ISG Provider Lens™

Multi Public Cloud Services

SAP HANA Infrastructure Services

A research report comparing provider strengths, challenges and competitive differentiators

QUADRANT REPORT | DECEMBER 2023 | FRANCE

Who Should Read This Section

This report is relevant to enterprises across industries in France for evaluating providers of SAP HANA infrastructure services for SAP S/4HANA workloads and large-scale HANA databases. In this quadrant, ISG defines the current market positioning of service providers in France and shows how they address the key challenges faced by enterprises in the region.

Enterprises in France are facing challenges in maintaining critical workloads specific to the SAP product line because of factors such as high costs, issues in handling data and change management and a shortage of skilled workers. Many enterprises are implementing SAP HANA as a part of their digital transformation initiatives and are looking for a hyperscale provider to overcome and address the challenges.

Enterprises are leveraging hyperscalers' compute resources, storage and connectivity on public clouds to host SAP workloads and facilitate scaling based on usage and infrastructure operations. Consequently, there is an increasing reliance on third-party applications that can be seamlessly integrated with SAP S/4 HANA. Service providers have developed specific automation capabilities to assess, plan and migrate SAP to public clouds, including legacy ERP Central Component (ECC) systems and data warehouses.

Enterprises are looking for providers focusing on IaaS performance, cost reduction, agility, improved security and resilience, analytics and industry-specific solutions for migrating SAP workloads. Hence, the integration of cutting-edge technologies like AI/ML into their services is enabling providers to assist clients in the process of modernizing their SAP applications and enhancing their overall business value.

IT leaders should read this report to better understand the relative strengths and weaknesses of SAP HANA infrastructure service providers and how their approaches can impact enterprises' public cloud strategies.

Software development and technology leaders should read this report to understand the relative positioning and capabilities of hyperscale SAP HANA infrastructure providers and how they can help procure infrastructure/services to migrate workloads to public clouds.

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

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

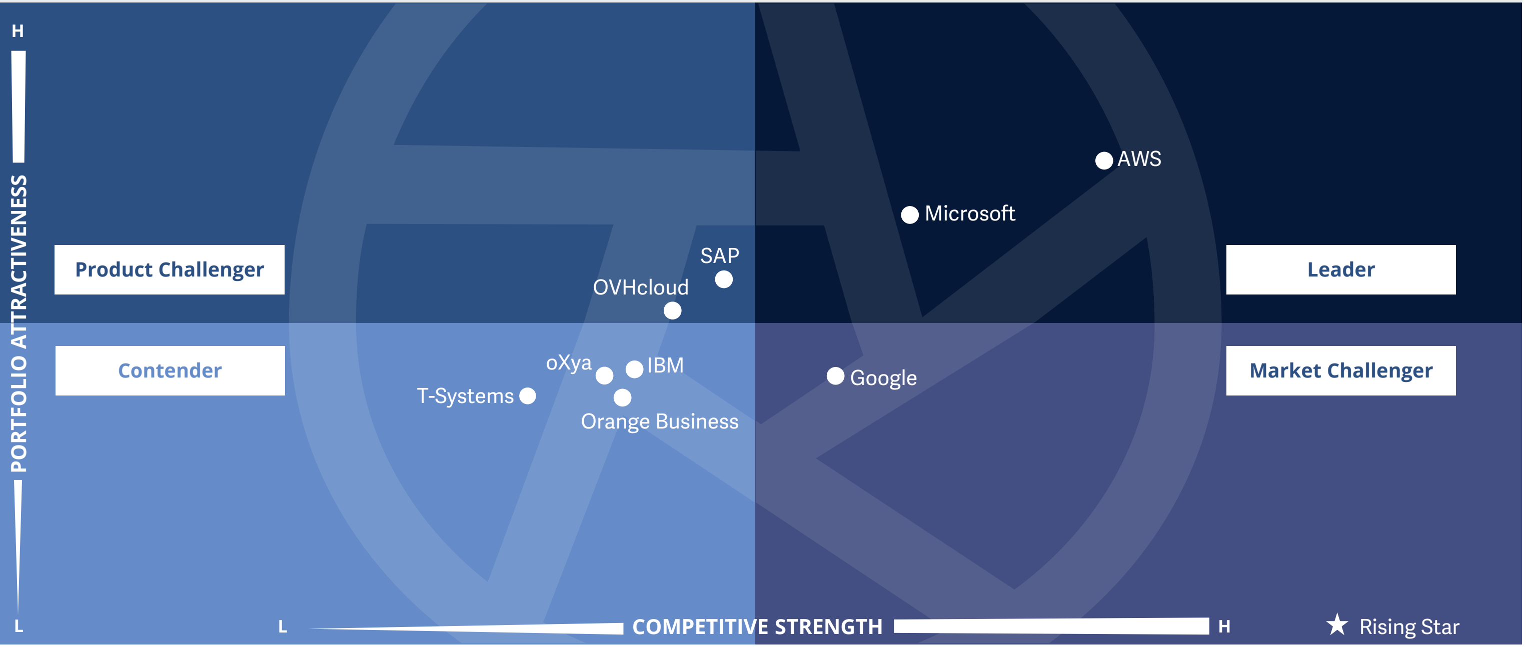
1. IaaS to include **SAP-certified servers** with storage and connectivity for SAP products; availability of SAP HANA instances in multiple memory sizes, enabling **on-demand upscaling** to accommodate instance growth and upgrades with minimum service interruptions
2. Memory capacity exceeding **6 TBs 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

ISG Provider Lens™

Source: ISG RESEARCH

Multi Public Cloud Services
SAP HANA Infrastructure Services

France 2023



This quadrant assesses service providers that offer **SAP products hosting**, especially SAP HANA, in **public cloud** shared environments with standard services and **SAP-certified infrastructure**.

Pedro L. Bicudo Maschio

AWS

Leader

> "AWS has extensive experience in supporting SAP migrations and optimizing SAP performance. It offers highly secure cloud infrastructure that complies with French regulations around security, certifications and data location."
>
> *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 surpassed 5,000 SAP clients in 2019, running ECC, HANA and SAP S/4HANA systems with up to 48 TB of memory. With its SAP expertise, AWS offers automation and professional services through ProServe to support migrations. In France, the company has approximately 1,000 employees and approximately 290 partners, including 17 certified in SAP services. In 2022, it announced its plan to invest €5.3 billion in France until 2031.

Strengths

Comprehensive and broadly adopted cloud: AWS has long supported SAP workloads, offering more than 200 pay-per-use services. Clients leverage AWS to lower costs, gain agility, access AI and ML services, and innovate faster. Users can run SAP on 31 regions, including seven in Europe, connected to over 400 edge locations. This flexibility enables clients to host and restore SAP services across regions for superior business resiliency.

Highly scalable infrastructure: AWS EC2 offers more than 650 generally available instances. AWS Nitro System is the hypervisor for high-memory SAP instances, providing close to zero CPU overhead, comparable to bare-metal server performance. AWS' SAP on Graviton3 instances are up to 60 percent more energy efficient and contribute to lower carbon emissions. Clients can start on small instances and grow at their pace without spending on unused capacity.

SAP application overhaul: AWS offers robust automation for migrations and operations with various solutions. These are AWS Launch Wizard, AWS Migration Hub Orchestrator, AWS Backint Agent for SAP HANA, AWS Backup Services for SAP HANA, Amazon CloudWatch Application Insights for SAP HANA and NetWeaver, and AWS Systems Manager for SAP. AWS ProServe helps clients with best practices, and AWS' SAP partner competency program ensures clients' access to the best experts.

Caution

AWS migration tools work for SAP S/4HANA private edition or RISE with SAP (SAP-managed operations). However, clients may require SAP partner well-versed in AWS solutions to get better results, such as SAP archiving prior to migration and ABAP modernization to integrate with AWS services.

Observations

SAP continues to push clients to migrate legacy ERPs to SAP S/4HANA, with a strong commitment to public clouds. It offers SAP Cloud with a focus on shared SAP solutions. Clients interested in SAP S/4HANA private edition are more inclined to migrate their ERP to AWS, Azure or Google Cloud.

Clients should assess SAP performance when choosing their preferred cloud infrastructure provider. Instances optimized for SAP HANA vary by cloud region. Having more instance options is a benefit for clients that can start with small instances and migrate to larger ones only when necessary. The goal is to pay only for what is in use. The more instances translate to more upscale steps, thus optimizing the spend without losing performance.

All hyperscalers offer upscaling, which usually requires minutes and does not impact SAP availability. However, some offer more and better tools to manage operations, backup and upgrades. Network latency, security tools and automation also differ by hyperscaler.

From the 51 companies assessed for this study, nine have qualified for this quadrant, with two being Leaders.

AWS

AWS offers the most extensive portfolio to migrate and operate SAP solutions. Automation ensures rapid migrations. The large number of cloud regions provides clients with more disaster recovery options. AWS has all possible certifications to ensure SAP compliance.

Microsoft

Microsoft offers many SAP and Microsoft software integration options, providing clients with user-friendly analytics and collaboration. It offers automated tools for SAP migration, monitoring and security integrated with Azure Active Directory (Azure AD).

Appendix

Report Author: Pedro L. Bicudo Maschio

A year that enterprises are maturing their cloud expectations and optimizing outcomes

France continues to show accelerated cloud adoption, with a growing number of cloud providers, service partners and job openings. The market slowed down in 2022, with enterprises dedicating additional time to the planning and migration processes associated with cloud adoption. This year, ISG observes mature cloud decisions, taking into consideration data sovereignty and security.

Companies can modernize legacy applications by decoupling data, logic, and services and adopting multicloud solutions to combine sovereignty and innovation. Enterprises assessing service providers should consider their expertise to implement infrastructure as code (IaC) and refactor legacy applications to use cloud-native technologies, such as microservices, Kubernetes or other container technologies, APIs, serverless computing, data lakes and low-cost cloud storage. It is not imperative to use all cloud-native technologies for all applications. Some end-of-life legacy applications are not worth refactoring or reengineering. Top service providers can guide clients on how to use cloud-native technologies wisely.

When modernizing and transforming to cloud, site reliability engineering (SRE) principles and practices offer the parameters to achieve high availability. It is commonly associated with quality and security, which are elements to consider in cloud architecture design. ISG has noticed an increasing number of service providers offering SRE as a core guideline for managed services and cloud architecture design.

The discussions around cloud sovereignty and data location regulations, initially perceived as negative and restrictive to cloud expansion, have gradually paved the way for more open-minded and flexible perspectives. Sovereign cloud is not stopping global cloud providers. Instead, the sovereign concept and current solutions enable market expansion by eliminating fear and uncertainty. Enterprises should plan for a best-of-breed approach,

The cloud has **eliminated the IT backlog** by facilitating users to **spend** on IT resources.

carefully choosing cloud providers to balance cost, compliance, performance and market differentiation.

Recently, ISG rolled out the Star of Excellence™ program, which is based on the voice of the customer concept. Here, providers are rated on six parameters, namely Service Delivery, Governance and Compliance, Collaboration and Transparency, Innovation and Thought Leadership, People and Culture Fit, and Business Continuity. The scores and data come from the Star of Excellence™ study that measures CX with providers based on direct client feedback. ISG found that the average provider CX score for the public cloud domain in Western Europe was 78.14 in 2022.

In **Consulting and Transformation Services for Large Accounts**, the market is growing at a moderate pace. Enterprises are more concerned with global economy uncertainties and prefer to assess cloud for short-term returns, focusing on cost management. Apparently, enterprises learned how to deal with sovereign cloud concerns and regulations. Certain data sets reside on certified data centers, while masked data, anonymized data and non-confidential data can reside on any cloud. Some hyperscalers offer data location services, providing French clients with the tools to manage compliance, security and risk. ISG believes France-based enterprises will continue experimenting with hybrid cloud to accommodate data sovereignty, health regulations, GDPR, data location and the use of advanced AI solutions, such as generative AI, which are not currently supported on SecNumCloud infrastructures.

In **Consulting and Transformation Services for Midmarket**, most clients do not need SecNumCloud and sovereign cloud to operate. However, more hospitals, clinics and companies that handle patients' data are using cloud services, thus requiring data location and Health Data Hosting (HDS) certification. This research finds that local service providers are more concerned with developing consulting expertise around HDS than building a sovereign cloud. The international hyperscalers can easily meet HDS requirements, while getting SecNumCloud certification is hardly possible for foreign cloud providers. This market will continue to use multicloud solutions, with data residing on HDS-certified infrastructure and applications that use cloud-native services from global hyperscalers.

The **Managed Services for Large Accounts** market demands advanced FinOps tools to manage enterprises' increasing cloud expenditure. All service providers offer AIOps, with task automation ranging from 40 to 70 percent. AIOps are behind self-service portals that empower business users or product owners responsible for agile development projects and digital products to launch additional cloud services, such as test environments, containers, and additional capacity to handle enterprise applications or e-commerce growth. The easy access to resources can lead to uncontrolled cloud spending. Complexity is increasing with the scale of operations, driving more vulnerabilities and chances of human errors. AIOps has become crucial for managing complexity, while FinOps is required to control the expanding cost of operations.

Companies that are considered Operators of Vital Importance (OVIs) require the SecNumCloud certification issued by the National Cybersecurity Agency of France (ANSSI). The enterprises dealing with patient data may require using HDS-certified data centers and service partners. The market has adapted and learned how to use multicloud solutions to promote security and compliance.

In **Managed Services for Midmarket**, MSPs offer AIOps and FinOps with commercial and open-source tools integrated with orchestration tools to deliver multicloud functionality. The midmarket clients are rarely impacted by data sovereignty regulations, with more demand for HDS because pharmacies, hospitals and clinics are midmarket companies with no plan to operate internationally. All hyperscalers have improved their partnership programs to attract new partners. However, many are small or independent software vendors (ISVs) that do not focus on managed services. The companies that qualify for this quadrant offer AIOps and minimum FinOps functionality to support clients' operations with automation and cost management.

In the **FinOps Services and Cloud Optimization** quadrant, ISG identifies service providers that excel in FinOps as a service. In this model, a service provider is responsible for developing the tagging strategy to better control IT spending and establish reporting mechanisms to demonstrate spending, governance and compliance. Leading service providers use advanced AI to identify anomalies in cloud usage and spending and propose architectural changes to improve performance and reduce costs. Service providers can implement new controls and avoid overspending.

The **Hyperscale Infrastructure and Platform Services** market slowed down but still maintains a double-digit annual growth rate. The regulations around data sovereignty, data location and health data services (HDS) have matured in France. However, IaaS and PaaS providers in Europe do not offer the same portfolio breadth and depth that global providers can deliver. SecNumCloud certification is restricted to companies headquartered in the eurozone, limiting the number of offerings. Consequently, clients are increasingly opting for multicloud solutions, allowing them to host data in one location and use services from the best source.

The **SAP HANA Infrastructure Services** market is highly competitive. SAP continues to push clients to migrate legacy ERPs to SAP S/4HANA, with a strong focus on public clouds. SAP Cloud offers shared SAP solutions (SaaS), and clients interested in SAP S/4HANA private edition are more inclined to migrate their ERP to public clouds. Clients should assess IaaS performance when choosing their preferred cloud infrastructure provider. Instances optimized for SAP HANA vary by cloud region. Some hyperscalers offer more and better tools to manage SAP operations, backup and upgrades. Network latency, security tools and automation also differ by hyperscaler.

Complexity is increasing with the scale of operations, driving more vulnerabilities and chances of human errors. AIOps has become crucial for managing complexity, while FinOps is required to control the expanding cost of operations.

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 France market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research™ methodology.

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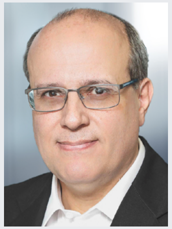
The research and analysis presented in this report includes research from the ISG Provider Lens™ program, ongoing ISG Research™ programs, interviews with ISG advisors, briefings with service providers and analysis of publicly available market information from multiple sources. The data collected for 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



Pedro L. Bicudo Maschio
Lead Analyst

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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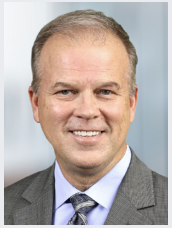
Manoj is a research analyst at ISG and supports ISG Provider Lens™ studies on Private/Hybrid Cloud – Data Center Services, Mainframes, Cloud Native Services & Solutions and Public Cloud Solution and Services. He also supports the lead analysts of multiple regions in the research process. Prior to this role, he supported the ROI process in sales intelligence platform and was an individual contributor in handling research requirements for advanced technologies in different sectors.

He has considerable expertise in predicting the automation impact by considering certain parameters such as productivity, efficiency and time reduction. During his tenure, he has supported research authors and authored Enterprise Context and Global Summary reports with market trends and insights.

IPL Product Owner



Jan Erik Aase

Partner and Global Head – ISG Provider Lens™

Mr. Aase brings extensive experience in the implementation and research of service integration and management of both IT and business processes. With over 35 years of experience, he is highly skilled at analyzing vendor governance trends and methodologies, identifying inefficiencies in current processes, and advising the industry. Jan Erik has experience on all four sides of the sourcing and vendor governance lifecycle - as a client, an industry analyst, a service provider and an advisor.

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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Founded in 2006, and based in Stamford, Conn., ISG employs more than 1,600 digital-ready professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry's most comprehensive marketplace data.

For more information, visit isg-one.com.

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REPORT: MULTI PUBLIC CLOUD SERVICES