



# Qentinel Pace™ Product Description

**Qentinel**

Robotic  
Software  
Testing

# THIS DOCUMENT

This document is the product description of Qentinel Pace™ robotic software testing solution. It is meant for those who want to have a general, high level, yet comprehensive overview of Qentinel Pace™. The document is dated 20th of September 2019.

## PRODUCT OVERVIEW

Qentinel Pace™ is a next generation AI powered cloud based robotic software testing platform. Qentinel Pace is available as a SaaS product with a service-license agreement and is accessible over web, so you don't have to install any local software.

On one hand, it revolutionizes your software development by curbing typical quality assurance bottlenecks: slow feedback cycles, high maintenance costs, poor scalability and zero to

minimal intelligence. And on the other hand, Qentinel Pace ensures the success of your business by assuring the quality of your business critical E2E processes, in the ever-growing ecosystems.

Users of Qentinel Pace are organizations that either develop software or deploy information systems. They want to deliver on time with high quality and ever-improving productivity. They often struggle with **these challenges**:

### Deliver value fast

How to deliver a product, adding a releasing value frequently while improving quality, productivity, and predictability? This DevOps challenge is typical for R&D, product or project organizations where complexity is in the content.

### Assure end-to-end business processes

How to keep the digital business processes running with heterogenous systems from different sources and unpredictable updates? This business operations challenge is typical in IT and digital business organizations where complexity is in dependencies.

With Qentinel Pace, you can utilize the full potential of robotic software testing, which is the future of test automation. A highly scalable, easily maintainable and extremely productive solution, which not only accelerates your speed of innovation and go to market, but also provides you with a holistic view of your DevOps health and analytic predictions.

Qentinel Pace addresses these challenges by providing a robotic testing platform where different robots and suites can be deployed, controlled, and maintained in the cloud through a single, consistent interface. It contributes to productivity through **three main paths**:

1. **Scalability** in capacity & platforms
2. **Efficiency** in complex environments
3. **Predictive analytics** for DevOps

Automating software tests is one thing, keeping the tests running and up-to-date is another. There exists a wealth of handy tools, even free ones, that enable a skilled software professional to do

small miracles in test automation. However, these tools tend to fall short when you need to scale them up for several teams or maintain a mass of test cases. It is typical today that as much as 70%

of test automation effort is spent on developing and maintaining the tools and environments and only 30% is spent on actually automating the tests. Qentinel Pace turns these ratios upside down: with Qentinel Pace the effort is spent on creating more and better tests rather than struggling with the maintenance of the tools and environment.

Managing a software investment is still like magical art. Software is intangible and invisible – and so is the process of creating it. Qentinel Pace eliminates the mystery by making quality and productivity visible and actionable. Qentinel Pace collects data from different phases of your DevOps and provides you with a holistic view of its quality. All data is used to find out what are the most influential predictors of the software quality, what

is the prediction and the confidence level of the prediction. All the information is presented as easy-to-digest visual and actionable insights. In addition to Qentinel Pace’s own data of test runs, Qentinel Pace integrates with a large number of common development tools, such as Jira, VSTS, git etc.

Qentinel Pace was made to scale. Today, the largest Qentinel Pace robot deployments run continuously tests that would consume the effort of more than 500 human beings full time. Smallest deployments, on the other hand, run just a few hundred hours per year. Qentinel Pace can scale both ways. Qentinel Pace can be used as a stand-alone robotic testing platform or as a test automation engine in a software toolchain.

## USERS

Qentinel Pace users are usually medium-to-large software and IT organizations that want to have better control of their quality and improve their productivity. Following are a few illustrative examples of Qentinel Pace users.

### **Peter, CIO of a financial services organization**

Peter is in charge of a large portfolio of information systems of different age and type. Some of them are modern and actively developed using agile methods while some others were last touched upon ten years ago. Obviously, a lot of data is involved, too. The systems vary from complex and large back-end systems to tiny mobile applications. When it comes to quality, Peter has three priorities: data and transactions must be correct, downtime must be minimized, and the costs of operations and development must be kept in control. Peter uses Qentinel Pace to automate the regression testing of his systems so that whenever something is changed somewhere he can be confident that everything still works. Qentinel Pace has helped Peter increase the total amount of testing by more than 5 000 % while cutting the cost of testing to a half.

**Downtime must be minimized.**

**Keep costs of operations and development in control.**

**Prevent production halts and faults caused by malfunction in the systems.**

### **John, VP of Engineering in industrial automation business**

John’s company provides industrial processing products and technologies that are used in manufacturing and logistics facilities. John is responsible for the software of these products and their control systems. Customer implementations are often highly customized and put together from different products and components of John’s rich portfolio. Quality requirements are high because malfunction in the system could halt production or cause production faults in John’s customers’ plants. John uses Qentinel Pace to tests all product software before it is released but also to run customer-specific test suites that ensure that new software versions or updated products work correctly in the customer’s production system. Without Qentinel Pace John couldn’t keep up with quality assurance load caused by all those different product versions and their combinations.

## **Liza, CTO of digital news platform company**

Liza's company provides a cloud-based platform for digital news publishing. Obviously, the platform also includes subscription management, billing, advertising and the other necessary business functions. To keep up with the market speed Liza has adopted DevOps. Her teams build new software versions several times a day and are ready to release new functionality any time. Scheduled production releases take place once per week. Qentinel Pace is the test automation platform in Liza's tool chain. The robots run test for single developers and teams as well as integration tests for the whole system and system acceptance tests with external integrations. With Qentinel Pace Liza has enabled extremely fast QA feedback to developers, cutting wait times and enabling early detection of defects. Moreover, Liza's developers now spend their time creating code for the product instead of developing and fixing test environments. Liza has been able to use testing professionals without programming skills to automate the tests. Not only that, Liza has excellent visibility on their DevOps health, and she leverages on the predictions to take pre-emptive actions, should the need be.

**New builds  
of software  
versions  
several  
times a day.**

**Ensure  
integrity  
of product  
data and  
transaction  
data.**

## **Matt, Business Program Manager in industrial equipment manufacturer**

Matt's employer is a global provider of industrial equipment. Matt is responsible for transforming their spare parts business. Spare parts are sold and ordered online and delivered and installed by local certified service companies. The product catalogue has tens of thousands of lines for different spare parts and their variants for different product generations and geographies. John uses Qentinel Pace to run automated tests on his "web store" application and its integrations with SAP and Salesforce to maintain confidence in code after changes. However, he has found Qentinel Pace necessary for validating his data. Qentinel Pace runs every day thousands of tests to check that the product data and transaction data in the different systems remains consistent and that each reseller has the right information about the parts they deliver.

## **Tina, VP in a telecom carrier**

Tina is responsible for the billing and provisioning solutions in telecom carrier company. Her software is put together from a commercial billing platform, several legacy applications, and large amount of code developed by her team. She has total 6 software teams working on different parts of the system. Tina wanted better quality and higher productivity. She must be able to respond fast to new requirements from the business. Lack of transparency is one of Tina's main concerns. She lacks first-hand information on the quality of the software and on the performance of her teams. With Qentinel Pace Liza has doubled her release speed and reduced her QA costs. This is possible because Liza's developers write now production code instead of test code and because they get immediate QA feedback after each build. Liza's real thrill, however, is that Qentinel Pace provides her with an accurate real-time view on quality enabling her to make wise and timely decisions on where to put her attention and her teams' energy.

**Need to  
improve  
quality and  
productivity  
in complex  
legacy IT  
environment.**

## KEY FEATURES

### Ready to run test infrastructure in the cloud

Qentinel Pace is fully deployed in the cloud. This means you don't need to invest in hardware and its maintenance. You'll never run out of test execution capacity. With Qentinel Pace it takes only few seconds to create a robot and you are all set to run your first automated test case. Qentinel Pace makes you free from worrying about test infrastructure procurement, deployment and maintenance so you can focus on more productive tasks. You can execute infinite number of test suites in parallel 24/7. Always on and always available. And as much as needed.

Once you have Qentinel Pace, you can create multiple projects and provide project specific access rights to people within your organization or out of your organization. This gives you an inbuilt infrastructure to support many teams, including cross-organization.

### Scales across platforms, test types and capacity

Qentinel Pace scales to the needs of large software systems and organizations. **You can test different target systems and platforms: applications running on different websites, native OS and mobile (android or iOS).** Qentinel Pace fits for all kinds of testing needs from development to deployment. It is productive solution across the organization and teams. You can also easily utilize existing test cases developed for other frameworks.

A core concept of Qentinel Pace is a robot. A robot is a cloud entity that knows a certain number of suites. If you need to test in high volumes, you may invoke a number of robots to run in parallel and ask them to run all their tests or selected suites only. With the help of machine vision, you can automate native desktop applications, such as SAP, as well as web or mobile applications, such as Salesforce. You can schedule your test runs ahead to fit your own schedule.

### Superior test design concept with PaceWords™

Test case design in Qentinel Pace is based on PaceWords, smart and simple command words that the test designer uses to describe the tests. They resemble the natural language and are easy to use even for people that have no testing or programming background. Majority of test cases can be expressed using only half a dozen PaceWords. PaceWords are a carefully balanced compromise between programmatic test automation and test automation based on visual tools. Programmatic tools provide great flexibility but require programming skills and are hard to maintain. Visual tools provide easy test creation, but the tests are very hard to maintain. PaceWords were designed to balance ease of use, power of flexibility, and excellent maintainability. **Same test can run across different web browsers, mobile, and native applications.**

Maintenance costs tend to increase a lot when automation coverage and number of cases increases. That is why we have put effort on making it minimum. Our largest customer has 18 000 automated tests with 700 000 test steps. These automated tests are executed 500 hours every single day. Sounds heavy, but is simple:

- Tests have been automated by using PaceWords methodology
- This allows 20 key words to cover 80% of the test steps.

Compared to some other open source and recording based test automation frameworks, maintaining tests with PaceWords is 5 times more effective: it takes less than 15% compared to your average 75% of effort spent on maintenance.

## Predictive Analytics for DevOps

DevOps teams need to build quality in and invest in automating integration, testing and deployment to obtain continuous feedback on functional and technical quality. How do you know if you have “quality built in”? In Qentinel Pace, predictive analytics for DevOps uses data from several sources and uses this timeseries data to model the whole software development stack. All data is used to find out what are the most influential predictors of the software quality, what quality prediction is and confidence level of the prediction.

Quality Intelligence® is measured, actionable information about quality. It provides the modelling, analytics and predictive functionality and technology included in Qentinel Pace. Quality Intelligence helps you measure and figure out what may be hindering you right now and what you can do to improve your performance. You get significant “no-nonsense” insights on how your DevOps pipeline is performing and it helps you to find the right levers to pull to prevent production incidents. Qentinel Pace provides you holistic view of your product and process quality.

## Software tool-chain integration

One may use Qentinel Pace as a stand-alone robotic testing solution – nothing else is needed. If you already have a continuous integration pipeline up and running, Qentinel Pace plugs easily in. If you use Git as your source code and test case library, Qentinel Pace will, too. If you use Jenkins, Bamboo, or some other tool to control your DevOps flow, it may control Qentinel Pace, too.

As described above, Qentinel Pace collects a wealth of data and visualizes it in its dashboards. If you want to use Clickview, Tableau, or some other data visualization tool instead, just do it using the data warehouse API of Qentinel Pace. Or vice versa, if you have data sources that provide useful information to be analysed in the Quality Intelligence® dashboard of Qentinel Pace, just push it to Qentinel Pace using the data warehouse API.

## Test data variation

Sometimes, especially when working with databases and data validation, one needs to run the same tests over and over again with many different data sets and data combinations. Support for data variation is built-in in Qentinel Pace.

## Traceability and visual transparency in test results

A manager may be happy with a single KPI, the Quality Intelligence® index, but the testers and the developers need all the details. Qentinel Pace not only stores the test logs for each execution round, it also stores screenshots of a failed scenarios and entire video recordings of test runs. Is it not great that you can go and watch the recorded videos of what robots have been up to? All this visual testing history is accessible in the test logs through video/snapshot recordings.

## Re-use of legacy test cases

Most organizations have some test automation legacy. With Qentinel Pace you don't need to throw your existing test assets away. If you have used Cucumber, Selenium, or Robot Framework, for example, you can import your tests in Qentinel Pace and keep using them while building more tests with Qentinel Pace.

## Production monitoring

Qentinel Pace works equally well for release testing and post-release testing. Qentinel Pace uses telemetric data to monitor the run-time behaviour of the software. You may also run regular scheduled tests in the production environment and monitor e.g. the response times of the system. The Quality Intelligence® Heatmap view tells you at a glance where and when you may have performance issues.

## USAGE-BASED LICENSE

The price of Qentinel Pace is usage-based. You pay for a SaaS subscription and the price is based on your consumption of test execution capacity. Consumption is measured in robot hours: typically, one robot hour corresponds to tens of human hours. The difference between robots and human beings is that robots are cheaper, they work tirelessly, and they rarely quit or get sick.

There is a suitable size for every use. Starter license is an easy way to get started if you don't yet know how much robot capacity you are going to use. Starter gives you 365 robot hours to spend during the next 12 months that is one robot hour per day, on average. 365 hours is a lot: depending on what kind of tests you run, it corresponds to 1 000 to 10 000 human testing hours.

Once your test mass grows, you may upgrade to a higher capacity subscription. These are all monthly subscriptions. You may cancel the subscription at any time you like – but the chances are you won't.