Move Oracle applications, middleware and databases to AWS

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24 May 2018

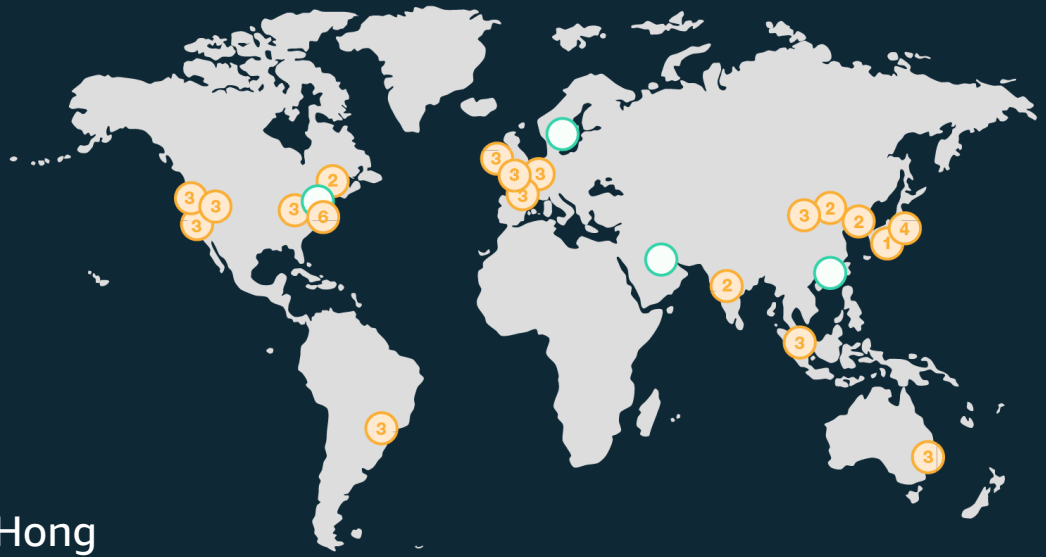
AWS GLOBAL INFRASTRUCTURE

Customers in 190 countries

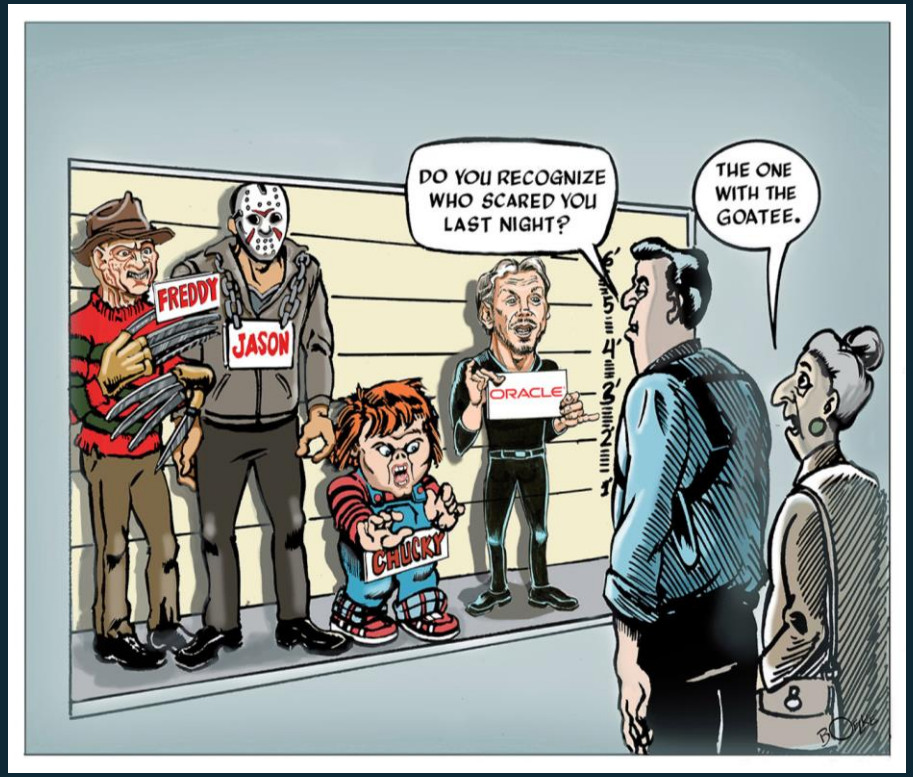
18 geographic Regions &
1 Local Region

55 availability zones

103 edge locations



New Region (coming soon) – Bahrain, Hong Kong SAR, Sweden, AWS GovCloud (US-East)



Why Oracle customers migrate to AWS

Retire technical debt

Tech refresh

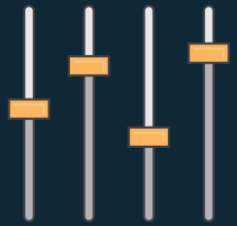
New applications

New architectures

Improve security

Automate operations

Improve performance

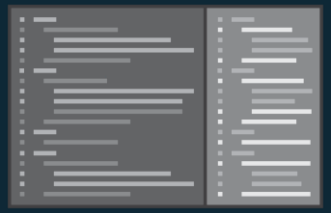


Simplification of s/w

AWS options for Oracle customers

Oracle Databases on AWS

Database migration to AWS



Fusion Middleware on AWS

Oracle Enterprise Applications on AWS

Customers migrating Oracle to AWS include

Oracle to Amazon Aurora	Oracle Database on AWS	Fusion Middleware	Enterprise Applications
AstraZeneca Reduced processing time from 26 hours to 40 minutes	News UK Closed 2 of 6 datacenters “Enabling the business, no constraints”	Mc Graw Hill Education Supported 4x peak load, but cheaper than data center	SEAOIL FUELING A BETTER FUTURE 20% TCO reduction 6x faster provision > 99.5% app availability
Trimble ROI <6 months 400% lower infra TCO	esa 1b star projections, 6 years data €500k less than on-prem	FAST RETAILING	sage “We didn’t encounter any roadblocks based on cost, functionality, or performance; we moved forward quickly and well within Sage’s budget.”

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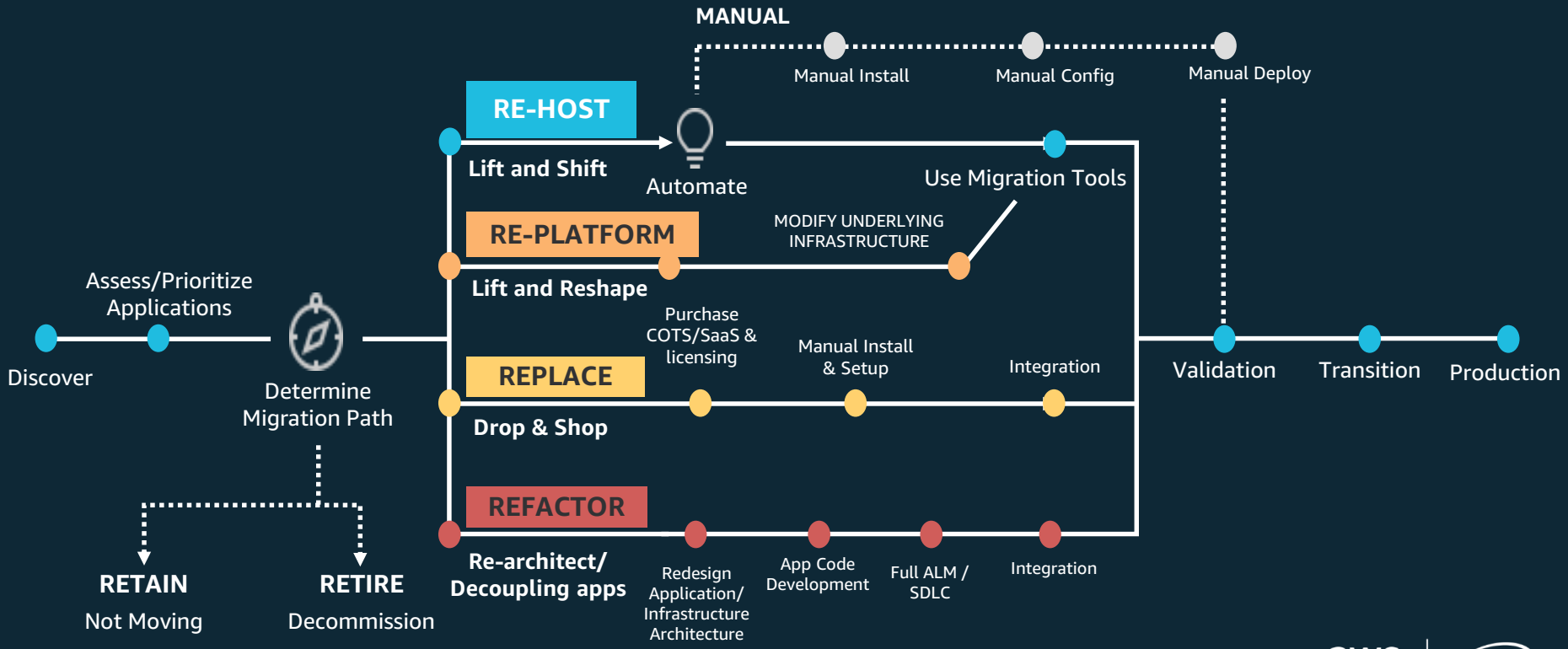
Six Common Application Migration Strategies



AWS migration strategies for Oracle customers

Solution	Oracle Databases			Oracle Fusion Middleware on AWS	Oracle Middleware to AWS	Oracle Enterprise Applications on AWS
	Oracle Databases on AWS EC2	Oracle Databases on AWS RDS	Oracle database migration to AWS			
Migration path	Rehost	Replatform	Refactor	Rehost	Refactor	Rehost
Post migration	Customer runs Oracle Database EE, SE, NoSQL, TimesTen, MySQL, Golden Gate on AWS	Customer shifts Oracle EE, SE to AWS RDS for Oracle	Customer migrates from Oracle EE, SE, NoSQL to AWS RDS OSS, Aurora or Redshift	Customer runs Oracle SOA Suite, WebLogic, OBIEE, BPM and more on AWS	Customer refactors their Java application	Customer runs Oracle E-Business Suite, PeopleSoft, JDE, Hyperion, Siebel and more on AWS
AWS Services	EC2/EBS, VPC	Oracle RDS	RDS OSS, Aurora, Redshift, Schema Conversion Tool, Database Migration Service	EC2/EBS, VPC	Elastic Beanstalk, ELB, Aurora	EC2/EBS, VPC, Oracle RDS

Oracle to AWS license and support - considerations

Solution	Oracle Databases			Oracle Fusion Middleware on AWS	Oracle Middleware to AWS	Oracle Enterprise Applications on AWS
	Oracle Databases on AWS EC2	Oracle Databases on AWS RDS	Oracle database migration to AWS			
Migration path	Rehost	Replatform	Refactor	Rehost	Refactor	Rehost
License consideration	BYOL. Review Oracle Cloud Licensing Policy. 2 vCPU= 1 Oracle Proc with Hyper threading enabled	License included or BYOL	MySQL and PostgreSQL open source	BYOL	Consider open source e.g. JBoss	BYOL
Support consideration	Standard Oracle support. Oracle Database >=11.2.0.4 & >= 12.1.0.2. AWS EC2 DB optimized instances.	Supported for Oracle Database >=11.2.0.4 & >= 12.1.0.2. AWS EC2 DB optimized instances.	AWS RDS and Redshift are managed services.	Standard Oracle support. Fully compatible	AWS Elastic Beanstalk provides management features	Standard Oracle support, including E-Business Suite, PeopleSoft, Siebel and more

Introducing Optimize CPUs for Amazon EC2 Instances

Amazon EC2

a) specify a custom number of vCPUs for new instances, while enjoying the same memory, storage, and bandwidth of a full-sized instance

b) disable Intel Hyper-Threading Technology for workloads that perform well with single-threaded CPUs

Enables Bring Your Own license (BYOL) customers to optimize their vCPU-based licensing costs!

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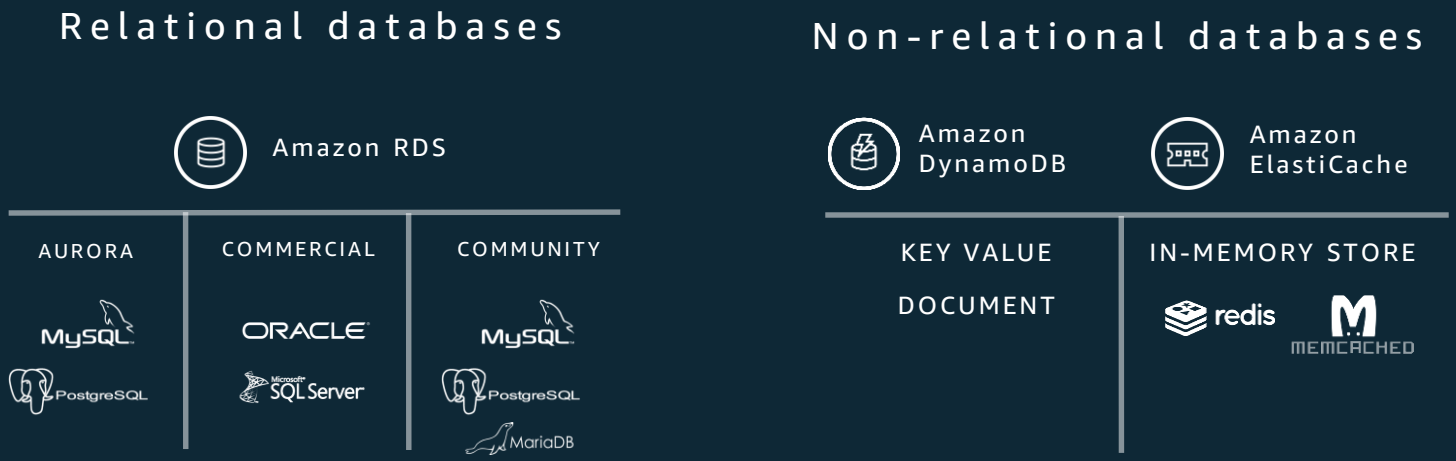
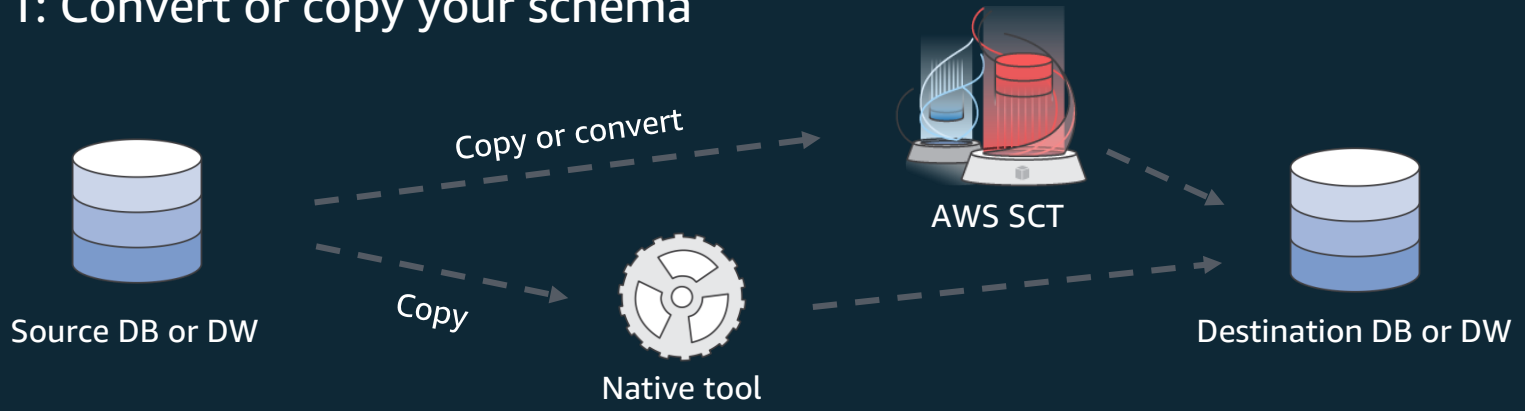
Evolution of databases

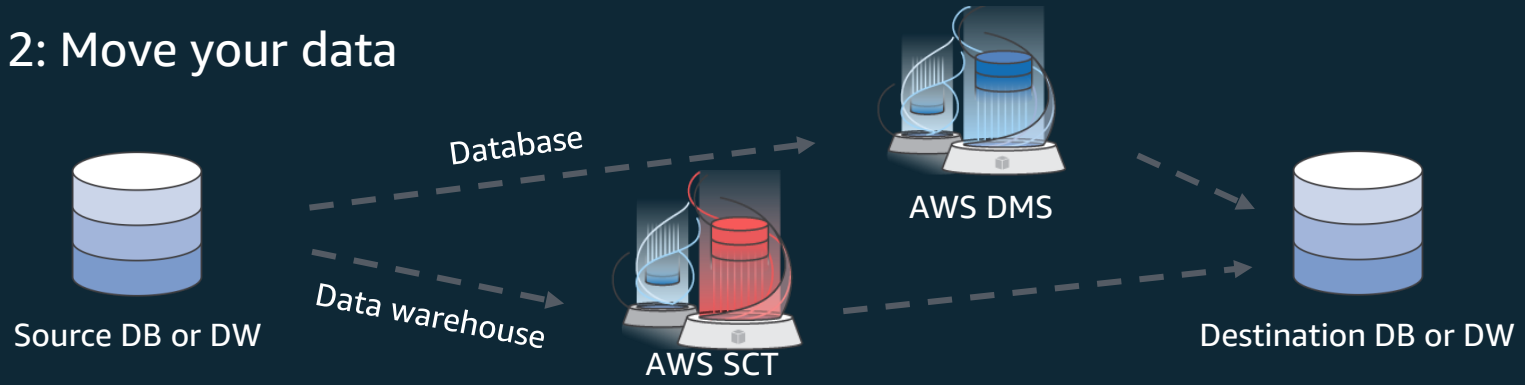


Database Migration the Easier Way

Step 1: Convert or copy your schema



Step 2: Move your data



CREATE. WONDERFUL. Globe

Freeing our Enterprise Data
Migrating Off Proprietary Databases

Maribeth Tiu
VP - Globe Information Systems Group, Solutions Delivery

May 24, 2018

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Globe

Ayala Singtel

One of 2 major players in the mobile and fixed communication services in the Philippines

AdSpark by Globe Venture konsulta MD KICKSTART Mynt Globe LABS

We are passionate about innovations as we invest in non-core telco services

62.8 MILLION MOBILE SUBSCRIBERS

1.3 MILLION HOME BROADBAND SUBSCRIBERS

$2.6B

SERVICE REVENUES

55.5%

REV MARKET SHARE

7,200

EMPLOYEES

1.1 MILLION

RETAILERS, DISTRIBUTORS, AND BUSINESS PARTNERS NATIONWIDE

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The road to a digital nation:

The 8-point IT Transformation goals will enable us to shift from a traditional telco to a Digital Services Provider

8 **IT Workforce Enablement**
We have engaged, competent and purpose-driven people equipped with the right information to perform their jobs.

1 **Customer Focus**
We are a customer-centric organization that is value-creating for the business. We apply user-centric design thinking in our services.

2 **Innovation**
We have ingrained innovation as an organization norm and pursue innovation in all areas, be it processes, solutions or customer offerings.

3 **Infrastructure at Scale**
We build intelligent and optimized infrastructure, managed in a standardized, shared services model.

4 **Ka-Globe Empowerment**
We empower Ka-Globe with new ways of working and provide digital solutions that improve collaboration and productivity.

5 **Operational Excellence**
We ensure stable and agile operations of our systems with best user experience to achieve efficiency and effectiveness in the IT organization.

6 **Bi-Modal Operating Model**
We equip the business with the agility to adapt quickly to market dynamics and stay ahead of the competition.

7 **Digital Transformation**
We provide the foundation that underpins Globe's digital transformation journey to succeed in the digital economy.

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Globe Cloud Journey

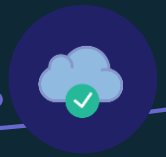
2009

Physical to Virtual

Conversion of Physical Machines to VMs

Ad Hoc Cloud Subscriptions

2014



Cloud FIRST

Organization Evangelization

50% of New Infra to Cloud

Provisioning – from 80 days to 5 days

2015 - 2016

Cloud RE-ENERGIZED

1800 Physical Servers reduced to 1200

90% of new Infra to Cloud

Provisioning – from 5 days to 2 days

2017

Cloud OPTIMIZED

1200 Physical Servers reduced to 800

Cloud Optimized Applications

Internal + Partner Training & Certification

2018-2019

Cloud NATIVE

800 Physical Servers under accelerated migration program

Cloud Native Applications

Cloud Native Vendors

Cloud Native Globe ISG

2019 - 2020

UNIFIED Cloud

Bi-Modal IT

End-to-end Automation

Self-Healing Applications

Self-optimizing Cloud

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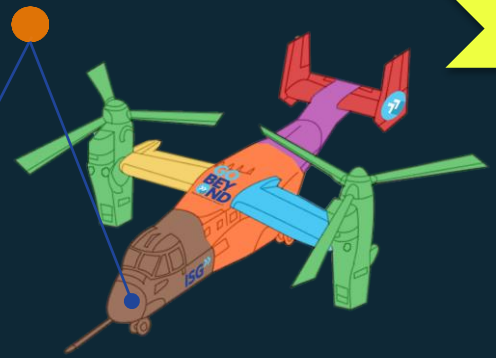
Program: migrating off proprietary databases



Optimise

Collaborate with Oracle to optimise current portfolio

Limit

Redefine DB selection framework for new requirements

Migrate

Create and execute migration plan for selected services

Negotiate

Engage Partner to limit usage and price adjustment

Oracle in Globe: A Significant Opportunity for Cost Savings

There are many types of unique transaction characteristics & requirements….

Storage	Performance	Workload	Access Method	Availability	Query Style
Record Oriented or Query Heavy?	Response Time or Throughput?	High Variance or Predictable?	Random Access or Continuous?	Do we really need Five Nines?	Transaction, Batch or Real-Time?

~~"Tier One"~~

…and there are many kinds of databases available to support them.

General RDBMS	Key-Value Direct Access	Column-Oriented RDBMS	Document Store DB
Hadoop	In-Memory Data Caching	Graph Database	Datagrid
	Wide Column Store	New SQL	

However we use Oracle for 90% of all our services…

ORACLE

- General RDBMS
- Graph Database
- Document Store DB

….as the default "go-to" platform

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1st Oracle DB Migration Project

Plan & Partner

AWS and *Danateq co-invested to certify their LINK solution on AWS, and ported it from Oracle to PostgreSQL.

Danateq Pte Ltd* *is a Singapore-based ISV and APN partner that supplies real-time loyalty, campaign management, and rewards solution called* ***LINK**. This solution is deployed at customers worldwide including Globe, Ericsson, and the Telenor Group.*

Reap the Benefit

Freed up 16 processors/ 32 cores for DBEE, RAC, and Partitioning **in Production**.

Freed up 4 processors / 8 cores for DBEE **in Development**.

for DBEE (8x2 production servers and 4x1 AWS dev instance); and 16 RACs

Even at a significant discount, this is an avoided 3 year cost of close to $1M!!!

Learn

Key enablers are: 1> Clear directive and executive sponsorship, 2> Partnerships w AWS and ISVs like Danateq

Outcome: An ISV-certified solution that reduced Globe's dependency on Oracle while providing an open source alternative.

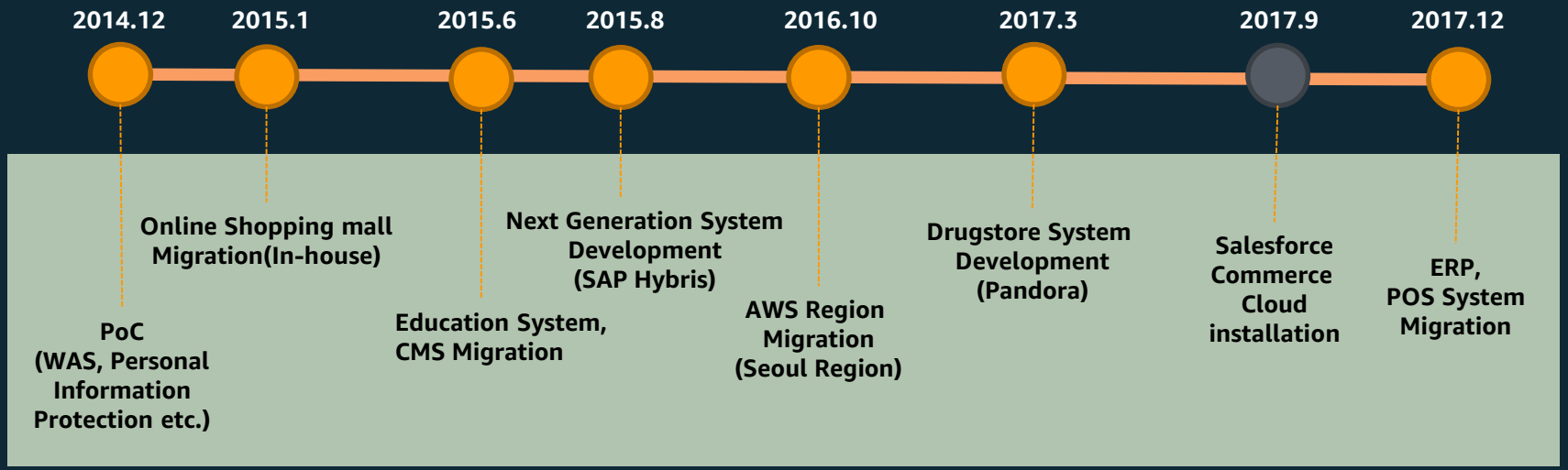
The success is also paving the way for other ISVs like Amdocs to partner as well.

Mega Mart

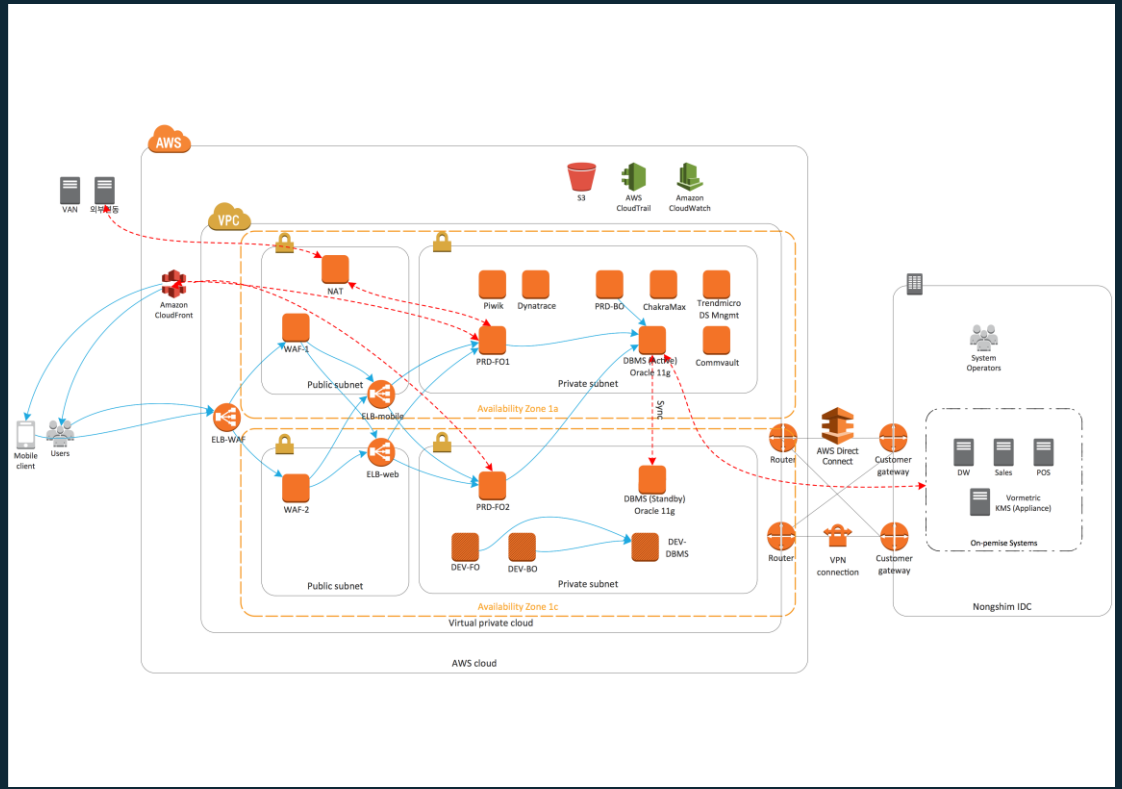
Mega Mart – Cloud migration case study

- Subsidiary of Nongshim Group - famous for Ramen and snack products
- Fourth largest distribution company in Korea
- Operates 15 large discount stores in Korea and two overseas stores

Mega Mart – Cloud migration case study



Mega Mart – Solution Architecture



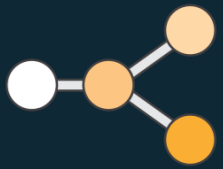
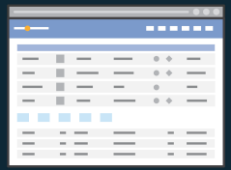
Mega Mart – Approach

- Hybrid architecture with 300Mpbs Direct Connect link and duplex VPN connections
- Migration downtime was minimized using AWS Database Migration Service (< 4 hours)
- Business systems configured as a VPN. Online stored protect with WAF
- Database encrypted, identities and access managed with 3rd party solutions
- Optimized solution for serving static content using Amazon Cloud Front and Amazon Elastic Transcoder
- AWS Well Architected approach

Mega Mart – Benefits of AWS

- Flexibility – Mega Mart scales up its infrastructure whenever it wants (e.g. sales promotion) And automated shutdown or startup of dev systems
- Security posture - improved by using WAF layer
- Compliant with Personal Data Protection Law laws
- Cost optimized - AWS has enabled Mega Mart’s online store to increase sales transactions by 40% but at 30% lower TCO over 6 years

APN Oracle Competency Partners' capabilities

 Technical assessments	 S/W license advisory	 Business cases
 Migration services and tools	 Managed services	 Applications and solutions

SoftwareONE
Oracle Advisory Services

Abhishek
Oracle Practice Lead - GCC & APAC
Email : Abhishek.Gupta@softwareone.com
Mobile : +65 90156366

SoftwareONE Oracle Advisory| Advisory, Optimization, Strategy

ENTITLEMENT ASSESSMENT

Understanding your Oracle Spend

CSI / ULA ANALYSIS

BENCHMARKING

Oracle Product Catalog
Discount Pattern
Product Bundle

COMPLIANCE ASSESSMENT DEPLOYMENT OPTIMIZATION

Optimized License & Deployment Strategy

USAGE SCAN

OPTIMIZATION

Effective License Position
GAP Analysis
Deployment Optimization
Technology Roadmap
Oracle Database alternative strategy (AWS Aurora, RDS, PostgreSQL)

CONTRACT ASSESSMENT COMMERCIAL OPTIMIZATION

Contract Modernization and Oracle Negotiation Support

RESULT ORIENTED STRATEGY

Oracle CSI Cancellation / Termination
BYOL Strategy
Oracle contract Risk Assessment
AWS Cloud commercials

Service Industry

National Parking management company with major applications running on Oracle Database intend to reduce Oracle TCO

Case Study 1

Scenario

- Oracle future purchase requirement: USD 8 Million based on compliance gap.
- SoftwareONE advisory assisted them with financial and contractual assessment to migrate Oracle workload to AWS Infrastructure.
- Final cost savings: **USD 7 Million**

Additional Considerations

- Amazon RDS, PostgreSQL on AWS and Amazon Aurora as alternatives were considered for Oracle Database workload migration.
- SoftwareONE advisory outlined mandatory Oracle Database requirement with deployment optimization on VMware environment to reduce Oracle licensing requirement.
- Oracle CSI contracts to be cancelled based on assessment.
- Detailed risk analysis with measures are implemented as part of proposed Oracle managed service.

Results

Oracle TCO cost savings

USD$7million

Blue Crystal Solutions

Assisting AWS prospects & clients to retire technical debt.

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F 8240 5716
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Phone 1300 765 008 |03 8610 6300
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Oracle Database, Migration, Transformation and Infrastructure Optimization for the Cloud.

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Examples of Oracle to AWS

Customer A - Emagine International (Software and Services Company)

- Halved response time to end customer
- Streamlined the implementation process for a new environments in AWS
- Post completion BCS passed a stringent AWS independent security audit with flying colours! This provided us with an International Case Study.

Customer B – Large Oil and Gas Company

- Customer needed a partner with expertise in migrating Exadata to AWS
- AWS needed a partner to guide them on infrastructure design that globally impacts Oracle licensing clients, this directly resulted in driving the new “Optimize CPUs for Amazon EC2 Instances” and the new Amazon “EC2 X1e Memory Optimized” instance family features.
- POC with subsequent multi phase approach
- Developed Exadata/Oracle RAC Automation Tools

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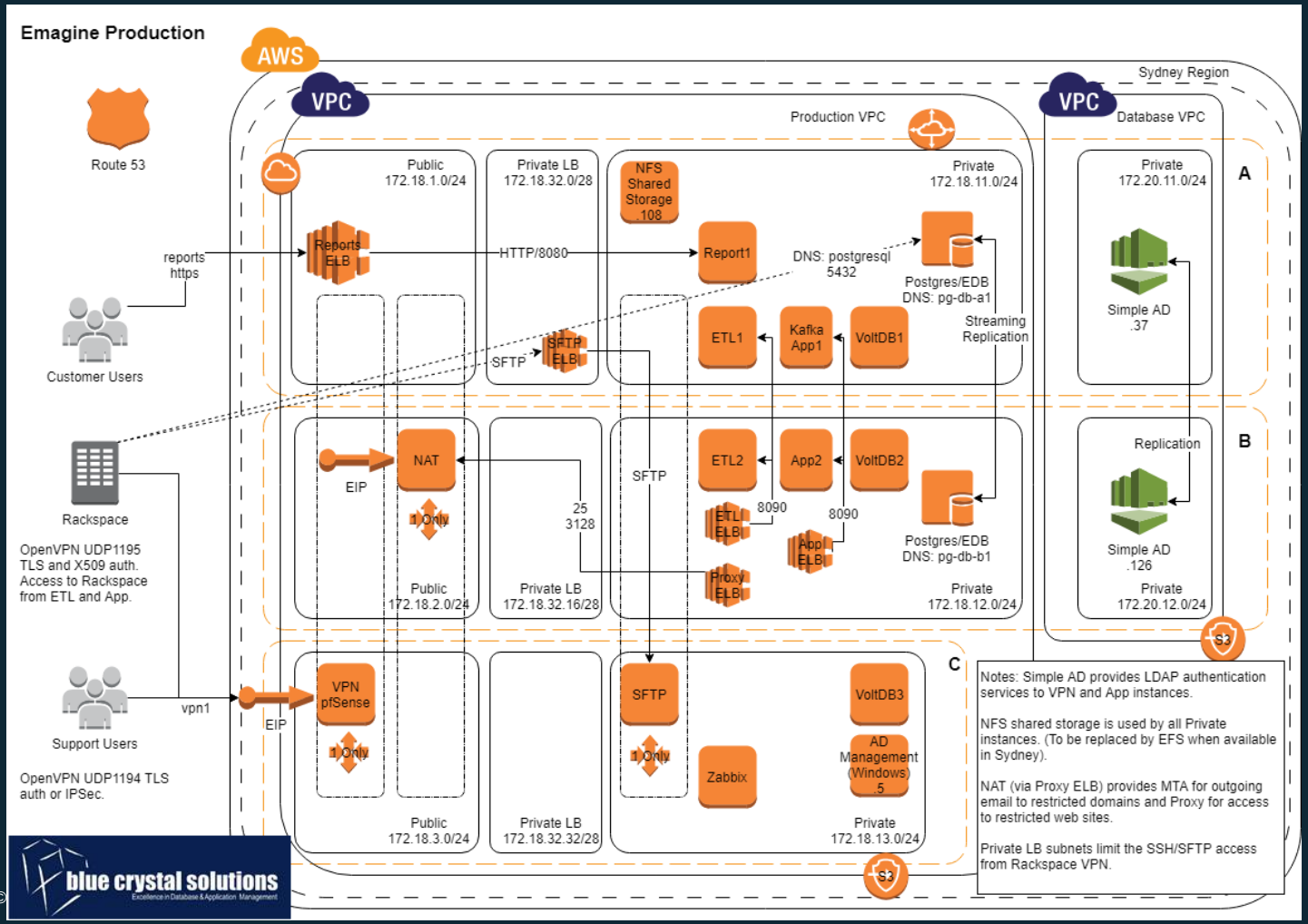

Lessons Learnt

- Pick a partner who knows the facts
- Failure to plan is planning to fail
- Customer B was led to believe that Oracle Exadata could not be moved to AWS. In a POC/ production we proved this to be incorrect
- Customer A & B had issues with vendor relationships and costs. By migrating of that vendor we fixed the problem, rather than treating the symptoms.
- Customer A takes a customer centric approach to business, by paying attention to the customer's customer BCS improved customer A’s market share and retention
- It’s not only about cost. Customer B had been pressured by the vendor for years.

Exclusive Offer – Complimentary Workshop

- Objective: Clear definition of a POC scope of work that will deliver measurable benefit to you (e.g lower cost, better performance, flexibility).
- How that works: Evaluate the where you are now against the desired state, including brainstorming the following topics:
  - Cloud Design Strategy
  - Understand your business strategy
  - Resources (Infrastructure and human)
  - Tools
  - Benefits to be gained
  - Budget and timeframe
  - Alternatives (Estimated cost comparisons)

Offer valid until 31st July

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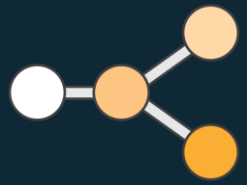
Getting Started

Customer Success Stories

APN Partners



Example architectures for Oracle applications

AWS Quick Starts for Oracle Database

Amazon RDS – launch a DB in minutes

AWS Cloud Economics

DB Freedom Program

Migration Acceleration Program

Database Freedom with AWS

Innovation

- Database Migration Service and Schema Conversion Tool
- Aurora MySQL and Aurora PostgreSQL, RDS for Open Source databases
- DynamoDB with DAX, EMR, Redshift and Spectrum, and other services
- New EC2 instance types

Expertise

- Professional Services, Partners, Service Teams
- Workload Qualification Framework
- Patterns and Recommendations

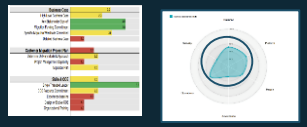
Programs

- Workshops
- Proofs-of-Concepts
- Incentives (e.g. MAP)

Key Steps in the Migration Journey

ASSESSMENT | READINESS & PLANNING | APPLICATION MIGRATIONS

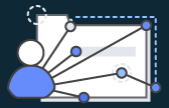
Migration Readiness Assessment (MRA)



Immersion Day

POC and/or Rapid Migration Test

Migration Readiness and Planning (MRP)



Discovery & Planning

Landing Zone

Skills/CoE

Migration Business Case

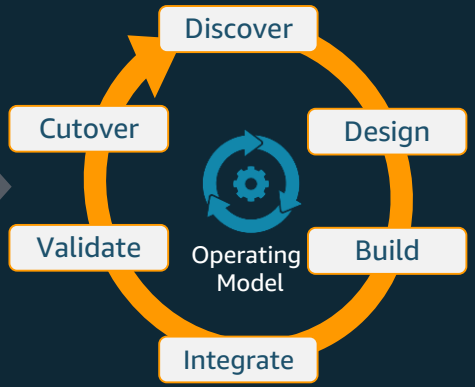
Security & Compliance

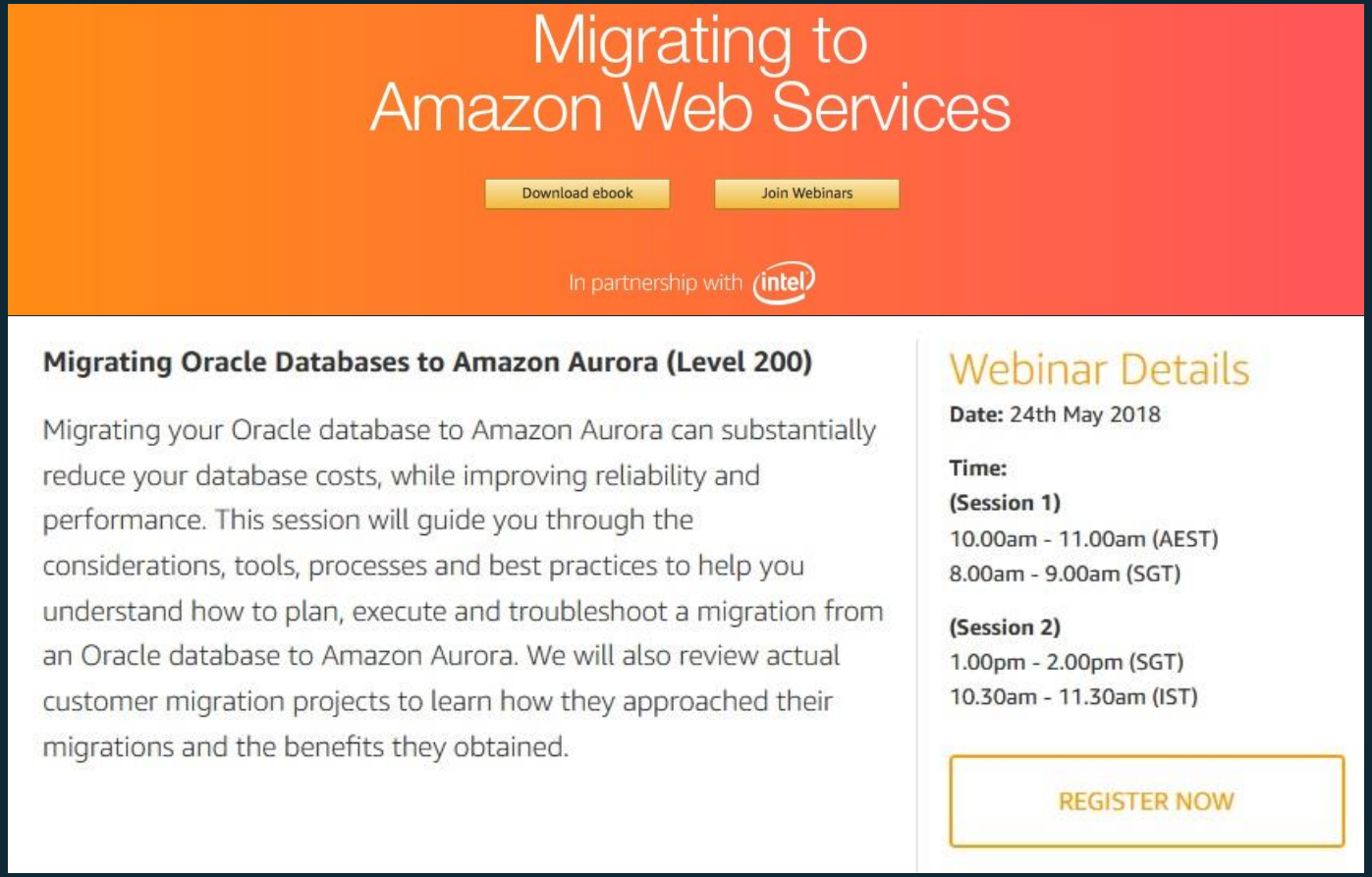
Operating Model

Migration Expertise

Migration Plan

Migration



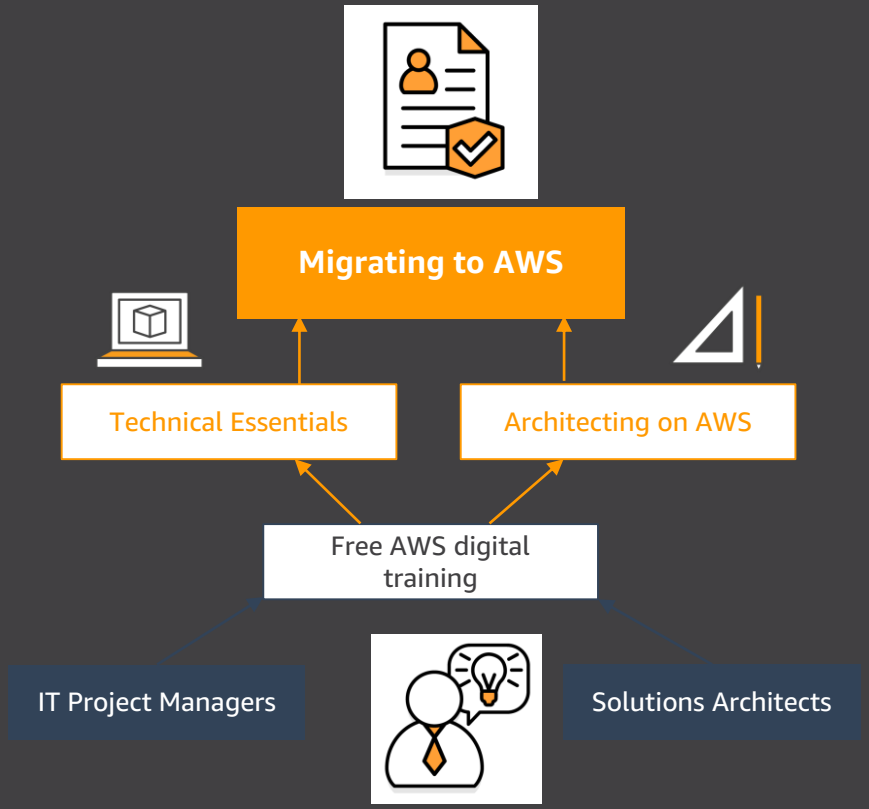


Resources

https://aws.amazon.com/oracle/resources/
https://aws.amazon.com/migration-acceleration-program/
https://aws.amazon.com/rds/aurora/
https://aws.amazon.com/dms/

David Payne
dspayne@amazon.com

Want to Learn More?



Get Started with Free Digital Training
Access free digital training to learn about AWS services and solutions for migrating to AWS.

Learn more with Classroom Based Training
Take the two-day, classroom-based training course covering the entire migration process:

- Application portfolio discovery
- Migration planning and design
- Application migration
- Post-migration validation and application optimization

Visit https://www.aws.training/

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