Buyer's guide to performance testing with UiPath Test Cloud



UiPath

Your software can pass every functional test and still fail the people who depend on it.

A checkout flow may work under normal conditions, an SAP workflow may validate correctly, and a claims process may complete as designed. But when demand spikes, systems slow down, or critical business cycles put pressure on the application, “working” may not be enough. For the business, slow performance can mean delayed transactions, frustrated users, lost productivity, and rising operational risk.

That is why performance testing has become essential to release confidence. Functional testing answers: does the software work? Performance testing answers: will it keep working when demand increases and business processes cannot afford to slow down?

The challenge is that traditional performance testing models are often too specialized, too separate, and too late to keep pace with modern release cycles.

AI-assisted and agentic performance testing are changing that model. Instead of relying only on specialist-driven scripting and late-cycle analysis, teams can use AI agents to help plan performance scenarios, execute tests, analyze results, summarize findings, and notify stakeholders while testers remain in control of objectives, thresholds, and release decisions.

In this buyer’s guide, we will explore how to close that gap: what modern performance testing should look like, how to evaluate the right approach, and how to move from isolated performance checks to continuous performance confidence as part of your overall software testing strategy.



What organizations should expect from modern performance testing

Modern performance testing should do more than generate load. It should help teams understand whether critical software can keep up with the way the business actually operates under peak demand, across connected systems, through long-running processes, and during moments when slowdowns are most costly.

For organizations evaluating a performance testing solution, the goal is to build confidence that business-critical applications can perform reliably before they reach production.

A modern performance testing solution should help teams evaluate the following core capabilities:

Buyer expectation	Why it matters
Reuse existing automated tests	Teams should not have to rebuild every business scenario from scratch in a separate performance testing tool. Existing functional automations should be usable as a foundation for performance testing.
Validate real-world demand patterns	Applications behave differently under normal load, peak traffic, sudden spikes, extended usage, and stress conditions. Buyers should look for support across load, spike, stress, endurance, and scalability testing where required by the use case.

Buyer expectation	Why it matters
Use AI-assisted planning, execution, and analysis	Performance testing has traditionally required specialist expertise for scenario design, load modeling, execution monitoring, bottleneck analysis, and result interpretation. AI agents can help teams generate realistic performance plans, run and monitor tests, analyze results, summarize findings, and notify stakeholders while keeping testers in control.
Support enterprise deployment models	Many organizations operate across cloud, on-premises, and hybrid architectures. Performance testing should support the customer's deployment reality, including cloud and on-premises execution models where applicable.
Make performance testing more accessible	Performance engineering expertise is valuable, but scarce. The right solution should reduce dependence on specialist-only scripting and help broader QA teams participate.
Connect performance results to release readiness	Performance insight should inform go/no-go decisions, regression planning, and continuous software testing, rather than sit in a disconnected report.
Integrate with CI/CD pipelines and release gates	Performance testing should not be a separate late-stage exercise. Results should connect to CI/CD workflows, automated quality gates, and release decisions so teams can identify performance risk earlier and act before production.
Connect with observability and APM data	Performance results become more actionable when they can be correlated with telemetry from systems such as APM, logs, traces, and infrastructure monitoring. This helps teams move from identifying slowdowns to understanding root cause.
Support governance, security, and compliance readiness	Enterprise buyers need performance testing to operate within secure, auditable, and governed environments, especially when AI-powered capabilities are used. Buyers should look for role-based access, auditability, data protection, and responsible AI controls.
Measure what affects user experience	Performance testing should provide insight into response time, throughput, stability, load behavior, and bottlenecks, not just pass/fail outcomes.

Organizations should look for a solution that can scale across business-critical workflows, connect to the broader software testing lifecycle, and help teams find bottlenecks before users do.



Why traditional approaches fall short

Performance testing has always mattered. The challenge is that many traditional approaches were built for a slower, more specialized model of software delivery: dedicated performance engineers, separate tools, custom scripts, and testing cycles that happen late in the release process.

That model is increasingly difficult to sustain.

Modern applications are distributed, integrated, and constantly changing. A single business process may span web interfaces, APIs, desktop applications, SAP, cloud services, robots, and third-party systems. For performance testing, organizations should validate which runtime types and technologies are supported for their specific scenarios. Testing performance in that environment requires more than isolated load scripts. It requires a way to validate how real business workflows behave under pressure.

Traditional performance testing often falls short in five areas:

Challenge	Why it creates risk
Specialist dependency	Performance testing often depends on a small group of experts who understand scripting, architecture, load modeling, and analysis. When those skills are scarce, performance testing becomes a bottleneck.
Late feedback	Performance tests are often run near the end of a release cycle. When bottlenecks appear late, teams face higher remediation costs, release delays, or added production risk.
Tool silos	Functional testing, performance testing, test management, and reporting often happen in separate systems. This makes it harder to connect performance results to overall release readiness.
Duplicate effort	Teams may already have automated functional tests that represent critical business journeys, but still need to recreate similar scenarios in a separate performance testing tool.
Limited business context	Traditional performance tests may validate isolated technical transactions but miss the end-to-end workflows that matter most to users and business operations.

The result is a performance confidence gap. Teams may know whether individual transactions can run under load but still lack a complete view of whether their most important business processes are ready for real-world demand.

For organizations evaluating performance testing solutions, this is the key question: Will the solution help performance testing become part of the broader software testing lifecycle, or will it create another silo?

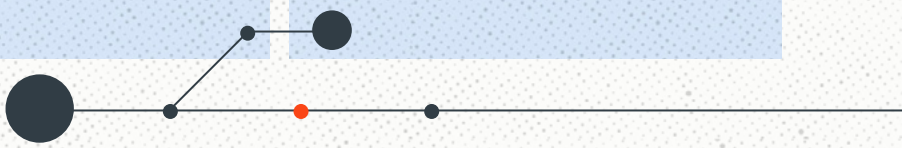
Buyer evaluation checklist

Choosing a performance testing solution is not just about generating load. It is about determining whether the platform can help your team build performance confidence across the software testing lifecycle.

Use the checklist below to evaluate whether a solution can support the way your applications, teams, and release processes actually work.

Evaluation question	Why it matters	What to look for
☑ **Can we reuse existing automated tests?**	Reusing existing automation reduces duplicate scripting, accelerates adoption, and helps teams build on the test assets they already trust.	A solution that can turn functional automated tests into performance testing scenarios.
☑ **Can we test realistic demand patterns?**	Applications behave differently under normal load, sudden spikes, extended usage, and stress conditions.	Support for load, spike, stress, and endurance testing.
☑ **Can we support the required execution model?**	Enterprise environments often span cloud, on-premises, and hybrid architectures, so performance testing must align with the customer's deployment, runtime, and capacity requirements.	Cloud and on-premises execution options, with clear guidance on virtual users, robots, platform unit consumption, and deployment-specific limits.
☑ **Can more of the QA team participate?**	Performance engineering expertise is valuable but scarce. Broader participation helps reduce bottlenecks.	Lower dependence on specialist.
☑ **Can results inform release readiness?**	Performance testing should help teams decide whether software is ready for production, not just produce isolated technical reports.	Integrated insight that connects performance results to broader software testing decisions.

Evaluation question	Why it matters	What to look for
Can we test complex enterprise workflows?	Critical business journeys often span multiple systems and technologies.	Support for the workflow technologies that matter most to the customer, such as web, API, desktop, and SAP scenarios where applicable, with validation of performance testing support for each target runtime.
Can the solution scale with our testing strategy?	Performance testing should grow from targeted validation to continuous performance confidence.	A platform that supports both initial use cases and broader adoption across teams, applications, and release cycles.
Can AI help plan, execute, and analyze performance tests?	Performance testing often requires specialized knowledge for scenario design, load modeling, bottleneck analysis, and results interpretation.	Agentic capabilities for planning, scenario generation, execution monitoring, analysis, reporting, and stakeholder notification.
Can performance testing support CI/CD and release gates?	Teams need performance feedback early enough to act before production.	CI/CD integration, automated test triggering, thresholds, release gates, and reporting that supports go/no-go decisions.
Can results connect with observability and APM data?	Performance results are more useful when correlated with application, infrastructure, log, trace, and monitoring data.	Integration or correlation with observability/APM systems, logs, traces, dashboards, and root-cause workflows.
Is the solution governed, secure, and enterprise-ready?	Performance testing may involve sensitive workflows, production-like data, distributed execution, and AI-powered analysis.	Role-based access, audit trails, data protection, responsible AI controls, and governance across teams and environments.



Why UiPath Test Cloud

UiPath Test Cloud is built for organizations that want performance testing to become part of their broader software testing strategy, not a separate activity that happens late in the release cycle. With agentic performance testing, UiPath helps teams use AI assistance across planning, scenario generation, execution, analysis, reporting, and notification, so performance confidence can become faster, more accessible, and more connected to release readiness.

With Test Cloud, teams can use existing automated tests as the foundation for performance testing. Instead of recreating every critical business scenario from scratch in a separate performance scripting tool, teams can build on existing UI and API automations where applicable and use them to understand how applications behave under pressure.

With UiPath Test Cloud, teams can:

1. **Reuse existing automated tests** as the foundation for performance testing scenarios
2. **Run load, spike, stress, and endurance tests** to evaluate how applications perform under different types of pressure
3. **Use cloud or on-premises performance execution models,** depending on deployment needs, to uncover bottlenecks and slowdowns before users are impacted
4. **Measure response time, throughput, stability, and load behavior** across critical workflows
5. **Validate performance for critical workflows** across supported runtime types, such as web, API, desktop, and SAP scenarios where applicable
6. **Bring performance testing closer to release readiness** by making it part of the broader software testing lifecycle
7. **Expand from functional validation to performance assurance** without treating performance testing as a disconnected tool or one-off project
8. **Use AI agents** to plan, generate, execute, analyze, report, and notify across performance testing workflows, reducing dependence on specialist-only scripting and analysis
9. **Build custom AI agents** with Agent Builder tailored to unique architectures, SLAs, environments, and performance testing needs

UiPath also brings third-party validation to the performance testing conversation. **UiPath was recognized as a Leader in the Gartner® Magic Quadrant™** for AI-Augmented Software Testing Tools and named a Leader in The Forrester Wave™: Autonomous Testing Platforms, Q4 2025. These recognitions reinforce UiPath's position in AI-powered and autonomous software testing.

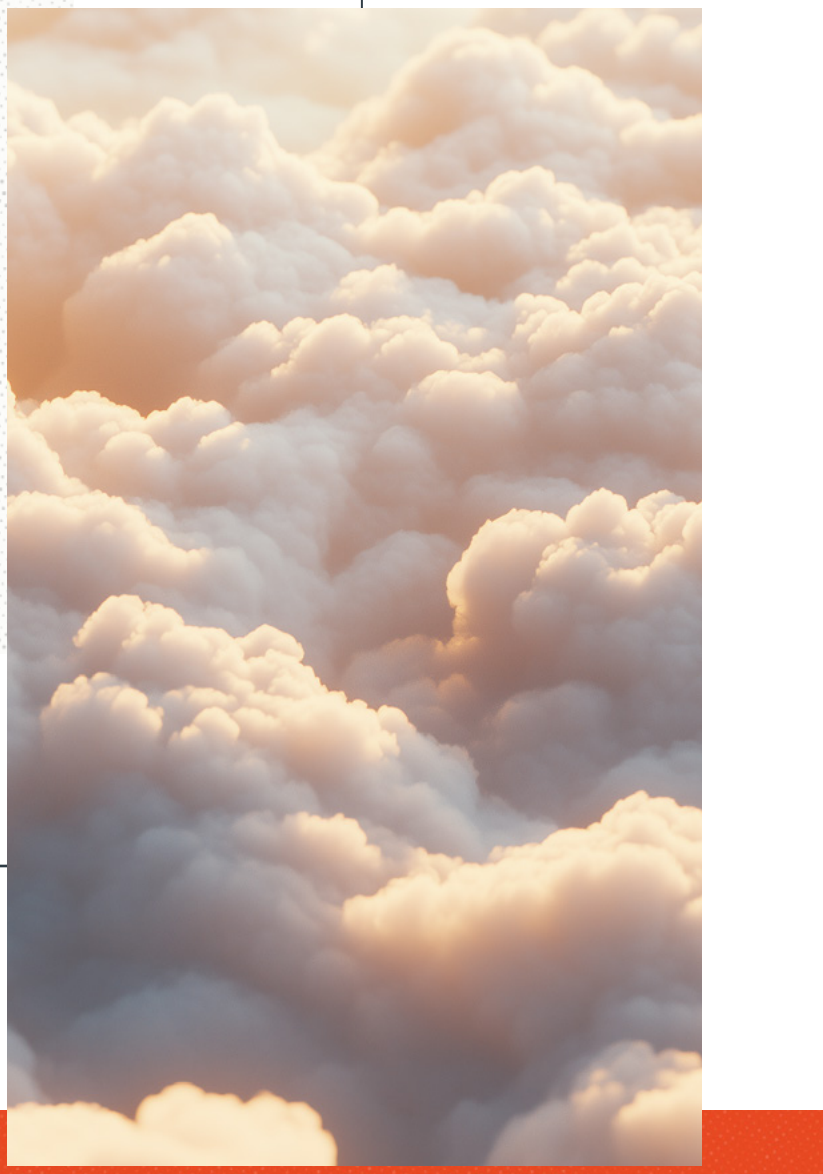
For organizations using UiPath testing capabilities today, this is an important modernization opportunity: performance testing is available exclusively as part of UiPath Test Cloud.

From functional confidence to performance confidence

Performance risk is no longer something teams can afford to find late, or worse, in production. As applications become more connected, release cycles accelerate, and user expectations rise, organizations need performance testing that is reusable, scalable, and connected to the broader software testing lifecycle.

UiPath Test Cloud helps teams make that shift. By using existing automated tests as the foundation for performance testing, and by applying AI assistance across planning, execution, analysis, reporting, and notification, organizations can move beyond isolated performance checks and build a more complete view of release readiness. It is designed to make performance testing more accessible, helping QA teams get started without relying only on specialized performance engineering skills.

With UiPath Test Cloud, organizations can expand from functional validation to continuous performance confidence, helping ensure that critical applications do not just pass tests, but perform when the business needs them most.



Ready to start?

See how UiPath Test Cloud helps teams move beyond functional validation and build performance confidence for real-world demand.

Explore Performance Testing in UiPath Test Cloud

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