Cloud Migration & Modernization in the Public Sector

AWS solutions and services to help you with your cloud journey

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8/13/2020
Business drivers for migrating to the cloud

Agility and staff productivity

EOL HW/SW

Improved security and operational resilience

Cost reduction

Data center consolidation

Going global quickly

Digital transformation

IoT and AI/ML
Migration to AWS creates value beyond cost savings

**Cost savings (TCO)**
- What is it?
  - Infrastructure cost savings/avoidance from moving to the cloud
- Examples
  - 31% Average infrastructure cost savings

**Staff productivity**
- Efficiency improvement by function on a task-by-task basis

**Operational resilience**
- Benefit of improving SLAs and reducing unplanned outages

**Mission agility**
- Deploying new features/applications faster and reducing errors
  - 3X More features delivered per year

Sources: IDC, AWS Analysis
What sets AWS apart?

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td>Fine-grained control</td>
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<tr>
<td>Service Breadth &amp; Depth; pace of innovation</td>
<td>175+ services to support any cloud workload; rapid customer driven releases</td>
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<td>Experience: 1M+ customers</td>
<td>Building and managing cloud since 2006</td>
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<td>Global Footprint</td>
<td>76 Availability Zones within 24 geographic Regions, 1 Local Zone, 216 Points of Presence (205 Edge Locations and 11 Regional Edge Caches) in 84 cities across 42 countries.</td>
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<td>Ecosystem</td>
<td>Tens of thousands of APN partners. The AWS Marketplace offers 39 categories, and more than 7,000 software listings</td>
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<td>Enterprise leader</td>
<td>AWS positioned as a Leader in the Gartner Magic Quadrant for Cloud Infrastructure as a Service, Worldwide</td>
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Global Footprint

AWS Regions provide multiple, physically separated and isolated Availability Zones which are connected with low latency, high throughput, and highly redundant networking.

AWS now spans 76 Availability Zones within 24 geographic regions around the world, and has announced plans for nine more Availability Zones and three more AWS Regions in Indonesia, Japan, and Spain.

With AWS Local Zones, you can easily run highly-demanding applications that require single-digit millisecond latencies to your end-users.

Amazon CloudFront uses a global network of 216 Points of Presence (205 Edge Locations and 11 Regional Edge Caches) in 84 cities across 42 countries.
Ensuring High Availability

The AWS Cloud infrastructure:
- A Region is a physical location in the world where we have multiple Availability Zones
- Availability Zones (AZ) consist of one or more discrete data centers, each with redundant power, networking, and connectivity, housed in separate facilities. Applications and Data are replicated in real time and consistent in the different AZs
- AWS Local Zones place compute, storage, database, and other select AWS services closer to end-users. Distance ensures high availability
- Low-latency ensures real data replication

AWS Regions (24) AZs (76)

Ohio

N. California

Oregon

São Paulo

Hong Kong

Sydney

Tokyo

Paris

Seoul

Beijing

Mumbai

Ningxia

Frankfurt

N. Virginia

Ireland

GovCloud (US-West)

GovCloud (US-East)

London

Canada

Milan

Stockholm

Bahrain

Cape Town

Singapore

Canary Islands

GovCloud (GovCloud)

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Breadth and Depth of Services

More services and more functionality within those services
Architected for Government Security Requirements

And many more...

https://aws.amazon.com/compliance/
Why use AWS to migrate your workloads?

**Most migration experience**
Over a million active customers; leading brands migrate to AWS

**Most comprehensive and mature migration tools**
AWS migration tools, as well as mature third-party migration tooling ecosystem to simplify and accelerate each step of the migration process

**Broad partner ecosystem**
80+ Migration certified partners, ISVs, and system integrators to help customers assess, mobilize and execute their cloud migration

**Most complete migration solutions**
Set of programs and solutions to accelerate your cloud journey
Thoughtful, methodical multi-year plan for cloud migration includes...

- Senior leadership conviction and alignment
- Top-down quantifiable goals
- Establish accountable leads, train your teams
- Build experience, don’t overanalyze
Migration process

Assess → Mobilize → Migrate & modernize

“The successful migration of mission-critical DLA applications to AWS GovCloud (US) delivered significant cost savings to the government, as well as increased efficiency for application management and improved customer experiences.”

-Atul Mathur, PIEE Program Manager
Public sector customers
Broadest and deepest set of capabilities to accelerate your migration

**Assess**
- Decision support: Cloud Adoption Readiness Tool (CART)
- TSO Logic: Directional Business Case, Migration Portfolio Assessment
- Migration Readiness Assessment

**Mobilize**
- Planning support: Migration Portfolio Assessment, AWS Application Discovery Service, AWS Control Tower
- TSO Logic: Directional Business Case, Automated Landing Zone
- AWS Prescriptive Guidance

**Migrate**
- Migration automation and governance: AWS Service Catalog, AWS Migration Hub
- Server and database migration: CloudEndure, AWS Server Migration Service, AWS Database Migration Service
- Hybrid solutions: AWS Outposts, AWS Direct Connect, VMware cloud on AWS
- Data and storage transfer: AWS Datasync, AWS Transfer for SFTP, AWS Kinesis Data Firehose, AWS Direct Connect, AWS Storage Gateway

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Migration readiness assessments highlight key areas of focus

Assessment focus

Customer data sources
Self-service and guided assessments
Stakeholder conversations

Business capability assessment
Business Value realization
People Roles & readiness
Governance Prioritization & control

Technical capability assessment
Platform Applications & infrastructure
Security Risk & compliance
Operations Hybrid & dynamic

Readiness assessment results
Determine the right migration pattern for your apps

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

Discover and organize data
- Applications
- Performance
- Infrastructure

7 Rs
- Refactor
- Re-platform
- Repurchase
- Rehost
- Relocate
- Retain
- Retire

Migration plan (Backlog)

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Application migration workflow

**Migration plan (Backlog)**
- Adopt most suitable patterns based on migration plan
- Select the right AWS and partner tools

**Migrate**
- Migrate application

**Track**
- Track application performance

**Migration waves**
- Continue migrating applications in waves
Develop an optimization roadmap

**Optimize** availability and performance

**Portfolio tier:** commodity
**Characteristics:** Non-business-critical, low change, minimal risk
**Approximate % portfolio**
50%

**Rehosted and repurchased apps**

**Evolve** to breathe new life into your applications

**Portfolio tier:** critical
**Characteristics:** Business critical, but low rate of change
**Approximate % portfolio**
30%

**Replat, rearchitect**

**Split-off** microservices from the monolith

**Portfolio tier:** differentiated
**Characteristics:** High rate of change & customer-facing
**Approximate % portfolio**
20%

**Rearchitect, refactor**

**Modernized applications**

**by number of applications, not percent of spend, as seen in typical customer environments**

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Architecture evolution

When the impact of change is small, release velocity can increase

Monolithic application
- Does everything
- Shared release pipeline
- Rigid scaling
- High impact of change
- Hard to adopt new technologies

Microservices
- Does one thing
- Independent deployments
- Independent scaling
- Small impact of change
- Choice of technology

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AWS Partner Competency Program

Recognizing partners with proficiencies in key solutions, verticals & infrastructure

- Big Data
- Mobile
- Security
- DevOps
- Migration
- Digital Media
- Healthcare
- Life Sciences
- Storage
- Microsoft
- SAP
- Oracle
The most comprehensive set of services and expertise
GDIT Partner Overview

2019 AWS Public Sector Partner of the Year Award
AWS Premier Partner
AWS Authorized Public Sector Partner
AWS Authorized Government Reseller
Managed Services Competency
AWS Authorized Well-Architected Partner
AWS Public Safety & Disaster Response Competency
All AWS services available on GSA Schedule 70
Support 30+ AWS Enterprise Programs across the Federal Government
10+ Enterprise Cloud Brokerages
80+ Enterprise Cloud Projects
2,000+ AWS accounts under management
50,000+ AWS instances under management
370+ AWS Certifications
Corent Technology Partner Overview

Corent's SurPaaS® Platform automates some of the most complex, time and labor-consuming Cloud migration, modernization and management tasks. SurPaaS® is used by AWS clients and partners to accelerate Discovery/Assessment, Cloud Migration, PaaS Integration, Containerization, SaaS-enablement, Marketplace Publishing, and Cost Optimization, as a fully integrated automation platform for the entire AWS Cloud Journey.