Maximizing Business Continuity with VMware in the Cloud:

A Decision-Maker's Guide

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A brief note

Improving IT resiliency and maintaining business continuity are more important than ever for any enterprise in the digital era. The flexibility and agility of cloud makes it an optimal solution to maintain business continuity. The cloud can mitigate risks of downtime ensuring continuous business operations. In fact, most IT decision-makers are looking at the cloud as a solution to *improve* uptime, performance and availability of applications, data and workloads.

In the chapters to follow, we break down how to develop a business continuity strategy in the cloud with a focus on VMware workloads; and provide a series of considerations to enable the best decision when choosing a public cloud environment.

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Business continuity plus cloud is a winning combination

Over the past decade, backup and disaster recovery have served as the gateway to the cloud for many organizations. Public cloud has typically delivered cost efficiencies and increased agility without requiring major investments in hardware, software, networks, personnel or physical space. These benefits have offered enterprises the flexibility to optimize their spending and speed—at any given time—by dialing up and down their consumption based on need.

In today's world, it's not just about backup and recovery; it's also about ensuring business is always up and running and that *organizations are able to recover applications, data and workloads completely and quickly. Any failure in doing so creates risk of losing revenue, brand confidence and customer good will.* In essence, we're talking about overall business continuity.

Business continuity comprises backup and recovery as well as high availability of mission critical applications and workloads at any given time.

As companies embrace digital transformation, they are seeing a corresponding increase in the cost and impact of downtime.

- Application downtime now costs the average enterprise $20.1 million in lost revenue and productivity.[1]

- Lost data from mission critical application downtime costs more than $102,000 per hour.[2]

- The average cost of a data breach is $3.92 million globally—rising by $300,000 for companies undergoing a major cloud migration. [3]

1 "2019 Cloud Data Management Report," Veeam, June 2019.
2 Ibid.
3 "2019 Cost of a Data Breach Report," IBM and Ponemon Institute, June 2019.

Critical Decisions

As IT teams expand their focus from cloud backup and recovery to business continuity and high availability, they must consider:

- Which technologies to use

- Which public cloud platform to implement

- Which workloads to prioritize

Capitalizing on current VMware investments

Most enterprises have discovered that leveraging VMware across on-premises infrastructure and public cloud is the optimal path to ensuring business continuity for mission critical applications. Keeping the VMware technology stack as part of the cloud strategy can decrease risks and maximize existing investments during digital transformation.

VMware is the predominant virtualization platform for on-premises deployments of mission critical applications. With that, there are many industry leading companies like Veeam and Zerto that offer solutions specifically for VMware across public cloud and on-premises infrastructure to simplify and enhance resiliency. As a result, more and more cloud providers are building integration and automation around these solutions on top of the VMware technology stack to further accelerate configuration and deployment.

OSRAM

To kick-start its business transformation, OSRAM focused on gaining agility, and chose to migrate its business to IBM Cloud pursuing a multi-cloud strategy.

Learn how the migration was simplified using virtual replication solutions from Zerto on IBM Cloud.

Critical Decisions

Mission critical applications are intertwined with many other applications, including vital databases, OLTP systems, financial systems, web sites, HR and many more. Companies must determine:

- How to ensure all application dependencies are considered.

- How to consistently manage and monitor governance, performance, SLAs and compliance.

- How to maximize business continuity, including backup, recovery and high availability.

Finding the right cloud provider for optimal business continuity

For reference, we've outlined general guidelines in the form of answers (A.) to enable planning and discussions with internal teams as well as potential providers.

If the decision is to continue using VMware for mission critical applications in the cloud, then choosing the right enterprise-grade cloud provider is key to a successful implementation. Further, it is critical when ensuring the necessary procedures and safety nets are in place to maintain continuous business operations.

Before laying out a business continuity strategy in the cloud, take a moment to consider the below questions and work with the broader team to align on the input and priorities. Then, challenge cloud providers on these questions and require answers before agreeing to partner with them on the strategy.

Q What are the business case, objectives and benefits? Are the benefits measureable? Where to start and what workloads should be prioritized?

A **Having a clear set of objectives and key performance indicators (KPIs) will keep the project focused and on track.** For example, **many organizations have multiple RTOs and RPOs that reflect the importance of each workload to their business, thus these should be considered when mapping out key objectives.** Not having clear and deliberate objectives will muddy the process and likely create confusion, frustration and conflicting priorities with no productive path forward. The result will be extra expense, time and resources spent and no real goal accomplished. Business-justified and goal-oriented objectives are key.

Q If mission critical workloads in the cloud is the decided strategy, then what are other applications and associated dependencies to consider?

A If it is mission critical it is likely tied to underlying OLTP systems, financial systems, web applications and more. Consider how to address the full scope of each application's dependencies without affecting business continuity. **This is a key question to ask any provider that is being considered.** They should have a clear and concise response to how their platform supports business continuity and ensures high availability of mission critical applications end to end.

Q What is an acceptable level of risk? Business continuity is all about risk management. Is any downtime acceptable? What RPOs and RTOs are required? What are the specific performance SLAs and compliance requirements that must be met? What about storage and backup requirements?

A **This goes back to knowing, prioritizing and communicating the business and migration requirements. Be realistic about the expectations, and know what is needed and ask for it!** Identify which provider can offer the most comprehensive support and plan while meeting all the "must have" requirements.

Q What features and capabilities are required? For example, is a snapshot-based replication or continuous replication needed?

A If the business case is clearly articulated, then it can be better determined what is needed to achieve the objectives. **These requirements should be addressed and prioritized before choosing any solution. Knowing the required features and capabilities ahead of time gives immediate control over the conversation.** Communicating requirements up front forces providers to respond directly to said requirements—or not. Ultimately, the ability to narrow down the provider field becomes easier and is based on which partner can best support these requirements.

Q Does the cloud provider support a well-rounded ecosystem of skills, expertise and tools? Can services easily be extended to access best-of-breed solutions for backup, disaster recovery and high availability?

A **Backup, recovery and high availability are specialized functions—particularly in the cloud. Many enterprises partner with leading software providers that specialize in areas like high availability and that can offer the expertise and tools to round out the coverage.** For example, companies such as Veeam and Zerto are widely known and often used for their disaster recovery and backup solutions. Veeam and Zerto deliver key capabilities enterprises are seeking, including breakthrough RTOs and RPOs and disaster recovery as a service. Identify the public cloud provider that offers tight integrations with these leading business continuity platforms and ask if these services can easily be leveraged for mission critical applications.

Top 5 business continuity capabilities to seek

1 Access to full VMware cloud stack

2 Pervasive automation for setup and operations

3 High availability at the VM level

4 RPOs near zero with zero data loss

5 RTOs in minutes

Critical Decisions

Answering the core questions will raise others:

- **Resources:** Does the organization have the personnel resources and skills in-house, or is an experienced partner or vendor needed to bridge the gap?

- **Costs:** How much will it cost and is there a way to measure total cost of ownership (TCO) or return on investment (RTO)?

- **Timing:** Is there a hard deadline, such as the end of support for a key application like SAP?

What to look for in a public cloud platform

If you have decided to leverage cloud to implement your solutions, perhaps the most critical question to answer is this:

Which company will earn your trust as an enterprise-grade cloud provider?

This is for you to decide. Use the guidance offered in the previous section and identify the provider that best meets the business, application and high availability requirements as well as the level of support and expertise needed to be successful.

We know these are hard decisions to make and research is critical. Here is some key information on why IBM Cloud should be considered for your business continuity strategy.

Introducing IBM Cloud

IBM does three main things differently than other cloud providers:

Value: Customers can get unlimited, no-cost data replication within more than 60 Global IBM Cloud data centers for site-to-site recovery.

Control: Hypervisor and bare metal access allows enterprises to maintain existing disaster recovery tooling and functionality, while gaining the agility and scalability of the cloud.

Choice: Customers can leverage flexible deployment and storage options to implement a multitiered disaster recovery and backup strategy.

In addition, IBM offers customers a broad ecosystem of experts and partners to tap into in developing a business continuity strategy and executing on the plan. IBM services has thousands of VMware technical experts with years of experience helping clients adopt and deploy a hybrid cloud strategy including a fully managed or shared approach on VMware on IBM Cloud. Industry leaders Veeam and Zerto are part of the portfolio of services by IBM Business Resiliency Services to expand data protection and recovery options.

With IBM Cloud for VMware Mission Critical Workloads, enterprises can meet today's demands for business continuity, including high availability, fast recovery times, automated failover and zero data loss when recovering from downtime events. The solution uses pervasive automation to simplify moving applications to the cloud, including lift-and-shift migrations.

IBM Cloud is also ahead of the curve in supporting vSAN Stretched Clusters. With vSAN Stretched Clusters, customer data is managed and replicated across multiple IBM Cloud data centers within regions, ensuring zero data loss in the event of a full site failure.

Overall, the benefits of using IBM Cloud for VMware Mission Critical Workloads include:

- SLAs of up to four nines at the VM level

- Full recovery in minutes

- Zero data loss, with near zero RPOs

- Automated failover via dual-site design

- No-cost replication between IBM Cloud data centers

- Tiered backup solutions

- Hardware-enforced security technology

- Automated compliance support

- Augmented architecture capabilities to support applications not built for the cloud

- Availability as a managed service or customer-managed

Movius

With IBM Cloud and the Veeam on IBM Cloud backup and restore service, Movius provides its MultiLine offering to global enterprises boosting agility, strengthening focus and supporting availability.

Learn how Movius went global on the IBM public cloud with business continuity as a top priority.

Chapter 5:

Planning and next steps

When it comes to cloud-based business continuity plans, for most enterprises the issue is not whether to do so, but when and how. IT decision-makers and business leaders must be assured that implementing business continuity solutions to the cloud will not interrupt business in any way, shape or form.

Relying on proven platforms, technology leaders and companies that understand enterprise-grade requirements is critical. Leveraging platforms that support a broad range of industry solutions that are compatible with an existing technology stack to mitigate risks matters. Whether that is the use of automation, high availability or any other solution—having the ability to tap into these services quickly and easily whenever the time is right is an important detail that is often overlooked.

The combination of VMware and IBM Cloud offers leading business continuity capabilities, particularly with IBM Cloud for VMware Mission Critical Workloads and tight integrations with Veeam and Zerto for disaster and recovery. With industry leading RTO and RPO capabilities, customers can be confident that business applications will be available, whether on premises or in the cloud.

Ready to maximize business continuity in the cloud? Learn how to make this happen with IBM Cloud for VMware Solutions.