

Multi Public Cloud Services

SAP HANA Infrastructure Services

A research report comparing provider strengths,
challenges and competitive differentiators



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Who Should Read This Section

This quadrant is relevant to enterprises across industries in Brazil to evaluate providers of SAP HANA infrastructure services for SAP S/4HANA workloads and large-scale HANA databases. ISG highlights the positioning of the providers in the region based on the depth of their offerings and market presence. Through the report, service providers can understand the current market dynamics and competition, while companies can assess innovations from traditional providers or new players.

The hosting of SAP workloads in the public cloud has become common in Brazil due to cost reduction possibilities with the RISE with SAP model and the growing adoption of S/4HANA. Leading cloud providers are offering specific tools for system migration, attracting traditional SAP customers (large enterprises) that have come to rely on their recommendations to migrate their workloads with lowered risks.

The selection of partners for assessing, planning and migrating SAP workloads to the cloud depends on the service provider's experience, certification level and cloud technologies employed. These factors help ensure agility, flexibility and scalability in delivery. Notably, automation resources and tools to improve cloud operations' performance, a flexible architecture and integrated security measures across the infrastructure are key differentiators.



IT leaders should read this report to better understand capabilities of SAP HANA infrastructure service providers and how their approaches to the market can impact enterprise public cloud strategies.



Software development and technology leaders should read this report to understand the relative positioning and workload migration capabilities of SAP HANA infrastructure service providers.



Sourcing, procurement and vendor management professionals should read this report to have a better understanding of the current landscape of SAP HANA infrastructure service providers in Brazil.



Definition

This quadrant assesses cloud infrastructures best suited to host SAP's software portfolio, emphasizing SAP S/4HANA workloads and large-scale HANA databases. Participating providers offer IaaS, including infrastructure operations, facilities, provisioning and scaling capacity for SAP workloads.

Key criteria for assessment include the IaaS providers' offering of data migration tools, technical support, system imaging, backup and restore capabilities, disaster recovery solutions, resource usage monitoring and dashboard management solutions. These tools required can be a part of the standard IaaS offerings or provided by partners in a marketplace.

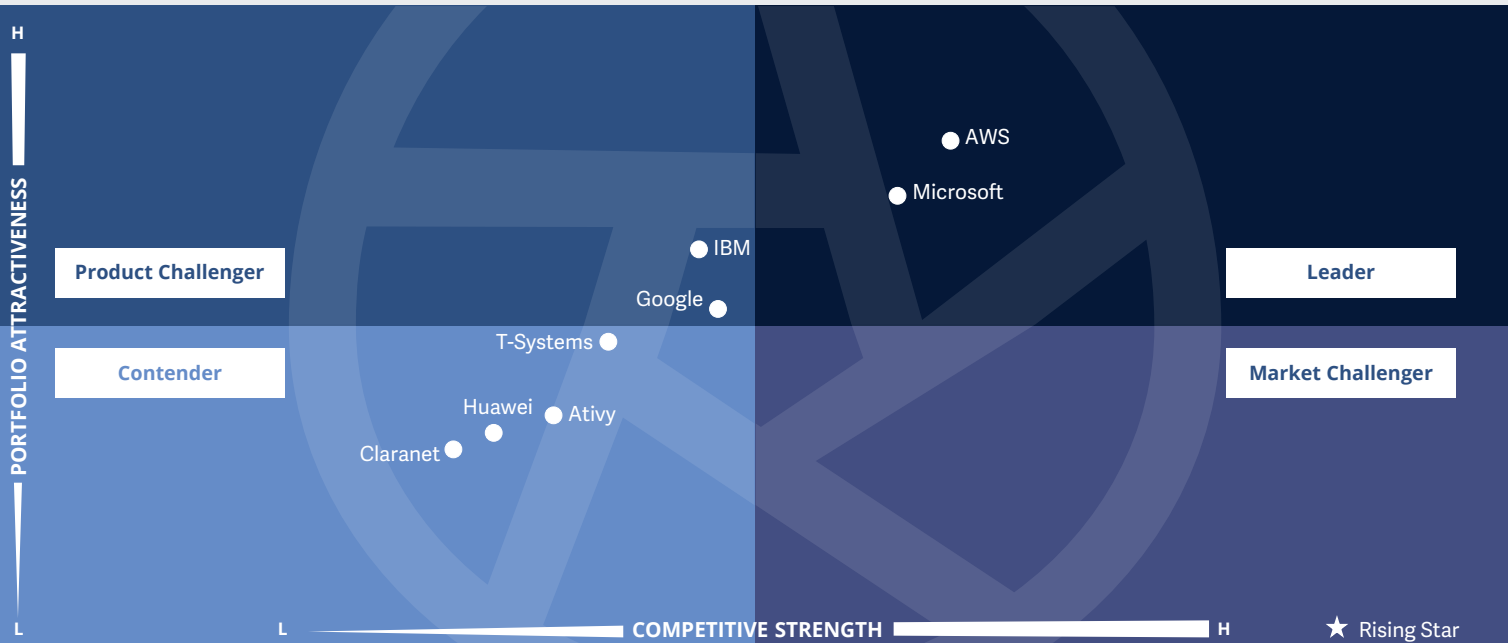
Infrastructure providers that participate in the RISE with SAP program receive a higher rating. However, RISE participation is not a mandatory requirement for inclusion in this quadrant. Ideally, the infrastructure provider should have a broad ecosystem, including SAP partners, enabling them to support clients in automating and operating their SAP instances in the cloud.

The cloud infrastructure provider should also offer pre-sales support to help clients with migration planning, cloud architecture design, sizing and performance optimization, licensing considerations, system and database configuration, virtual private network configuration and third-party vendor solutions (toolsets). The support analysis focuses on the vendor's service partner ecosystem and their expertise in conducting related migrations and operations.

Eligibility Criteria

1. IaaS to include **SAP-certified servers** with storage and connectivity for SAP products. Availability of SAP HANA instances in multiple memory sizes, enabling **on-demand upscaling** to accommodate instance growth and upgrades with minimum service interruptions.
2. Memory capacity exceeding **6 TBs per virtual machine**
3. Easy access, **transparent prices**, consumption-based, reserved instance and dedicated instance billing models
4. Recognized **quality standards** and **service certifications**, with a strong focus on **data protection** and cybersecurity
5. **Low-cost storage** for backups and archiving
6. **Multi-region** disaster recovery capabilities
7. Automated **backup and restore functionality** (platform-based, proprietary or partner solutions)
8. Frameworks and **tools for application and data migration**
9. An ecosystem of **certified partners** with SAP specialization.





This quadrant assesses the hyperscalers offering **SAP hosting**, with a major focus on SAP HANA instances in **public cloud** for SAP S/4HANA private edition and **RISE with SAP**. Services include security, automation and monitoring tools.

Pedro L. Bicudo Maschio



AWS



“AWS has many options for SAP on cloud. Besides having more instance types, it offers low latency connectivity to enable high-availability and multiregion business continuity, AI and ML services, analytics, automation, and security and compliance.”

Pedro L. Bicudo Maschio

Overview

AWS is headquartered in Washington, U.S. and operates in 32 countries. In FY22, the company generated \$80.1 billion in revenue, with Compute, Storage, and Database as its largest segment. It has many SAP clients running ECC, HANA and SAP S/4HANA, with up to 48TB of memory. The company offers automation and professional services (ProServe) to support migrations.

In Brazil, AWS has approximately 450 partners, including 18 with SAP certifications. In 2023, it published the Economic Impact Study, demonstrating how the investment in AWS South America (São Paulo) region impacted Brazil's gross domestic product (GDP).

Strengths

Client experience and reliability: SAP on AWS has a long availability track record, offering over 300 security, compliance and governance services and features. Its low latency interconnectivity enables clients to run SAP in 31 regions and access more than 450 points of presence. AWS offers over 650 generally available EC2 instances under AWS Nitro hypervisor, ensuring superior performance and security.

SAP modernization expertise: AWS' SAP partner competency program ensures clients access to top experts for migrating, running and transforming SAP workloads. In 2022, the company launched AWS SDK for SAP ABAP with more than 200 AWS services to facilitate application modernization and transformation. AWS ProServe practice for

SAP supports clients and partners to achieve the needed results with the best practices and experience gained from many SAP migrations.

Automation at all levels: AWS Launch Wizard and AWS Migration Hub Orchestrator facilitate migrating SAP workloads to AWS. After completion, AWS Backint Agent for SAP HANA provides a SAP-certified backup and restore solution. Amazon CloudWatch Application Insights for SAP HANA and NetWeaver facilitate application operations, and AWS Systems Manager for SAP maintains efficient operations.

Caution

Clients can migrate their SAP ERP to the AWS Cloud with trivial automation. However, ISG studies show that simple migrations can carry obsolete solutions to the cloud, driving cloud resource overutilization. For better results, clients should consider SAP archiving prior to migration and application modernization.



Observations

The SAP market is of high importance for hyperscalers. Typical SAP clients also migrate other workloads to the cloud. SAP pushes RISE with SAP deals, accelerating cloud migrations. However, typical SAP clients have more than SAP S/4HANA, simultaneously using legacy ERPs, analytic tools, data warehouses, sales and service automation, customer relationship management (CRM), e-commerce, human capital management (HCM) and other SAP or competitors' products.

As observed in 2022, large enterprises typically deal directly with hyperscalers to migrate their SAP workloads to the cloud and use one of their specialized partners to plan and execute these migrations. When choosing their preferred cloud, clients should consider their requirements for integration, network latency, data location and service partners; selecting the right service partners can be as important as choosing the hyperscaler.

The market in Brazil is concentrated on AWS and Microsoft. Google Cloud offers price-competitive deals, but with few cases, including large instances or complex environments.

From the 45 companies assessed for this study, eight qualified for this quadrant, with two being Leaders.

AWS

AWS offers a large number of automation tools for HANA migrations and SAP S/4HANA operations in the cloud. It also has a significant number of virtual machine options, with clients reporting superior performance when hosting SAP S/4HANA on AWS.

Microsoft

Microsoft offers flexible infrastructure configurations to host SAP workloads, with integrated security and collaboration tools. Clients usually integrate the Microsoft Power platform to enrich SAP S/4HANA analytics.





Appendix

Report Author: Pedro L. Bicudo Maschio

The cloud continues to expand in Brazil, helping enterprises thrive in tough economic times.

Service providers reported a reduced demand in the first quarter of 2023. The change in the federal government in 2022 and global economic uncertainties in 2023 have pushed enterprises to reconsider their investments in innovation to prioritize projects that can bring higher efficiencies and business process optimizations.

Public cloud has the economies of scale to provide clients with a highly efficient computing platform. Enterprises consider cloud services, such as the use of AI-based analytics, new ML models and generative AI (GenAI), as opportunities to rethink business processes and further improve efficiencies.

Such optimization opportunities exist even for companies already running on the public cloud. A fast cloud migration without deploying robust

cloud governance can lead to the overuse of resources. With infrastructure as code (IaC), agile teams can deploy applications with one click, easily provisioning cloud resources. Users can set up new environments for testing, validating applications, developing PoCs or other reasons but might overlook the need to deprovision this environment afterward, leading to increased cloud costs. Clients have asked ISG's advice on how to handle this challenge for better control in terms of cloud spending. To this end, this year, ISG has included FinOps Services and Cloud Optimization as a separate quadrant to identify service providers and highlight their offerings to enable companies to get the complete benefit of the cloud.

The following major trends can be seen in Brazil:

- Significant attention to cloud cost management
- Client expectation to extend AIOps to automate FinOps and cloud governance
- Increased multicloud adoption using a best-of-bread approach
- Demand for application modernization to better consume cloud-native technologies

Clients demanding
cost reduction
prefer **multicloud** to
use the most
efficient solution.



A multicloud environment is more common among large accounts than in the midmarket. A large account usually has many business units with diverse applications and requirements. Each business unit can have its own ERP, CRM, e-commerce and particular requirements. Midmarket companies usually consolidate applications to achieve economies of scale. In all cases, clients choose the cloud platform that best handles a specific workload. Some applications are replaced with a SaaS platform, while others can run better on specific clouds. Most cloud data centers in Brazil have direct links connecting clouds, without the need for custom network configurations. Multicloud offers low latency and high security. Clients see no reason to consolidate all workloads on a single cloud.

The service providers featured in the **Consulting and Transformation Services for Large Accounts** quadrant expect major cloud growth in the banking and financial services industries. Traditional banks are using the cloud to host and operate instant payment systems and open-banking platforms, but still lag behind digital banks that completely operate

in the cloud. However, cost implications and legacy applications are slowing down cloud adoption. Clients are demanding application modernization, including refactoring application code to run on the public cloud while adding APIs to consume cloud-native technologies such as IaC, serverless computing, AI services and GenAI. Most service providers are working with hyperscalers to accelerate application modernization with automated tools. New COBOL migrations to the public cloud have been reported, although the volume is still low and not impacting providers' position in the quadrant. The major hyperscalers pushing mainframe migrations to the cloud are AWS, Google, Microsoft and IBM.

The participants in the **Consulting and Transformation Services for Midmarket** quadrant reported the same trends. However, the reduced demand for innovation was offset by an increasing demand for moving workloads from one cloud to another. For the first time, ISG observes a notable number of such cases, including among hyperscalers, without a clear indication of which one is losing or gaining clients. The cause is the same – increasing

cloud cost – because rightsizing cloud resources can reduce a client's monthly bill by from 20 to 40 percent. Although savings can be achieved without changing hyperscalers, clients that open competitive bids can get cloud credits and reduce their spending in the short-term. Cloud credits allow clients to achieve their goals for a year, knowing the cost will go up when credits expire in the following year. The catch is that some deals force clients to commit to a minimum consumption of three years.

The demand for application modernization in the midmarket is different from the requirements of large accounts. Most companies in this market do not have mainframes, with most of their applications running on x86 servers, and are thus aligned with cloud offerings. Many clients use client/server applications, including ERPs that require refactoring to use cloud-native technologies. Not all service providers can execute refactoring, but all providers included in this quadrant can guide clients to undertake refactoring on their own or through application service partners.

In the **Managed Services for Large Accounts** quadrant, service providers align cloud operations with security and governance practices. Advanced service platforms offer automated self-service with approval workflows, mandating adherence to compliance and security policies in each cloud deployment. Some service platforms have broader functionalities than others, indicating clients need to compare their requirements with the platform functionality. Top providers configure IaC according to specific client policies and each service request is checked, enabling AIOps to automate security and compliance and FinOps tools to read resource policies, automate cost audits and use analytics for rightsizing resources.

Clients in the **Managed Services for Midmarket** quadrant are more focused on consultative services and expect the service provider to propose and implement security and cost management controls. Top providers are using advanced analytics to anticipate cloud spending and advise clients on optimizing and avoiding surprise costs in the cloud bill. Providers can use the same



tools for large accounts and midmarket, with different complexities and in keeping with industry regulations. Also, public companies and organizations in the public sector have governance requirements that do not apply to privately owned companies. This market also demands AIOps and FinOps services but puts more responsibility on the provider to optimize operations. In the last year, many clients have replaced incumbent providers with more proficient ones.

The new quadrant covering **FinOps Services and Cloud Optimization** shows that providers can use the same tools to offer different results. Top providers can automate resource tagging with standards and client-specific indicators and use advanced analytics to demonstrate cloud utilization in four areas:

- Financial – managing cloud budgets
- Governance – spending authority and accountability
- Security – user access to financial information and access audit trail
- Sustainability – carbon consumption versus sustainability targets

Approval workflows cross-check cloud budgets, real-time spending and individual authorization levers to deploy new cloud services and resources. Each cloud asset has identification tags to map utilization and logging access to enable an audit trail. Real-time dashboards can link spending to projects, activities and individuals, enabling managers to see total spending and dig down to asset levels. Not all providers can deliver this level of detail today and some can go further and guide clients with comprehensive frameworks for approval levels, service tagging, approval workflows and industry-specific templates to handle regulations, privacy and confidentiality related requirements. The top providers include weekly and monthly meetings in their engagements to proactively optimize client infrastructure and avoid overspending or justify, in business terms, the value of spending more in particular cases.

Advanced FinOps solutions use ML to understand utilization patterns and use data analytics to predict cloud spending, guiding clients to negotiate cloud budgets, set optimization goals and meet sustainability targets. In this space, clients believe that GenAI

will work wonders, automating client advice and proposing new ways of optimizing cloud costs. But it might be a while before GenAI is able to meet these expectations. Most providers are only experimenting with GenAI and just only one is already using it for a few clients to scan applications' code and map dependencies to propose changes that reduce database calls and cloud service utilization.

The **Hyperscale Infrastructure and Platform Services** quadrant assesses nine cloud providers. The market is becoming increasingly competitive every year, with all providers expanding their partner networks. In Brazil, multicloud is a reality and clients prioritize costs when selecting IaaS. AWS has responded to market changes rapidly and continues to lead, with Google, Microsoft, Oracle and the new entrants, Huawei and Tencent, pushing market competitiveness. With more options, hyperscalers' differentiation resides in their partner ecosystem; the ability to reach out to an increasing number of clients; and their unique services such as cognitive AI, GenAI and ML capacity.

The **SAP HANA Infrastructure Services** quadrant is characterized by the entry of a large number of partners to support clients' demands. SAP has been very successful in Brazil, using the RISE with SAP program to accelerate clients' migrations to the cloud. Upgrading or adopting SAP S/4HANA is the major growth driver affecting this market segment. The top hyperscalers offer automated tools to accelerate RISE with SAP migrations, providing a safe path for hesitating customers. When choosing their cloud platform, enterprises should check partner credentials and migration automation tools to achieve the desired results.

Multicloud offers myriad options to clients, covering cost to performance, driving the demand for FinOps services that consolidate spending and enabling the use of analytics to support management decisions.





Provider Classifications: Quadrant Key

Product Challengers offer a product and service portfolio that reflect excellent service and technology stacks. These providers and vendors deliver an unmatched broad and deep range of capabilities. They show evidence of investing to enhance their market presence and competitive strengths.

Leaders have a comprehensive product and service offering, a strong market presence and established competitive position. The product portfolios and competitive strategies of Leaders are strongly positioned to win business in the markets covered by the study. The Leaders also represent innovative strength and competitive stability.

Contenders offer services and products meeting the evaluation criteria that qualifies them to be included in the IPL quadrant. These promising service providers or vendors show evidence of rapidly investing in products/ services and a follow sensible market approach with a goal of becoming a Product or Market Challenger within 12 to 18 months.

Market Challengers have a strong presence in the market and offer a significant edge over other vendors and providers based on competitive strength. Often, Market Challengers are the established and well-known vendors in the regions or vertical markets covered in the study.

★ **Rising Stars** have promising portfolios or the market experience to become a Leader, including the required roadmap and adequate focus on key market trends and customer requirements. Rising Stars also have excellent management and understanding of the local market in the studied region. These vendors and service providers give evidence of significant progress toward their goals in the last 12 months. ISG expects Rising Stars to reach the Leader quadrant within the next 12 to 24 months if they continue their delivery of above-average market impact and strength of innovation.

Not in means the service provider or vendor was not included in this quadrant. Among the possible reasons for this designation: ISG could not obtain enough information to position the company; the company does not provide the relevant service or solution as defined for each quadrant of a study; or the company did not meet the eligibility criteria for the study quadrant. Omission from the quadrant does not imply that the service provider or vendor does not offer or plan to offer this service or solution.



The ISG Provider Lens™ 2023 – Multi Public Cloud Services study analyzes the relevant software vendors/service providers in the Brazil market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research™ methodology.

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The research and analysis presented in this report includes research from the ISG Provider Lens™ program, ongoing ISG Research™ programs, interviews with ISG advisors, briefings with service providers and analysis of publicly available market information from multiple sources. The data collected for this report represent information that ISG believes to be current as of November 2023 for providers that actively participated and for providers that did not. ISG recognizes that many mergers and acquisitions may have occurred since then, but this report does not reflect these changes.

All revenue references are in U.S. dollars (\$) unless noted otherwise.

The study was divided into the following steps:

1. Definition of Multi Public Cloud Services market
2. Use of questionnaire-based surveys of service providers/vendors across all trend topics
3. Interactive discussions with service providers/vendors on capabilities and use cases
4. Leverage ISG's internal databases and advisor knowledge and experience (wherever applicable)
5. Detailed analysis and evaluation of services and service documentation based on the facts and figures received from providers and other sources.
6. Use of the following main evaluation criteria:
 - * Strategy & vision
 - * Innovation
 - * Brand awareness and presence in the market
 - * Sales and partner landscape
 - * Breadth and depth of portfolio of services offered
 - * Technology advancements



Author



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Distinguished analyst and author, Pedro Maschio brings extensive experience in the research of the SEMEA (Southern Europe Middle East and Africa) and the Americas service markets. With more than 30 years of experience in sourcing, he has developed vendor assessments plus contract restructuring, services scope and IT benchmarking programs for diverse vertical markets in the Americas and APAC.

Before joining ISG, Pedro was a partner of TGT Consult and managing vice president at Gartner Inc., responsible for the consulting business in APAC and Latin America.

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Now as a research director, principal analyst and global head of ISG Provider Lens™, he is very well positioned to assess and report on the state of the industry and make recommendations for both enterprises and service provider clients.



ISG Provider Lens™

The ISG Provider Lens™ Quadrant research series is the only service provider evaluation of its kind to combine empirical, data-driven research and market analysis with the real-world experience and observations of ISG's global advisory team. Enterprises will find a wealth of detailed data and market analysis to help guide their selection of appropriate sourcing partners, while ISG advisors use the reports to validate their own market knowledge and make recommendations to ISG's enterprise clients. The research currently covers providers offering their services across multiple geographies globally.

For more information about ISG Provider Lens™ research, please visit this [webpage](#).

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For more information, visit isg-one.com.





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