RESILIENCE TODAY: THE CHALLENGES OF "ALWAYS-ON" IN HYBRID IT

GLOBAL TECHNOLOGY SOLUTIONS GROUP

In this paper, we will discuss several themes:

- **The emerging demands for "always-on" IT resilience**
- **The complexity created by Hybrid IT and the proliferation of options in the market**
- **Ensuring alignment with the business**

WHEN "ALWAYS-ON" BECOMES "TABLE STAKES"

Across all industries, it's now clear that the demand for IT service continuity- to be "always on" in support of the organization- is greater than ever, and growing.

The term "digital business" means different things to different organizations. There are differences across industries: for example, hospitals and banks are more demanding than other segments.

But across all industries, it's now clear that the demand for IT service continuity- to be "always on" in support of the organization- is greater than ever, and growing.[1]

In a recent resilience poll, Gartner asked IT professionals for the shortest recovery time objectives in each of these tiers of service: mission critical, critical, important, and deferrable. Even for the **deferrable tier**, 42% of the respondents said **four hours or less**.[2] This percentage increased by one-third from the previous year's poll, and places tremendous demands on those entrusted with providing resilience on an affordable basis.

IT SERVICE CONTINUITY

A growing demand for continuity of operations reflects a change in the resilience mindset from an inward, compliance-based view to an outward, customer-focused one.

In traditional IT thinking, firms protected themselves against operational availability issues through the application of high availability techniques. Disaster protection from site or regional events is addressed through one or more recovery facilities, whether company owned or subscription-based.

Today, models have changed. A growing demand for continuity of operations reflects a change in the resilience mindset from an inward, compliance-based view to an outward, customer-focused one.

Of this emerging trend, Gartner writes:

"IT Service Continuity comprises the consolidation of IT disaster recovery and high-availability management into a single cohesive management discipline. It is becoming the IT operations foundation for business resilience."[3]

Gartner predicts that by the end of 2017, "60% of large enterprises will have transitioned… to a broader use of IT service continuity management."[4]

THE GOAL: PREVENT INTERRUPTION, WHATEVER THE CAUSE

Gartner tells us that 80% of unplanned downtime is based on internal data center events- human factors- rather than environmental factors.[5] An overall resilience plan- and budget- should be based on mitigating the risk of service interruption, irrespective of the potential cause. **In Gartner's view, the strategy must be equally effective in supporting the reliable failover of a single application, a specific group of applications or an entire data center.**

THE RAZOR'S EDGE: BALANCING AVAILABILITY WITH AFFORDABILITY

We must note that business users with demands of short recovery times are not typically focused on the cost implications of this level of service. Even in those cases where infrastructure budgets are permitted to increase, they do not typically do so at a rate proportionate to the cost of higher levels of availability.

At the risk of oversimplification, it's critical that we get this right. To the extent we don't, only two outcomes are possible:

- We overspend and detract from the funds available for investment in the business, or,
- We under-protect the business; risking reputational damage, or worse.

COMPLEXITY CONTINUES TO INCREASE

HYBRID IT IS A MORE COMPLEX SERVICE DELIVERY MODEL

According to Gartner:

Hybrid IT involves multiple cloud and on-premises services from multiple providers, and creates an environment in which IT can coordinate, but not control, the pace and nature of change in the underlying application and business process services.[6] The hybrid IT model adds complexity to the IT environment.

The range of Hybrid IT options is dramatically different than it was five years ago. In the past, many organizations had a straightforward configuration of primary data centers and recovery sites. Today, IT operations run in a complex configuration of on-premise, co-located, and cloud (SaaS, PaaS, and IaaS) environments. This adds complexity to recovery planning and testing. This Hybrid IT, or Hybrid Cloud, or Multi-Cloud environment will be 80% of the marketplace for the foreseeable future.

RECOVERY OPTIONS HAVE PROLIFERATED

There are dozens of options to choose from in managed backup. Similarly, there is a growing list of options in Disaster Recovery as a Service. Some focus on co-location; others have a pure-play cloud broker focus. Side-by-side comparisons are difficult.[7]

A growing number of firms are using public cloud services as a vehicle for both managed backup and for Disaster Recovery. In fact, a leading IaaS provider recently presented a client success story from a major US stock exchange. Gartner's study of Service Continuity lists no fewer than **41 separate and distinct technologies and management approaches** designed to support the continuity of IT operations.

THE FIRST STEP: CLARITY AND THE BIA

The Business Impact Analysis is the scale by which we balance risk with investment, making the best decisions on what to protect with available funds.

So with higher stakes, shifting operational models, and aggressive sellers promising nirvana from a sea of difficult-to-compare options, where do we start? The **business impact analysis** is defined as a "systematic process to determine and evaluate the potential effects of an interruption to critical business operations as a result of a disaster, accident or emergency."

The Business Impact Analysis is the scale by which we balance risk with investment, making the best decisions on what to protect with available funds. What does the business require, and what is the range of affordable options to deliver it? Clearly, not every application requires nonstop availability, nor will someone be willing to pay for it.

Too few organizations have the resources to get the BIA right. The cost for outside consultants **before remediation begins** can range well into six figures. Organizational attention wanes- and fee fatigue sets in- before the job is complete. Another approach is to bring to the business an alternative, streamlined approach, which can be brought to you by experienced practitioners.

There is a relationship between the required RTO and the price you pay for it (e.g., 1% of IT spend for tape backup and 5-day recovery; 8-10% or greater for continuous availability). An experienced professional can help an organization look at the application portfolio, and examine a series of alternatives, explaining the cost implications of each tier. They can then present alternatives in such a "platinum/ gold/ silver/bronze" context which will help to "fast track" the client to a rightsized answer.

From there, in many cases, the deeper analysis can begin. It's important to know of a five-minute RTO for a given application- but even more important to know that this application requires a database with an RTO of four hours.

MAKING MEANINGFUL CHANGE: IMPLEMENTATION

While examining the range of options, we are mindful to understand what providers will charge and what they are actually committing to.

Once RTOs and RPOs are established, a risk assessment- or a gap analysis- is completed. We need to understand the distance between our ability to recover and what the business has deemed essential.

From there, we analyze mitigation alternatives to close those gaps, and assign a price tag to each option. We evaluate the provider solutions and management techniques available to support each option.

While examining the range of options, we are mindful to understand what providers will charge and what they are actually committing to… that is to say, contractual service level agreements (SLAs) and not marketing literature.

THE ROLE OF TESTING

The need for more frequent or ongoing testing is being driven by Risk and Compliance governance.

The importance of testing continues to grow. For many, what was historically an annual or semi-annual requirement has grown to four times per year. Some Disaster Recovery as a Service (DRaaS) providers are offering four for free. A few even offer unlimited testing: as technology continues to change, orchestrated push button playbooks have led to decreased cost. Tests are now typically smaller but more focused, enabling a deeper dive. The need for more frequent or ongoing testing is being driven by Risk and Compliance governance.
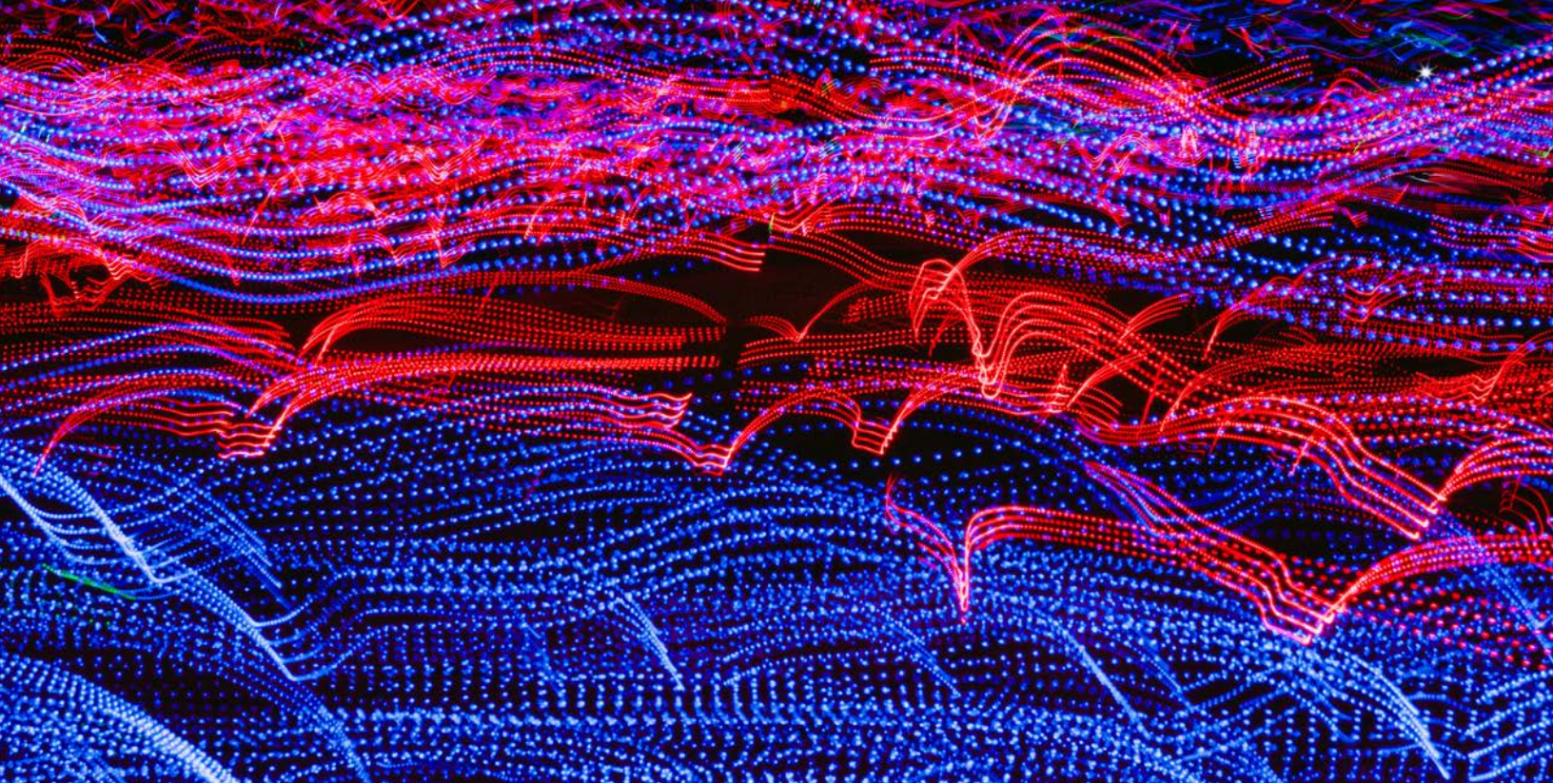
THE NEXT GENERATION

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Earlier in this paper we discussed the complexity added by Hybrid IT/ the Hybrid Cloud/ Multi-Cloud. As applications become more portable and mobile across a hybrid DC, we need the ability to more rapidly respond to demand, and to disruptive events.

The next frontier includes the ability to orchestrate workload, whether in virtual machines or in containers, across the hybrid enterprise. This is just beginning to happen now.

The trend dovetails with the propagation of cloud management platforms and policy driven governance. DR over time will become a more policy driven construct.

It's worth noting that **simply hosting a workload in the cloud does not make it resilient**. We have to architect for that. It might be expensive- but it's our job to balance risk with investment.

GTSG CAN HELP.

1 **Planning and Analysis**
whether your business impact analysis, a risk assessment and gap analysis, or your remediation plan

2 **Vendor Analysis and Selection**
sorting through competing claims and getting to the bottom line of what SLA you can expect

3 **Disaster Recovery Plan,** both creation and testing

4 **Governance and Program Management**, which are core competencies of ours

When you begin this process — or more likely, decide that it needs another look — you want the combination of deep experience with the forward view of the emerging options in the marketplace. GTSG brings you both: nearly 30 years of experience in mission critical operations, with an eye toward the demands of the digital future and options created by innovative and ever-expanding cloud and co-location options.

With us, you'll get:

INDEPENDENCE
when we consult to you, we are not resellers of any product or service. When we make a recommendation, you'll not spend any time guessing why.

RISK MITIGATION
experience dating back to changes in thinking on availability post 9/11; vision to help major firms support "always-on" operations today"; structured methods which codify what we've learned.

AN EASY ENTRY POINT
whether it's a discussion or a workshop.

We'd be delighted to start the discussion.
Reach out to us at **ITServices@GTSG.com** or **1.877.467.9885**.

Sources

[1, 3, 4] "Hype Cycle for IT Service Continuity Management, 2015," 28 July 2015, Gartner, John P Morency, Pushan Rinnen, Carl Claunch

[2,5] Gartner, Security and Risk Survey Results, June 2015

[6] "Managing IT Resilience Is Much More Than Simply Failing Over Applications," Refreshed 28 September 2016, Gartner, John P. Morency

[7] "Five Pragmatic Questions to Ask Potential DRaaS Providers," 11 May 2016, Gartner, Ron Blair