Hewlett Packard (HP) Position Level : Senior Executive

- Network planning, design, implementation and troubleshooting for major ISP and telecommunication company customer at every design level e.g core backbone, distribution.
- Involved in security audit and penetration testing as a prerequisite in project implementation
- Act as a technical project manager for smaller enterprise projects, managing project timeline, coordination with third party, P&L, service delivery, technical personnel and vendor management.
- Projects involved includes Metro E, wired broadband, wireless broadband (HSPDA), business voice network, MPLS, IP radio access network and also WAN peering to upstream provider.

# Jan 2006-Dec 2008: Network Engineer (ISP) Access Networks, JARING Communications Sdn. Bhd. Position Level: Senior Executive

- Network planning, design, implementation and troubleshooting of various network technologies
  including dial up, isdn, wired broadband, leased line, VPN, fiber optics network, microwave link,
  wireless broadband and satellite broadband.
- Configure and manage network POPs/router all over Malaysia at every design level, e.g core backbone, distribution and network edge router.
- Experience in network consulting such as proposing design and solution for WAN link, LAN
  switching, routing design, security design, high availability network design, link budget analysis,
  BGP multihoming, small sites multihoming etc.
- Successful handled projects include Broadband over Power Line network, Mesh Wireless network, Fiber To The Home (FTTH) network, managed security service, MyIX, network design for varsities; research grid network, xDSL and satellite broadband.
- Involved in ISP security setup and management; incident handling such as DDOS, web phishing; and security forensic.

# **Professional Regional Events Participation**

### 1. Communic Asia 2016, Singapore.

Participation Level: Conference Speaker.

Presentation Title: Efficient Extension of SDN NFV Capabilities into the Optical Layer

#### 2.BWF Broadband and TV Connect Asia 2016, Jakarta Indonesia.

Participation Level: Conference Speaker

Presentation Title: Moving Towards Intelligent and Agile Broadband Through SDN and NFV

#### 3.MCMC-GSMA ASEAN CTPR Master Class 2016, Indonesia.

**Participation Level: Conference Speaker / Forum Panelist** 

Presentation Title: Software Defined Network/Network Functions Virtualisation - 5G Network Slicing

#### 4.International Conference of Computational Intelligence in Information System 2016, Brunei.

**Participation Level: Conference Speaker** 

Presentation Title: Future Agile Network and Services with SDN NFV

#### **Acquired Skills And Experience**

Knowledge and experiences in....

- Technology planning and strategy including 5G, FMC, Telco Cloud, IoT and SDN NFV.
- Network design and architecture consulting.
- Network engineering and operation, service delivery, project and team management
- Telecommunication policy, procedure and regulations such as IP assignment (IPv4 and IPv6), security policy, spectrum planning and assignment.
- Microsoft Windows server and various Linux distributions, also other UNIX variant operating system such as FreeBSD, Linux Security OS
- Knowledge in network server systems which includes email, web, file, DNS, DHCP, proxy, NMS, LDAP, SAN, database server and server virtualization
- Experience in configuring network appliance such as Cisco routers and switches, firewall, IP DSLAM, access concentrator, RAS, BRAS, RADIUS, load balancer and packet shaper devices
- Various programming language knowledge, C, C+++, Perl, Java, Tcl/Tk, Python, Ruby, HTML, SQL
- IP routing and switching networking hardware, software and protocols, transport network (OTN, SDH/SONET, DWDM, Microwave, Wireless, Satellite).
- Network, system and application security which includes security best practice, penetration testing, security incident handling and forensic

## **Professional Contributions**

Malaysia Internet Exchange (MyIX): Company representative (Jaring, TIME, VADS)

Malaysia Network Operator Group (MyNOG) : Member

Malaysian Communications & Multimedia Commission (MCMC) IPv6 Technical Workgroup (TWG):

Company representative (TIME)

MCMC Green ICT Technical Workgroup : Company representative (TIME) MCMC IoT Technical Workgroup : Company representative (Huawei)

Internet Society Malaysia Chapter (ISOC): Member

# **Additional Information**

# **Strengths and Characters:**

- Leadership charisma, dynamic team player
- Sense of responsibility, creative and resourceful
- Open minded, mature and fast learner.
- Willing to work hard and learn new things
- Strong interest in keeping up with technology trends and developments
- Good communication, interpersonal, and organization skills