

Automating Disaster Recovery on AWS



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About our Client:-

The client is one of the leading private sector bank with an expanding presence across the country. It currently services over 10.66 million customers through a network 500 branches. It is listed both on NSE and BSE.



Problem Statement: -

The client didn't have a DR present and they needed a quick solution to be complaint by RBI. Client sought to move and strengthen its disaster recovery process to the AWS cloud, but lacked the necessary in-house resources.

Solution:-

VMware cloud on AWS
VMware Site recovery Manager
AWS Application Load Balancer
vShpere





VMware Cloud on AWS:-

Amazon Web Services (AWS) and VMware have collaborated to create VMware Cloud on AWS, an integrated cloud offering. By converting and extending your on-premises VMware vSpherebased infrastructures to the AWS Cloud, which runs on Amazon Elastic Compute Cloud, you can provide a highly scalable and secure service (Amazon EC2).

For all vSphere-based workloads, AWS is VMware's recommended public cloud partner. The VMware and AWS alliance provides customers with a faster, easier, and more cost-effective path to the hybrid cloud, as well as the ability to upgrade applications, allowing for faster time-to-market and enhanced innovation. With our Virtual Desktop Infrastructure (VDI) solutions, you can deploy secure virtual apps and desktops using your existing skills, processes, and governance, allowing workers to work securely from any place. New Amazon EC2 i3en.metal instances for VMware CloudTM on AWS, powered by Intel® Xeon® Scalable processors, provide high networking throughput and lower latency, allowing you to quickly transfer data centres to the cloud for disaster recovery, application modernization, and data centre evacuation. VMware and AWS have collaborated for over four years to provide organisations with improved cloud services.

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AWS and VMware Cloud

VMware CloudTM on AWS is an on-demand service that allows businesses to run applications in VMware vSphere®-based cloud environments while also gaining access to a variety of AWS services. This service, which is powered by VMware Cloud Foundation, integrates vSphere, VMware vSANTM, and VMware NSX®, as well as vCenter® administration, and is intended to run on dedicated, elastic, bare-metal AWS infrastructure.

IT teams can use familiar VMware tools to manage their cloudbased resources using this solution. You can upgrade your infrastructure using VMware Cloud on AWS by using existing tools and skill sets. This can be accomplished without requiring complex conversions, reworking, or re-architecture. VMware Cloud on AWS also offers smooth access to AWS services.

Uniquely designed to give you the flexibility to leverage any cloud environment. While providing consistent operations for how clouds are managed and secured. Extend Cloud Foundation into the public cloud and consume as a service. Take advantage of VMware technologies across compute (vSphere), storage (vSAN) and networking (NSX) with enterprise-class solutions. Simple and consistent operations for rapid provisioning of VMware software defined data center (SDDC) environments on AWS



VMWARE AND AWS: BENEFITS

- Use services where you need them
- Simplify management with consistent Operations
- Build for the future while minimizing your risk

VMware Site Recovery Manager: -

VMware Site Recovery Manager is a business continuity and catastrophe recovery tool that allows you to plan, test, and manage virtual machine recovery between a protected and a recovery vCenter Server site. Site Recovery Manager can be used to carry out various sorts of recovery from the protected site to the recovery site. The orderly migration of virtual computers from the protected site to the recovery site is known as planned migration. When transferring workloads in a controlled manner, planned migration prevents data loss. Both sites must be operational and fully functional for the intended migration to be successful. Disaster recovery does not necessitate the availability of both sites, and it can be begun in the case that the protected site goes down suddenly.



Features:-

Simple, Policy-Based Management:- Using centralised recovery plans administered via the vSphere Web Client, use policy-driven automation to easily safeguard thousands of virtual machines.

Compatible With Any Storage:- Native integration with vSphere Replication, Virtual Volumes (vVols), and array-based replication solutions from all major VMware storage partners provides freedom and choice.

Hybrid Cloud Ready:- VMware Site Recovery for VMC on A WS provides end-to-end disaster recovery protection as a service. This easy-to-implement solution takes use of existing investments while preparing you for hybrid cloud.

Multi-cloud Ready:- Use Azure, Google Cloud, and Oracle Cloud as DR failover targets for on-premises and cloud workloads within the same hyperscaler using SRM for Hyperscalers.

AWS Application Load Balancer:-

Elastic Load Balancing spreads your incoming traffic over different targets in one or more Availability Zones, such as EC2 instances, containers, and IP addresses. It keeps track of the health of its registered targets and only sends traffic to those who are in good shape. Elastic Load Balancing allows you to scale your load balancer as your incoming traffic fluctuates. It can scale to the vast majority of workloads automatically.

Application Load Balancers, Network Load Balancers, Gateway Load Balancers, and Classic Load Balancers are all supported by Elastic Load Balancing. You can choose the load balancer that best meets your requirements.



Application Load Balancer Components: -

Clients communicate with a load balancer through a single point of contact. Incoming application traffic is distributed over different targets, such as EC2 instances, across multiple Availability Zones by the load balancer. This improves your application's availability. To your load balancer, you add one or more listeners.

A listener monitors for client connection requests using the protocol and port that you specify. The load balancer routes requests to its registered targets according to the rules you provide for a listener. A priority, one or more actions, and one or more conditions make up each rule. When a rule's criteria are met, the rule's actions are carried out. For each listener, you must set a default rule, and you can optionally define additional rules.

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vShpere: -

VMware vSphere is VMware's virtualization platform, which transforms data centres into aggregated computing infrastructures that include CPU, storage, and networking resources. vSphere manages these infrastructures as a unified operating environment and provides you with the tools to administer the data centres that participate in that environment.

ESXi and vCenter Server are the two main components of vSphere. ESXi is a virtualization platform for creating and running virtual machines and appliances. vCenter Server is a service that allows you to manage and pool host resources across several servers on a network.





Features:-

Deliver AI- and Developer-Ready Infrastructure:- AI and Kubernetes applications will benefit from increased efficiency, scale, and security. GPUs can be used to provide AI/ML infrastructure. In less than an hour, you can deploy enterprise-grade Kubernetes clusters.

Simplify Operations:- Make software upgrades, patching, and firmware updates easier and less disruptive to simplify lifecycle management. In a single interface, you can manage both onpremises and off-premises assets.

Scale Without Compromise:- Up to 50% more hosts per cluster can be supported by scaling your infrastructure. High-performance apps, monster VMs, and memory-intensive databases, such as SAP HANA, EPIC, and others, can all be met.

Boost Infrastructure and Data Security:- Protect your hybrid cloud architecture with built-in fundamental security rather than point solutions added after the fact. Stop ransomware and malware in their tracks.

Partner Value Added:- In about 1.5 months, ACC successfully set up RBL Bank's Cloud-based DR system. They were in charge of all technical aspects of the project, including network connectivity and AWS native services integration. ACC also collaborated with the customer to develop a recovery plan and successfully test the solution.



ABOUT ACC

ACC is an AWS Advance Partner with AWS Mobility Competency. Awarded The Best BFSI industry Consulting Partner for the year 2019, ACC has had several successful cloud migration and application development projects to its credit.

Our business offerings include Digitalisation, Cloud Services, Product Engineering, Big Data & Analytics and Cloud Security. ACC has developed several products to its credit. These include Ottohm – Enterprise Video and OTT Platform, Atlas API – API Management and Development Platform, Atlas CLM – Cloud Life Cycle Management, Atlas HCM – HR Digital Onboarding and Employee Management, Atlas ITSM – Vendor Onboarding and Service Management and Smart Contracts – Contract Automation and Management.



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