



the magic of E2E testing


OFFER


PRODUCTS & SERVICES 2024

Software | AI service | Testing service | Portable testing lab | Hardware

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Our business: E2E test automation

QiTASC has developed an all-in-one end-to-end test automation environment. All our products – software, hardware, remotely accessible lab and AI service – integrate seamlessly into each other.

Fields of expertise:

Acceptance Testing

Backend Testing

Tariff & Charging
Verification

Core Network Testing

E2E & Migration Testing

IFRS Testing

NW Element Simulation

IoT Testing

Protocol testing

Our main goal is to minimize test case maintenance and the time spent on test case documentation. We help digital companies automate their environment, processes and products. Our testing services are provided to manage and run tests for you. For this, we have many abstraction levels and various layers which makes it easy to integrate or extend our framework.

The QiTASC offer includes everything a digital company needs to operate high-quality end-to-end test automation.

As QiTASC, we have built a strong reputation with operators and integrators, especially in telecom and IoT. Constant development results in an offer which strives to integrate new trends and technologies, such as a portable lab for a smart or an AI package for different-sized companies.

We are a family company, with six family members actively working for QiTASC. Together we have developed a whole framework covering nearly all aspects of testing including hardware-related aspects, integration approaches, test automation processes and ways of working as well as functional and non-functional testing. We also focus on access, security and remote control. Our scripting language is simple but powerful.

Founded in 2005, we are an Austrian software company with its main office in Vienna and an additional one in Düsseldorf, Germany. Our international team of experts operates from Europe and Asia.

What our offer stands for:



All-in-one solutions

The simple but powerful software intaQt® is easy to use, provides many features and has a lab that users can interact with 100% remotely. intaQt® comes along with complementary tools and covers many technologies.



Customer loyalty

As a family business, we have a lean management. Projects are realized efficiently, agilely and pragmatically, while our size allows flexibility and a customer-oriented mindset. This forms the basis of collaborations that last for years.



Clarity

Our clear documentation helps you become comfortable with our tools as soon as possible. Any questions that arise are dealt with by our team of experts and the AI testing service QAIA.



Quality

Our offer improves your testing approach, which helps you to improve the quality of your processes and products. It positively affects your profit, brand and customer loyalty.



Prediction

Our automated analysis of the results makes your project transparent, so you can take the right strategic decisions.



Efficient use of time and money

With our all-in-one solution, we help you to complete your projects faster, cheaper, and with the use of the newest technologies.

Benefits of end-to-end automated testing in numbers



Efficiency

5x more test cases executed than manual tests in same period

Automated Provisioning

70% less time spent on preparation and configuration



Accelerated Analysis

40% less time spent on defect analysis



Operation Gain

24/7 test cases can be reused and run permanently

Automated Reporting

80% of reporting work is automated

AI Agent

15% performance gain with AI agent supporting employees

Health Check & Lab Verification

25% better lab quality



Fast Integration

In **5** days integration is complete

Effectiveness

60% gain in time & resources



Effects of end-to-end automated testing on a digital company

Operational problem	Effect on the product	Solution from end to end-test automation
Regression issues	Configuration or codebase changes can introduce unexpected issues or compromise existing functionality.	Automated testing helps counter regression issues by quickly running a suite of tests to ensure that new changes do not negatively impact previously working features.
Faster feedback	Delays in identifying and fixing issues can slow down the development process.	Automated feedback allows developers to detect and address issues early in the development cycle. This accelerates the overall development process.
Consistency and repeatability	Manual testing may lead to variations in test execution, making it difficult to achieve consistent results.	Consistent and repeatable test execution with automated testing eliminates the variability introduced by human testers. This consistency contributes to the reliability of the testing process.
Increased test coverage	A poor testing strategy or slow manual testing may not cover all possible scenarios, leading to gaps in test coverage.	High-quality automated testing is designed to cover a wide range of scenarios. It increases the likelihood of identifying potential issues across different platforms, browsers, and environments.
Resource efficiency	A team of only manual testers requires a lot of manpower. Running all tests manually can be time-consuming and may cause delays. Deadlines are missed.	Automating repetitive and time-consuming testing tasks enables the efficient use of resources. The time gained can be spent on more complex and exploratory tasks.
Continuous integration and deployment (CI/CD)	Integrating new code changes and deploying software often causes integration issues.	In CI/CD pipelines, automated tests are run automatically whenever new code is committed. This ensures that changes can be safely integrated and deployed.
Cost reduction	Manual testing or conventional automated testing software can be costly in terms of time and resources.	High-quality automation reduces costs over the long term by improving efficiency, allowing faster releases, and minimizing the need for extensive testing procedures.
Improved test accuracy	Human testers may make mistakes, leading to inaccuracies in test results.	Automated tests execute predefined steps precisely, reducing the risk of human error and providing accurate and reliable test results.
All-in-one	Integration of a scattered tool environment always requires more resources and carries the risk of blind spots.	At QiTASC, you create your project for your end-to-end tests in which all activities are supported, from development to reporting. You get a combination of smart hardware, software, AI and best practices.

Customers

International customers appreciate the high-quality products and services, as well as the constant development provided by QiTASC. They profit from the detailed analysis and deep dive into the possibilities of increasing the quality of their digital product with our offer for end-to-end test automation.

Usually, they run businesses in the telecommunications, MVNO, IoT or smart home sector. Although not listed yet, customers from the financial industry and payment services in their business (i.e. online shops) could also benefit hugely from the QiTASC solution.

Below, our current customers are listed, followed by a rough idea of how different industries benefit from testing with our end-to-end test automation solution.



Why digital industries benefit most from our offer



Telecom

Testing in the telecommunications business is mainly divided into BSS and OSS testing.

BSS testing focuses on business-critical use cases and OSS testing mainly on communications- and network-specific test cases. We work in both areas and offer automation of PoS, tariff selection and provisioning requests towards OSS. In OSS, we do provisioning and network element testing with different network types, services and physical devices.

QiTASC has experience with all major suppliers and knows the technology and systems.

Suppliers provide new software releases once a year. With agile development release cycles, shortened testing becomes essential.



IoT – Internet of things

The software behind the interaction of IoT systems, such as smart homes, is based on a continuous integration process which constantly adds new features to the code.

We test any devices which can be used as a graphical user interface to communicate with the IoT system. The framework finds any bugs and checks whether existing features still work after new ones have been integrated.

The combination of our software and an IoT lab is capable of producing automated testing scenarios such as the use of a remote app in a smart home environment which checks whether all windows have been closed or the car has actually been locked. While our framework tests your code, you can concentrate on developing your actual IoT system.



MVNO

MVNO companies are part of the telecom industry. With years of experience and a framework in global use, we have collected a wealth of technology and system experience of all major telecommunications suppliers. Regardless of whether the use cases are protocol related, and/or charging related, and/or service related – our solution equips MVNOs to enhance operational efficiency, reduce costs, and deliver superior services to their customers.



SME – Small and medium-sized enterprises

SMEs can benefit from our testing infrastructure (QiTASC Test Services) that we offer online.

Another service is our offer to provide you with an AI agent customized to your needs.



Finance & charging

Financial data are clearly structured and harmonized, according to International Financial Reporting Standards.

We provide various methods to check huge amounts of data against existing specifications. These checks may be syntax validation but also data plausibility scans or file comparisons. We can individually adapt test cases to dedicated requirements.

By creating automatic test cases, large data files can be verified quickly and reliably, which saves a lot of time and resources for other accounting activities.

Offer: List of products & services

intaQt® supports all domains

Voice: 2G, 3G, 4G, 5G,
POTS, ISDN, WiFi, VoLTE
aut.

SMS, MMS, USSD
automation

Data usage automation

Automation of
provisioning & charging
verification

Web UI & app automation

IOT & 5G automation

CPE & device automation

Software

We run and continuously develop the end-to-end test automation software intaQt®. In addition, we offer 11 complementary software tools that optimize the automation pipe. They offer a range of features that allow users to execute and validate automated tests based on complex use cases spanning multiple domains.

Testing centre of excellence

A TCoE ensures expertise and resources for effectively testing complex technologies and their integration. We build the backbone for your TCoE, uniting innovation, security and excellence to one testing environment.

AI service

We integrate AI to any system. Our AI testing agent QAIA speeds up any testing process with intaQt® and supports your team.

Testing services

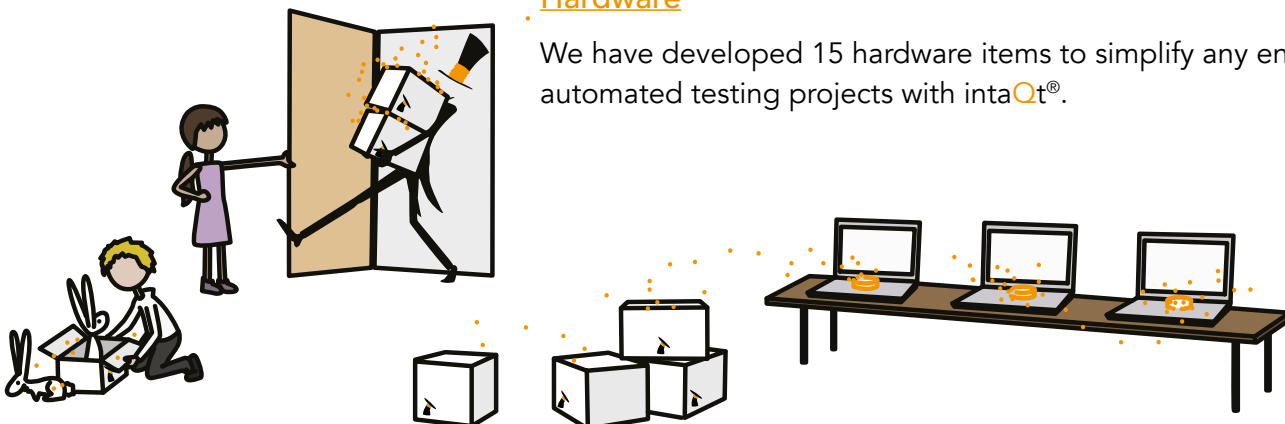
A testing team and project management support integration, provide configuration, develop and implement test cases and verification, and carry out reporting and defect management.

Portable lab suitcase

Carry your lab with you and run test cases anywhere in the world. This offers the opportunity for testing scenarios to which the location of the devices is relevant.

Hardware

We have developed 15 hardware items to simplify any end-to-end automated testing projects with intaQt®.



Software

Our [test automation software](#) inQt® is tailored to the needs of experienced engineering and testing professionals. It offers a set of tools for all kinds of test cases and covers remote test & control capabilities, automated evidence collection, automated verification and reporting.

inQt®, the heart of our framework

inQt® comes with different interfaces for test case development and a tool for automated verification.

We are constantly working on new features, fine-tuning existing functionalities, and developing new complementary software tools.

Easy to use, quick to execute and efficient to maintain

inQt® features a human-readable, natural English scripting language that can be understood by all project stakeholders and allows modification, reuse and maintenance of test cases without the need for programming skills. Tailored features are built in and ready to use.

Our tools allow horizontal scaling of automated scheduling, sequencing and parallel executions with full control of test resources. Test results and all evidence obtained are linked to the test report which can automatically be uploaded to existing life cycle or test management tools.

Various abstraction layers of the inQt® server ensure that very large test case libraries can be maintained and adapted with minimum effort to the rapid changes of environment and tested systems.

Places with inQt® installed:





intatQt

Runtime environment for test automation framework

Server and test interface

intatQt® lets you create, manage and run automated tests that reflect real-world scenarios, customer experiences and complex interactions with backend systems. At the touch of a button, intatQt® executes complex end-to-end testing scenarios quickly, accurately and efficiently.

The intatQt® audio service enables the automated testing of audio recordings, audio matching and speech channel monitoring in telephony test cases. This is especially useful for verifying IVR prompts, for audio recordings that subscribers hear or for assessing sound quality.

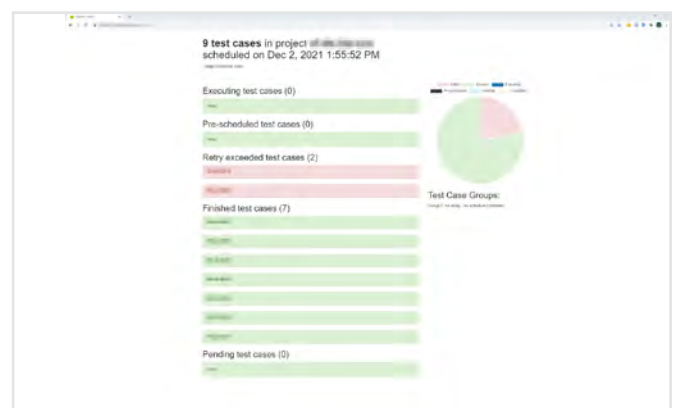
intatQt® UI Steps Language automates activities performed while using websites, Android & iOS apps and Internet of Things (IoT) devices. It includes extensive built-in functionalities for communicating with backend systems.

Our custom Steps Language allows users to create custom step definitions, models and functions, which are accessed and executed by feature files. This enables the seamless integration of complex technical specifications and external systems into the background so that test cases are as accurate and reflective of real usage as possible.

Intelligent scheduling service

The software tool sQedule is a resource-aware scheduler that schedules tests on intatQt® agents. sQedule then evaluates and allocates phones to test cases based on availability and priority.

sQedule always executes the maximum number of possible test cases by optimizing the test cases' properties and available devices. This increases the amount of testing while preventing failures due to unavailable phones or incorrect test case selection.





A series of tutorial videos supports the first steps with intaQt® studio. Ongoing, QAIA gives quick and accurate answers.

Test case development UI

[intaQt studio](#) is a test case development environment. It is the convenient IDE for writing and executing intaQt® test cases. It includes the most important and useful features required for robust and easy-to-understand test cases. It provides features such as code suggestions, navigation, inspections and interactive control of remote phones.

With intaQt studio, testers write clear test case “feature files” using our natural-sounding test language that consists of hundreds of built-in predefined steps.

Built-in steps apply to common scenarios in network and mobile testing, as well as web and app testing, and reduce the effort required to develop test cases. Intelligent code completion supports test case creation and development. Hundreds of built-in steps cover some of the most important activities in automated testing. Additional productivity and shortcut tools simplify navigation through intaQt studio.

```

1  Example scenario: Call Forwarding
2  Given an Android phone as A
3  And a Snom phone as B
4  And an Android phone as C
5  Then setup Call Forwarding from B to c.number
6  When A dials the number B.number
7      * within 30 seconds, C detects an incoming call
        from A.number
8      * after 5 seconds, C answers the incoming call
9      * after 5 seconds, A ends the call
10 Verify CDR for callForwardingsTC

```



Web-based User Interface

[intaQt web-ui](#) is a portal with a web-based user interface which offers the option of web-hosted test services. It is an alternative product to the locally installed intaQt studio which are both designed to develop and execute test cases. The main difference with intaQt web-ui is that a project’s admin can restrict specific users’ permissions.



conQlude

conQlude enables post-analysis of test run artefacts through seamless integration with other QiTASC products.

Reporting and issue tracking

conQlude is a centrally accessible, secure web interface portal that collects, manages and exports into Qt® test case run data and also includes automated bug and error tracking.

conQlude makes test data including reports, logs, media attachments and metadata available to all project users. This eliminates the need for spreadsheets as well as manually collecting test information and reformatting it for recognition by additional databases and services.

TEST RUN REPORT	TEST SUITE HISTORY	ERROR CATEGORY	UNASSIGNED REPORTS	
Test Run Report				
Test Name	Error Category	Tester	Start time	Duration
07.06.0070	Unknown	bot009	16.02.2018, 04:13:55	4 minutes
09.09.0519	Unknown	bot009	16.02.2018, 04:03:05	10 minutes
09.01.0062	CDR verification Failed	bot009	16.02.2018, 03:53:00	9 minutes
02.09.0008		bot009	16.02.2018, 03:39:54	12 minutes
02.09.0060		bot009	16.02.2018, 03:28:31	11 minutes
02.10.0101	Timeout Exception	bot009	16.02.2018, 03:20:15	8 minutes
02.10.0112		bot009	16.02.2018, 03:16:20	3 minutes
02.10.0121		bot009	16.02.2018, 03:09:44	6 minutes
02.07.0004	Timeout Exception	bot015	16.02.2018, 03:05:45	4 minutes
02.10.0144		bot009	16.02.2018, 03:03:57	5 minutes
02.10.0137	Unknown	bot008	16.02.2018, 03:03:14	5 minutes

Features for testers and project members

Access test reports from your entire team in a centralized location, track bugs and take a closer look at multimedia attachments, metadata and logs.

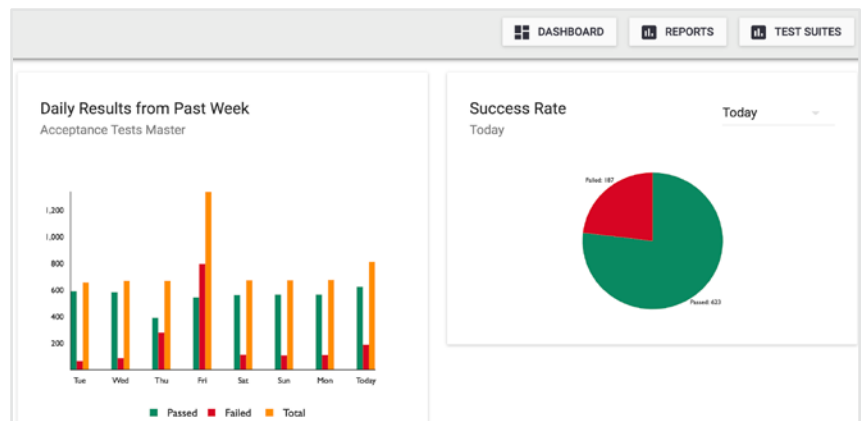
For example, the feature test run reports (see left) lets users view and review a project’s test reports and their metadata. Because conQlude collects test results and artefacts from

all members of a team, users can access reports and data from the tests they executed as well as those of their team colleagues.

Apart from review and verification, features also include attachments, bug and issue tracking, data export, as well as charts. As seen below, such charts visualize test data for a quick overview of your project’s progress.

Test managers have access to all conQlude features available to test engineers as well as configure test categories, approval workflow, and error category configuration.

conQlude features for administrators include administer project settings and external integration configurations.





Part of the mimiQ software is mimiQ load, a load generator.

Interface testing tool

mimiQ is a general-purpose interface testing tool. It is a test script executor with built-in support for http and diameter communication. mimiQ supports both test scripts and load testing. It has been used for http testing for 5G networks. As part of a test case, multiple mimiQ scripts run simultaneously, allowing complex scenarios such as simulated nodes and callbacks.

mimiQ is extremely fast and has targeted features for load testing and a scripting language. It provides a templating engine so that scripts can easily load request/response data. Thanks to a very fast execution engine we can generate load and stress test scenarios.

Easy microservice testing

mimiQ provides powerful primitives allowing both querying and hosting of http/2 services. For example, with a single line of mimiQ script, a callback endpoint can be created. The address of this endpoint can be passed to a server, enabling mimiQ to check that the server uses the callback.

Simulation of network nodes

If you need to test a network, but not all the nodes are present, mimiQ allows simulation of network nodes. A mimiQ script can simulate a network node within a test case. When the real node is available, simply remove the simulation script and the test case will then use the real node.

```

charging_server.rhai
6
7 let request = env.serve_http();
8
9 assert(request != ());
10
11 println("Request uri: " + request.uri);
12
13 reqBody = request.get_json_body();
14
15 if reqBody != () && reqBody.value("notifUri") != () {
16     PCF_notifUri = reqBody.value("notifUri");
17 };
18
19 if "/update" in request.uri {
20     sendRequest(env, request, PCF_notifUri);
21 };
22
23 if "/nchf-convergedcharging/v2/chargingdata" in request.uri {
24     sendResponseN40(env, request);
25 };
26
27 if "/nchf-spendinglimitcontrol/v1/subscriptions" in request.uri {
28     sendResponseN28(env, request);
29 };
30 }
31
32 fn sendResponseN28(env, request){
33     let headers = #{};
34     headers["Content-Type"] = "application/json";
35     headers["Location"] = "SpendingLimitControl-12345";
36 };
37 let args = #{};
38 let responseCode = 0;
39 let body = "";
40 if request.method == "POST" {
41     responseCode = 201;
42     let subID = env.get_str("subscriberId");
43     args = #{};
44     args["subscriberId"] = subID;
45 };
46 body = env.template("mimiq/templates/http/dataCharging/spending_limit_control_cre");
47 }
48 if request.method == "DELETE" {
49     responseCode = 204;
50     args = #{};
51     body = "{}";
52 };
53 request.respond_with(responseCode, headers, body);
54 }
55
56 fn sendResponseN40(env, request){
57     let headers = #{};
58     headers["Content-Type"] = "application/json";
59 }
    
```

List of additional software tools

The previously introduced software tools are accompanied by the ones below. All of them interact in order to optimize the testing workflow.



intaQt client

Command Line Test Case Development

intaQt® client provides a customizable way to execute test cases and projects, including XML configuration files, via the command line.



intaQt verification

Verification

Verify hundreds of parameters and metadata of a test case within seconds during a test or after data has been collected. intaQt verification checks device, subscriber and event details, internal infrastructure, legal requirements, financial characteristics and more.



restriQt

User management

restriQt is an authoring and authentication tool that manages users and their roles and provides access to other software products, services and resources. Test resources can be assigned to individual projects and testers.



cheQ

Trace Comparison & Verification

Compare two traces in an intelligent, automated way. Trace verification can be customized by packaging of trace data and correlation rules, simply edited in the tool (copy/paste). It enables a record of previous comparisons to be kept.



cdr-linQ

CDR Web Service

The web service for collecting, filtering and presenting CDRs which have been generated by test cases. They are collected and decoded. cdr-linQ shows two CDRs and compares them.



colleQtor

Evidence Collector

colleQtor is a service for collecting evidence which comes as a stream and is then provided to the test case for verification purposes.



reloQate

SIM Card Detector

reloQate is a background service for checking and mapping SIM cards located in a SIM array/ SIM Mux to a dedicated phone.



reQord

Secure event service

reQord captures audit events created by use of the intaQt® framework in an encrypted database.



exQavate

Security connection

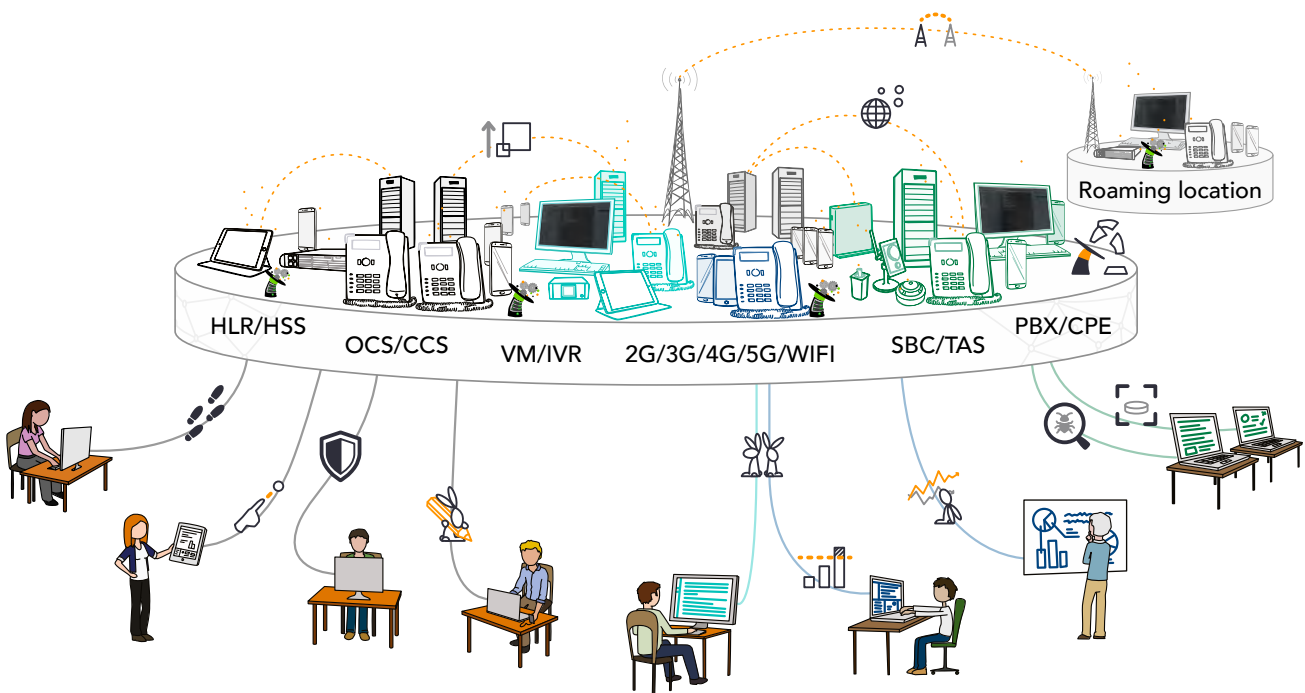
Provides a secure connection between test sites, test Qt, and QiTASC hub.









Testing Centre of Excellence

A Testing Centre of Excellence (TCoE) is a specialized unit within a company that focuses on improving the quality of services and outcomes. It is run by a dedicated team of experts whose sole job is to make sure that the testing of services is done well, consistently, and efficiently. This team makes use of dedicated hardware, software, and processes.

QiTASC provides a framework which can build the backbone of any Testing Centre of Excellence.

In telecommunications and IoT, a TCoE plays a crucial role in handling the complexity and diversity of devices, networks, and applications, ensuring interoperability, performance, and security across various platforms and technologies.



-  Remote control
-  AI analysis & defect resolution
-  Test automation environment
-  Multi tenancy
-  Reports & project KPIs
-  Trace & evidence collection
-  Authoring environment
-  Integration to NE via interfaces
-  Simulation environment
-  Security
-  Roaming site integration
-  Scalability
-  Monitoring

Key topics covered by a TCoE from QiTASC

Comprehensive testing coverage

Utilizing the QiTASC test automation framework to ensure extensive testing of all telecom aspects, from network to user experience with pre integrated test infrastructure and support of test automation, documentation tools, verification features, reporting channels and logging for AI analysis.

Quality assurance

Upholding superior product and service quality, QiTASC detects bugs and enhances system efficiency.

Testing automation

QiTASC accelerates the testing cycle, minimizes errors, and standardizes outcomes through automated tools.

Innovation in testing

QiTASC continually adopts innovative testing techniques to navigate the telecom industry's evolving landscape along with processes and best practices to meet customers requirements and enable sustainable services.

Scalable and flexible solutions

The QiTASC framework's design enables flexible and scalable testing for diverse project demands. Multi tenancy features make it easy to manage sub-projects.

Cost-efficiency

QiTASC's cost-efficient testing strategies ensure optimal use of resources while maintaining quality. Reduced testing costs thanks to maximum automation and AI integration, with improved quality and accelerated time to market.

Regulatory compliance and security

With QiTASC, telecom data security and regulatory adherence are guaranteed.

Real-world performance testing

QiTASC tests under realistic conditions to assure system robustness against various stressors.

Expertise and specialization

QiTASC provides seasoned professionals adept at the latest telecom testing practices.

Continuous improvement with feedback loops

QiTASC champions ongoing enhancement and provides constructive development team feedback.

Customer-centric approach

QiTASC prioritizes the end user, crafting tests that mirror actual customer behaviour. Communication and collaboration are improved by smart test case language and a framework of integrated useful tools and services.

Risk management

QiTASC identifies and mitigates potential software and network deployment risks.

Seamless integration testing

QiTASC ensures cohesive telecom system interoperability.

Data-driven insights

Leverage QiTASC's data analysis to inform performance improvements and user experience enhancements.

AI service

Our [AI service](#) increases the efficiency of your business with AI. Your future AI assistant will speed up customer communication, support your team with up-to-date knowledge, accelerate document based processes and analyse business data automatically.

Not a chatbot

Unlike an ordinary chatbot, the AI model learns with every answer and is maintained automatically. That way, it forms an intelligent support in data-driven processes without the need for ongoing maintenance.

The power of AI

The capacity of AI lies in the analysis and coordination of search results. The QiTASC AI service is defined by its intelligence creating said results.

Apart from research, AI intelligence can analyse large amounts of complex data, monitor developments and identify abnormal patterns. The user communicates with any AI assistant in human-like conversation via chat. No ongoing interaction is needed to update the knowledge-base, in other words the AI model that forms the basis.

Our AI offer

Companies that trust in our AI service either integrate their individual AI assistant or work with our existing AI test automation agent.

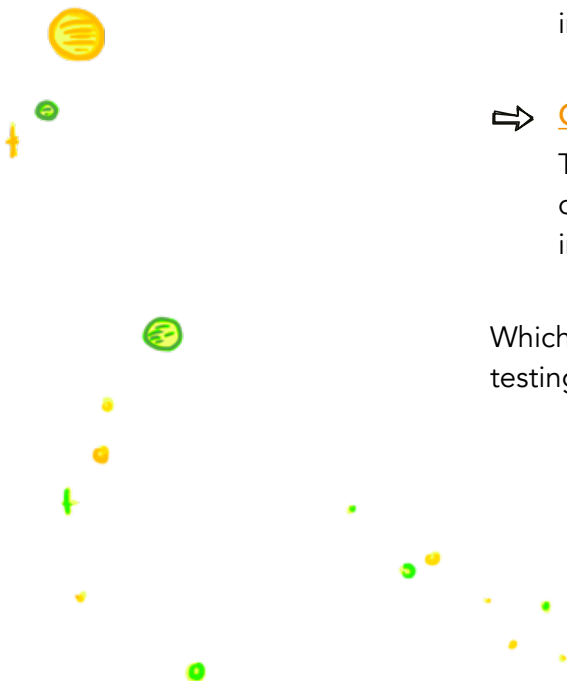
⇒ [AI assistant for a small business](#)

We integrate an AI assistant in your system. We build your individual AI model, feed it with relevant information and hand over your ready-to-start assistant.

⇒ [QAIA – AI test automation agent](#)

The AI testing assistant QAIA has full knowledge of our testing software intaQt®. Now, each tester has their individual testing specialist to talk to.

Which AI service is chosen depends on whether AI should support testing with intaQt® or other processes.



Benefits of AI



State-of-the-art service at low cost

Fast integration of an intelligent team member with long-term benefits. Always up-to-date with no follow-up costs or maintenance necessary.



Team support

Repetitive tasks and simple requests are taken over, reducing stress for your team which is free to focus on complex tasks.



Customer satisfaction

AI-powered chatbots and virtual assistants can handle multi-channel communication in any language, speeding up replies to customer requests. Fast availability, human-like communication and up-to-date answers increase customer satisfaction.



Higher security

An AI assistant analyses network data and user behaviour to detect suspicious patterns that may indicate fraud. It monitors network traffic in real time to detect anomalies and potential security threats, such as with regard to security, billing or phishing attempts.



Virtual network assistant

AI understands and supports service activation, plan selection, and account management.



Support of any business

The QiTASC AI service can be integrated in businesses of any size and in any industry.



Handling big data

The ability to decode information from text documents, as well as images or videos, increases productivity when handling large amounts of data.



Predictive maintenance

Analyse data and historical maintenance records to predict equipment failures.



Optimization by analysis

The AI assistant analyses billing data, identifies discrepancies and detects revenue leakage. Predicting customer behaviours helps in any decision-making process in management and marketing.



Faster data-driven processes

Having AI integrated in a business leads to significant efficiency gains in data-driven processes.



Document dispatching

An AI assistant improves efficiency and streamline operations when dealing with multiple customer channels. It intelligently routes customer care requests from platforms like emails, forms, SMS, mail and voice calls to agents.

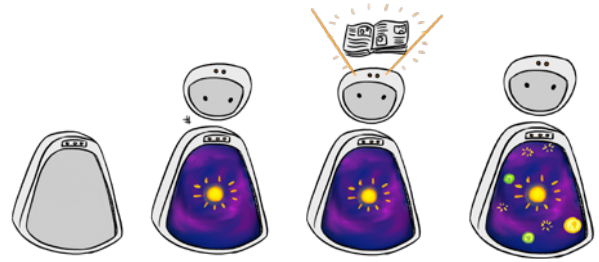


Document verification

AI can boost productivity and accuracy when handling a large volume of written documentation with customers. It categorizes content quickly and provides automated responses, leading to improved operational efficiency.

AI assistant for small businesses

An **AI assistant** is like an additional team member that you, your team and customers can chat with. It gives human-like, up-to-date answers. Its intelligence is like a universe, full of snippets of information. It is the same information which is given to your in-house team to keep them up-to-date.



What makes it different from an ordinary chatbot is its ability to combine those snippets to create new information and learn with every request.

Problems solved & opportunities

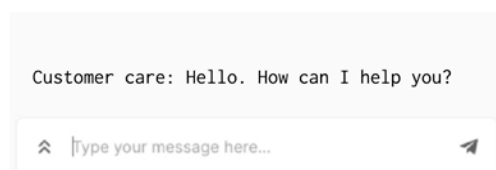
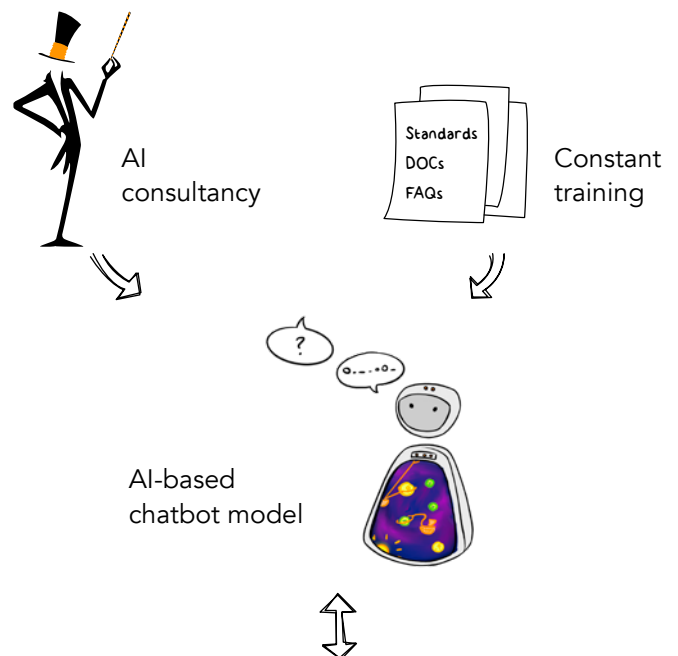
AI assistants can handle many tasks simultaneously. It can answer questions in multiple languages, solve problems with up-to-date knowledge, and make suggestions based on the analysis of data.

Our AI service identifies AI potentials and designs customized AI applications to meet your specific business objectives to optimize your services. This assures your network reliability, enhances your customer's experience and automates processes.

Use case: AI customer care support

First, we initialize and train the individual AI-based chatbot model. To make it an additional agent, we train it with your company data such as standards, docs and FAQs. Once up and running, it learns from the same information sources as your team does. No ongoing adjustments are needed.

The intelligent system behind the AI agent is constantly learning. It can closely resemble human-like conversation, which speeds up accurate answering mechanisms to end users. It therefore increases call centre quality and customer satisfaction, reducing call centre expenses and operational requests.

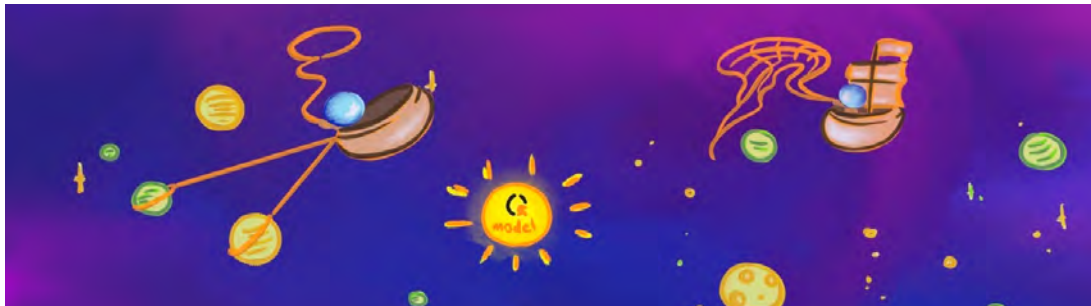


QAIA – AI test automation agent

QAIA is short for “[QiTASC AI assistant](#)”. It gives human-like, up-to-date answers with full knowledge of our software, hardware, lab and service.

Your testing team can communicate with QAIA on Teams as if it were an additional member of the QiTASC service centre team. It answers questions and suggests the scripting of individual test cases. Furthermore, it understands the complexity of telecommunications, IoT and finance, and can combine this knowledge with our testing experience.

QAIA works as an intelligent, virtual assistant with a main focus on automated testing. Its intelligence is like a universe, full of snippets of information about automated testing and the challenges of the industries we focus on. With every new feature, QAIA stores new information it can use to communicate with your testing team.



Testing & management assistant

Testers can ask QAIA any question about intaQt® and are guided through the process of testing with intaQt®. Apart from the testing team, management uses QAIA as a virtual assistant. In the lab, QAIA is a smart bot, performing some basic actions.

QAIA comes along with a valid intaQt® licence. It can control and generate test cases which can be used by testers as a basis.

Document management & verification

QAIA can read and analyse documents. It performs 3GPP documents analysis and comparisons with vendor documentation.

QAIA intelligently routes customer care requests from multiple customer platforms like emails, forms, SMS, mail and voice calls to agents. This

results in faster response times and enhanced customer satisfaction.

For document verification, QAIA can identify content and reply to customers even while handling a large amounts of written documentation. It categorizes content quickly and provides automated responses.

Analysis, verification, security, optimization

Our AI assistant carries out technical analysis, e.g. traces, CDRs etc. Apart from verification, it enables swift identification of suspicious activities and safeguards customers and profits. It can proactively detect and address fraud. This ensures network integrity, customer trust, and minimizes financial losses caused by fraudulent activities. Furthermore, it makes appropriate suggestions for business optimization by analysing financial data.

Testing service

[Hand over testing activities to the QiTASC team of experts.](#) We implement test requirements, develop and execute test cases, carry out test result analysis and defect or project management, and train and support your team.

Managed testing

Hand over full control of your project to us. For the duration of the test project, we provide you with software, test engineers, automation expert know-how, and other services as agreed.

Some of the key features of our managed testing service may include developing a risk assessment, defining the test scope, making sure that all requirements are implemented, converting them into test scenarios, or writing, executing and analysing test results.

Testing & retesting

As our customer, you hand over testing and retesting activities to us. This involves contracting our in-house test engineers to execute tests for you. You gain speed, accuracy and reliability, which are critical to getting your product to the market on time and without any defects.

This is especially useful when there is a temporary shortage of in-house test engineers or when the project needs additional support with running tests but does not require QiTASC to take full control.



Support & training for our software intaQt®

We provide both in-depth training to ensure your team can expertly use the test automation software products of the intaQt® suite as well as feature-specific training focusing on particular technical challenges.

Supportive information from:

- DoQumentation
- Tutorial videos on YouTube
- Website
- QAIA
- Manuals
- QiTASC team

Classroom-style:

This is recommended for new customers who purchase multiple licences for corporate use. After the sessions, test engineers have knowledge and experience of intaQt® that they can share with their colleagues.

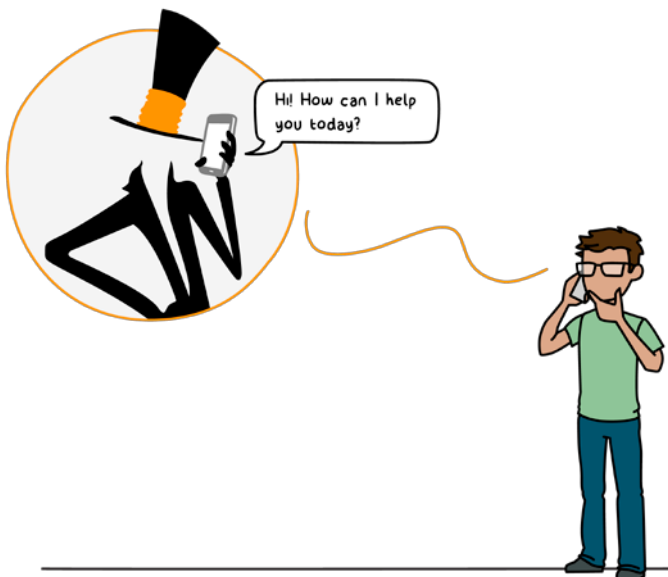
Feature-specific training:

This is recommended if you need to develop advanced skills for specific intaQt® features or want a quick (remote) training session when adding a QiTASC product to your workflow.

QAIA & personalised technical support

Our QiTASC AI assistant is there to support test case development or answer any question when troubleshooting. With a valid intaQt® licence, you can chat with QAIA on Teams.

Otherwise, our team of experts is available to help answer technical questions about our software or help you troubleshoot errors.



Hardware

We develop [hardware](#) with the aim of simplifying any automated testing projects with our end-to-end testing software [intaQt®](#). Some of the hardware items can be purchased separately, while others are more useful in combination.

Currently, we offer a total of 15 hardware items, which can be categorized as the following:

Additional feature:

Some of the telecom devices extend the life of mobile phone batteries.

This is done with the help of [intaQt®](#) by monitoring the battery level and charging them accordingly.

- ⇒ Telecom devices
8 items, such as IPS – [intaQt®](#) phone service
- ⇒ IoT devices
1 item: The IoT platform board
- ⇒ Holders
4 items, such as the shielded box tower
- ⇒ Casings
2 items, such as the phone case

Nearly all our hardware products are produced individually, tailored to the requirements of each project. Hence, there are often variations in the hardware tools for different sizes or numbers of devices.

As the development of hardware items is constantly evolving, the current list can be found online.





Audio hub

The audio hub carries audio signals to selected VoIP phones directly via the headset connector.



Phone hub v2

This unit combines up to 6 USB ports and 3 audio ports. It extends the life of its battery.



Bluetooth triple adapter

This device manages audio between phones to record and play back audio.



Phone hub v3

The phone hub v3 has 8 USB ports to connect up to 4 phones including their audio and 4 SIM MUS adapters. It monitors power consumption.



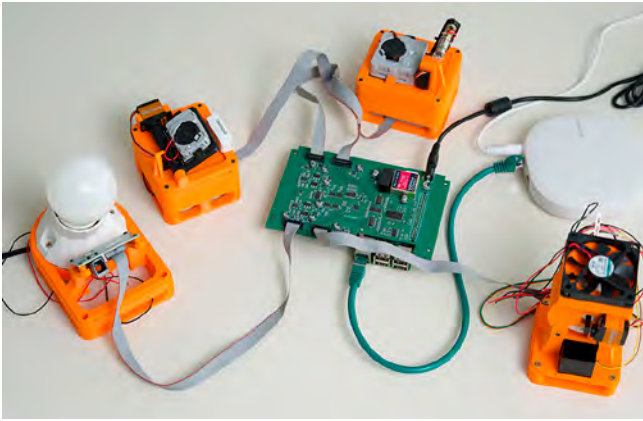
Single phone adapter

The tool can connect a phone to a SIM adapter, record and play back audio.



SIM multiplexer

The SIM multiplexer can connect up to 8 SIM cards to a single phone, including audio via Bluetooth. It monitors power consumption.



IoT platform board

The IoT platform board creates an IoT setup in a testing lab, offering the functionalities that are needed to run IoT devices. One IoT platform board can be connected to up to 4 IoT devices.



Phone hub holder

A version of the phone hub holder is available for one single phone hub and a Bluetooth triple adapter which can be placed on a flat surface.



Phone holder

The phone holder is a rack for arranging up to 10 mobile phones and up to 3 phone hubs for heat prevention, air circulation and a better overview.



Shielded box tower

The holder stacks a large number phones and SIM MUS adapters in a clear arrangement and with specific dimensions inside a shielded box.



Phone claw

The phone claw holds phones. Its size can easily be changed without the need for special equipment and can be fastened on a flat surface.



Phone case

A phone case covers a mobile phone to prevent it from damage. It can be mounted on flat surfaces. The opened screen enables interaction.

Portable lab suitcase

The opportunity to [carry your test automation lab with you](#) means test cases can be executed anywhere in the world. So far, we have developed suitcases for telecom, MVNO, IoT, and smart cities. Our suitcases are constantly being adapted and fine-tuned. With every new release, they cover more scenarios for different industries.

Below, you see the portable lab suitcase for a customer in the telecommunications industry. It has been designed as an out-of-the-box, plug-and-play production testing unit, inheriting:

- 2–5 phones
- an IPS
- phone hub
- and fan.

All devices are designed and implemented individually and placed inside a water- and fireproof suitcase. When they arrive, they are already wired and can be used immediately. intaQt® is already installed, the systems are configured. Just insert the SIM cards, connect it to power and LAN and GO!



How to purchase

Purchase our innovative test automation software, hardware and AI services to level up your end-to-end testing. Our relentless pursuit of the highest standards led to our all-in-one solution consisting of a software suite, a lab for remote execution, an IoT setup, a portable lab, AI service and a testing service.

A package for every business model



Software

Buy an intaQt® licence to develop and run your test cases.

SOFTWARE package includes:

- A working code base
- Training and support from the development team



Hardware

Buy or rent our innovative hardware solutions for your lab. With the portable lab in a suitcase, you can carry your lab with you.



Service

With a valid software licence, you can rely on our AI service or let our testing team take over testing for your project.

SERVICE includes:

- A working code base
- Training and support from the development team
- Analysis, development and execution of required test cases



All in One

Software, hardware, AI service, testing service, consultancy – everything you need for your project.

ALL IN ONE includes:

- A working code base
- Training and support from the development team
- Analysis, development and execution of required test cases
- Portable lab in a suitcase
- Individual lab adaption
- Creation of your Testing Centre of Excellence

"Quality is never an accident.
It is always the result of intelligent effort."

(John Ruskin)

Get in touch!

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