Combining Amazon Web Services and SAP Expertise

AWS and itelligence: Virtual Data Centers as an SAP Managed Service

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Thanks to the flexibility it offers, the public cloud has long been a viable option for many use cases at various companies. Data protection and data security have attracted greater attention, and confidence has grown. As a result, the diverse range of services on offer has come to the fore. Offerings such as Amazon Web Services (AWS) provide established, easy-to-consume infrastructures that make it easy to obtain large server capacities globally.

Companies now see AWS as a possible production environment for the latest SAP solutions, such as SAP S/4HANA® and SAP Hybris®. AWS offerings bring many benefits – but there are still challenges to overcome.

Infrastructure and service are combined.

A Strategic Cooperation for Public Cloud

As a hyperscaler, Amazon Web Services (AWS) offers a diverse range of cloud services. The most well-known of these is still the technical provision of extremely scalable infrastructures. With AWS, these infrastructures can be obtained very quickly and capacities can be adjusted instantly. However, the infrastructure-as-a-service (IaaS) model requires customers to manage the entire infrastructure and solutions themselves.

Public cloud deployment seems simple – and initially, it is. Activating individual servers and installing applications takes little time. Users can access the public cloud through a simple internet connection. For a test environment, this may well be enough. However, for high-quality operations, particularly in a production environment, companies need to take the same measures as they would in their own data center. These include carefully planning network structures and security levels, performing security monitoring, implementing back-up procedures, and monitoring performance and capacity.

AWS offers an impressive range of technical IT services. But the responsibility for deploying them and combining them properly and purposefully lies with the user. AWS is aware of this. For this reason, in October 2017, itelligence and AWS announced a strategic partnership. It combines Amazon Web Services' flexibility and range of services with itelligence's industry-leading SAP expertise. In other words, companies receive end-to-end managed services for their SAP environment – run on AWS by itelligence experts.

> Companies can now migrate their entire SAP landscapes, including SAP S/4HANA and SAP Hybris Commerce, to AWS, where they can be monitored, managed, and optimized.

Maximum Scalability and Compliance in Virtual Data Centers

Thanks to many years of experience in running SAP systems in its own, globally distributed data centers, itelligence understands the demand very well. That is why itelligence has transferred proven services and processes from its own data centers to AWS where possible, naming it a "virtual data center" in the public cloud. This ensures that certified SAP operations can be migrated to AWS while maintaining the same quality and guarantees seamless integration between itelligence Managed Cloud and AWS public cloud.

The combination of these two service platforms brings several benefits. For example, customers can choose from a wider range of data center locations. In addition to itelligence's global network of data centers, customers can also run their SAP workloads at AWS sites around the world. This means global companies can store their data wherever usage or legal regulations require them to.

The AWS cloud currently comprises 54 availability zones across 18 regions.

Source: AWS

Tailored SLAs define the scope of service.

Personalized Cloud: End-to-End SAP-Oriented Services

Cloud offerings such as those provided by AWS also pay off thanks to their high level of automation. Virtual instances can be launched within seconds, and the deployment of full SAP systems is automatic. However, companies still face the task of integrating these systems into their IT landscape. Managed services from itelligence combine the efficiency of AWS with the expertise of experienced SAP specialists. The scope of services is defined in tailored service agreements that range from basic user support to complete support for highly critical system landscapes.

Migration and Implementation Following Best Practices

itelligence has developed standardized practices for migrating entire SAP environments to the AWS public cloud. Companies can rely on tried-and-tested processes and do not have to develop their own methodology for every project. Using an adapted version of Fast AWS and SAP Transformation (FAST), SAP systems can be migrated to the cloud in just a few days. It is also possible to move to the SAP HANA database simultaneously, saving more valuable time. itelligence expertise ensures that all aspects are considered: from network connection and system deployment, through data transfer and migration, to interface customization and system testing.

Full-Service SLAs

AWS service agreements guarantee 99.95% availability. However, this only applies to the infrastructure. What happens if an error occurs in the SAP system? SAP managed services from itelligence include continuous monitoring and management for the operating system, database, and applications. Errors and failures are not only identified, but are also resolved by experienced SAP experts.

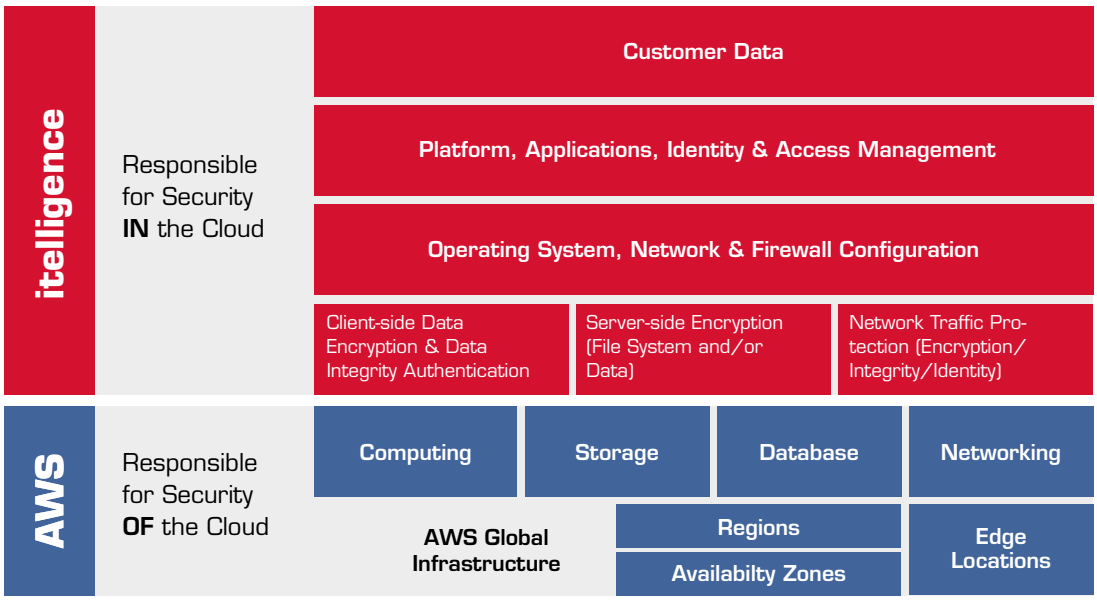
Multi-Tiered Security Concept

Public cloud security is still a sensitive and important subject. Public accessibility and thousands of customers necessitate highly robust security measures. AWS is aware of this critical issue and is putting considerable effort into improving security at all levels and ensuring it meets the highest standards.

This involves implementing various security layers. Firstly, data centers and infrastructure need to be secure. Secondly, the software layer needs to be protected against potential attacks and vulnerabilities. In addition, it needs to be ensured that neither users nor external intruders can gain unauthorized access to data via networks.

AWS secures all the IT layers for which they are responsible. However, companies that use AWS infrastructure and services still need to implement and monitor suitable security concepts for any layers that they introduce to this environment themselves.

For this task, itelligence has adapted its own proven cloud data centers and SAP operations for the AWS public cloud, enabling companies to benefit immediately. Included in this are the correct configuration of firewalls, encrypted data access, and regular installation of security patches and updates.



Backup and Disaster Recovery

A backup might seem easy at first. But when terabytes of data need to be stored efficiently in multiple versions to enable rapid recovery in case of emergency, complexity rises quickly in the public cloud, too. Every day, multiple backups of numerous systems should be managed reliably and need to run without any detrimental effects on the performance of productive applications.

As an experienced, certified SAP partner, itelligence knows the current requirements for data backup. That is why the available AWS technologies have been optimally combined and enhanced, fulfilling the goals of security, speed, and efficiency.

AWS public cloud locations provide companies with many options to implement disaster recovery measures. There is a wide range of possibilities for preventing major technical disruptions. These range from disaster recovery for on-premise solutions or a remote extension of itelligence's cloud data centers to exact system replication across multiple AWS regions. The choice depends on the applicable compliance regulations. Specialists offer support for disaster recovery solution design. Depending on the application, be it a business-critical ERP system or an online shop with a high level of traffic, the necessary level of protection will vary.

SAP Hybris: The Aurora Option

Like all other SAP solutions, SAP Hybris can also be combined with the in-memory database SAP HANA. And for large transaction volumes, the database can truly come to shine with SAP Hybris. With AWS, customers have the additional possibility to opt for the AWS Aurora relational database engine. AWS offers this as a full service supported by SAP Hybris, bringing cost benefits for larger environments as well as smaller ones.

On the AWS platform, SAP Hybris Commerce can use additional technical features. Here, for the first time, SAP has made one of its applications "container-ready". Installation based on Docker container technology and Kubernetes orchestration software enables greater independence from specific cloud environments. In addition, when combined with the AWS Auto Scaling service, Kubernetes can be used to flexibly respond to almost any web application load requirements.

AWS and itelligence data centers can be combined.

Flexible Operation of Bimodal IT

Future IT landscapes will have a bimodal structure. A company's essential core processes remain as standardized as possible, and there is little need for customization. This increases stability and facilitates upgrades.

This core is enhanced by a flexible level for applications that are highly dynamic in terms of functional requirements and development. Flexible systems in the AWS cloud can be one option for these agile applications surrounding the stable core. Depending on requirements, another viable option is a hybrid cloud model, where companies run their core systems in a private cloud and migrate the large number of quickly consumable complementary services to the public cloud. itelligence's seamless operating model provides ideal support for this approach.

itelligence's approach to SAP systems gives companies the freedom to choose how their systems are distributed in a multi-cloud model. It is not only possible to run solutions specifically developed for cloud use in a public cloud; customer-specific SAP solutions can also be moved to a dedicated infrastructure cloud.

Three example scenarios:

- Business-critical SAP S/4HANA software is run directly in itelligence data centers optimized for SAP technology, while a capacity-hungry online shop based on SAP Hybris is offloaded to the hyperscaler AWS.
- Test and development systems run on AWS to enable more agile responses to the project demands of company departments. itelligence runs the production environment in a dedicated private cloud. Alternatively, it can be run on-premises in the company's own data center.
- All SAP applications run in the AWS public cloud. itelligence takes care of operation, support, and SAP-specific optimization.

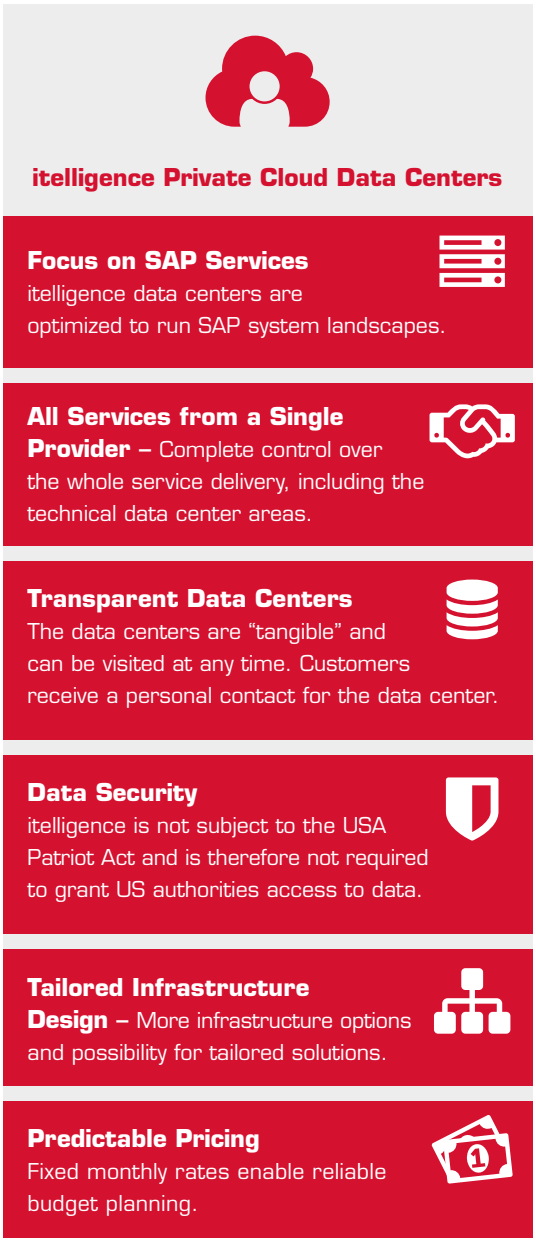
The most suitable distribution of responsibilities varies from company to company. But in any case, the customer can rely on a central point of contact: itelligence. Therefore, if disruption occurs, if capacity requirements change, or if an SAP-specific question arises, it is always clear who to turn to for support.

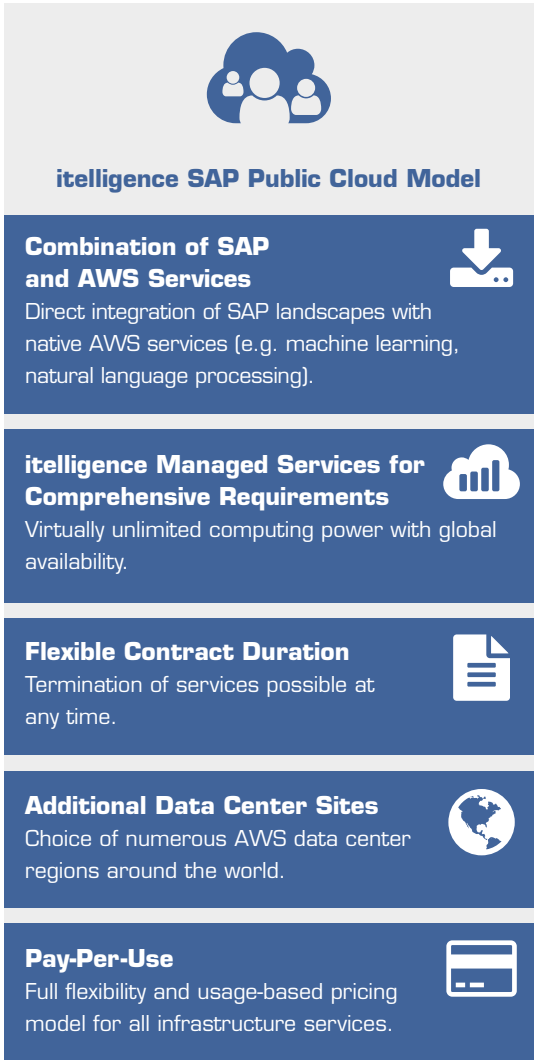
For Whom Is AWS Best Suited?

AWS public cloud or itelligence private cloud? Both options have their advantages. Objectives should be analyzed to determine the right choice for the particular case.

The following graphic offers some initial guidance:

Orientation: Which Operating Model Should I Choose?





Start with a Needs Assessment or Get Going Straight Away?

itelligence helps find the right combination for any cloud strategy. Private, public, or multi-cloud – all options can present a company with the right path to achieving its goals. There is hardly any risk involved in getting started because the initial step toward the cloud is easily accomplished.

It is important to understand that the public cloud is not an end in itself. However, it can add essential attributes to a business strategy and boost agility. That also applies to businesses that want to outsource their IT internationally. Both AWS and itelligence data centers are available around the world – as are the relevant managed services.

Learn more about itelligence's global managed services:

» www.we-manage-your-cloud.com/en