

Application Performance Engineering

Services Catalog



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Why Performance Engineering?

Software performance engineering is more important now than ever before. With the growth in mobile devices and rich consumer interfaces, performance expectations have driven all users to demand an experience that provides information and feedback with no delay. Industry trends, such as responsive user interface, dictate that delays greater than one second—and for many applications, one tenth of a second—are enough to make a user feel that the application is of poor quality. Other trends, such as device mesh and the Internet of things, are creating new data at massive scale that require a new class of solutions.

Performance engineering encompasses all aspects of software architecture—from designing measurable success criteria, to defining a valid test platform for analysis, to validating and optimizing the performance during development, and finally, to monitoring the performance once deployed.

At Orasi, we have an extensive background in helping customers design, develop, and deploy high-performing software solutions. Our team of experts will help you gain an accelerated return from your software projects by minimizing cost and risk, as well as maintaining effective and efficient processes.

Services Delivery Options

At Orasi, we have experts that can travel to your site to help you with your project. These same resources can also work remotely with your distributed resources. In addition to that level of service, we also offer remote performance engineering assistance to customers without the budget or time to add full-time resources. Our team offers remote performance engineering from the U.S., Mexico, and India to provide global services and expertise.

Whether you need short- or long-term assistance, we have the flexibility to help you with the specific needs of your organization. Our services use the cloud to generate load from across the world, so your testing can simulate real-world conditions. We also use the cloud to monitor and analyze solutions to maximize the availability and collaboration with worldwide development and operations centers.

Orasi Performance Process Services

The performance process is different at every customer, because software design and development is unique. Orasi has experience helping a broad range of application categories, as well as across a deep range of business verticals. Our goal is to become your trusted advisor for performance best practices.

Service Option: Performance Engineering Roadmap

Orasi evaluates the performance processes and recommends a roadmap for improvement. This evaluation covers the following areas:

- Environments and/or simulation
- Goals and requirements
- Team collaboration and processes
- Monitoring and analysis tools
- Solution design

For each of these areas, we have created a maturity model from looking at the best practices across the industry. An Orasi performance architect works with the stakeholders to validate goals through a pre-engagement questionnaire. This is followed by a series of onsite interviews with the developers, architects, operations, and testing team to benchmark the current status, as well as capture goals for the roadmap. The output of this engagement is available in sample format from the Orasi sales team.

- **Timeframe:** 1 to 2 weeks
- **Location:** In-person collaboration
- **Resources:** Architects
- **Requirements:** Access to a key member of the cross-discipline teams

Service Option: Coaching

Orasi coaches help teams grow strong by applying performance engineering practices to their software development life cycle (SDLC). To fully adopt these changes, this growth takes time; therefore, our coaches spend time with a team to help them become more aware of their workflow and how to collaborate most effectively.

Our coaches span multiple projects, and their goal is to have the team become adept in applying performance practices. This doesn't mean that we only work with people who have performance in their job description. Most of the teams we coach already have performance roles in some fashion, and they want to boost their effectiveness and proficiency.

- **Timeframe:** 1 to 3 months
- **Location:** Onsite and/or remote
- **Resources:** Architects
- **Requirements:** One or more projects that have a demand for improved performance

Orasi Performance and Scalability Project Services

This category of services encompasses projects with specific goals in mind. The list below provides classes of solutions that Orasi has solved to date. As the technology industry changes, Orasi adapts and improves its services to help improve performance where it is needed.

Consultants will first determine the goals of the optimization at a pragmatic level. Next, Orasi will define the measurements which will validate this success using the best measurements available. The consultants will then help drive a hypothesis-driven suite of tests into the solution to create a pattern for incremental and scientific improvement. This requires collaboration for improvement with the developers, database administrators, and operations staff.

Service Option: Database Performance Optimization

This suite of services is specifically geared toward solutions that are primarily constrained in their databases. This often requires specialization in storage and specific database technology.

- **Timeframe:** 1 to 3 months
- **Location:** In-person collaboration

- **Resources:** Senior architect
- **Requirements:** Access to the unique database monitoring tools (typically these are requested from the operations or DBA teams)

Service Option: Capacity Planning and Infrastructure Optimization

This suite of services is designed to help customers design for impending demand around certain events or new releases. This typically involves resolving the solution under test into a set of workload models or set of transactions that would model hypothetical behavior. After that initial model, a suite of simulations is created and the results are quantified to create a capacity plan. In so doing, the analysis also determines hardware costs for each workload model. This analysis helps determine the most efficient places in the solution to optimize for infrastructure costs and utilization.

- **Timeframe:** 2 to 6 months
- **Location:** In-person collaboration
- **Resources:** Senior architect
- **Requirements:** Access to additional hardware resources to temporarily scale the solution under test to find the key performance costs associated with the workload

Service Option: DevOps Readiness and Monitoring Optimization

Software solutions that must run efficiently over long periods of time should strive for improved efficiency in performance behavior for the customer. DevOps readiness and monitoring optimization is a tuning process that requires improved collaboration between development, testing, and operations/sustainment. Our practice helps create monitoring solutions during the design and test phases of the SDLC. These practices also help drive improvements in mean time to recovery and second tier defect resolution time. We focus on continuous testing, real-time troubleshooting, and production validation.

- **Timeframe:** 1 to 3 months
- **Location:** In-person collaboration
- **Resources:** Senior architect
- **Requirements:** One or more projects that have a demand for improved performance

OPTIC

Organizations using HPE LoadRunner, HPE Performance Center, and AppDynamics who need better visibility into their virtual load impact may wish to use Orasi Performance Test Intelligence Connector (OPTIC), an Orasi tool that integrates both systems.

OPTIC allows HPE LoadRunner transactions to be displayed in AppDynamics, side by side with other business transactions being generated by the monitored system. Operations teams can see exactly when virtual load is applied and what transactions are affected—in real time and with no manual effort.

OPTIC also provides a common analysis platform for developers, quality assurance, and operations for improving collaboration and turnaround time during performance troubleshooting and solution optimization.

Orasi Application Performance Testing

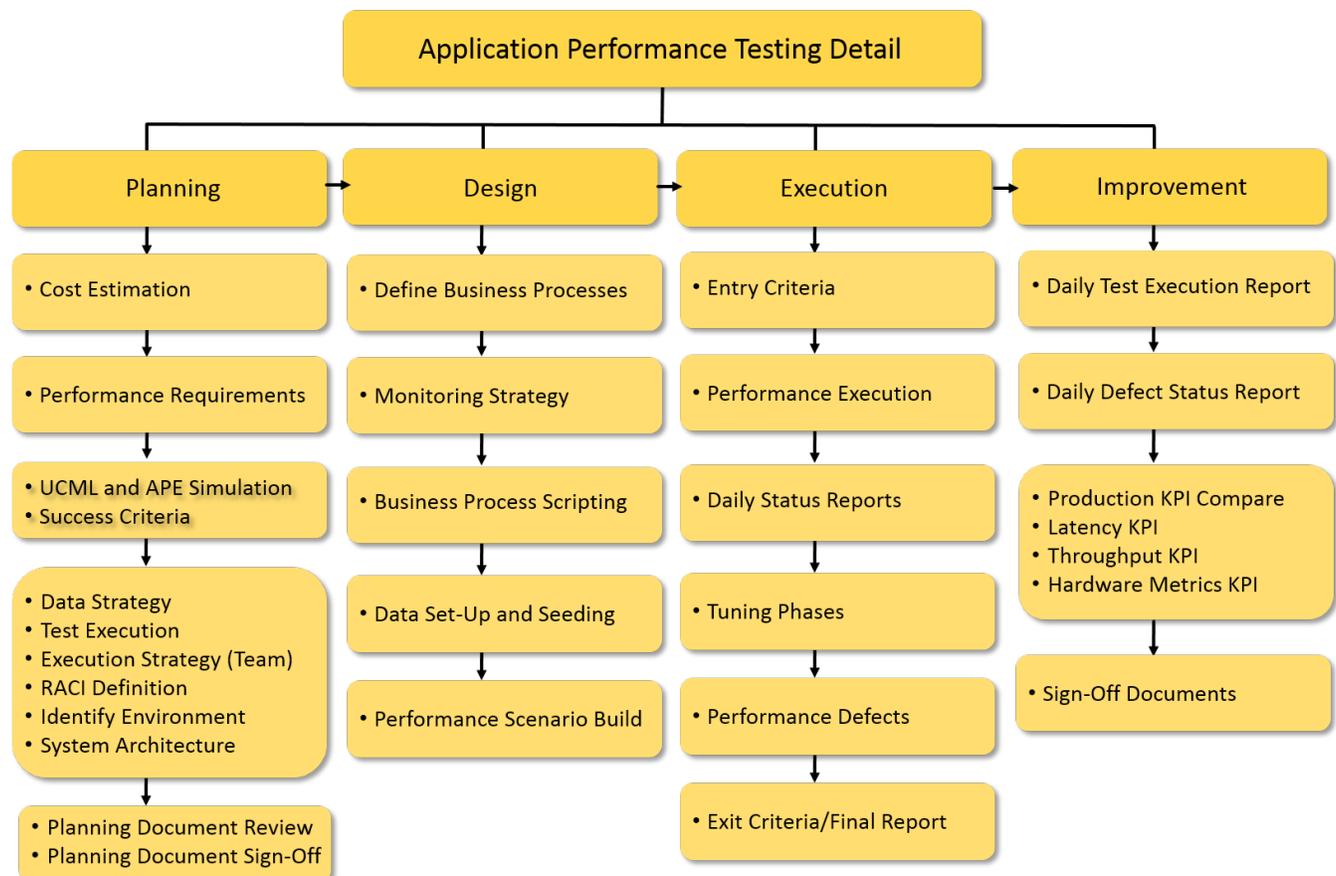
Orasi has a team with depth and breadth across industries and technologies. We have a dedicated performance testing practice that can help any project.

Overall Test Methodology

During the development of the application and before any major deployment, a performance test should be run to measure the current latency, capacity, and scalability of the system. The performance team will work with your team development and operations teams to scope the requirements, examine the solution architecture, and analyze the test and production environments. This leads to the creation and execution of a performance test plan.

A roadmap of areas to improve is fed back into the engineering team to optimize performance engineering. Performance testing encompasses the following activities:

- Performance test management
- Optimal performance testing strategy
- Set-up, build-out, and configuration
- Data reduction and analysis
- Performance test priorities and execution
- Roles and responsibilities
- Reporting and KPI measurements



Orasi will use a repeatable load and performance testing process as the basis for recommendations. Below you will find a detailed depiction of Orasi's performance testing methodology.

The performance test team will work with the rest of the team to determine the best plan for your organization's objectives. There are six primary types of performance testing that can be customized to your needs:

- Load testing
- Stress testing
- Endurance testing
- Spike testing
- Configuration testing
- Isolation and tuning testing

Some types of performance testing, such as a normal capacity load test, can be completed in one to three weeks, while others, such as configuration and isolation, can take months. Our team will work with you to make the most of your testing efforts.

Performance software testing in a subscription model or extended project will include the pillars of planning, data strategy, execution, and improvement. A scorecard for each of these areas will be developed and used to build customer expertise and track performance improvements and technical debt.

Service Option: Coaching

Orasi coaches help teams grow strong by applying performance engineering practices to their software development life cycle (SDLC). To fully adopt these changes, this growth takes time; therefore, our coaches spend time with a team to help them become more aware of their workflow and how to collaborate most effectively.

Our coaches span multiple projects, and their goal is to have the team become adept in applying performance practices. This doesn't mean that we only work with people who have performance in their job description. Most of the teams we coach already have performance roles in some fashion, and they want to boost their effectiveness and proficiency.

In addition, the coaching service includes access to Orasi University for training for associated topics for up to five individuals.

- **Timeframe:** 1 to 3 months
- **Location:** In-person collaboration
- **Resources:** Senior consultant/coach
- **Requirements:** One or more projects with existing test resources and a demand for improved performance testing

Service Option: UI Analysis and Recommendations

Orasi performance UI test experts will examine the user interface code, as well as the interactions with back-end systems. Orasi can also create UI test automation to capture results across devices, builds, and other conditions to create an accurate and data-driven process for improvement.

- **Timeframe:** 1 to 2 months
- **Location:** Mix of in-person collaboration with remote work
- **Resources:** Senior consultant
- **Requirements:** Access to the development team and the source code for the user interface, as well as instrumented UI or the ability to add this instrumentation within a test environment

Service Option: Small Application Performance Test

Orasi performance test experts will validate the solution under test as described above. Typically in these scenarios, many of deliverables defined above are already completed, which helps reduce the overall workload to focus on the scripting and test execution.

- **Timeframe:** 2 to 4 weeks
- **Location:** Mix of in-person collaboration with remote work
- **Resources:** Senior consultant (due to the abbreviated timeframe)
- **Requirements:** Smaller tests are for lower risk projects (For example, solutions with strong configuration and environment practices and simpler data and workflow requirements)

Service Option: Medium Application Performance Test

Orasi performance test experts will validate the solution under test as described above. A medium scenario requires most of the deliverables defined above, or the complexity of the inputs is higher, which requires a larger overall workload for scripting and test execution.

- **Timeframe:** 4 to 12 weeks
- **Location:** Mix of in-person collaboration with remote work
- **Resources:** Senior consultants and less-tenured resource blend
- **Requirements:** Smaller tests are for lower risk projects (For example, solutions with strong configuration and environment practices and simpler data and workflow requirements)

Service Option: SAP Performance Test

Orasi has a team of performance consultants who specialize in SAP product suite. These tests require the same patterns and practices defined above.

- **Timeframe:** 2 weeks to 3 months
- **Location:** Mix of in-person collaboration with remote work
- **Resources:** SAP performance specialists
- **Requirements:** Access to a suitable test environment

Service Option: Custom Performance Test

Orasi has validated hundreds of different solutions across its team. We are confident that we can create a solution to match any software solution. We love a challenge and have earned many case studies to share.

- **Timeframe:** Variable
- **Location:** In-person collaboration
- **Resources:** Architectural oversight to define the solution, and then a blend of senior consultants and performance testers
- **Requirements:** N/A

Service Option: Performance Test Subscription

The best way to prevent a performance issue is to test frequently. Orasi can execute tests for every build, once a week, or whenever you demand it. The smaller the set of changes that are included in each test, the lower the cost of troubleshooting. This proactive practice dramatically reduces the risk of a performance showstopper.

- **Timeframe:** Periodic over the course of the subscription, with the minimum engagement being nine months
- **Location:** Remote
- **Resources:** Senior consultant to develop the solution, with execution handled by less-tenured resources
- **Requirements:** Remote access to the solution under test

Service Option: API/Web Services Performance Test

Orasi has developed a specialization in API or web service-level tests. These tests help find the issues closer to the code under development. The cost of scripting and maintenance is lower than generating workload against the user interface or website integration layer.

- **Timeframe:** 2 to 6 weeks
- **Location:** Mix of in-person collaboration with remote work
- **Resources:** Senior consultant/coach
- **Requirements:** Well-developed API with strong documentation will reduce the cost of scripting and the overhead of onsite travel and expenses

Service Option: Cloud Performance Test

For publicly accessible solutions, Orasi has a specialization in generating the load and performance from the cloud. This solution also reduces any costs associated with on-premise test tools.

- **Timeframe:** 2 weeks or more
- **Location:** Mix of in-person collaboration with remote work
- **Resources:** Senior consultant to develop the solution, with execution handled by less-tenured resources
- **Requirements:** The solution under test must be publicly accessible and this type of testing typically requires deeper collaboration with the network operations team than other types of testing

Orasi Performance Tool Services

At Orasi Software we leverage a broad range of performance tools to do our services. For some tools, we provide a deeper range of tool-specific offerings.

Service Option: Installation and Upgrade Services

Orasi will install or upgrade client’s performance testing solutions and ensure it works with the client’s application.

- **Timeframe:** 1 to 5 days
- **Location:** Onsite or via remote access
- **Resources:** Performance engineer
- **Requirements:** Access and proper permissions to application servers, networks, etc. to perform the software changes and availability of suitable hardware for deployment of the solution

Service Option: Tool Training Services

Orasi will provide vendor-certified training for HPE LoadRunner, HPE Performance Center, or AppDynamics.

- **Timeframe:** 2 to 3 days
- **Location:** Onsite or remote
- **Resources:** Certified trainer
- **Requirements:** Designated training location for onsite engagements

Service Option: Hosting Services

Orasi will host and maintain performance tools in the cloud. This reduces labor costs and improves reliability. This will be more cost effective, because we can leverage elasticity of demand.

- **Timeframe:** 1- to 3-year commitment
- **Location:** Microsoft Azure for the PC controller and Amazon, Google, and more for the load generation
- **Resources:** Transition will be managed by a senior consultant and the maintenance and support will be done by Orasi systems engineers and support specialists
- **Requirements:** HPE LoadRunner is not an option for hosting

Role	HPE Performance Center	AppDynamics	jMeter	Soasta
Implementation/Upgrade	X	X	X	X
Training	X	X		
Hosting	X	SaaS by vendor	X	SaaS by vendor



For more information, contact Orasi today.

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