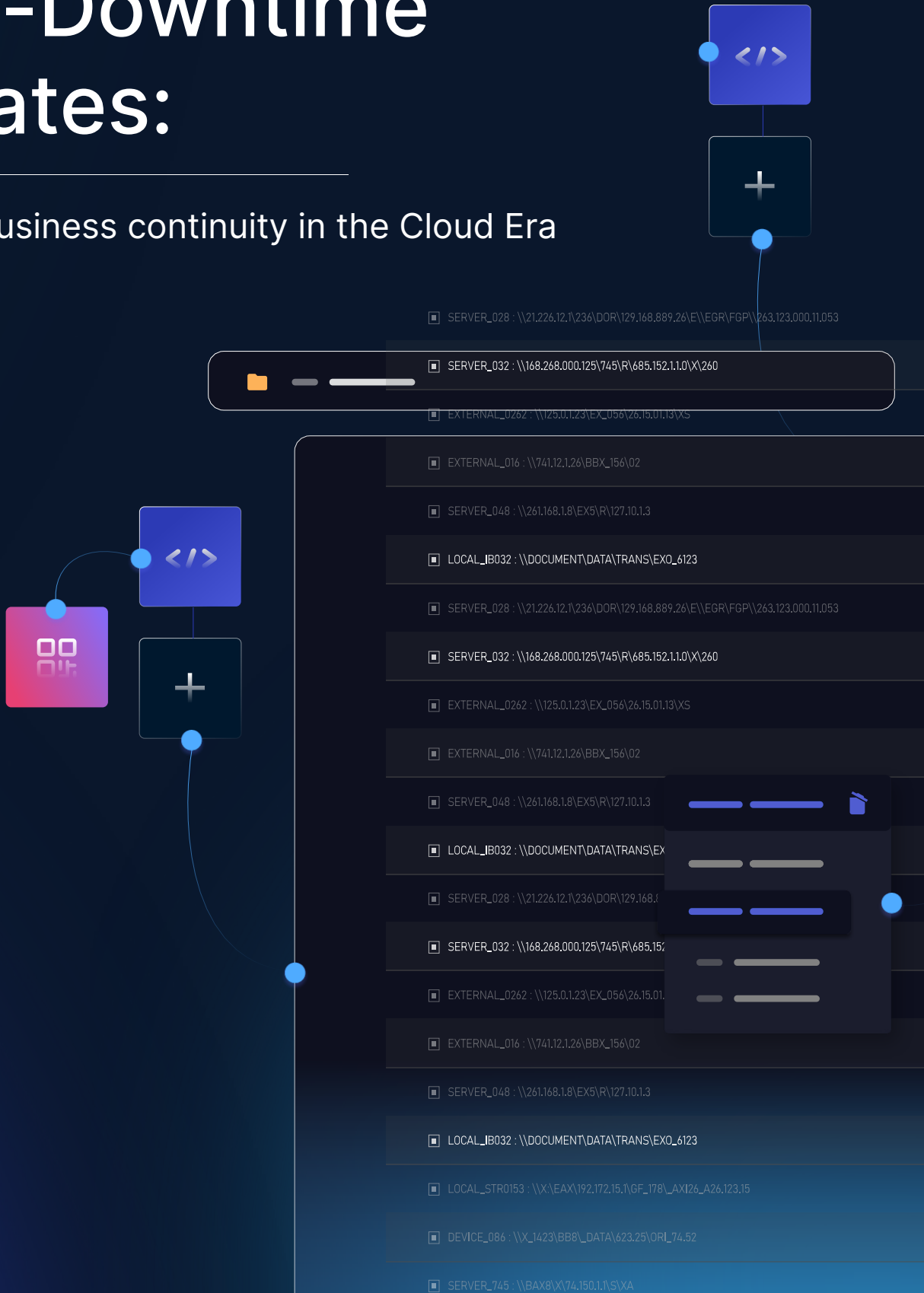




Zero-Downtime Updates:

Ensuring business continuity in the Cloud Era

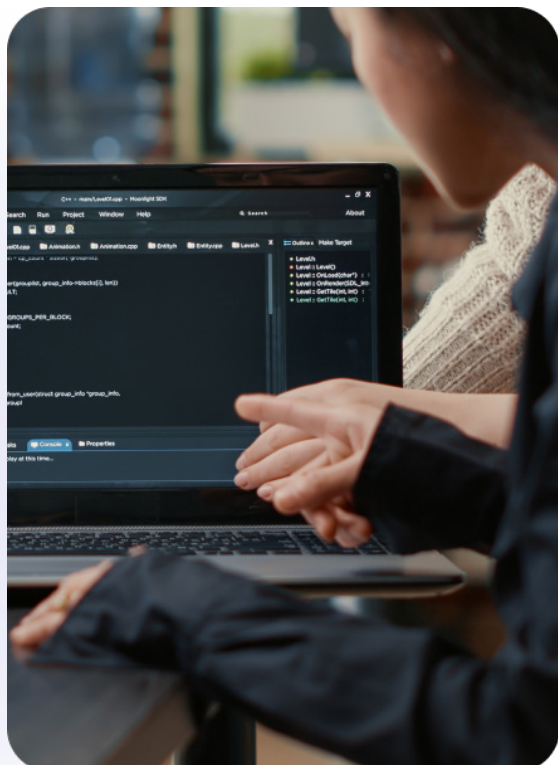


Zero downtime: A 'must-have' for businesses



Services and solutions must uphold uninterrupted, round-the-clock availability in the Cloud Era. Any disruptions to this availability could trigger profound consequences. Such interruptions not only incur substantial financial losses, as depicted in Figure 1, but they also undermine the essential trust of customers, which stands as a cornerstone for business success and longevity.

Figure 1—Financial Impact of Enterprise Downtime



Over \$5 Million per Hour

44% of enterprises report hourly downtime costs ranging from \$1 million to over \$5 million, exclusive of potential legal fees, fines, or penalties.



\$300,000 per Hour for Mission-Critical Apps

91% of organizations indicate an average cost exceeding \$300,000 for a single hour of downtime for mission-critical server hardware and applications. This estimate includes lost business, productivity disruptions, and remediation efforts.



\$4,998 to \$16,700 per Minute per Server

The per minute, per server downtime cost can be staggering, ranging from \$4,998 (based on \$300,000 hourly costs) to \$16,700 (based on \$1,000,000 hourly costs).



\$200,000 to \$400,000 for a 15-Minute Peak Hour Outage

Even a brief 15-minute outage impacting two mission-critical servers during peak usage hours can lead to a substantial cost between \$200,000 to \$400,000, irrespective of data loss, theft, or damage.

Source: [ITIC's 12th annual 2021 Hourly Cost of Downtime Survey](#)

The ambitious target of achieving zero downtime updates has shifted from a 'nice-to-have' aspiration to a 'must-have' necessity. Businesses require this to prosper in today's intensely competitive and perpetually connected environment.

The [12th Annual 2021 Hourly Cost of Downtime Survey by ITIC](#) discloses the following²:



Four Nines Availability

89% of organizations mandate a minimum of 99.99% availability.



Five Nines Reliability

35% of respondents report that their firms are aiming for an exceptional reliability level of 99.999%.

As per [McKinsey](#), various factors, including heightened customer expectations, are prompting numerous business leaders to express apprehensions regarding the uninterrupted operation and availability of their crucial applications.¹

Mitigating disruptions from software updates, customization, and patching

In our deeply interconnected global business environment, myriad potential disruptions are always looming. Maintaining, updating, and patching critical software systems such as Oracle ERP Cloud without triggering downtime presents a significant challenge.

Mandatory upgrades by SaaS vendors

SaaS vendors often supply businesses with quarterly patches. However, even though the vendors test these patches, they may trigger disruptions due to interactions with other systems or customizations made by the business. To mitigate this, organizations need to invest in tools for pre-deployment patch testing.

SOX and other internal audit testing and verification

Compliance with internal and statutory audits requires comprehensive testing, validation, and documentation. Businesses must employ advanced solutions for conducting these audit tests and automatically recording screen data as audit evidence.

Regular deployment of enhancements/releases

Businesses often make system modifications to rectify bugs or enhance functionality. Rigorous testing of all affected applications and business procedures is crucial following these changes. Enterprises require a solution that ensures these changes do not adversely impact business processes.

Changes in hardware/infrastructure/middleware

Modifications to hardware, infrastructure, or middleware necessitate testing of all connected applications. Organizations should adopt a solution that facilitates comprehensive end-to-end application testing to prevent production failures.

Vendor-supplied application patches

Application vendors frequently issue patches for various purposes, including bug fixes, enhancements, or security improvements. Testing these patches can pose a challenge, especially for organizations with customized standard applications. Businesses need a solution that not only thoroughly tests these patches but also helps identify potential issues, assess risks, and make informed decisions concerning patch applications.

Why testing alone is not enough

Although testing plays a crucial role in ensuring software updates don't disrupt business processes, testing alone cannot guarantee zero-downtime updates.³

Both software developers and testers utilize testing-centric strategies, including business acceptance testing—a critical part of contemporary product development. It enables organizations to gauge a product's readiness for real-world deployment and ensure the integration of new functionalities with existing ones.

Developers' approach to testing

Developers generally tailor their testing strategies to verify that the software functions as intended. Their testing approach leans more towards confirmatory than exploratory, concentrating on validating the functionality of their specific contributions.

Software testers' approach

Software testers adopt a broader approach, actively hunting for potential defects that might impinge on the user experience. They devise various test scenarios based on software requirements, which are used to construct diverse test cases with the aim of uncovering any defects.

This testing process, while vital, only represents a portion of the broader mandate to ensure business continuity and validation following software updates, migrations, patches, and other modifications.

Line-of-Business (LOB) Business Process Assurance

Beyond functional testing, a comprehensive solution involves business process validation or assurance, typically managed by line-of-business managers (LOBs).

Unlike task-specific testing, business process validation ensures that software modifications—be they upgrades, updates, customizations, or patches—align with business goals and maintain operational continuity.

LOBs focus not just on the individual components of the software but also on the overarching picture of business process assurance and continuity. This macro-level perspective is critical to monitoring software changes and ensuring they do not disrupt the seamless operation of business activities.

Table 1: Testing-Centric Approach vs Business Process Assurance Approach

	Testing-Centric Approach	Business Process Assurance Approach
Focus	Software functionality	Business continuity and alignment with business objectives
Scope	Specific software components, both positive and negative aspects	Macro-level perspective, encompassing the entire software and business ecosystem
Goal	To verify that the software works as intended and identify defects	To ensure software modifications align with business goals and do not disrupt operations
Method	Derive test scenarios from requirements, create test cases to find defects	Validate that software changes (upgrades, updates, customizations, patches) support business objectives without compromising continuity
Outcome	Functional software with identified and corrected defects	Software that not only functions as intended, but also aligns with and supports the business's needs and objectives

The Need for Comprehensive Business Process Assurance

Businesses need a holistic business process assurance solution that delivers a suite of critical capabilities specifically tailored to guarantee uninterrupted operations.

Introducing the Attest Business Process Assurance Platform

Attest is the premier cloud-based business process assurance solution, crafted to preserve the integrity of business processes, regardless of the hosting location of applications.


Attest delivers business process validation that enables enterprise application leaders to manage upgrades effectively, maintain process consistency, and uphold compliance with regulatory requirements.

Attest allows businesses to:




Achieve a comprehensive view

Attest goes beyond a component-level focus to offer a macro-level perspective, attending to both upstream and downstream facets of the components under modification. This broad view ensures the integrity of the business processes that the component integrates with.




Conduct impact analysis

Attest's unique impact analysis module can promptly identify the business flows affected by a change in any business process or subprocess. This enables businesses to comprehend the full impact of changes and respond accordingly.



Discover and map business processes

Attest furnishes a comprehensive process map of all business operations, granting businesses a thorough understanding of their operations and the interrelationships among various processes.



Orchestrate end to end testing automation

Attest assists in automating the end-to-end testing of impacted business processes. This minimizes the risk of human error, conserves time, and ensures more dependable outcomes.

For line-of-business (LOB) managers in sectors like manufacturing, finance, and supply chain, Attest can revolutionize operations.

Attest aids in managing changes to the application footprint holistically, averts costly system outages due to inadequately validated software changes, and thus enhances customer satisfaction.

Conclusion

Securing business continuity and achieving zero downtime is more than just a competitive edge—it's an operational imperative.

The Attest Business Process Assurance Platform pioneers this endeavor, delivering a solution that transcends traditional testing.

Attest adopts a comprehensive, end-to-end strategy, meticulously cognizant of upstream and downstream components surrounding the elements under modification. This approach equips businesses with the ability to realize zero-downtime updates and secure business continuity in the Cloud Era.



ATTEST is a pioneering solution in the realm of Business Process Assurance, marking its uniqueness as the first cloud-based platform designed to maintain the integrity of business processes, regardless of their location, be it on-premise or on the cloud.

Constructed from the ground up, ATTEST provides a robust and reliable platform specifically tailored to safeguard enterprise-level business operations. This innovative solution adeptly handles complex workflows, promotes optimal operations, and significantly contributes to achieving business objectives, making it a vital tool in the modern digital business landscape.

Contact Us

Ready to achieve zero-downtime updates and ensure business continuity?
Visit www.myattest.com or contact us to schedule a personalized demo and experience the benefits of ATTEST firsthand.



830 Stewart Drive #202
Sunnyvale, CA 94085 USA



info@myattest.com

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