ISG Provider Lens™

Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions

Colocation Services for Large Accounts

Germany 2021

Quadrant Report

A research report comparing provider strengths, challenges and competitive differentiators

Customized report courtesy of:

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July 2021

About this Report

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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 services providers and analysis of publicly available market information from multiple sources. The data collected for this report represents information that ISG believes to be current as of April 2021, for providers who actively participated as well as for providers who did not. ISG recognizes that many mergers and acquisitions have taken place since that time, but those changes are not reflected in this report.

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

The lead author for this report is Wolfgang Heinhaus, supported by Heiko Henkes. The editor is John Burnell. The enterprise context and research analyst is Katharina Kummer and the data analyst is Vijaykumar Goud.

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EXECUTIVE SUMMARY

In 2020 and similarly in the spring of 2021, the demand for IT and cloud services in Germany was higher than ever before. The whole country now seems to have a close affinity to the buzzword "digitalization." Those that are an active part of the German economy and who do not necessarily have to be present on-site have further taken to digitalization in their lives and work environments, and thus, no longer need to depend on local elements and IT resources. At the same time, however, the hazards of cybercrime and the challenges arising from the complexity of cloud landscapes have grown larger than ever.

The European market for IT and business services is still in excellent, robust shape. While the managed service segment retained a strong presence in the first quarter of 2021, the demand for cloud-based services reached a new all-time high according to the EMEA ISG Index. In the first quarter the magnitude of the overall sourcing market, which includes both as-a-service and managed services engagements, amounted to €6.0 billion. Compared to the same time period of the previous year, that represents an increase of 20 percent. In the managed services sector, annual contract value (ACV) in the first quarter totaled €2.9 billion. This implies growth of 23 percent compared to the previous year and was the second strong quarter in a row. ISG attributes the increase to high growth in both the IT outsourcing (ITO) and business process outsourcing (BPO) segments. In addition, the results in Great Britain, France and the DACH region (Germany, Austria, Switzerland) were excellent. In the ITO market, ADM services (application development and maintenance) and infrastructure services, in particular, have contributed to the overall growth of 17 percent in the ACV year-on-year, amounting to €2.5 billion. In the BPO sector, the managed services

growth was 66 percent, thanks to the strong demand for industry-specific services and in the finance and accounting and engineering and research and development (R&D) sectors. In total, business process outsourcing contributed €437 million to the entire managed services segment.

The COVID-19 pandemic and the rise of the home office, which is now established across regions, have contributed to the fact that managed services, hosting and colocation providers play an even greater role in Germany and maintain more economic power. Midmarket companies, in particular, have sought consulting and support for implementation and ongoing operations to ensure their presence. Large corporations are also working on expanding their cloud resources and attaining a higher level of utilization, and are entering a dimension of complexity which is unparalleled.

Managed service providers (MSPs) were required to organize a wide variety of IT environments and set up or operate sufficient workspaces for remote work or home schooling, managed cloud hosts were responsible for provisioning sufficient server capacities, and colocation providers ensured the provision of professional and standardized data centers for operations and the necessary carrier and hyperscaler connectivity and bandwidth.

Digitalization is being expanded and accelerated again, which has led to an increase in the overall need for private and hybrid cloud services. The call for service support has become more prominent because handling these architectures and technologies involves complexities, which in most cases, cannot be handled by an enterprise's in-house

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employees. Companies want to invest less and less in their own, in-house hardware as they are relying on the flexibility and scaling on the part of the cloud provider to reduce their capital expenses. Most service providers offer both managed services and managed hosting, which is why the offers are fluid and tend to overlap. It is therefore important for the customer to rely on the right vendor that can provide comprehensive support in planning, implementation and operation. Managed hosting providers that previously owned and operated their own data centers are increasingly relying on the use of colocation services. As a result, the need for additional colocation data centers is increasing. The clientele is also made up of integrators, companies that are downsizing or closing their data centers, and public cloud providers, some of which no longer build their own data centers, but to use the space and services of colocation providers. The users of these facilities get everything from a single source: space, security, a modern technical infrastructure and support. The boundaries between private and public cloud will soon be entirely blurred; it is the age of distributed clouds.

Considering the DACH region, there are more than 1,000 service providers or hosting providers in Germany, Austria or Switzerland that seek access to a market of almost 100 million people and more than 5 million midsize companies and groups. The number of user companies that want to be supplied with a maximum latency of 35 milliseconds, or even less, has risen sharply and will continue to grow thanks to the ongoing digitalization projects. New IT/OT solutions, the emerging edge computing market segment plus developments like autonomous driving and mixed reality will lead to increased demands

related to response times and for familiarizing users with data processing and storage practices. 5G mobile communication technology plays an important role in the successful transition and smooth functioning of such use cases, with its latency of 5 m/sec up to real time.

Managed Services

In the first quarter of 2021, the managed services market in Germany, Austria and Switzerland produced annual contract value amounting to €840 million, which indicates an increase of 13 percent compared to the previous year. It was the second quarter in a row in which ACV in the DACH countries exceeded US$1 billion (€840 million) – which is about a third higher than the historical average. The DACH region now accounts for almost 30 percent of managed services ACV in EMEA.

Managed services have long since evolved to support a multi-cloud, and thus a multi-platform landscape, including private, public and hybrid cloud. In some cases, mainframe services such as those for the IBM Z Series are also integrated. Management has become much more complex as a result. Managed service providers are prepared for challenges and have sufficiently well-trained experts at their disposal, with the relevant certifications in the service, product and partner sectors, such as with hyperscalers. Relevant providers maintain partnerships with several hyperscalers, but at least with one major such as AWS or Azure. Large companies greatly value the possibility of being able to use the services of several public clouds, because these offer different functions, which not only ensures differentiation and variety but can also be an additional pillar to rely on.

Services are constantly being refined. They are characterized, in particular, by automation and intelligence to improve the quality of administration, to accelerate and make production safer and to ensure proactive management and self-healing in case of errors. An important point here is the comprehensive consulting available throughout the process, from concept development and earlier, to determination of the type of processing for which cloud environment is suitable, to installation and operation by the managed service provider. Following "workload-based" processing philosophy, cloud computing and associated managed services nowadays have many facets and forms, and thus, requirements for handling things such as containers, Kubernetes or cloud-native architectures.

Leading providers for large customers and corporations include: Accenture, Arvato Systems, Atos, Capgemini, Computacenter, DXC, Fujitsu, IBM, T-Systems and *um (Orange Business Services). Cognizant and Infosys have been rated as Rising Stars for their excellent performance.

Leading providers for German midmarket businesses include: All for One Group, Axians, CANCOM, Claranet, DATAGROUP, Deutsche Telekom (TDG), Materna, PlusServer and q.beyond. Release42 is this year's Rising Star.

Managed Hosting

The traditional managed hosting market has weakened noticeably in recent years and is almost on the brink of extinction. The service providers have long since been resting their focus on the cloud. This study focuses on private cloud hosting resources and their integration into hybrid operating models. The providers have further developed their offerings. They offer hybrid cloud services that can be combined as required and operated on a single platform. They maintain partnerships with at least one of the major public cloud providers, in most cases with Microsoft, since they were familiar with Microsoft before the cloud boom, in terms of data center operations, certifications such as the Gold/Silver data center competency and other elements. Depending on the service provider's size and equipment and the customer requirements, it may have other public cloud partnerships with AWS, Google Cloud, IBM, Oracle or Alibaba. The providers have service experts that are certified accordingly. They follow a holistic approach regarding operation across all cloud environments. In the course of transition to the cloud, customers enjoy comprehensive support throughout, from transformation to commissioning. In addition to standard hosting services, some of the colocation providers have expanded their offerings and also offer managed cloud hosting services.

The trend towards managed services has also led some hosting providers to abandon all or part of their own data centers for a variety of reasons. Leading reasons include lack of space for computing resources and the aging of their technical infrastructure, which is currently difficult to upgrade without further investment in sectors such as IoT and edge.

In addition, compliance guidelines can often no longer be adhered to. Hence, some hosting providers prefer to rent demarcated areas or cages in the highly secure, certified buildings of colocation providers. This has proven to be of great advantage for the service provider, given that the colocation operator is highly specialized in data center infrastructure. Their core business is to deal with technical components and, eventually, with network and server hardware, physical building security, general data center standardization, carrier and public cloud connections and, last but not least, energy consumption and carbon dioxide values.

Cloud operation is mainly supported with products from VMware, Nutanix, Red Hat or Microsoft. Providers are continuously developing their offerings. They are increasingly automating and accelerating operational processes with AI support, and simplifying workloads with container management solutions like Kubernetes. This makes administration more secure and prevents business interruptions. For security reasons, the data is processed and stored in geo-redundant data centers.

 Leading providers for large customers and corporations include: Atos, Arvato Systems, Fujitsu, IBM, Rackspace and T-Systems. Unisys has been rated a Rising Star for its excellent performance

Leading providers for German midmarket businesses include: Axians, CANCOM, Claranet, DATAGROUP, Deutsche Telekom (TDG), NTT DATA, PlusServer and q.beyond.

Colocation Services

The demand for colocation and connectivity services in the German market continues unchecked, and the boom will continue for the next few years. Hardly a month goes by without a new data center being announced or opened. In the last 12 months, major colocation providers in Frankfurt alone have built five new data centers or expanded their existing ones. They've now established themselves in approximately 35,000 m² of additional space. Convincing arguments for security, connectivity services that can be set up at short notice, high availability and adherence to compliance guidelines are testimonies that are greatly valued by national and international client companies, despite the high energy costs involved. Energy efficiency, however, plays an increasingly important role in decisions. Energy prices in Germany are the highest in Europe. Data center operators are, therefore, stepping up efforts to deploy high-efficiency cooling and UPS systems to minimize electricity costs and carbon dioxide emissions and achieve a PuE of 1.3 or lower. Colocation service providers take the PuE value into account for pricing, which has a positive impact on costs.

At the largest regional colocation site, near the DE-CIX internet exchange point in Frankfurt, (which is the second-largest in the world), data throughput has increased from 9.1 to 10 Tbit/s, or 1,250 gigabytes/s, within 12 months. The COVID-19 pandemic has greatly contributed to this; people are relying more and more on digital applications than

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ever before – using home offices instead of traditional offices, streaming movies instead of attending movie theaters and increasing their use of video conferencing. The data traffic is growing, and the bandwidth must increase with it. And it is, as noted. Net floor space is increasing dramatically in new data centers. While in the past data centers were typically built with 3,000 - 4,000 m² of net floor space, today they are usually 10,000 m² or more. Colocation is also increasingly being used by managed service and cloud providers. Major hyperscalers are setting up their own PoPs at colocation providers' sites to provide added value and be accessible in real time. Alternatively, they are moving their infrastructure straight into the colocation providers' premises and letting go of in-house data centers.

New foreign providers have recently determined the Frankfurt location as being ideal for them. Suitable land in Frankfurt is therefore becoming increasingly scarce. The provider Interxion, which was acquired by Digital Realty last year, has secured one of the last available plots of land in Frankfurt with an area of 108,000 m². Increasingly, suitable sites are being sought in Frankfurt's Speckgürtel area, in suburbs that can offer sufficient energy reserves. This has not affected the latency to the DE-CIX exchange node.

Approximately 60 colocation providers operate around 100 data centers in the Frankfurt area and offer total area of about 700,000 m². In addition, about 170 colocation data centers are available in other metropolitan areas including Munich, Düsseldorf, Berlin, Hamburg, Nuremberg and other large economic areas. These are preferred above all by midmarket companies that intend to operate their IT infrastructure in their vicinity and want to count on low latency. Data centers in the region are gaining additional importance for companies that are contemplating moving parts of their workloads to the edge of the network (edge computing), where large amounts of data need to be processed quickly.

Leading providers for large corporations are: CyrusOne, Equinix, Interxion, ITENOS, Keppel Data Centres, maincubes, NTT Global Data Centers EMEA and Telehouse. T-Systems has been classified as a Rising Star.

Leading providers for German midmarket businesses include: KAMP, myLoc, PFALZKOM, PlusServer, STACKIT and TelemaxX. Cyxtera has been positioned as a Rising Star.

Introduction

Simplified illustration

2021 Private Hybrid Cloud - Data Center Solutions and Services, Germany	
Managed Services for Large Accounts	Managed Services for Midmarket
Managed Hosting for Large Accounts	Managed Hosting for Midmarket
Colocation Services for Large Accounts	Colocation Services for for Midmarket

Source: ISG 2021

Definition

Market Overview

Data center outsourcing involves the delegation of responsibilities for the management of end-to-end data center resources to a third-party provider, and includes provisioning of orchestration, integrated monitoring, and management of computing, storage, database and middleware resources, and other components of the infrastructure. The data center may be owned by the respective company, the service provider or a third-party provider or colocation service. Integrated monitoring and management services are typically delivered from the provider's site via an offshore, onshore or nearshore shared service center or dedicated delivery center model, and are classified as remote infrastructure management (RIM) services.

Definition (cont.)

A private cloud is an extension of a company's existing computer environment. It uses the investments already made in virtual infrastructure and applications. Organizations with stringent security and governance requirements, where processing of large volumes of data and ensuring tight integration (with other enterprise applications and workflows) are requirements, may give preference to an on-premises or private cloud, with hardware hosted on-site at the customer's facilities. IT service providers can build private clouds using scalable virtual computing, networking and storage resources running in their data centers or over shared infrastructure, but in an appropriately configured, isolated environment.

A hybrid cloud combines the best of on-premise, private and public cloud services. It connects the existing on-site infrastructure services with a private or public cloud or with both. The aim is to combine services and data from different cloud models to set up a uniform, automated and well-managed cloud infrastructure. One of the fundamental advantages of hybrid cloud deployment is the high level of control it offers to the particular organization. Hybrid clouds allow organizations to leverage the capabilities of public cloud platform providers without having to outsource all of their data to a third-party data center. As a result, they benefit from greater flexibility while still being able to operate the important components within their own firewall.

Scope of the Study

The ISG Provider Lens™ study offers IT decision makers the following advantages:

- Differentiated positioning of the providers based on competitive strength and portfolio attractiveness

- Focus on different markets: U.S., Germany, Switzerland, U.K., the Nordic countries and Brazil

Our studies thus provide an essential basis for decisions regarding positioning and go-to-market considerations. ISG advisors and corporate customers also use information from these reports to evaluate their current and potential new provider relationships.

Typical outsourcing activities include, for example, technical support (levels 1, 2, 3), server monitoring, application performance monitoring, storage and database administration, hosting, colocation, disaster recovery, implementation, defining and setting up architectures, establishing standards and policies, and transformation projects such as virtualization, consolidation and cloud enablement services.

Definition (cont.)

Scope of the Study

In cases of standalone services such as colocation and managed hosting, the service level/support level of the services differs from a fully managed data center outsourcing contract. For example, a colocation provider offers facilities and infrastructure for hosting of equipment, and some basic support services. All other infrastructure management aspects are the customer's responsibility. Customers can either manage these aspects by themselves or hand them over to a managed service provider.

ISG studies are intended to help provide forecasts of customer projects and purchase decisions in typical companies. When facing a major strategy transformation, infrastructure procurement versus leasing decisions, implementing agile practices, or automating the IT environment, enterprise customers are sure to benefit from a study that examines the entire ecosystem for a given service area.

Therefore, ISG studies consist of several quadrants that cover a range of services that are required by corporate customers, as illustrated in the figure.

Provider Classifications

The provider position reflects the suitability of IT providers for a defined market segment (quadrant). Without further additions, the position always applies to all company sizes classes and industries. In case the IT service requirements from enterprise customers differ and the spectrum of IT providers operating in the local market is sufficiently wide, a further differentiation of the IT providers by performance is made according to the target group for products and services. In doing so, ISG either considers the industry requirements or the number of employees, as well as the corporate structures of customers and positions IT providers according to their focus area. As a result, ISG differentiates them, if necessary, into two client target groups that are defined as follows:

- **Midmarket**: Companies with 100 to 4,999 employees or revenues between US$20 million and US$999 million with central headquarters in the respective country, usually privately owned.

- **Large Accounts**: Multinational companies with more than 5,000 employees or revenue above US$1 billion, with activities worldwide and globally distributed decision-making structures.

Provider Classifications

The ISG Provider Lens™ quadrants are created using an evaluation matrix containing four segments (Leader, Product & Market Challenger and Contender), and the providers are positioned accordingly.

Leader

The Leaders among the vendors/providers have a highly attractive product and service offering and a very strong market and competitive position; they fulfill all requirements for successful market cultivation. They can be regarded as opinion leaders, providing strategic impulses to the market. They also ensure innovative strength and stability.

Product Challenger

The Product Challengers offer a product and service portfolio that provides an above-average coverage of corporate requirements, but are not able to provide the same resources and strengths as the Leaders regarding the individual market cultivation categories. Often, this is due to the respective vendor's size or weak footprint within the respective target segment.

Market Challenger

Market Challengers are also very competitive, but there is still significant portfolio potential and they clearly fall behind the Leaders. Often, the Market Challengers are established vendors that are somewhat slow to address new trends due to their size and company structure, and therefore have some potential to optimize their portfolio and increase their attractiveness.

Contender

Contenders still lack mature products and services or sufficient depth and breadth in their offering, but also show some strengths and improvement potential in their market cultivation efforts. These vendors are often generalists or niche players.

Provider Classifications (cont.)

Each ISG Provider Lens™ quadrant may include a service provider(s) who ISG believes has a strong potential to move into the leader's quadrant.

Rising Star

Rising stars are mostly product challengers with high future potential. When receiving the "rising stars" award, such companies have a promising portfolio, including the required roadmap and an adequate focus on key market trends and customer requirements. Also, the "rising stars" has an excellent management and understanding of the local market. This award is only given to vendors or service providers that have made extreme progress towards their goals within the last 12 months and are on a good way to reach the leader quadrant within the next 12-24 months, due to their above-average impact and innovative strength.

Not In

This service provider or vendor was not included in this quadrant as ISG could not obtain enough information to position them. This omission does not imply that the service provider or vendor does not provide this service.

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Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions - Quadrant Provider Listing 1 of 8

	Managed Services for Large Accounts	Managed Services for Midmarket	Managed Hosting for Large Accounts	Managed Hosting for Midmarket	Colocation Services for Large Accounts	Colocation Services for Midmarket
*um (Orange)	● Leader	● Not In	● Product Challenger	● Not In	● Not In	● Not In
23 Media	● Not In	● Not In	● Not In	● Not In	● Product Challenger	● Not In
3U	● Not In	● Not In	● Not In	● Not In	● Not In	● Contender
Abilis IT	● Not In	● Contender	● Not In	● Not In	● Not In	● Not In
Accenture	● Leader	● Not In	● Not In	● Not In	● Not In	● Not In
ACP	● Not In	● Market Challenger	● Not In	● Not In	● Not In	● Not In
Adacor	● Not In	● Not In	● Not In	● Product Challenger	● Not In	● Not In
Advanced Unibyte	● Not In	● Contender	● Not In	● Not In	● Not In	● Not In
All for One Group	● Not In	● Leader	● Not In	● Not In	● Not In	● Not In
Anexia	● Not In	● Not In	● Contender	● Not In	● Not In	● Not In
Arvato Systems	● Leader	● Not In	● Leader	● Not In	● Not In	● Not In
Atos	● Leader	● Not In	● Leader	● Not In	● Not In	● Not In

Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions - Quadrant Provider Listing 2 of 8

	Managed Services for Large Accounts	Managed Services for Midmarket	Managed Hosting for Large Accounts	Managed Hosting for Midmarket	Colocation Services for Large Accounts	Colocation Services for Midmarket
Axians	Not In	Leader	Not In	Leader	Not In	Not In
Baden Cloud	Not In	Not In	Not In	Not In	Not In	Contender
Bechtle	Not In	Market Challenger	Not In	Market Challenger	Not In	Not In
BT	Contender	Not In	Product Challenger	Not In	Product Challenger	Not In
BTC	Not In	Not In	Contender	Not In	Not In	Not In
CANCOM	Not In	Leader	Not In	Leader	Not In	Not In
Capgemini	Leader	Not In	Not In	Not In	Not In	Not In
Cegeka	Contender	Not In	Not In	Not In	Not In	Not In
Cema	Not In	Contender	Not In	Not In	Not In	Not In
Centron	Not In	Contender	Not In	Contender	Contender	Not In
CGI	Market Challenger	Not In	Market Challenger	Not In	Not In	Not In
Claranet	Not In	Leader	Not In	Leader	Not In	Not In

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Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions - Quadrant Provider Listing 3 of 8

	Managed Services for Large Accounts	Managed Services for Midmarket	Managed Hosting for Large Accounts	Managed Hosting for Midmarket	Colocation Services for Large Accounts	Colocation Services for Midmarket
Cognizant	● Rising Star	● Not In	● Not In	● Not In	● Not In	● Not In
Colocation IX	● Not In	● Not In	● Not In	● Not In	● Not In	● Contender
Colt DCS	● Not In	● Not In	● Not In	● Not In	● Not In	● Product Challenger
Computacenter	● Leader	● Not In	● Not In	● Not In	● Not In	● Not In
Conet	● Not In	● Market Challenger	● Not In	● Not In	● Not In	● Not In
Controlware	● Not In	● Product Challenger	● Not In	● Not In	● Not In	● Not In
CyrusOne	● Not In	● Not In	● Not In	● Not In	● Leader	● Not In
Cyxtera	● Not In	● Not In	● Not In	● Not In	● Not In	● Rising Star
DARZ	● Not In	● Not In	● Not In	● Product Challenger	● Not In	● Product Challenger
Datacenter Leipzig	● Not In	● Not In	● Not In	● Not In	● Not In	● Product Challenger
Datacenter One	● Not In	● Not In	● Not In	● Not In	● Market Challenger	● Not In
DATAGROUP	● Not In	● Leader	● Not In	● Leader	● Not In	● Not In

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Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions - Quadrant Provider Listing 4 of 8

	Managed Services for Large Accounts	Managed Services for Midmarket	Managed Hosting for Large Accounts	Managed Hosting for Midmarket	Colocation Services for Large Accounts	Colocation Services for Midmarket
Deutsche Telekom (TDG)	Not In	Leader	Not In	Leader	Not In	Not In
DevoteamIAlegri	Market Challenger	Not In	Not In	Not In	Not In	Not In
dokom21	Not In	Not In	Not In	Not In	Not In	Contender
Dunkel	Not In	Not In	Not In	Contender	Not In	Not In
DXC	Leader	Not In	Market Challenger	Not In	Not In	Not In
Ecotel	Not In	Not In	Not In	Not In	Not In	Contender
EMC HostCo	Not In	Not In	Not In	Not In	Not In	Product Challenger
Ensono	Contender	Not In	Product Challenger	Not In	Contender	Not In
Equinix	Not In	Not In	Not In	Not In	Leader	Not In
First Colo	Not In	Not In	Not In	Not In	Not In	Contender
Fujitsu	Leader	Not In	Leader	Not In	Not In	Not In
Global Switch	Not In	Not In	Not In	Not In	Product Challenger	Not In

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Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions - Quadrant Provider Listing 5 of 8

	Managed Services for Large Accounts	Managed Services for Midmarket	Managed Hosting for Large Accounts	Managed Hosting for Midmarket	Colocation Services for Large Accounts	Colocation Services for Midmarket
gridscale	Not In	Not In	Not In	Product Challenger	Not In	Not In
gtt	Not In	Not In	Contender	Not In	Not In	Contender
HCL	Product Challenger	Not In	Not In	Not In	Not In	Not In
Hetzner Online	Not In	Not In	Not In	Market Challenger	Not In	Contender
Hexaware	Contender	Not In	Not In	Not In	Not In	Not In
Hostserver	Not In	Not In	Not In	Contender	Not In	Not In
Hostway	Not In	Not In	Not In	Not In	Not In	Market Challenger
IBM	Leader	Not In	Leader	Not In	Product Challenger	Not In
IGN	Not In	Not In	Not In	Not In	Not In	Contender
Infosys	Rising Star	Not In	Not In	Not In	Not In	Not In
Interxion (Digital Realty)	Not In	Not In	Not In	Not In	Leader	Not In
IP Exchange(q.beyond)	Not In	Not In	Not In	Not In	Product Challenger	Not In

Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions - Quadrant Provider Listing 6 of 8

	Managed Services for Large Accounts	Managed Services for Midmarket	Managed Hosting for Large Accounts	Managed Hosting for Midmarket	Colocation Services for Large Accounts	Colocation Services for Midmarket
ITENOS	Not In	Not In	Not In	Not In	● Leader	Not In
KAMP	Not In	Not In	Not In	Not In	Not In	● Leader
Keppel Data Centres	Not In	Not In	Not In	Not In	● Leader	Not In
Logicalis	Not In	● Product Challenger	Not In	Not In	Not In	Not In
Lumen	Not In	Not In	● Product Challenger	Not In	Not In	Not In
maincubes	Not In	Not In	Not In	Not In	● Leader	Not In
Materna	Not In	● Leader	○ Contender	Not In	Not In	Not In
msg systems	Not In	● Product Challenger	Not In	Not In	Not In	Not In
myLoc	Not In	Not In	Not In	○ Contender	Not In	● Leader
Netfox	Not In	Not In	Not In	○ Contender	Not In	Not In
noris network	Not In	Not In	Not In	Not In	● Leader	Not In
NTT DATA	● Product Challenger	Not In	Not In	● Leader	Not In	Not In

Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions - Quadrant Provider Listing 7 of 8

	Managed Services for Large Accounts	Managed Services for Midmarket	Managed Hosting for Large Accounts	Managed Hosting for Midmarket	Colocation Services for Large Accounts	Colocation Services for Midmarket
NTT Ltd.	Not In	Not In	Not In	Not In	Leader	Not In
Operational Services	Not In	Not In	Contender	Not In	Not In	Not In
PFALZKOM	Not In	Not In	Not In	Not In	Not In	Leader
PlusServer	Not In	Leader	Not In	Leader	Not In	Leader
Profi	Not In	Contender	Not In	Not In	Not In	Not In
q.beyond	Not In	Leader	Not In	Leader	Not In	Not In
Rackspace Technology	Product Challenger	Not In	Leader	Not In	Not In	Not In
ratiokontakt	Not In	Not In	Not In	Product Challenger	Not In	Not In
release42	Not In	Rising Star	Not In	Contender	Not In	Not In
ScaleUp Technologies	Not In	Not In	Not In	Contender	Product Challenger	Not In
Sievers	Not In	Contender	Not In	Not In	Not In	Not In
Sopra Steria	Product Challenger	Not In	Product Challenger	Not In	Not In	Not In

Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions - Quadrant Provider Listing 8 of 8

	Managed Services for Large Accounts	Managed Services for Midmarket	Managed Hosting for Large Accounts	Managed Hosting for Midmarket	Colocation Services for Large Accounts	Colocation Services for Midmarket
STACKIT	Not In	Not In	Not In	Not In	Not In	Leader
Syntax Systems	Not In	Contender	Not In	Market Challenger	Not In	Not In
TCS	Product Challenger	Not In	Product Challenger	Not In	Not In	Not In
Tech Mahindra	Product Challenger	Not In	Not In	Not In	Not In	Not In
Telehouse	Not In	Not In	Not In	Not In	Leader	Not In
TelemaxX	Not In	Not In	Not In	Contender	Not In	Leader
Trivadis	Product Challenger	Not In	Not In	Not In	Not In	Not In
T-Systems	Leader	Not In	Leader	Not In	Rising Star	Not In
Unisys	Product Challenger	Not In	Rising Star	Not In	Not In	Not In
Vodafone	Contender	Not In	Contender	Not In	Contender	Not In
Wipro	Product Challenger	Not In	Not In	Not In	Not In	Not In

Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions Quadrants

ENTERPRISE CONTEXT

Colocation Services for Large Accounts

This report is relevant to large companies in Germany that are evaluating colocation providers.

This quadrant addresses the current market positioning of colocation providers in Germany. It shows how the companies deal with the key challenges they face in the region. Companies are putting the highest priority on integrating colocation computing resources into their overall hybrid cloud strategy. Incorporating colocation resources can help companies reduce the expense of running their own data centers while enabling them to retain some control over the hardware and systems that regulate the applications hosted there.

The use of local data centers is particularly valued in Germany, as compliance with the multitude of data protection and residency requirements that need to be fulfilled can be ensured by using local facilities in collaboration with cloud providers based in America.

This favors the trend among German companies to strongly restructure their private data centers into colocation data centers.

When considering investments for a private data center, it needs to be noted that energy consumption and compliance regulations contribute to rising costs. This makes investment in sustainability concepts a worthwhile endeavor. Colocation providers are able to take on the costs and prioritize energy efficiency and, therefore, sustainability as well. This, subsequently, leads to reduced carbon dioxide emissions.

IT executives should read this report to better understand the relative strengths and weaknesses of colocation providers and how the market approach of these providers may impact enterprise hybrid cloud strategies. In particular, it is about how the use of a colocation provider affects the management and operation of important workloads.

Software development and technology executives should read this report to understand positioning of colocation providers and obtain a better understanding of how the range of services rendered by these providers can impact the ongoing development of software products within an organization. Even if not all applications hosted by a colocation provider are actively developed, new projects will likely need to be integrated with some of these systems.

Procurement, purchasing and vendor management professionals should read this report to develop a better understanding of the current colocation provider landscape in Germany.
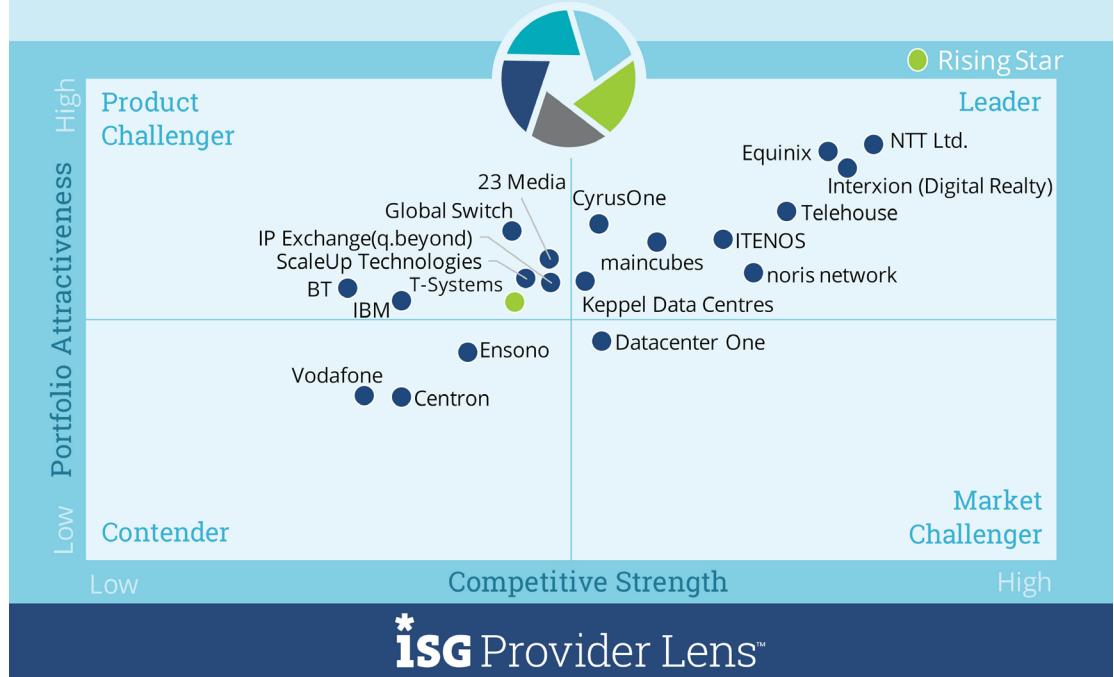
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COLOCATION SERVICES FOR LARGE ACCOUNTS

Definition

This quadrant assesses providers that offer standardized data center operations as colocation services for midmarket and large enterprise clients. The participating companies offer community access points for various hosting providers, system houses, carriers or telecommunication providers and end users. Enterprise clients that opt for colocation services expect a standardized and sophisticated data center setup, many carrier choices, low latency and high bandwidth at affordable prices to deliver rich content or critical, latency-sensitive information to users in and outside major metropolitan areas.

Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions
Colocation Services for Large Accounts

2021
Germany

Product Challenger · Leader · Market Challenger · Contender

Portfolio Attractiveness (High / Low) · Competitive Strength (Low / High)

Rising Star

Providers plotted: Equinix, NTT Ltd., Interxion (Digital Realty), Telehouse, ITENOS, noris network, CyrusOne, 23 Media, maincubes, Global Switch, IP Exchange(q.beyond), ScaleUp Technologies, T-Systems, BT, IBM, Keppel Data Centres, Datacenter One, Ensono, Vodafone, Centron

Source: ISG Research 2021

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COLOCATION SERVICES FOR LARGE ACCOUNTS

Eligibility Criteria

- Owned facilities that offer a standardized data center architecture design for colocation

- Provision of high quality data network technology and connectivity

- Guaranteed power density, designed for current and future technologies

- Provision of at least five physical security layers on the premises

- Proof of appropriate certifications such as SSAE 16, ISO 27001, ISO 9001, HIPAA, ISO 14001, ISO 22301, PCI DSS, NIST, FISMA, SOC Type 1, 2, EN 50600, etc.

- Ability to securely manage and maintain all data center devices and technology stacks

- Availability of SLAs regarding "hands & feet support" and hardware replacement

- Availability of facilities with internet exchange points with proximity to users and to the cloud

- Offering disaster recovery and backup solutions

- Use of clean energy sources and solutions to reduce energy consumption, including zero carbon emissions and green data center initiatives

COLOCATION SERVICES FOR LARGE ACCOUNTS

Observations

Demand for colocation spaces and connectivity services continues unabated. This boom is set to continue over the next few years. Hardly a month goes by without a new data center being opened. Many providers are expanding their portfolios and responding to increasingly demanding customer requirements. For example, opportunities are being offered to test cloud scenarios to identify the benefits and minimize risks prior to implementing in a production environment. Smart hands offerings are improving, with some colocation operators offering housing and the ability to provide their own infrastructure, mostly virtual machines, that custom-ers can use in whole or in part as they choose. Interested parties include companies of all sizes, but also service providers, integrators, carriers and, as is increasingly being observed, public cloud providers. The demand for connectivity has increased significantly. It is expected that connections to other partners can be made at short notice in the data centers via a meet-me room. Selection of carriers is expected to take place on site.

In selected data centers in the region outside Frankfurt, a fast low-latency direct connection to the DE-CIX internet exchange node is offered via fiber optic ring. DE-CIX provides the facility for this. Major hyper-scalers are increasingly using colocation facilities to set up their own PoPs, with the aim of guaranteeing customers fast accessibility to their data centers. The data centers are not only being built near the DE-CIX internet exchange hub in Frankfurt, but also in other larger economic areas. There are two reasons for this. First, companies want their colocation partner to be close to them, and second, edge computing for IoT applications plays an important role. Large amounts of data can be processed "on-site" with low latency of less than 5ms, which a remote cloud data center with approximately 70ms cannot do. Driven by the high energy costs in Germany, there has been a strong focus on energy efficiency when building new data centers in recent years.

- **CyrusOne** has only been operating in Germany for a few years, but has achieved high growth in a short time. It has three data centers in Frankfurt, and a fourth is being planned. CyrusOne prefers working with large companies and service providers.

- **Equinix** has grown worldwide and can now offer more than 220 colocation data centers. Equinix has 10 data centers at four locations in Germany. Its powerful and versatile connectivity program makes Equinix one of the best providers worldwide.

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COLOCATION SERVICES FOR LARGE ACCOUNTS

Observations (cont.)

- **Interxion** owns 12 data centers in Frankfurt and two in Düsseldorf. The purchase of new land indicates further expansion plans. Interxion offers the most carriers available. The company was acquired by Digital Realty in early 2020 and has operated since then as: Interxion A Digital Realty Company.

- **ITENOS** owns seven data centers in five cities and is a lucrative partner for small businesses, midmarket companies and service providers.

- **Keppel Data** Centres has maintained a data center in Frankfurt for two years, which was acquired by Citigroup Bank. Keppel Data Centres focuses on building a strong gateway between Germany and Asia for customers that are active in both regions.

- **maincubes** has a data center in Offenbach with a comprehensive colocation service offering. Another data center is being built in Frankfurt.

- **noris network** owns state-of-the-art and energy-efficient colocation data centers in Nuremberg, Munich and Hof.

- **NTT Global Datacenters** is the largest provider in Germany, with nine data centers at five locations with a total of 160,000 m² space. Establishment of more data centers is being planned. Land acquisition is the basis for such ambitious expansion plans. The company's innovative Technology Experience Labs offer enables users to test new technologies in labs.

- **Telehouse** is a major international player with a colocation data center in Frankfurt, with colocation space of 52,500 m².

- **T-Systems** was rated a Rising Star and maintains two data centers each in Magdeburg/Biere, Frankfurt and Munich as part of its twin data center approach to enable a high level of security.

ITENOS

Overview

ITENOS is an experienced colocation service provider and has offered its services since 1993. ITENOS is part of Deutsche Telekom, but operates as an independent company. With seven data centers, ITENOS has a total net area of 31,200 m² and is one of the largest providers, primarily for midmarket businesses. Its 220 employees ensure smooth running of the colocation services, which are used by more than 250 midmarket companies and numerous service providers. Extensive webinars demonstrate the attractive services.

Strengths

Large range of services: The ITENOS experts are adept at supporting the customer in planning and realization all the way to implementation. The comprehensive colocation service offerings, such as installation support, infrastructure monitoring and smart hands services, are notable options for making operations as easy as possible for customers. ITENOS guarantees that the data does not leave the German space and that the strict governance regulations of Deutsche Telekom are adhered to.

Partner model for colocation providers: In regions where ITENOS does not operate its own data centers, partnerships are established with colocation providers that adopt and deploy the comprehensive colocation concept, including the Data LogistIX connectivity platform as a bundle. In this way, ITENOS achieves proximity to the customer, which can use the familiar environment anywhere.

Comprehensive provision of lines: ITENOS offers versatile possibilities to connect with other partners. These include connectivity services such as MPLS connections and lines via the internet exchange nodes DE-CIX, AMS-IX, LINX and VIX to about 900 partners and carriers. More than 150 carriers host their network on ITENOS premises and establish secure connections to other participants. Multi-cloud connectivities are created via the virtual Data LogistIX Multiservice platform, which enables secure connections to cloud providers and partners with a single physical port. Connections to all major hyperscalers run across multiple routes and platforms. This reduces latency and speeds up processing.

Caution

In some data centers, availability only corresponds to the Tier II classification. An upgrade to Tier III would raise availability to a higher level and convince customers of the added security.

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The attractive service offering and the shift to colocation partners on the part of ITENOS are tailored to the needs of midmarket businesses and are highly appreciated by existing customers.

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Methodology

METHODOLOGY

The research study "ISG Provider Lens™ 2021 – Next-Gen Private/Hybrid Cloud – Data Center Services & Solutions" analyzes the relevant software vendors/service providers for the German market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research methodology. The study was divided into the following steps:

1. Definition of Next-Gen Private/Hybrid Cloud – Data Center Services & Solutions market;

2. Use of questionnaire-based surveys of service providers/vendor 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 key 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.

Authors and Editors

Heiko Henkes, Author
Director Advisor

Heiko Henkes is a Director and Principal Analyst at ISG; in his role as Global IPL Content Lead, he is responsible for strategic business management and acts as thought leader of ISG's team of research analysts. His core competencies are in the areas of defining derivations for all types of companies within their IT-based business model transformation. He builds the bridge between IT trend topics and acts as keynote speaker on current and future IT trends. Heiko has over 12 years' experience in IT consulting, primary and secondary market research and provider GTM strategies.
His research Focus: Digital Business Transformation, Cloud and Edge Computing, Mobile Business, Change Management and Mixed Reality

Wolfgang Heinhaus, Author
Partner Advisor

Mr. Heinhaus has in-depth technical and business know-how and more than 30 years of experience as IT manager, IT consultant and project manager to contribute to ISG client projects. His main areas of expertise comprise IT service performance and IT sourcing strategy as well as data center project planning and implementation. His IT outsourcing skills include IT infrastructure, servers and networks (LAN and WAN), including data centers and the cloud.Wolfgang has worked successfully for clients from multiple industries, where he acted as advisor on IT infrastructure topics such as server environments, networks or data center security.
Wolfgang has completed training in business management at SGD Darmstadt.

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Authors and Editors

Katharina Kummer, Secondary Research
Research Analyst

Katharina Kummer is a research analyst at ISG and is responsible for supporting and co-authoring Provider Lens™ studies on Public Cloud Transformational Services, Private Hybrid Cloud Data Center, Data Analytics, Microsoft Ecosystem and Cloud Native – Container Services. Her areas of expertise lie in cloud, data centers, cloud native services, digital linguistics and NLP. Katharina develops content from an enterprise perspective and author the global summary report. Along with this, she supports the lead analysts in the research process and ad-hoc research assignments and writes articles about niche technologies, market trends and insights.

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ISG Provider Lens™ Report: Next-Gen Private/Hybrid Cloud - Data Center Services & Solutions
July 2021

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