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Solution Scorecard for Amazon Web Services IaaS+PaaS

Published 12 November 2021 - ID G00756364 - 26 min read

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This assessment scores AWS laaS+PaaS against Gartner's 270-point Solution Criteria for Cloud Integrated laaS and PaaS. AWS has an overall solution score of 94 out of 100, making it an attractive strategic option for technical professionals responsible for cloud production deployments.

Overview

Key Findings

- Amazon Web Services (AWS) has an overall solution score of 94. It meets 98% of Gartner's required criteria, 90% of Gartner's preferred criteria and 78% of Gartner's optional criteria. For the sixth year in a row, AWS has the highest scores of any evaluated vendor in this market. It is fully suitable for enterprise-class production use.
- Although customers are increasingly diversifying their cloud provider choices and AWS is increasingly part of a multicloud strategy, rather than a sole provider choice AWS remains the global market share leader in cloud infrastructure and platform services (CIPS), as well as the stand-alone laaS and PaaS markets. Its maturity is marked by its depth of technical capabilities, the breadth and capabilities of its partner ecosystem, and track record of reliable service delivery.
- AWS has a rich and diverse portfolio of services. It provides an extensive array of architectural and configuration options, and new capabilities are constantly being introduced. The customers that make the most optimal use of AWS rapidly evolve their engineering practices as services evolve, thoughtfully mix native and third-party capabilities, and seek to optimize risk and cost within the goalposts set by their business priorities.

Recommendations

I&O technical professionals responsible for evaluating, comparing and selecting cloud providers should:

Select AWS as the primary strategic laaS+PaaS provider if their top priority is a proven, stable platform with a multiyear track record of innovation, or the highest degree of resilience, control, orchestration, automation, security and scalability.

- Evaluate AWS as a strategic laaS+PaaS provider, either within a single-cloud or multicloud strategy. AWS's capabilities can meet the majority of digital business and enterprise workload scenarios. Its high-quality technical support, professional services and capable third-party ecosystem increase the likelihood of successful implementations.
- Assess AWS as a potential tactical laaS+PaaS provider for all production deployments unless they have specific business restrictions that would prohibit adoption.

What's New in This Update

Note: We have a new format for our Solution Scorecards. A complete version of the current criteria and scoring is available at Gartner CloudScores. You can also access the data in the downloadable Excel file.

Throughout 2020 and during the first half of 2021, customers increasingly adopted "deliberate" multicloud workload placement strategies, in a shift away from the "accidental" multicloud situations that often resulted from ungoverned and tactical cloud adoption. Consequently, cloud provider decisions are not limited to deciding whether or not to adopt and contract with a provider, but also include workload placement decisions, which occur for each application. While customers will primarily choose strategic providers based on alignment to their strategic IT roadmaps, technical criteria remain a significant influencer on workload placement policies and decisions.

In the second quarter of 2021, Gartner performed a partial update of its Solution Scorecard evaluations for laaS+PaaS. This research is part of that multivendor assessment. Across that assessment:

- Where a criterion's score changed from No to Yes (or from Yes to No), we updated the scores and evaluation text. Capabilities had to be generally available (GA) by 30 April 2021 (the "cutoff date") to count for scoring purposes. These criteria are marked with an update date of "April 2021."
- Where a criterion's score did not change, the evaluation text remains as it was in 2020, where capabilities had to be GA by 30 April 2020 to count for scoring purposes. These criteria are marked with an update date of "April 2020."
- If we discovered that a criterion's evaluation text was inaccurate when published in 2020, we have corrected that text even if the score did not change. These criteria are marked with an update date of "April 2021."

However, each 2021 Solution Scorecard document contains a full update of Gartner's analysis of that cloud provider's laaS+PaaS offering, along with new recommendations for effective adoption and ongoing management of the solution, in both single-cloud and multicloud contexts.

This Solution Scorecard is scored and evaluated against the latest Solution Criteria for Cloud Integrated IaaS and PaaS, which was published in April 2021 and consists of 270 criteria. The 2019, 2020 and 2021 scores are directly comparable to one another. The score details are available on the Gartner Cloud Decisions platform and the Excel toolkit contained within a zip file that can be downloaded from the left-hand side of this document on gartner.com. This assessment is intended to be read alongside the Solution Criteria because that document contains the full explanation of what is required for each criterion. Note that the title of a criterion is not, by itself, an adequate explanation of what is required. In many cases, in order to meet the criterion's requirements, the cloud provider must not only offer the named service, but also include a defined set of minimum features.

If you are customizing this assessment for your own needs, you may choose to score the provider differently from Gartner. We provide transparency into the scoring for each criterion so that you can choose to focus on the aspects of a criterion that matter to you.

Bottom-Line Assessment

We assessed the integrated IaaS and PaaS capabilities of Amazon Web Services (AWS), a cloud computing-focused subsidiary of Amazon. In-scope offerings are accessible through the AWS Management Console. AWS's SaaS offerings, such as Amazon Chime and Amazon Connect, are out of scope. The VMware Cloud on AWS is also out of scope because it is a third-party offering.

AWS has commercial regions and U.S. government regions that are both included within the scope of this assessment. However, the AWS China regions, which are delivered via a partnership, are outside the scope of this assessment.

AWS meets 98% of Gartner's required criteria for enterprise-class, production-grade cloud integrated laaS and PaaS providers. AWS meets 100% of the required criteria in all categories except for resilience and security, where it misses a single criterion in each category. AWS also scores well in every category across both preferred and optional criteria, including achieving 100% of the preferred and optional criteria in the digital business infrastructure category.

Consequently, Gartner believes that AWS is suitable for enterprise production use and recommends considering AWS for almost all cloud laaS or laaS+PaaS scenarios.

Solution Scorecard and Feature Snapshot

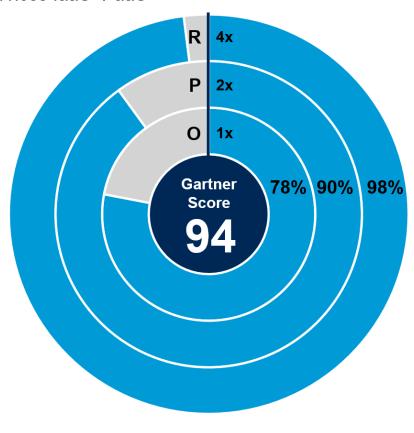
Figure 1 shows that AWS has an overall solution score of 94 out of 100. It also shows that AWS meets 98% of Gartner's Required criteria, 90% of Gartner's Preferred criteria and 78% of Gartner's Optional criteria.

Figure 1: AWS's Overall Gartner Score



Solution Scorecard

Amazon Web Services laaS+PaaS



Source: Gartner ID: 756364

As of April 2021

Gartner.

Note: The above scores, and those in the companion Excel tool, are accurate as of the published date, but they will be periodically updated. A complete version of the current criteria and scoring is available in the downloadable Excel file. The data will also be available on Gartner CloudScores, where it will be updated periodically.

Solution Scorecard Calculation

Gartner uses a weighted system to calculate the overall Gartner Score:

- Required criteria are assigned a weight multiplier of 4.
- Preferred criteria are assigned a weight multiplier of 2.
- Optional criteria are assigned a weight multiplier of 1.

The weight values can be customized by clients to meet their needs in the companion Microsoft Excel workbook (found under the download icon on the left side of this document in the client view on gartner.com). To omit weighting, clients should assign a multiplier value of 1 to all criteria.

Solution Criteria Framework

Gartner developed the Solution Criteria framework to address the current and future needs of its clients. This framework categorizes market features as:

- Required: Capabilities essential to developing, deploying and managing mission-critical, secure and compliant production applications. Missing Required capabilities may be "showstoppers" that require specific risk mitigation or may make the provider unsuitable for your use case.
- Preferred: Capabilities that are necessary but not vital to a broad range of use cases. Missing
 Preferred capabilities will often need to be replaced by other solutions. Most customers will have at least one application that requires these capabilities.
- Optional: Capabilities that are useful for specific use cases, but which many customers will not need. In many cases, these capabilities represent emerging technologies.

A companion Microsoft Excel workbook accompanies this Solution Scorecard. Your organization should modify and customize this workbook to create a comprehensive list of criteria that takes its specific needs into account. For assistance with using and modifying the workbook, refer to the "How To" worksheet.

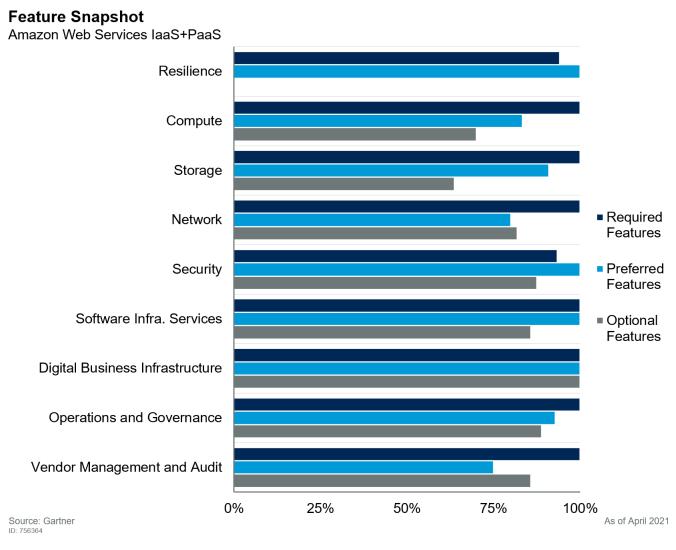
You can download the Excel workbook from the left toolbar of this document on Gartner.com. You can also access this data through Gartner Cloud Decisions.

In some cases, this assessment may show that the provider meets some or most of the requirements of the criterion, even though it does not meet all of them. In other cases, this assessment may show that the provider fully meets a criterion but is dependent on functionality that was in beta at the time of the evaluation (and which may still be in beta). Because this assessment does not offer partial credit, such criteria have received a "No" score. However, technical professionals reviewing this assessment should take note of the details because the explanations reveal what functionality exists and what workarounds may exist for missing capabilities. You are encouraged to use the Excel workbook provided with this research to customize your own scoring.

Figure 2 shows the AWS feature snapshot.

Figure 2: AWS Feature Snapshot





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Note: The above scores, and those in the companion Excel tool, are accurate as of the published date, but they will be periodically updated. A complete version of the current criteria and scoring is available in the downloadable Excel file. The data will also be available on Gartner CloudScores, where it will be updated periodically.

Strengths

AWS has the following key strengths:

■ Large-scale capacity and scalability offerings: AWS has shown itself capable of building and delivering services at large scale. AWS has 21 full commercial regions in 17 countries on six continents, plus an additional two AWS GovCloud regions in the United States. (AWS China has an

additional two regions in mainland China, but these are delivered through a partnership and are thus outside the scope of this evaluation.) AWS has 76 availability zones (AZs). Because AZs may span multiple data centers, and a data center typically is at least 50,000 square feet in size, AWS's total data center footprint is immense. For instance, the US-East-1 region has more than 60 data centers across six AZs. AWS has both the most customer capacity built out and the most customer capacity in use in this market. AWS enables customers to provision very large amounts of capacity with no prior notice. AWS services are typically designed to allow customers to operate at the large scale demanded by global digital businesses. This includes both the scalability of the services themselves and the scale assumptions within the options given to customers for managing those services.

- Extensive portfolio of flexible service offerings: Not only does AWS have a very broad portfolio of services, but those services have many options and nuances. This allows each customer greater configurability and more precise tailoring to the customer's needs. AWS offers customers control and flexibility over how they define their environments, including network topology, security controls, resiliency, geographic placement, and the balance between price and performance. AWS's security foundations are solid, and it provides a comprehensive set of security-related features and services. It provides many capabilities for the management, operation and governance of customer environments. The AWS portfolio of services is covered by a broad array of compliance certifications and reports.
- Core focus on digital businesses: AWS's roots in serving digital-native businesses and startups continue to inform its business direction. AWS remains oriented toward the needs of digital natives and businesses undergoing digital business transformation. AWS supports digital business use cases with a set of specialized cloud services in domains that include AI/ML, the Internet of Things (IoT), edge services, and big data analytics. It continues to expand into new domains and innovate. It has a wide array of developer-friendly "up the stack" capabilities. Its services enable the use of agile practices, including continuous integration and continuous delivery (CI/CD), infrastructure as code (IaC), DevOps and DevSecOps.
- Proven suitability for the traditional enterprise: AWS has expanded well beyond its origins to also become a market-leading provider to the enterprise, including "traditional" IT organizations. Many customers have completed migrations involving moving thousands of applications or compute instances (VMs or bare-metal servers) to AWS. It has proven technically suitable for running a broad range of enterprise workloads, including large SAP and Oracle Enterprise Resource Planning (ERP) implementations. It has begun to expand into "hybrid" scenarios through its on-premises AWS Outposts and via its partnership for the VMware Cloud on AWS, and it has flexible options for integrating with enterprise networks. AWS has also demonstrated consistent enterprise capabilities in its Premium Support organization, with expert technical support, proactive technical account management and flexible support of critical events.

■ Broad and deep ecosystem: As the longtime market leader — with more experience, more customers, and greater breadth of implementation types than its competitors — AWS has gathered a large and capable ecosystem. This includes the numerous partners that implement AWS-based solutions, migrate customer data centers to AWS and provide managed services, as well as the service providers that offer their own solutions on top of the AWS environment. In the broad cloud managed service provider (MSP) and system integrator (SI) market. Furthermore, AWS has an extensive catalog of third-party, single-click software deployments — known as the AWS Marketplace — with more than 1,600 vendors listed. Finally, AWS skills are broadly available in the labor market. Nearly 600,000 individuals worldwide hold active AWS certifications.

Weaknesses

AWS has the following weaknesses, which may warrant caution:

- Building blocks, not solutions: AWS is composed of many discrete services that are rarely initially built as part of an integrated solution and may not always become well-integrated. There is limited consistency of implementation or user experience across the platform's services. Furthermore, because AWS constantly introduces new capabilities, customer best practices are also in a constant state of evolution. Customers engaged in complex implementations are likely to need assistance in order to maximize cost-efficiency and ensure the use of best practices. In order to use the platform in an optimal fashion, customers need to ensure that they keep up with AWS evolution and that their employee skills remain current.
- Choice overload: Although greater choice and flexibility can be advantageous, it also results in complexity. The sheer number of options available in AWS can readily overwhelm not just novices, but the experts that work with the platform daily, including within MSPs and SIs. This applies to basic tasks, such as choosing the most cost-effective compute instance types for a given workload. It also applies to more complex tasks, such as choosing the right rules to precisely tailor least-privilege self-service access for agile development teams who use a diverse array of services. There are often both native and third-party AWS tools or professional services that help customers navigate these choices. However, AWS is oriented toward maximizers (those who are willing to expend more effort to arrive at optimal choices) rather than satisficers (those who prefer a fast decision to a better decision).
- Limited architectural transparency: Although AWS often provides documented assurance of a capability for instance, limited disruption to VMs during hypervisor hot-patching it does not always provide sufficient transparency as to the technical means behind that capability. AWS may reveal some architectural details in conference presentations and similar contexts, but that makes it difficult for customers to locate the information. In many cases where AWS provides documentation of an implementation, it does so only under a nondisclosure agreement (NDA).

Oriented toward distributed cloud, not hybrid cloud: Unlike many of its competitors, AWS does not have a heritage as an on-premises software company. Its marketing messages and service roadmaps have been dominated by the "distributed cloud" notion that most workloads eventually run on cloud services, even if those workloads are not necessarily located within AWS data centers. AWS's "hybrid" strategy, partnerships and services are primarily directed toward helping customers transition toward cloud services and supporting the edge scenarios necessary for IoT and similar use cases. AWS is focused on delivering services, not software that customers run themselves on customer-owned hardware.

■ Limited traditional disaster recovery (DR) capabilities: Traditional DR architectures require block-level and file-level replication of storage volumes and file shares to a remote site that is more than 100 kilometers (60 miles) apart. Although AWS has multiple AZs within synchronous replication distance in each region, it does not have multiple regions in most countries. In such countries, it therefore cannot offer distant but still in-country DR sites. The Elastic Block Store service does not provide automated replication across regions, though the file share services can be replicated through AWS DataSync. AWS does not provide a turnkey disaster recovery service, though it acquired a DR software company, CloudEndure, in early 2019 and provides its software-based solution through the AWS Marketplace.

Reasons to Deploy

Gartner clients typically believe that AWS is a likely good choice as a strategic laaS+PaaS provider in the following circumstances:

- The organization is looking to employ the market share leader or is interested in the broadest ecosystem of partners and marketplace vendor offerings.
- The organization prioritizes maturity and proven stability of services, or the broadest range of resilience options. AWS has demonstrated, over many years, that it can operate its services at scale while adhering to (and exceeding) its published SLAs.
- The organization is seeking the provider with the broadest range of capabilities, which is well-suited to both new cloud-native applications and migration of "traditional" enterprise applications and both Linux and Windows workloads. The coexistence of multiple types of workloads within a single cloud provider reduces complexity and thus cost.
- The organization desires to migrate traditional enterprise workloads into the public cloud, and wants a cloud provider (and associated managed and professional services provider ecosystem) that has a well-established track record of successful and competitively-priced migration completion at a range of scale that goes up to thousands of workloads.

Gartner clients also cite the following circumstances as influential in decisions to offer the option of AWS within a multicloud strategy:

- The organization desires to design and deploy cloud-native applications with the highest degree of control, orchestration, automation, security and scalability in the market.
- The organization desires to migrate Linux-based mission-critical enterprise workloads such as SAP-based ERP systems into the public cloud, and wants the provider with the best track record of availability.
- The organization is also using or planning to adopt VMware Cloud on AWS. Organizations that host their workloads through the managed service by VMware gain immediate proximity to AWS services.

Reasons to Not Deploy

Gartner clients are typically cautious when considering AWS in the following circumstances:

- The organization has a strong preference for aligning its cloud strategy to its primary strategic ISV, and that ISV competes directly in the laaS+PaaS market.
- The organization is looking for a provider that can also offer a full suite of on-premises private cloud, hybrid cloud, or multicloud services.
- The organization considers the broader Amazon entity to be a current or future competitor (either against itself or with the organization's customers or partners), and its business leadership's concerns outweigh other selection criteria. This may be true even if the organization cannot identify technical or other quantifiable risks related to AWS being a subsidiary of Amazon.

Analysis

AWS essentially created the public cloud IaaS market in 2006; it has not only remained the market-share leader in IaaS, but also become the market-share leader in PaaS. AWS defines innovative feature sets that many competitors aim to incorporate into roadmaps and offerings months and years in the future. Originally targeted at developers, AWS is a massive-scale, service-oriented platform that has since moved into offerings for more mainstream IT operations professionals.

Keep the following in mind when considering whether or not AWS is a good strategic fit for your organization:

AWS's customers skew large. Not only does AWS have many large cloud-native customers, but it
also has many mid-market and enterprise customers with extensive deployments. Its service
interfaces readily support management at scale, and its ecosystem readily supports larger

customers. AWS supports highly customizable configurations which are well-suited to complex needs, but may feel overwhelmingly complicated to less sophisticated customers. Furthermore, scale means that AWS is, from a sales perspective, less attentive to smaller customers that are not growing rapidly. A customer spending \$1 million per year is relatively small to AWS — but is a very significant customer to all of its competitors.

- AWS is built around the assumption that organizations want to be agile and innovative. By default, AWS assumes businesses want to move quickly, seize new opportunities for growth, and pursue digital transformation. These assumptions influence its technical roadmap, the way that it approaches its ecosystem, its marketing messages, and its customer relationship management and implementation advice. When working with AWS, be clear about the goals for your cloud strategy especially if they are not aligned to AWS's assumptions. Otherwise sales proposals may contain unrealistic growth projections, and AWS-recommended technical architectures may assume you want to pursue developer self-service, DevOps, and exploitation of cloud-native capabilities to drive digital business initiatives.
- AWS's release velocity is not only fast, but also unpredictable. AWS manages continuous releases from independent service teams operating on agile sprints, rather than a centrally-coordinated schedule oriented around quarterly releases. Customers with a measured pace of technology adoption, especially those who are accustomed to commercial off-the-shelf (COTS) software with predictable and widely-spaced release cycles, may feel deluged by constant updates and feature announcements in AWS. These number over 1,000 per year. Although new releases do not cause service disruptions and rarely break backward compatibility, organizations that do not keep up with the changes may find that they are not maximizing service benefits, risk-reduction, or cost-optimization.

Cloud architects guiding the implementation of AWS should:

- Use a priority-driven service validation framework to determine what to adopt. AWS's large suite of offerings, multitude of configurations, and pace of innovation can be daunting. You do not need to support all services, and each supported service does not require identical depth of support. See How to Selectively Validate and Implement Services From a Cloud Provider's Portfolio for guidance. Consult the Gartner assessments of individual AWS offerings (see Note 1) to accelerate your evaluations.
- Carefully design your landing zone. Landing zone decisions (including account structure and VPC architecture) will have a long-term effect on the way that you govern, secure, and manage costs. Leverage AWS premium support resources to ensure that your landing zone structure aligns with best practices. See Designing an Amazon Web Services Account Structure and Governance Strategy for guidance.

■ Take a cloud-first approach to security. Adopt AWS's native security capabilities before deciding whether to layer on additional security controls. These capabilities are best deployed as a set. See A Guidance Framework for Prioritizing AWS Native Security Tools for recommendations.

- Choose data services based on the patterns they were designed to support. AWS provides a wide array of data services that can be used to build an end-to-end data management platform, but these services are not automatically integrated and orchestrated into such a platform. Furthermore, there is overlap between the intended use cases of services, complicating architecture decisions. See Building Data Architecture Using Amazon Web Services and Choose the Right AWS Database Service for guidance.
- Make intelligent commitments to maximize value. You can retain the flexibility to choose services within the framework of a commitment-based discounts. Prioritize use of Savings Plans over Reserved Instances. Ensure that your sourcing team negotiates programmatic discounts using AWS's Private Pricing Agreements. Service credits may also be available through the AWS Migration Acceleration Program (MAP), and the most aggressive offers are typically centered on SAP migration. Consult the three-part series that begins with A Sourcing Executive's Guide to Negotiating With AWS, 2020: Part 1 Preparation to understand what will best support negotiation efforts.
- If you are an AWS partner, acquire AWS certifications and specialties. Acquiring technical competence and experience with AWS is vital to full engagement and participation in AWS's partner program, and optimizing the return on partnership efforts. Successful partners use their partner status as a tool in their overall business strategy and demonstrate their value to AWS by winning customers and bringing them to the AWS platform. See What You Must Know When Partnering With Amazon Web Services for details based on a partner survey.

Required Features for Production

Amazon Web Services meets 98% of Gartner's required cloud laaS+PaaS criteria. The only required criteria that AWS does not meet are:

- Service-level objectives: Published SLOs give customers insight into the engineering expectations for a given service, as opposed to the financial guarantees in SLAs. SLO expectations are useful when designing technical solutions that run in the cloud environment because SLOs are generally higher than SLAs. AWS does not publish availability SLOs that are distinct from SLAs for its services.
- RBAC policies for resource groups: A resource group is defined as a construct that an element can be uniquely assigned to. Although an element may have many tags, an element may belong to only a single resource group. Resource groups are useful for partitioning "projects" within accounts, when RBAC policies can be applied to a resource group. AWS's only partitions are at the

account level. It does not provide a mechanism to create resource groups. Customers who need to segregate projects in their own partitions can work around this lack by creating accounts for those projects and using AWS Organizations and cross-account access in IAM. IAM policies can also apply to tags, but tags do not cover all the use cases for resource groups.

Preferred Features for Production

Amazon Web Services meets 90% of Gartner's preferred cloud laaS+PaaS criteria. Some missing criteria that typical organizations prefer include:

- Lab service: AWS does not have a service that facilitates building "lab environments," which are useful for training and demo environments, as well as experimental developer sandboxes.

 Although it is possible for the customer to do so through combining numerous other AWS capabilities, this requires significant engineering work. Customers can also consider the use of lab solutions from AWS partners, such as Commvault's Amazon Virtual Labs.
- Rapid provisioning of container instances: AWS does not offer a service that allows a customer to launch an individual container instance that is independent of a cluster-based container orchestration service. While Fargate is a serverless container service that allows a customer simple self-service access to launch a container instance, it requires first deploying an underlying Amazon Elastic Container Service (Amazon ECS) or Amazon Elastic Kubernetes Service (Amazon EKS) cluster. Customers can also consider deploying a Knative-based solution on EKS for serverless container needs.
- Provider access logs: AWS tightly restricts access to customer data and the infrastructure that runs customer services. When a customer requests that AWS technical support personnel perform actions that could result in the access of customer data, those actions are logged in CloudTrail. However, AWS does not provide customers with logs of other forms of administrative access that might occur as a result of operational activities.

Optional Features for Production

AWS meets 78% of Gartner's optional cloud laaS+PaaS criteria. Some missing criteria that typical organizations consider optional include:

■ Full regional consistency: AWS does not have a published policy for when services are rolled out to a given region, and there has historically been no consistency to the timeframes of such rollouts. This makes it very difficult for a customer to predict if and when a new service might become available in a region of interest. For customers with applications that are deployed globally across many regions, this may delay their ability to adopt new services, if such services need to be used in all such regions.

Private cloud framework software: AWS does not sell software that allows customers to independently implement private clouds on-premises, rather than purchasing a service. Although AWS Outposts is a solution for customers who need an on-premises solution, Outposts is a service that is delivered as a hardware appliance. This means that AWS does not have a solution for customers that want to be able to operate a full cloud stack while fully disconnected from the provider, usually due to temporary or long-term network isolation or for geopolitical reasons.

Block storage synchronous replication and cross-region block storage replication: Although AWS replicates the data stored on EBS volumes within an AZ, it does not have a service that automatically synchronously replicates block storage between multiple AZs within a region. Nor does it have a service that asynchronously replicates block storage between two regions. Consequently, customers who need replication for disaster recovery should consider the use of AWS's CloudEndure software for this purpose.

Note 1: Related Guidance

This Solution Scorecard is one of several that cover AWS capabilities. Other scorecards include:

- Solution Scorecard for Amazon Web Services Cloud Application Platform Services
- Solution Scorecard for Amazon Elastic Kubernetes Service
- Solution Scorecard for AWS Cloud Analytical Data Stores
- Solution Scorecard for Amazon SageMaker
- Solution Scorecard for Amazon Relational Database Service, March 2020
- Solution Scorecard for AWS Cost Optimization Tools, 2019

AWS is also evaluated in numerous Magic Quadrants and other multivendor assessments, including:

- Magic Quadrant for Cloud Infrastructure and Platform Services
- Key Services Differences Between AWS, Azure and GCP: Governance and Policy Management
- Solution Comparison for the Native Security Capabilities Within Alibaba Cloud, AWS, Azure, GCP,
 IBM Cloud and OCI
- Solution Comparison for the IAM Capabilities in Amazon Web Services, Google Cloud Platform and Microsoft Azure
- Solution Comparison for Cloud Data Warehouse Platforms

Solution Comparison for Blockchain Cloud Services From Leading Public Cloud Providers

- Differences Between AWS Outposts, Google Anthos, Microsoft Azure Stack and Azure Arc for Hybrid Cloud
- Solution Comparison for VMware Cloud Offerings
- Magic Quadrant for Cloud Database Management Systems
- Magic Quadrant for Analytics and Business Intelligence Platforms
- Magic Quadrant for Data Science and Machine Learning Platforms
- Magic Quadrant for Cloud AI Developer Services
- Magic Quadrant for Industrial IoT Platforms
- Magic Quadrant for Contact Center as a Service
- Magic Quadrant for Full Life Cycle API Management
- Market Guide for Desktop as a Service

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