EBOOK:

Host mission-critical Microsoft SQL Server workloads on VMware Cloud™ on AWS

Extend your databases and applications to the cloud

Contents

Introduction

Microsoft SQL Server is a widely used database system employed by organizations of all sizes around the world. It is employed for a variety of relational database and custom-built solutions by ISVs. While many organizations still have their Microsoft SQL Server deployments on-premises, an increasing number are evaluating ways to migrate Microsoft SQL Server to the cloud.

This is an increasingly attractive value proposition, given the compelling economics of the cloud, such as the ability to scale on demand, as well as the resiliency and reliability offered by Amazon Web Services (AWS). In addition, organizations can bring Microsoft SQL Server applications to AWS and be empowered to take advantage of new and innovative services.

Among these are the hybrid offering, VMware Cloud on AWS, which makes it possible to continue operating Microsoft SQL Server Virtual Machines (VMs) as they have been used on-premises, but on state-of-the-art, managed hardware. This solution eliminates the need for such undifferentiated heavy lifting activities as procuring and managing haradware, as well as software and firmware patching of compute, networking, and storage components.

In this eBook, we will touch on common use cases, and go into detail on some of the many ways organizations can benefit from running Microsoft SQL Server databases and applications on VMware Cloud on AWS.

Common Microsoft SQL Server on VMware Cloud on AWS use cases

Some of the primary and most common drivers that compel organizations to move their on-premises Microsoft SQL Server environments to VMware Cloud on AWS are as follows:

Moving away from costly data centers is the most common reason organizations migrate their Microsoft SQL Server environments to VMware Cloud on AWS. In this regard, they are looking for a solution that will no longer include the burdens of managing their own hardware, powering cooling, and having to deal with component failure.

The simple, low-risk migration of Microsoft SQL Server workloads to VMware Cloud on AWS using known tools such as VMware HCX and VMware vMotion is another common driver. By using a platform that is already familiar to infrastructure administrators, this often does not feel like a full-fledged migration and makes it easier for organizations to transition to the cloud at their own pace.

Data center extension is also one of the main reasons organizations are moving their Microsoft SQL Server databases and related workloads to VMware Cloud on AWS, because the hybrid model not only fosters footprint expansion, but also delivers on-demand capacity to eliminate over-provisioning. VMware Cloud on AWS also makes it easier to run Microsoft SQL Server test and development workloads and stream database backup to AWS.

Migrate Microsoft SQL Server to VMware Cloud on AWS

A common challenge faced when moving to a cloud platform can be found in the significant architectural differences between key infrastructure components like storage, networking, and monitoring. Yet VMware Cloud on AWS is able to bring the same consistent management and Software-Defined Data Center (SDDC) components to the cloud. This enables your organization to take advantage of the flexibility of those platforms, while simultaneously delivering the same end-user experience as an on-premises environment. By running VMware Cloud on AWS, you can also gain low latency access to native AWS features like AWS Lambda for serverless computing, Amazon Redshift for big data, and Amazon Simple Storage Service (Amazon S3) for storage, backup, and archiving.

VMware Cloud on AWS is built using proven technologies like VMware vSphere for compute, VMware vSAN for storage, and VMware NSX for software defined networking. It is a hybrid solution that is managed and monitored using the same set of tools you are already using to manage your on-premises VMware environments.

This helps to reduce some of the friction commonly associated with moving to AWS by avoiding common infrastructure challenges associated with migrating to an entirely new platform. Migrating your Microsoft SQL Server environment to VMware Cloud on AWS allows your administrators to continue using the same tools, skillsets, and processes both on-premises and on the cloud. This process is simplified by using vMotion, which makes it possible to move servers between hardware without any downtime and keep everything online as you transition.

Running Microsoft SQL Server on VMware Cloud on AWS is fairly straightforward, especially if your organization has experience running Microsoft SQL Server on the VMware ESXi hypervisor in an on-premises environment, because that will translate directly to VMware Cloud on AWS. Since this hybrid offering runs directly on bare-metal hosts, things like storage configuration follow normal VMware best practices.

Microsoft SQL Server 2008 End of Support

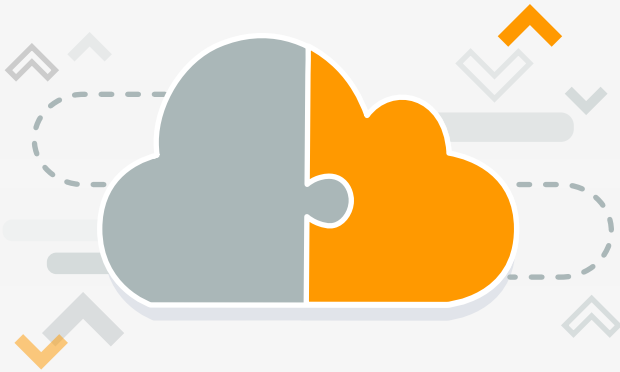
On July 9, 2019, support for Microsoft SQL Server 2008 will end. This means there will no longer be regular security updates. If you don't already have a strategy in place to overcome this, explore the benefits of migrating your Microsoft SQL Server environment to VMware Cloud on AWS.

Take advantage of native AWS services

Moving your Microsoft SQL Server environment to VMware Cloud on AWS enables you to use more than 140 native AWS services with Microsoft SQL Server workloads. For example, you can move your legacy tape backup solution to the cloud by using Amazon S3 and/or Amazon Glacier and AWS Storage Gateway for Microsoft SQL Server backups, and also benefit from AWS IoT applications and solutions, as well as numerous Artificial Intelligence and Machine Learning offerings on AWS.

You can also employ Amazon Elastic Load Balancer to direct traffic to web servers, and integrate managed AWS Directory Service and/or Amazon Route 53 for your naming resolution in Microsoft SQL Server and application servers while encrypting VMware Cloud on AWS storage using AWS Key Management Service.

Once migration is complete, automating the Microsoft SQL Server deployment enables consistent settings across all your environments, and makes troubleshooting performance issues easier by ruling out basic configuration problems.



Benefits of running Microsoft SQL Server on VMware Cloud on AWS

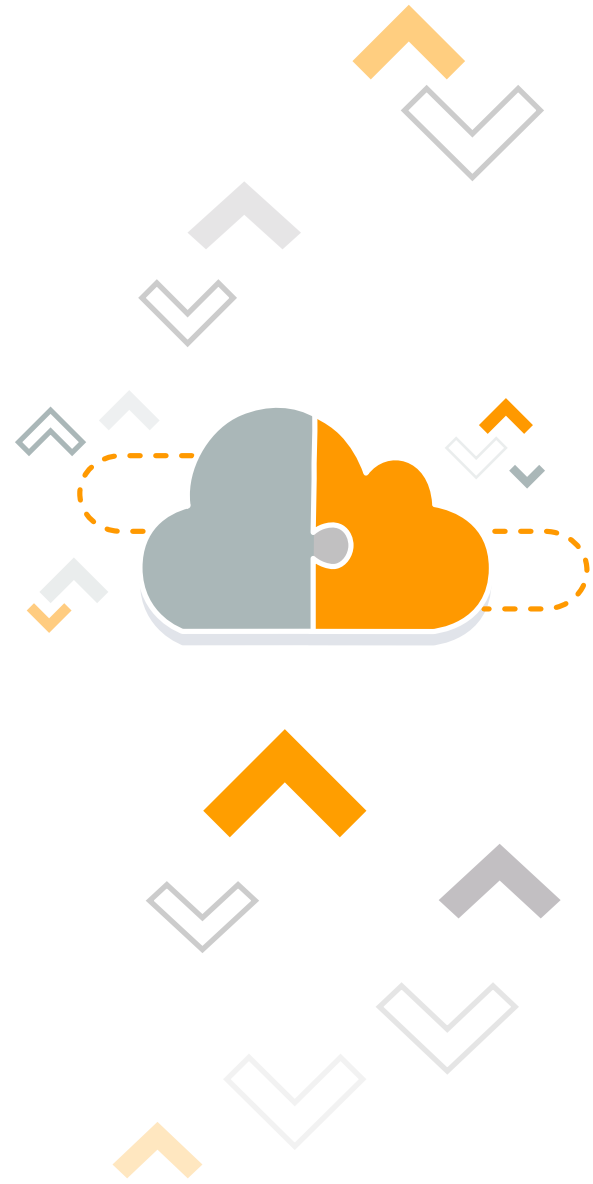
- This hybrid solution enables your organization to dynamically add compute to accommodate peak business instead of paying for peak compute year-round. You can also have hardware failures automatically fixed in minutes instead of hours or days with no additional contracts, fees, or employee involvement, and reduce Microsoft licensing costs by improving VM density across fewer, state-of-the-art Amazon Elastic Compute Cloud (Amazon EC2) bare metal compute hosts.
- You can also leverage either AWS Direct Connect or AWS Site-to-Site VPN to provide secure connectivity between your on-premises environment(s) and VMware Cloud on AWS SDDC.
- VMware Cloud on AWS supports high availability architectures for Microsoft SQL Server such as AlwaysOn Availability Groups while leveraging your existing license agreements.
- If your organization experiences variable workload demands, the on-demand scalability of VMware Cloud on AWS offers shorter demand forecasting cycles, and reduces spend on over-provisioned hardware capacity.
- The elastic, tunable, high performance of Microsoft SQL Server is enhanced when running on VMware Cloud on AWS, because it is not as rigid as an on-premises environment which often leads to improved performance for VMs.
- Finally, your organization will find value in the way this solution balances high availability and disaster recovery in a single step.

Conclusion

If your organization is committed to running Microsoft SQL Server databases and workloads while maintaining your VMware investments, looking to reduce capital expenditure in data centers and hardware, and seeking a way to start taking advantage of the benefits of the cloud, consider migrating your Microsoft SQL Server environment to VMware Cloud on AWS.

Post-migration, the hybrid environment enables the simplification of workload management, with the downtime caused by having to replace failing hardware no longer a primary concern. You will also realize the value of rapid scalability by right-sizing your workloads the first time, and not having to pay for unused hardware.

To get started, engage with VMware Sales or your AWS Sales Representative for a face to face workshop to map out a vision, assessment, strategy, and plan for moving your Microsoft SQL Server environment to VMware Cloud on AWS.



Microsoft SQL Server on VMware Cloud on AWS Resources

VMware Cloud on AWS Home

VMware Cloud on AWS (on AWS site)

VMware Cloud on AWS (on VMware site)

Microsoft SQL Server on VMware Cloud on AWS:

Microsoft SQL Server Workloads and VMware Cloud on AWS: Design, Migration, and Configuration

Performance Characterization of Microsoft SQL Server Using VMware Cloud on AWS

TCO tools

VMware Cloud on AWS Pricing Calculator

VMware Cloud on AWS Sizer and TCO

VMware roadmap

VMware Cloud on AWS Roadmap