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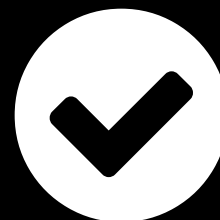
Checklist For Modernizing Mission-Critical Workloads: A Focus On Flexibility

In today's competitive and volatile business environment, every company must have an adaptable, resilient business model to respond to unexpected challenges, especially in times of economic uncertainty. This requires the modernization of mission-critical systems — the core set of systems and applications that power business processes — as a central component of that model to make any business more scalable and flexible than ever. That is why 70% of decision makers say their companies are actively planning to move, or have already moved, mission-critical systems to the cloud. Cloud platforms offer high-performance, elastic, secure, and resilient infrastructure ready to host companies' most important business applications.

A recent Forrester study, commissioned by Microsoft, analyzed several different attributes of infrastructure for mission-critical systems and found that scalability and flexibility are the most common attributes that companies demand. But which specific facets of scalability and flexibility should you consider to optimize your current mission-critical workload configurations? Consider these six key factors to infuse your mission-critical systems with scalability and flexibility as you transition your core applications to the cloud:

1. Flexible and scalable infrastructure.
2. Broad range of consumption models.
3. Distributed workload placement.
4. Elastic performance.
5. Consistent management.
6. Built-in data protection and security.

70% of decision makers say their companies are actively planning to move, or have already moved, mission-critical systems to the cloud to better meet infrastructure requirements.



METHODOLOGY

This Checklist is based on the results of the Forrester study, "The Move Is On: Modernize Mission-Critical Systems With Cloud" commissioned by Microsoft.

For that study, Forrester interviewed six IT decision makers (three of whom were contacts provided by Microsoft) at companies across multiple industries to discuss their mission-critical systems and cloud migration strategies. The research also included an online survey of 412 IT decision makers at the director level or higher from companies with 500 employees or more in the US, the UK, France, and Germany.

Questions provided to the participants sought to define mission-critical systems, identify what attributes of those systems are most important, and understand how companies are using or planning to use cloud infrastructure to support critical systems. The research began in February 2020 and was completed in March 2020.

1. FLEXIBLE AND SCALABLE INFRASTRUCTURE.

When transitioning to the cloud, you have the potential ability to swap out compute, storage, and network infrastructure for updated, improved, and more performant infrastructure, without disruption. Cloud platforms continuously innovate and make new and improved infrastructure available on demand, yielding an “evergreen” technology foundation that would be prohibitively expensive for companies to continuously provision and maintain themselves. Cloud lowers the cost and complexity barriers to keeping mission-critical infrastructure up to date.

Additionally, mission-critical systems are critical for a reason: They run a significant a portion of a company’s most important business processes, and they must scale up and down as the business expands or contracts. Having scalable infrastructure allows mission-critical platforms to scale to thousands of nodes for even the most demanding workloads, such as high-performance computing (HPC), weather forecasting, and scientific research. And scalable infrastructure can be dialed back just as quickly when not needed or when demand ebbs.

2. BROAD RANGE OF CONSUMPTION MODELS.

With respect to cost, our study found that price performance — getting the most value out of every dollar spent — is top of mind when choosing mission-critical infrastructure. And there are several potential aspects to consider. Cloud’s “pay-only-for-what-you-use” pricing model is designed to maximize price performance, and today’s cloud platforms offer a broad array of pricing options, from pay-as-you-go to reserved capacity to multiyear term discounts. Cloud platforms also offer cost optimization features and tools, resizing recommendations, and advice to guide customers to the optimal mix of price models for each of their mission-critical applications.

Price performance is top of mind when choosing mission-critical infrastructure.

3. DISTRIBUTED WORKLOAD PLACEMENT.

To meet customers where they are and take advantage of emerging cloud and edge computing technologies, companies are increasingly deploying and extending mission-critical systems beyond the data center. Data collection, analysis, and processing are moving to the cloud and to the edge — to retail locations, factory floors, and airplanes, for example. Companies need the ability to place compute and data workloads as close as possible to customers, suppliers, and partners. The ability to deploy mission-critical systems in the data center, in the cloud, or at the edge was a top requirement for over 40% of decision makers surveyed.

4. ELASTIC PERFORMANCE.

As the demands on mission-critical systems scale up or down, user experience and performance must remain high, and latency must be low. Overall, users have very low tolerance for mission-critical system interruptions, poor performance, or long wait times. Sixty-one percent of decision makers report they have low to no tolerance for system jitters (i.e., interruptions in the order of microseconds/milliseconds). Organizations must be able to dial up and down system performance and network latency on demand. Take advantage of high-speed network connections to cloud, from cloud, and between cloud locations to maintain optimal performance and latency.

61% of decision makers have low to no tolerance for system jitters.

5. CONSISTENT MANAGEMENT.

Ongoing operations of mission-critical systems are a recurring pain point for all IT organizations and are often a significant drain on IT operations costs. As mission-critical systems are migrated to and modernized on more distributed platforms, having a consistent, unified approach to managing systems wherever they are deployed is imperative. Look for management tooling that provides a consistent, unified, and centralized view of health and performance while offering automations to control maintenance windows, schedule rolling updates and upgrades, and move toward zero-downtime upgrades.

6. BUILT-IN DATA PROTECTION AND SECURITY.

As you expand your mission-critical systems, ensure that your access controls, security policies, and data protection strategies scale with you. Cloud-based security tools and services provide a unified view of your security and compliance posture wherever your mission-critical systems are running and help protect against data exfiltration and breaches. Cloud-based data protection simplifies and lowers the cost of backup, replication, and recovery for mission-critical systems.

Ensure that your access controls, security policies, and data protection strategies scale with you.

To read the full results of this study, please refer to the Thought Leadership Paper commissioned by Microsoft titled, “The Move Is On: Modernize Mission-Critical Systems With Cloud.”

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