ocean⁹

powering digital business

Frequently Asked Questions

July 2, 2017

EXECUTIVE SUMMARY

Please give me a short description of Ocean9?

Ocean9 enables companies to run complex and mission-critical enterprise software in the cloud. By making full use of the underlying public cloud capabilities, Ocean9 redefines enterprise infrastructure and provides new levels of business agility, flexibility, availability, and cost savings.

How does this help my business?

With Ocean9 you can move your SAP solutions and digital core into the cloud without any significant effort. With the open Ocean9 architecture (see below), you can then focus on your digital business transformation and easily extend systems powered by Ocean9 for the Internet-of-Things or data lakes.

How does Ocean9 help my business transformation for the digital world?

Ocean9 is a perfect foundation for enabling and driving your digital transformation programs and agenda. Our SAP-as-a-Service offerings on public cloud are especially suited to accelerate and simplify your move to the SAP Digital Core with ease and therefore being able to focus on truly business differentiating transformation projects instead of core infrastructure initiatives.

What's more, with the open Ocean9 architecture (see below), you can then focus on your digital business transformation and easily extend systems powered by Ocean9 for the Internet-of-Things or data lakes.

What solutions does Ocean9 offer?

Ocean9 provides a suite of Software as a Service (SaaS) offerings for the enterprise. Solutions include Database-as-a-Service for SAP HANA, MS SQL and Oracle DB as well as SAP-as-a-Service for S/4HANA or SAP Business One on SAP HANA or Microsoft Sequel Server (MS SQL).

Does Ocean9 focus on any specific use cases?

Ocean9 supports a variety of use cases like rapid deployment, backup and disaster recovery, and instant innovation with on-demand development and test resources. These use cases are a perfect complement to existing on-premise infrastructure for a gradual migration to the public cloud.

Please describe the high level Ocean9 architecture?

The Ocean9 Intelligent Platform orchestrates SAP and other enterprise workloads on top of the AWS and Azure public clouds. The Ocean9 platform takes care of the full configuration and system deployment on the public cloud. What is more, based on the Ocean9 "White Box" model, all cloud configurations are deployed into your own cloud account. This allows full

extensibility of the Ocean9-based system configurations for the Internet-of-Things and data lakes.

Does the Ocean9 solution require training?

No. The Ocean9 solution is highly intuitive and self-explanatory. Anybody with basic SAP system and public cloud understanding can easily and securely provision enterprise class SAP software using Ocean9. We also provide a variety of onboarding tools and support to make the process as smooth as possible.

What about SAP licensing?

Ocean9 follows a bring your own license (BYOL) model. Therefore, customers need to procure and provide his own SAP, MS SQL or Oracle licenses.

In case of SAP and SAP HANA, on-premise licenses can be freely deployed in the cloud without any solution limitations or licensing concerns.

What is the Ocean9 business and licensing model?

Ocean9 is sold as a subscription with very flexible terms. Subscriptions are available for hourly on-demand usage, monthly, and yearly terms. Additionally, subscription pricing is tied to your cloud consumption.

How can I get started with Ocean9?

It is extremely easy and quick to get started with Ocean9 on either AWS or Microsoft Azure. All you need to provide is a cloud account with any of two supported public cloud providers, SAP, Oracle or other software licenses and the respective software installers.

End-to-end onboarding takes around 2 hours and is fully guided by one of our engineers. After the onboarding, the Ocean9 team is available for support and training as required.

Can I try before I buy?

Of course. We would be thrilled for you to take our solution for a spin. The onboarding is extremely easy and we would follow the steps described in the previous question.

If you are interested in an Ocean9 trial subscription, please send an email to LetsTalk@ocean9.io.

Enterprise Readiness

Does Ocean9 fulfill the high-performance requirements of mission critical SAP workloads?

Yes. Ocean9 provides fully certified high-performance SAP-as-a-Service solutions in compliance with strict SAP configuration rules. Go here to read more. [link within this document to lower section]

Can you ensure business continuity and disaster recovery (BCDR)?

Yes. Ocean9 provides up to 99.99% availability as well as disaster recovery with an recovery point objective (RPO) of minutes and an recovery time objective (RTO) of one to two hours, depending on data size. Go here to read more.

Is my valuable business data secure in the public cloud and managed by Ocean9?

Yes. Ocean9 SaaS solutions are architected following the strictest cloud architecture and security standards. User authentications provides the option of two-factor authentication, customer data is encrypted at rest and in motion and customers access their systems and data via highly secure private networking. What's more, system and data access can be tightly controlled and governed on a per system level, giving Ocean9 customers full control over their valuable data.

High Performance

Do you meet SAP system and performance requirements?

Yes. All Ocean9 cloud service configurations provide maximum high-performance in compliance with all applicable SAP certification rules and specifications. Additionally, all Ocean9 configurations are fully performance tested using one or several of the SAP benchmarks.

Following the SAP rules for non-production workloads, Ocean9 provides countless cost optimized SAP cloud service configurations that nevertheless meet strict SAP requirements.

How do I achieve low latency between critical systems and my on-premise environments?

Ocean9 engineers work closely with your team to define the best deployment models and topologies. While every customer situation is different, here are some rules for enabling low latency across systems:

Choose a cloud provider region that is close to your own datacenters to minimize latency within your hybrid environment.

Use a virtual private network (VPN) or direct connect setup to enable a low latency connection between your datacenters and the cloud region.

Co-locate all workloads for cloud deployment within a single region of your cloud provider of choice, yet spread out across various AWS availability zones or MS Azure availability sets.

See the constantly growing global hyperscale infrastructures of our two providers AWS and Microsoft Azure.

Can I leverage the latest high-performance CPU generations?

Yes. Public cloud providers are very aggressive in adopting the latest CPU generations providing the latest technology as well as price/performance advantages with each refresh. Unlike with privately owned infrastructure, in public cloud you can adopt the latest and greatest infrastructure whenever available.

Convertible pricing models on AWS enable upgrading to the latest infrastructure even when leveraging upfront payment models.

Business Continuity and Disaster Recovery

What are the high availability capabilities of Ocean9?

Ocean9 provides flexible high availability (HA) settings starting with a cost-neutral option providing 99.5% availability on the low end.

On the high end, a three-site setup using SAP HANA System Replication achieves 99.99% availability.

Best of all, you can vary your high availability settings following your business seasons and therefore achieve a tailored and adjustable risk avoidance/cost structure according to your needs.

How about disaster recovery?

Ocean9 supports cost-effective backup-based disaster recovery (DR) with industry leading RPO of 15 minutes and RTO of one to two hours. Ocean9 supports the following deployment patterns today:

- **On-premise to Cloud**
  De-risk your existing on-premise environments and avoid the costs of redundant infrastructure, setup, and management overhead.
- **Cloud to cloud**
  Protect your systems from man-made or natural disasters by enabling region-to-region or even cross-public cloud provider DRaaS.

What are RTO and RPO for various setup scenarios?

Ocean9 achieves industry leading RTO and RPO with a highly cost-effective setup. The effective RPO ranges in the minutes and is determined by the frequency of persisting delta backup logs in SAP HANA, set at 15 minute intervals in SAP factory by default.

For RTO, Ocean9 achieves values of one to two hours for provisioning a freshly installed SAP system and loading the last good backup into the system.

As a reference point, recovering an Ocean9 reference database with 1.2 billion rows of data takes only 20 minutes.

Enterprise Security

How do I securely connect my datacenters with the cloud?

AWS and Azure let you provision logically isolated sections of the respective public cloud where with the help of Ocean9 you can launch your resources. You have complete control over the virtual networking environment, IP address ranges, creation of subnets, and the configuration of route tables and network gateways.

Furthermore, you can create a public-facing subnet for your web servers that has access to the Internet, and place your backend systems such as databases or application servers in a private-facing subnet with no Internet access. You can also leverage multiple layers of security, including security groups and network access control lists, to help control access to cloud resources in each subnet.

Additionally, you can create a Hardware Virtual Private Network (VPN) connection between your corporate datacenter and your VPC and leverage the public AWS or Azure clouds as an extension of your corporate datacenter.

Does public cloud meet stringent industry security and compliance standards?

Yes. Public cloud providers invest heavily in compliance and cover a broad spectrum across key industries. In fact, Gartner predicts that "Through 2020, public cloud infrastructure as a service (IaaS) workloads will suffer at least 60% fewer security incidents than those in traditional data centers."[1] Since compliance coverage is constantly growing, it is best to explore the up to date certifications of Microsoft Azure and AWS at these links.

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[1] http://www.gartner.com/smarterwithgartner/is-the-cloud-secure

Does Ocean9 have access to customer data?

No. Ocean9 does not have access to customer data on the customers cloud account. The only data we have access to is business systems metadata on utilization, performance, system health status, and the like.

In addition, we ensure the protection of customer data through well-defined and highly secure routing definitions for different types of traffic.

Hybrid and Multi Cloud

Which clouds do you support today and in the future?

Today, Ocean9 supports Microsoft Azure and AWS, leveraging each cloud's application programing interface (API) without any abstraction. Depending on customer demand and cloud provider support for enterprise class workloads such as SAP, Ocean9 intends to support other clouds such as Google Cloud Platform or IBM Bluemix.

Additionally, we can deploy the Ocean9 Intelligent Platform on private cloud infrastructures for larger companies or managed service providers (MSP).

Please reach out to LetsTalk@ocean9.io if you want us to support additional 3rd party clouds or your own private cloud.

Can I use Ocean9 to orchestrate my private cloud infrastructure?

Yes. This is possible, but depends on the capabilities of your private cloud API. Therefore, simply reach out to the team at Ocean9 by sending an email to LetsTalk@ocean9.io to start a conversation. Here is how we typically approach such a project with the goal of assessing the feasibility of using the Ocean9 Intelligent Platform on top of your private cloud. Ocean 9 will:

- Review private cloud API documentation and test key resource APIs for its capabilities.
- Determine initial feasibility and highlight any areas of concern/question.
- Implement POC for end-2-end SAP HANA provisioning process .
- Prepare final feasibility assessment.
- Discuss integration project.
- Again, please contact us at the above email to get the ball rolling.

Does Ocean9 support multi-cloud scenarios?

Yes. Ocean9 lets you freely move between the AWS and Azure clouds for deploying your enterprise workloads; of course, both with a free choice of the region you want to deploy into.

Additionally, Ocean9 leverages multi-cloud for important use cases like Disaster Recovery-as-a-Service (DRaaS). Recovering a workload from one region of cloud provider A to a similar region of cloud provider B is as easy to perform as all other Ocean9 functionality.

Of course, DRaaS also works from on-premise to cloud A to cloud B and back on-premise. This is the beauty of native cloud with Ocean9.

Cloud Lock-In

Can I get locked into the Ocean9 cloud services?

No. Ocean9 is engineered to give you full freedom to move in and out of our service as you wish.

Ocean9 provisions all systems into a customer's cloud account of choice. In case you stop subscribing to the Ocean9 service, you can still retain all these systems within your cloud accounts. Please note: Some restrictions may apply.

How about lock-in to the underlying cloud like AWS or Azure?

Ocean9 enables free movement between all public cloud infrastructures that Ocean9 supports. Powered by the Ocean9 Intelligent Platform, customers can easily move from public cloud A to public cloud B. The only charges that would occur are egress charges by the cloud provider which are currently $0.050 per GB on AWS. This adds up to $100 for a 2TB SAP HANA system when moving out of AWS.

How can I move my systems to another cloud or cloud service provider?

There are two choices for moving a system from cloud A to cloud B or cloud region 1 to cloud region 2 respectively. They are:

- **Backup based**: We continuously backup a system from one location to another. During cut over, we restore this backup into a brand-new system and re-route all application traffic to this new system during the automated procedure.
- **Replication based**: We instantiate a new system in the target cloud and then connect old to new system via SAP HANA System Replication. Once the source system has been fully replicated to the new target system, we can systematically trigger a failover to the new system and re-route all traffic to this system.

Getting started

Are there any pre-requisites before getting started with Ocean9?

No. All you need is to bring your own SAP and other licenses to Ocean9, upload the software installers to the cloud, and finally setup your own cloud account. Locating the software installers and license keys within your company maybe the hardest step. From there it only gets easier.

Is there an initial implementation phase to get started?

No, if you stick to our standard offering, there is no implementation phase. Of course, the larger a system deployment and migration project gets, the more diligence is required. But this diligence needs to occur on a non-technical project management level. And the agility of Ocean9 will even make this process easier.
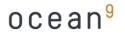
What if I have special requirements or need additional systems deployed and managed in the cloud?

Ocean9 has a strong Advisory Practice to assist with such special requests. We will jointly assess migration of any non-standard systems and systematically enable these systems also. Our goal is to deliver a full solution to all our customers.

How about migrating all my systems to the cloud? Can you do this for me?

Yes, Ocean9 is happy to drive, facilitate, and/or assist in your full landscape migrations using our proven migration process and tooling.

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Find out more about Ocean9 at www.ocean9.io

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