AWS Migrations – Assess Phase

EMEA Migration Academy

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In today’s session …

- Why Migrate and Modernize?
- What does the Assess phase solve?
- How to do an effective Assessment?
Why Migrate and Modernize?
Benefits seen across thousands of migrations

- **31%**
  - Average infrastructure cost savings

- **43%**
  - Fewer security incidents per year

- **62%**
  - IT staff productivity boost

- **3x**
  - More features delivered per year

Sources: IDC, Nucleus Research, AWS analysis

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We see multiple business drivers why customers are migrating to AWS.
What does the **Assess phase** solve?
Common Questions

- How do I get started?
- What do I have in my environment?
- What should I move to the cloud?
- How to create a business case?
- Is my organization ready for the cloud?
Engagement of stakeholders

- Procurement
- Legal
- CISO
- Head of App Dev
- CFO
- Head of Delivery
- Risk and Audit Leader
- CCoE Leader
- Head of infrastructure
- HR
What stage of adoption are you at?

Typical cloud journey

1. Project
   - Are we ready for change?
2. Foundation
   - How much of this is new to me/my team?
3. Migration
4. Reinvention
   - Can we move fast enough?
3 stages in the change journey

**Assess**
- Rapid discovery
- TCO calculation
- Briefings & workshops
- Immersion Day

**Mobilize**
- Discovery & planning
- Landing Zone
- Business case
- Migration plan
- Operating model
- Skills/Center of excellence
- Migration experience
- Business case
- Migration plan
- Operating model
- Skills/Center of excellence
- Migration experience

**Migrate and modernize**
- Migrate
- Operate
- Modernize

Create a case for change
Mobilization through experiences
Accelerate migration at scale
Assess Phase

Current IT snapshot

- Asset inventories
- App configuration data
- Performance information
- CMDB
- SLA/OLA
- Architecture
- Tribal knowledge

AWS Migration Evaluator
(Formerly TSO Logic)

AWS Migration Readiness Assessment

AWS Migration Hub

Business case

Readiness

Tracking
How to do an effective Assessment?
What do I have on my environment?
On-premises purchase for peak

Typical data centers are utilized less than 50%, on average, according to studies by Gartner, McKinsey, and the Uptime Institute.

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<thead>
<tr>
<th>Compute capacity</th>
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<td>90%</td>
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<td>100%</td>
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<table>
<thead>
<tr>
<th>On-premises IT</th>
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<tr>
<td>Idle Capacity, 55%</td>
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<tr>
<td>Used IT Capacity, 45%</td>
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<th>Application/workload drivers</th>
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<td>Fluctuating/“Spiky”</td>
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<tr>
<td>Part-time</td>
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<td>Cyclical</td>
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Use good data
Rich toolset to support each phase of migration

**Assess**
- Inventory: Migration evaluator, AWS Application Discovery Service
- Business case: Migration evaluator, Migration portfolio assessment
- Deep discovery: AWS Application Discovery Service
- Planning: AWS Application Discovery Service
- Landing zone: AWS Control Tower, AWS Service Catalog

**Mobilize**

**Migrate & modernize**
- Workload and data migration: AWS Application Migration Service, AWS DataSync, AWS DMS

**Operate and optimize**
- Operations: AWS Management & Governance services, Monitoring

**AWS Migration Hub**

**PARTNERS**
- AWS Application Discovery Service
- AWS Service Catalog
- AWS Migration Hub
- AWS DMS
- AWS Control Tower

**Partner migration tools found on** [aws marketplace](https://aws.amazon.com/marketplace)
AWS Migration Evaluator – Inventory discovery

**AGENTLESS COLLECTOR**

- Needs dedicated Windows Server 2012 R2 or greater with local admin rights
- Supports automatic upload of daily inventory and utilization
- Supports data redaction through manual Excel export and upload via AWS Management Console

**VMWARE**
- Communicates with each vSphere virtual appliance
- Via the vSphere SOAP API over HTTPS (TCP 443)
- Provisioning is persisted along with relationships (VM/host) and time-series usage

**HYPER-V**
- Communicates with each Hyper-V host
- Via WMI over TCP port 135 + ephemeral TCP port range (49152–65535)
- Provisioning is persisted along with relationships (VM/host) and time-series usage

**BARE METALS**
- Communicates with each server directly through WMI, SNMP v2c, or SNMP v3
- SNMP is done over UDP port 161, WMI over TCP port 135 + ephemeral TCP port range (49152–65535)
- Provisioning is persisted for Windows machines and time-series usage

**SQL SERVER**
- Communicates with each server directly through T-SQL
- Connectivity via TCP port 1433
- SQL Server version and edition is persisted against each VMware virtual machine, Hyper-V virtual machine, and bare metal
AWS Migration Evaluator – Deliverables

Data Insights
Overview of the percentage of time servers were used, environment insights & licensing details.

- On-Duty: 48.8%
- Idle: 9.0%
- Unavailable: 7.5%
- Zombie: 10.3%
- Expected Idle: 16.8%

Environment & Licensing
- Zombies: 9.0% (Server-based on first time usage)
- SQL Enterprise: 159
- SQL Standard: 21
- Windows Servers: 647
- Linux Servers: 773

On-Premises Annual Cost Estimation

Included in On-Premises Cost Estimation
- Server hardware based on AWS benchmarks
- Attached storage
- Power
- Software licensing: OS (if applicable)
- Microsoft SQL Server licensing (if applicable)

Excluded in On-Premises Cost Estimation
- Employee costs
- Migration tools
- Professional services
- Shared storage
- Software outside of OS and SQL
- Networking

Currency is in USD. annually. TCO logic benchmark costs were used for calculating annualized on-premises estimates. OS and SQL licensing can be configured to customer needs. On-premises licensed SQL costs are counted at the operating system level unless host @ $5,700 per core, spending system @ $100 per core.

3 YR Standard RI/Instance Savings Plan
(Windows Server & SQL Server Included)

AWS Modeling Parameters
- Licenses: 3 Year
- Instances: 3
- Modeling: TSO Right Sizing
- Licensing: Windows licenses included
- Currency: USD annually

Savings Plan Rate Estimate: $248.15 Commit / Hour

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# Databases – AWS Schema Conversion Tool

<table>
<thead>
<tr>
<th>Source database</th>
<th>Target database on Amazon RDS</th>
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<tbody>
<tr>
<td>Oracle</td>
<td>Amazon Aurora, MySQL, PostgreSQL, Oracle</td>
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<td>Oracle data warehouse</td>
<td>Amazon Redshift</td>
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<tr>
<td>Azure SQL</td>
<td>Amazon Aurora, MySQL, PostgreSQL</td>
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<td>Microsoft SQL Server</td>
<td>Amazon Aurora, Amazon Redshift, MySQL, PostgreSQL</td>
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<td>Teradata</td>
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<td>IBM Netezza</td>
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<td>Greenplum</td>
<td>Amazon Redshift</td>
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<td>HPE Vertica</td>
<td>Amazon Redshift</td>
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<td>MySQL and MariaDB</td>
<td>PostgreSQL</td>
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<td>PostgreSQL</td>
<td>Amazon Aurora, MySQL</td>
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<td>Amazon Aurora</td>
<td>PostgreSQL</td>
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<td>IBM Db2 LUW</td>
<td>Amazon Aurora, MySQL, PostgreSQL</td>
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<td>Apache Cassandra</td>
<td>Amazon DynamoDB</td>
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<td>SAP ASE</td>
<td>RDS for MySQL, Aurora MySQL, RDS for PostgreSQL, and Aurora PostgreSQL</td>
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Create a business case
What type of business case do you need right now?

**Directional Business Case (Assess phase)**
High-level, designed for establishing direction for the Cloud journey. Based on high-level data inputs. Directional accuracy.

**Detailed Business Case (Assess/Mobilize phase)**
Deep-dive of multiple data points, designed for Boards to approve adoption of cloud / reinvention of cloud. High accuracy.
Business Case Purpose
Articulate the value and strategic benefits of your activity
Cloud Economics
Breakdown the cost of resources, operation, and opportunity

**Operations cost**
What’s the before and after view of running all of these applications?

**Migration cost**
What’s the cost of actually making the change.

**Decommissioning cost**
What’s the cost of achieving the forecast benefit of the change?
AWS Funding Programs

AWS supports customers & partners with one or more of the following:

- Additional incentives
- Specialized services and tools
- Proof-of-concept investments
- Advisory and technical guidance
- Training

[ Dive deep this Nov 15th ]
Position the benefits of using a Partner

Involving a partner with experience can help customers to:

- Reach desired business outcome faster
- Reduce your operational costs
- Focus on innovation
- Reduce security and compliance risk
- Develop your skills
Do an MRA – Migration Readiness Assessment
Migration Readiness Assessment (MRA) Overview

- Evaluates cloud competence, capability and commitment
- ~80 questions survey aligned to AWS Cloud Adoption Framework (CAF)
- Conducted as a 1-day workshop and/or interviews with stakeholders
- Gaps identified to address during Mobilize phase
MRA based on AWS Cloud Adoption Framework (CAF)

Business Capability
- Business Value Realization
- People Roles and Readiness
- Governance Prioritization and Control

Technical Capability
- Platform Applications and Infrastructure
- Security Risk and Compliance
- Operations Hybrid and Dynamic

AWS Migration Readiness Assessment Questionnaire (undefined - Example Customer)

Question: Is the IT organization run as a federation of groups or is there a centralized organization? The more distributed the coordination will be assuming the migration scope spans these distributed groups.

Rating: 5 4 3 2 1

Centralized organization; Central infrastructure (Bob); Apps (Mike); Business Partner Organizations; Security/Governance; Customer teams under each (with BAs). The project teams tend to act in silos
Why do an MRA? (Outcomes)

Customer
- Consensus on current state
- Identify pockets of capability
- Awareness of gaps
- AWS evaluation of their capabilities
- Action plan to increase capability

Partner
- Insight to current state
- Builds trust
- Understand political situations
- Gain insights to how the customer works
- Recommend appropriate activities

- Fewer roadblocks during Migration
- Common playbook for improvement
MRA Outcomes
If 80 questions are too much...
Check the AWS Cloud Adoption Readiness Tool (CART)

• 16 questions
• 6 perspectives
• Available publicly at https://cloudreadiness.amazonaws.com/#/cart
Actionable next steps
1. Use discovery tools to calculate the right sized estimations and the Total Cost of Ownership (TCO)

2. Build a Business Case with stakeholder drivers, migration scope, business benefits, and cloud economics

3. Bring stakeholders together with a Migration Readiness Assessment or a Cloud Readiness Assessment

aws.amazon.com/cloud-migration
Recommended Sessions

- Migration Methodology – Mobilize
  06-10-2021, 11:00 - 12:00 CET

- Cloud Migration Business Case
  14-10-2021, 11:00 - 12:00 CET

- Migration Readiness Assessment
  27-10-2021, 11:00 - 12:00 CET

- Application Discovery Service
  08-11-2021, 11:00 - 12:00 CET

- AWS funding available for migration projects
  15-11-2021, 11:00 - 12:00 CET
Thank you!

Feedback is a gift!
https://eventbox.dev/survey/XKVSL2Z

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