**NATHAN AW**

# EXECUTIVE SUMMARY

* + - * Whole of Region (​China + ASEAN​) and Full Stack (​AppDevSec and Infrastructure​) Digital Solutions Architect at Allianz Asia
      * Pacific with over 8 years’ extensive hands-on experience in ​API, Microservices & Cloud Native Design, Build and

## Deployment​, ​Distributed Ledger Technologies (DLT), Robotics Process Automation (RPA), Systems Integration, Data Governance & Data Quality, and technology consulting experience​. Strong Finance, Telecommunication and Manufacturing background with ​deep understanding of disruptive technologies​ and past experience in driving large-scale technology transformation in Multinational Companies (MNCs) • Previously ​Microservices (Openshift) & Blockchain (Quorum) Engineer (Assistant Vice President) at ​OCBC Bank

* + - * Outstanding record of Solution Architecture and Design, with proven expertise in successful Presales, IT Project Delivery, having delivered multiple successful​ deployments in Singapore and in the ASEAN region
      * Technically Strong, Adaptable Individual​ having taken on & succeeded in various IT developer roles such as Accenture consultant for Singapore Customs and Ministry of Health with achievements such as: o Successfully designed, build and rollout Trade Confirmation on Distributed Ledger Technologies (DLT), a minimum viable product (MVP), to Production (Live)
      * Successfully designed two modules for a ~120million Accenture led project for Singapore Government

# PROFESSIONAL EXPERIENCE

**Regional Digital Solutions Architect, Allianz Asia Pacific Apr 2019 – Present**

## Allianz Asia Pacific (AZAP) • Singapore, ASEAN, Greater Asia

* Part of the Allianz Asia Pacific Regional IT Team (AZAP) serving as a Customer-Centric, Digital-Focus Microservices Developer and Hands-on Digital Solutions Architect responsible for Secure End to End (SE2E) Delivery, Design, Build,
* Configuration, Harmonization and Governance of RESTful APIs, Spring Boot Based Backend Microservices on Cloud-Native Platforms delivered via DevSecOps. These digital at scale, cloud-native platforms are the foundation for innovation, the enabler of a robust digital ecosystem and a key lever for open digital co-creation
* API Platform and Agile Delivery Platform Owner for the Entire Region (China + ASEAN​ )​
* Distill, articulate and communicate complex technology concepts and first principles to stakeholders (Product Owners, Developers, Customers)
* Analyze, design and architect secure by design, regulatory-compliant digital-to-the-core(D2TC) blueprints and best practices which can be replicated across different geographical markets, at scale.
* Build and integrate Front End (Angular 8.xx) as a Single Page Application (SPA) embedded in Adobe Experience Manager (AEM) consuming APIs on API Gateway (Apigee) which invoke Spring Boot Based Backend for Frontend (BFF) services deployed on Openshift Platform
* Sizing and Budgeting for all Microservices Regional Projects

Specialities: Digital to the Core Architecture Design, Secure API Architect Design & Build (Apigee), Cloud Native Platform​

(Openshift), App Dev (Spring Boot as Backend and Angular 7.xx, 8.xx as Front End), Complex E2E Integration (Front End to

Insurance Core Systems through the Microservices Paradigm and Patterns), DevSecOps Engineering

**Microservices & Blockchain Engineer, Systems Delivery & Channel Development Apr 2018 – April 2019**

## Overseas Chinese Banking Corporation Bank (OCBC) • Singapore

* Pioneer Microservices Developer to design, build and roll out ~4 Authentication and Authorization (AA) Spring Boot Based​ Microservices onto Openshift Platform in UAT via fabric8-maven-plugin (f8-m-p)
* Pioneer blockchain developer hired to explore, build and scale DLT capabilities within the capital markets infrastructure with a​ focus on post-trade activities (confirmation, clearing, settlements)
* Exploit distributed ledger technologies (DLTs) and smart contracts to achieve an immutable, consistent and distributed single source of truth across disparate systems thereby enabling data lineage, improved resiliency and efficiency gains on an unparalleled scale, reducing friction and fragmentation
* Design, build, roll out and scale new blockchain-based platforms within existing banking infrastructure to drive significant operational efficiencies
* Hands-on blockchain full stack developer and architect (Gather requirements, infra nodes setup, integration with existing systems, build secure smart contracts and build DApp UI/frontend with bootstrap)

### Digital Advisory & Solutions Manager, Emerging Technologies & Innovation Practice NTT DATA • Singapore August 2017 - March 2018

NTT DATA is a leading IT services provider and global innovation partner headquartered in Tokyo, with business operations in over 40 countries.

* Head-hunted by NTT Data as DLT/RPA and Oracle Lead to help grow, accelerate and scale the ASEAN business as part of rapid regional expansion
* Strong hands-on solution architect/developer whose porfolio includes Oracle Stack and fast emerging technologies. i.e.,
* Distributed Ledger Technologies (DLTs), Robotics Process Automation (RPA) & Cloud
* Conduct Proof-of-concepts/Proof-of-Value for DLTs & RPA
* Collaborate with Sales to drive ASEAN revenue growth
* Hyperledger Developer/Architect with a deep understanding of how blockchain works, its integration methods, techniques (e.g., Chain Connectors) and its data formats. e.g., MT940, ISO20022, EDI820, EDIFACT, XBRL. Strong hands-on with Fabric, Composer, Iroha, Quilt and Burrow
* Implemented proprietary RPA tool/UiPath to drive significant operational efficiency (~72.9%)
* Possess an unique blend of enterprise integration background (API, ESB, SOA) and a deep technical understanding of emerging technologies (IOT, Blockchain and Augmented Reality) to quickly help customers bridge the "old" (i.e., legacy) and the "new" (i.e., emerging) thereby pivoting customers successfully to the "new", moving them from the disrupted to becoming the disruptors
* GS1 know-how
* Deep technical knowledge of blockchain/automation tools
* Leveraged OCR (abbyy) and its models to learn and extract scanned hand written invoice as part of a crucial first step in end-to-end digital transformation

References:

https://www.nttdata.com/global/en/media/press-release/2017/december/mufg-and-ntt-data-layfoundation- for-digital-trade-between-singapore-and-japan-using-blockchain

Specialties: Solution architect & design, End-to-End Digitalization Blueprint Design +

Implementation, Blockchain implementation + integration via Interledger Protocol (Ripple ILP) and/ or Hyperledger Quilt, Automation & Blockchain @ Scale, gRPC

### Digital Identity and Integration Technical Consultant/Team Lead Accenture • Singapore February 2017 - July 2017

Served as a Digital Identity and Integration Technical Consultant/Team Lead for a complex and critical digital transformation & integration bespoke project involving multiple best-of-class technologies (Oracle Identity Access and Management (IAM), IBM Security Access Manager (ISAM), Oracle Policy Automation (OPA), Oracle BPM/SOA Suite, Oracle Data Integrator, CA Layer

7, Apigee, QRadar, Qlik, Sitecore, DynamoDB, Cassandra, Zookeeper, Apache Solr, IBM Sterling B2B, Jenkins, ManageEngine,

Rundeck, Splunk) across disparate environments -- on-premises and cloud

* Worked closely with customer to define and formulate the problem statement(s) using consulting toolkits (issue trees, MECE) and aligning multiple stakeholders (client, external vendors and internal teams) to deliver a precise solution thereby unlocking the full value and potential from their technology investments
* Led and managed onshore and offshore team to meet aggressive timelines
* Leverage and apply Robotic Process Automation (RPA) to optimize build process
* Leverage JSON Web Token (JWT) to establish trust and security between disparate systems.
* Helped changed the way software is delivered through CI/CD & massive automation leveraging Github, Jenkins, Puppet and Vagrant

Specialties: Systems Integration, Middleware, Digital Identity spanning disparate environments (on-premise, cloud), Designing restful

APIs, Drive Digital Transformation, Robotic Process Automation (RPA), Stakeholder Management, Continuous Integration and

Continuous Delivery (CI/CD), Gap analysis, MECE, Issues Tree Formulation, Digital Transformation @ Scale

### Regional PaaS Cloud and Middleware Sales Engineer Oracle • Singapore July 2015 - February 2017

**Rehired back to Oracle.**

* Part of Middleware Solutions Consulting Team for Oracle Platform as a Service (PaaS) and Middleware (SOA, OSB, BPM, Oracle
* API Gateway & WebLogic)
* Responsible for the technical/solution aspects of commercial deals across 13 markets (ASEAN countries/South Asia -- Sri Lanka,
* Pakistan, etc)
* Deliver Proof-of-Concepts (PoC) for Oracle PaaS and Middleware (SOA, OSB, BPM, Oracle API Gateway & WebLogic)
* Collaborate internally with Sales Team and Product Management Team to help customers in the region go digital with Oracle
* Platform as a Service (PaaS) and Middleware (SOA, OSB, BPM, Oracle API Gateway & WebLogic)
* Responsible for driving adoption of Oracle Internet of Things Cloud in ASEAN. Engaging and evangelising the industry on the power of IOT. Represented Oracle at IOT Asia 2016.
* Worked with some of the biggest banks and telcos in the region (Singtel, Telekom Malaysia, Digi, Telkomsel, Indosat, Maybank, Permata, BCA and BDO) on critical digital transformation projects
* Manage multiple stakeholders (customers, external vendors and internal teams)

Competencies: Cloud Computing, Middleware and Integration, Technical Pre-sales, Solution-based Technical Selling, Post-sales Support (e.g., Troubleshooting, Performance Tuning), Digital Business Transformation, Digitization at Scale, Digital Strategy, Solution Architecture + Blueprinting, Customer Outcome Focused Transformation

Technical Specialties: Service Oriented Architecture (SOA), Microservices, Oracle API Gateway, Oracle Internet of Things Cloud

Service, Oracle Mobile Cloud Service, Oracle SOA Cloud Service, Oracle Stream Analytics, LoRaWan, Advanced Message Queuing Protocol (AMQP)

Industries Served: Financial Services, Telecommunications, Transportation

### Technology Consulting Analyst (Client & Markets) Accenture • Singapore July 2014 - July 2015

* Part of Accenture Consulting Practice, deployed to Health and Public Service (H&PS)
* Responsible for Data Integration (Extract-Transform-Load) across numerous heterogeneous data sources (Oracle Database 11g,
* MySQL), End to End Reporting (raw data to report fit for use) and Healthcare Analytics for Ministry of Health Holdings, Singapore
* Played an instrumental role in a complex Proof-of-Concept (PoC) involving multiple software vendors. PoC was a success -- Accenture was awarded the contract (~$1M in services) Technical Specialties: Informatica Power Center, Oracle PL/SQL, Business

Objects (Crystal Reports), Oracle Database 11g, Oracle Business Intelligence Enterprise Edition (OBIEE) 11.1.1.9, IBM Rational

Clear Case/Clear Quest, IBM BuildForge, Data Tier Integration

Other Specialties: Technology Consulting, Data warehousing, Software Development Lifecycle, Complex Data Integration, Data Modelling, Business Reporting, Extract-Transform-Load (ETL)

Industries Served: Healthcare

### Staff Consultant Oracle • Singapore November 2014 - December 2014

* Promoted to Staff Consultant
* Led a Team of two for Anti-Money Laundering (AML) Proof-of-Concept (PoC) which consist of Oracle Enterprise Data Quality
* (OEDQ), Oracle WatchList Screening (OWS) and Oracle Financial Crime and Compliance Management (FCCM) for a multinational banking and financial services company
* Using OEDQ, profiled, transformed and loaded > 20 flat files generated by numerous bank legacy systems. These transformed files were further processed in Oracle Financial Crime and Compliance Management (FCCM)

Industries Served: Financial Services, Telecommunications, Government

**Associate Consultant November 2013 - November 2014**

## Oracle Consulting Services (OCS), ASEAN

* Promoted to Associate Consultant
* Led Requirements Gathering, Analysis and Design, Build and Test for a Data Integration / Data warehouse project using Oracle Data Integrator 12c on Oracle Exadata for a Malaysia Telco
* Configured Oracle Watchlist Screening (OWS) (Oracle Database 12c, WebLogic 12c, Oracle Enterprise Data Quality 12c) on a Leading Cloud Platform

Industries Served: Telecommunications, Government

**Graduate Trainee July 2012 - October 2013**

## Oracle Corporation

Selected to join Oracle Graduate Development Program in 2012. As part of this talent development program, I gained exposure in the different Line-of- Business (LOB) Teams. These teams were:

Fusion Middleware Team (9 Months)

* Part of a multinational team of experts responsible to deliver a Real-Time Offer (part of Marketing campaign) Proof-of-Concept
* (PoC) /Pilot consisting of Oracle Event Processing (OEP), Oracle Coherence, Oracle Real-Time Decisions (RTD) and Oracle
* Spatial (Geolocation) for a multinational banking and financial services company. Pilot was deployed in production for six months.
* Delivered Proof-of-Concept (PoC) for Oracle Real User Experience Insight (RUEI) for an insurance company in Asia and various Government agencies in Singapore. RUEI was setup from scratch on Oracle Enterprise Linux. With the PoC findings, Customer conducted analysis and identified performance issues with a Java web application.
* Gathered requirements, developed and presented user Interfaces using Oracle Application Development Framework (ADF) to Local Partner for a leading Utility company in Indonesia.
* Assigned overseas to Jakarta for 1.5 months to provide on-site assistance to local partner implementation team on an Order
* Management Modernization project for an Indonesian leading multi-finance company belonging to the largest and most respected conglomerate group in Indonesia.
* Enterprise Architecture Team (3 Months)
* Delivered a successful demonstration with Oracle Tuxedo, Oracle WebLogic Server and Oracle Database 11gR2 Real Application
* Cluster (RAC)
* Prepared findings for "Technology Trends and its Implications on the Banking Industry" that was delivered to C-level Executives of a Leading Bank in Singapore

# EDUCATIONAL QUALIFICATIONS

## Singapore Management University - B.Sc.Computer Science (Information Systems), 2009 - 2012

* Graduated in 3 years instead of the usual 4 years with a double major in Computer Science (Information Systems) & Organisational​ Behaviour and Human Resource
* Nominated to represent Singapore at The 51st National Writers Workshop at Silliman University, the oldest creative writing program in Asia. [https://en.wikipedia.org/wiki/Silliman\_National\_Writers\_Worksho](https://en.wikipedia.org/wiki/Silliman_National_Writers_Workshop)​[p](https://en.wikipedia.org/wiki/Silliman_National_Writers_Workshop)

# INDUSTRY ACCOLADES AND RECOGNITION

Invited to be Keynote speaker at the Inaugural Global Fintech & Blockchain China Summit 2017 in Pudong, Shanghai. Presented​ on the topic “**Blockchain, Integration and Financial Innovation”** ​ [**http://www.ptp-international.com/eArc-v.Asp?ID=180**](http://www.ptp-international.com/eArc-v.Asp?ID=1802)​[**2**](http://www.ptp-international.com/eArc-v.Asp?ID=1802)

Invited to be a Keynote speaker at the World Blockchain Forum at Singapore Marina Bay Sands in 2019. Presented on the topic​ **“Decentralized Digital Identity: The Elusive Key to Inclusive Growth”** Information are as follows:​

* + <https://twitter.com/Hyperledger/status/1143898717419921409/photo/1>
  + [https://wiki.hyperledger.org/download/attachments/2392948/Decentralized%20Digital%20Identity\_%20%20The%20El usive%20Key%20to%20Inclusive%20Growth%20%281%29\_FINAL.pptx](https://wiki.hyperledger.org/download/attachments/2392948/Decentralized%20Digital%20Identity_%20%20The%20Elusive%20Key%20to%20Inclusive%20Growth%20%281%29_FINAL.pptx?version=1&modificationDate=1561497670000&api=v2)

Nominated to The Linux Foundation Hyperledger Speakers Bureau in 2018. ​ [https://www.hyperledger.org/news/speakersburea](https://www.hyperledger.org/news/speakersbureau)​[u](https://www.hyperledger.org/news/speakersbureau)

Nominated to The Linux Foundation Hyperledger Technical Ambassador in 2017. <https://www.hyperledger.org/participate/technical-ambassador>

Technical Writer Contributor to The Linux Foundation Hyperledger since 2017.

<https://www.hyperledger.org/blog/2017/12/05/developer-showcase-series-nathan-aw-ntt-data><https://www.hyperledger.org/blog/2018/07/24/hyperledger-sawtooth-seth-and-truffle-101>

Invited to present on **“Applications for Quantum Information Networks”**​ at The Internet Engineering Task Force (IETF), Virtual, at The Quantum Internet Research Group (QIRG) on April 2020

[https://datatracker.ietf.org/meeting/interim-2020-qirg-01/materials/slides-interim-2020-qirg-01-sessa-applications-for-quantum-inf ormation-network.pdf](https://datatracker.ietf.org/meeting/interim-2020-qirg-01/materials/slides-interim-2020-qirg-01-sessa-applications-for-quantum-information-network.pdf)

## Invited to present on “Byzantine Agreement Protocols for Large-Scale Decentralized Identity Management”​ at T

Internet Engineering Task Force (IETF) 104, Prague, at The Decentralized Internet Infrastructure Research Group (DINRG) on March 2019

[https://datatracker.ietf.org/meeting/104/materials/slides-104-dinrg-byzantine-agreement-protocols-for-large-scale-decentralized-id entity-management](https://datatracker.ietf.org/meeting/104/materials/slides-104-dinrg-byzantine-agreement-protocols-for-large-scale-decentralized-identity-management)

## Invited to present on “Decentralized Identity - What Lies Ahead of Us: The Open (Interesting) Research Issues”​ at The​

Internet Engineering Task Force (IETF) 103, Bangkok, at The Decentralized Internet Infrastructure Research Group (DINRG) on Nov 18

[https://datatracker.ietf.org/meeting/104/materials/slides-104-dinrg-byzantine-agreement-protocols-for-large-scale-decentralized-id entity-management](https://datatracker.ietf.org/meeting/104/materials/slides-104-dinrg-byzantine-agreement-protocols-for-large-scale-decentralized-identity-management) ​ .The IETF is the premier Internet standards body, developing open standards through open processes.

Technical Contributor at the Ethereum Based Identity (ERC725) Solutions [https://erc725alliance.org](https://erc725alliance.org/)​[/](https://erc725alliance.org/)

Sits on the IEEE Blockchain Editorial Board [https://blockchain.ieee.org/technicalbriefs/editorial-boar](https://blockchain.ieee.org/technicalbriefs/editorial-board)​[d](https://blockchain.ieee.org/technicalbriefs/editorial-board)

Guest writer [https://bitcoinmagazine.com/articles/guest-post-understanding-limits-and-potential-blockchain-technolog](https://bitcoinmagazine.com/articles/guest-post-understanding-limits-and-potential-blockchain-technology)​ [y](https://bitcoinmagazine.com/articles/guest-post-understanding-limits-and-potential-blockchain-technology) <https://www.nasdaq.com/articles/guest-post-understanding-limits-and-potential-blockchain-technology-2017-11-09>

Invited to present at OWASP Singapore on “**Securing your APIs: OWASP API Top 10 2019, Real-life Case Studies and**​ **Demo”** - ​ [https://owasp.org/www-chapter-singapore](https://owasp.org/www-chapter-singapore/)​ [/](https://owasp.org/www-chapter-singapore/)