HIGHER FASTER FURTHER

the motto of a modern IT mindset

We will get you ahead of the game:
ConSol Consulting & Solutions Software GmbH

What We Do

Cloud Computing: Public, Private, Hybrid or Multi: Together, we evaluate your cloud readiness and we will be at your side throughout the entire transition process. Using cloud-native apps, we will continue along your path, developing software at home in the cloud. This way your IT resources become scalable to the max, available, and controlled by you.

Software Architecture: You want to modernize parts of your IT or renew your entire IT system landscape? We use the proper technologies and methods to ensure that your system meets the highest requirements and will be perfectly prepared for innovations.

CI / CD: Continuous Integration und Continuous Delivery aim at a stable high-availability operation. Each phase in software development can be automated and interface errors prevented from the start. Therefore, new functions and features can be delivered faster and error-free.

Web Application Development: You will be one step ahead using modern, flexible and highly available Web applications. Rely on 30 years of expertise and our experts will come up with the perfect solution for giving you the edge.

Test Automation & Monitoring: Count on the comprehensive ConSol test management and get your software release-ready as fast as possible – since a smoothly running software is securing your business value. Also, open source monitoring will make your business IT high performing at all times.

Becoming agile

Introducing innovations, establishing a new culture, reducing costs, making good past omissions, or to position oneself more clearly in the competition: Most change processes start with companies at a strategic turning point. In 2018, ConSol Consulting & Solutions Software GmbH chose an agile organization model and restructured accordingly.

We talked to Michael Beutner, CEO at ConSol Software GmbH, about the ConSol change project.

What persuaded your company to take a strategic turn?

Until early 2018, the divisions marketing and sales were separate from the delivery division. Over the years, it became apparent, that this approach didn't really work for us. There were too many discrepancies and frictional losses in day-to-day business. At the same time, there were not enough impulses for further development of the company's current service portfolio. This was our reason to opt for transforming our organization into a more suitable, more agile form.

Did you know right away in which direction you wanted to change?

Digitization is changing the framework for our business. Almost on a daily base, we have to deal with new and better technologies. Our customers are developing new business models much faster than even a few years ago. We have to address this and that is why ConSol has to position itself in a way that enables us to compete successfully in this environment for years to come. Our answer was looking for an organizational form that allowed us to develop more efficiently. We have to react faster and more flexible to new market requirements.

What kind of structural changes did you specifically implement and do they have a positive effect on the team culture and the frictional losses mentioned before?

We decided to divide ConSol in separate self-organizing business units. Each business unit has its own business plans as well as marketing and sales responsibility but also the freedom of design regarding new ideas, content alignment and investments. It was important to us to strengthen co-responsibility and co-management of the employees and to give them the space to try things.

This approach allows for making many decisions, close to the customer and close to the employees. This made our processes more dynamic – we decide faster and have become extremely more agile. Teams within the units and units among themselves communicate more and more directly. Feedback loops immediately lead to project progress. These are all important factors, considerably promoting the teams' intrinsic motivation. In the DevOps unit this becomes particularly apparent. Development and operations go hand in hand. We optimize processes with a high degree of automation, minimizing the error rate. Even before the change, ConSol work ethics have been characterized by trusting the individual. Still we kept developing in this aspect by aligning our culture with modern, agile work practices.

I consider the decision to bring in innovation and implement it in the company as an important factor for future success.

From your point of view, what were the most important success factors in this change project?

The preconditions for executing the change were already existing. We knew exactly what agility was all about and that it was possible to interlink it with our company's philosophy. We did not have to reinvent the wheel but could assume already existing and functioning parts. We succeeded in defining an agile organization that suited us.

The changes we made were very well prepared. Many employees already had years of experience with agile methods. Of course, this couldn't be transferred one-to-one, but made it much easier to implement the new structures and processes in the company.

Trust: The company owners as well as management and the key-players were convinced of this change and trusted it to work.

The company's willingness to change. As already indicated, there was some friction before 2018 and therefor there was motivation in the company to bring such change about. We were fortunate to have employees interested in taking on responsibility and in designing and that definitely helped to realize the model aspired.

I consider the decision to bring in innovation and implement it in the company as an important factor for future success. To be prepared for the future, we want to pick up emerging technologies and become experts in these fields. We are continuously developing here, so change will remain a part of us, with regard to our organization as well as to defining our strategy and our fields of business.

Digital Transformation & the Multi-Cloud-Hype

Without using cloud services, digital transformation becomes impossible. Selecting the appropriate cloud though confronts the outsourcing company with a tough choice, since the appropriate cloud strategy is crucial for the digital transformation to succeed.

There is no mistaking that companies won't be able to afford ignoring the digital transformation. Key component here is the change of business models brought about by IT processes. New ideas are being developed, critically reflecting on existing structures and procedures. A company's willingness to tackle necessary changes today will determine its competitiveness and viability tomorrow.

Essential prerequisites for digitization are process and data analyses as well as a consolidated view of all existing data. This implies a comprehensive compilation of already existing IT systems and the establishment of a common IT platform for the company. Into this platform, companies also have to integrate present stand-alone solutions often correlating with media disruption and time loss. The objective is to provide metrics of all processes from former operating divisions as self-service and transparent for controlling.

Here, the subject of business intelligence (BI) is playing a decisive role. Companies willing to promote digital transformation need a central BI solution with a central data pool. By systematically evaluating their data, companies can gain important insights for optimizing their business processes. Business intelligence solutions for example offer support in reducing costs, minimize risks and discover new market prospects. And what is more, technologies provide companies with many other evaluation options for the analysis of large unstructured quantities of data – the keyword here is big data.
Necessary prerequisites for the digital transformation like the implementation of digital business processes, the data consolidation or implementing a BI solution, already demonstrate one thing quite clearly: Digitization definitely comes with more IT.

Digitization requires a multitude of applications and services demonstrating high agility, great flexibility, and big scalability. From cost perspective alone, it becomes obvious that no company can cope with this task completely autonomously. Here the cloud comes in, providing the tools and information necessary, e.g. in the field of big data. There are, for example, globally collected data, encrypted, and processed on a big data platform of a public cloud, made available to the the end customer via BI solutions – almost in real time and as self-service – and without days of manual processing.

Digitization requires Cloud Strategy

Thus, digitization and cloud strategy go hand in hand, raising questions for the cloud model that meets the company specific requirements best: a private, public, hybrid or even a multi-cloud. Current trends point to multi-cloud approaches, running the required company applications with various public cloud providers. However, the notion of multi-cloud is often very broadly interpreted. It's worth discussing if we are talking multi-cloud already, when a company purchases Office from the Microsoft cloud while simultaneously running a virtual machine (VM) on Amazon web services. Either way multi-cloud begins where different services are actually integrated – for instance if a common authentication is used between services or if services are communicating seamlessly in the background.

Three aspects in particular advocate the multi-cloud: For one, a company can use it to pursue a best-of-breed approach; Microsoft Azure, for example, is better suited than the Google cloud for internet-of-things (IoT) applications, while the google cloud scores better in other areas. Second, the multi-cloud reduces dependency on one single provider which enables the company to remain flexible in case of a change in one service's terms and conditions may have negative effects or of a service terminated completely. Third, the use of a multi-cloud allows for combining compliance and dynamics; companies are able to use German Providers for using services with high compliance requirements while for all other services they may use the flexible, highly scalable infrastructures of large public cloud providers.

These multi-cloud advantages are basically valid for all companies, still they actually take effect only in larger corporations – because of the required solution variety. In most cases, small or medium-sized companies focus on a distinctly specified core business. It is therefore unlikely, that in the frame of digital transformation they might require simultaneously IoT suites, the most developer friendly machine learning environment and the fastest bare metal machines.

Digitization challenges IT

Therefor, as the IDC survey „Cloud Computing in Deutschland" outlines, multi-cloud environments may not always represent the best choice for small or medium-sized companies, even if they are being hyped at the moment.

An interesting result was, that many developers regard „multi clouds as the presently most promising approach for optimizing required IT resources and IT infrastructures". However, a company must not ignore that multi-cloud uses inevitably imply immense challenges, e.g. with regard to greater administrative efforts, developing data silos, or – to put it cautiously – the not quite economical move of data between clouds. Choosing one single cloud provider therefor may be the best solution if a company has a clearly defined core business and is able to cover for required services quite well with one single provider. Actually, this may apply for a larger company as well.

Yet regardless of the cloud model a company prefers in implementing its digitization strategy – one single aspect will always be valid: There is not one single strategy for cloud services that suits all companies. This is why companies as a rule choose a partner who provides individual advice and develops a tailored master plan – which is the only way a successful digital transformation can be assured.

DevOps & Agile Software Development

Full Power

No DevOps without Agile Software Development — No Agility without DevOps.

DevOps and agility are notions well embedded in the IT sector. Yet, what actually drives this pursuit for ever more agility and interlocking the fields of development and operations?

First of all, companies and especially their IT departments want to work more economically, more efficiently and with more dependable results in order to save time and money – and often much hassle. Simultaneously, companies promise better and faster available products and services.

Teams are working in so-called sprints, each usually lasting two to four weeks.

This way, new application features or software may be dispatched as a minimal viable product (MVP) in no time at all – a distinct competitive edge. However, this economic goal is based on the demand for a fundamental change of culture within IT.

The focus is here on the "hows" of cooperation. Both methods – agile software development and DevOps – are defining a new kind of team culture, collaboration, and fault tolerance, thereby transforming entire corporate cultures.

Both, agility model and DevOps approach, refer to quite different aspects. Still, only combining the two demonstrates what they can actually do for teams. In 2001, the idea of agile software development was documented in the Manifesto for Agile Software Development.

It states four major principles:

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

Minimizing Project Risk by Agile Approach

With theses demands, software developers are leaving behind the classic linear waterfall approach, focusing on an iterative approach instead. Customers and project managers are interconnected and provide feedback on the project's status within short intervals. New code is being tested right away, allowing for results on a weekly or even daily base. Also, new or altered customer requirements can be integrated into the process immediately. Both, Scrum or Kanban process models represent central components in the iterative and incremental software development.

DevOps: All are Networked

You might say that DevOps perfects the concept of agile software development or that it goes even further. The teams are working in close alliance, communicating from the very beginning on what Dev can do for Ops and what Ops needs from Dev in order to subsequently have the software product enter a stable productive operation. The automation of processes during application development is another DevOps feature. In order to accelerate product dispatch, development cycles are being largely automated, supported by CI/CD pipelines. Ideally there is a mixed development operations team for ensuring interdisciplinary workflows. Simultaneously, DevOps aims at integrating all stakeholders of a project from the very beginning: Besides Dev and Ops, this includes testing, quality assurance, security and of course the customer.

From DevOps to DevSecOps

In recent years, especially the IT's shift towards the cloud has raised issues regarding security. Therefor it is only reasonable to include also the security team as an active part in an app's lifecycle. The notion of DevSecOps therefore should be regarded an advancement of the approach addressing the subject of cyber security.

Both, agility model and DevOps approach, refer to quite different aspects. Still, only combining the two demonstrates what they can actually do for teams. In 2001, the idea of agile software development was documented in the Manifesto for Agile Software Development.

Iterative and Incremental Evolution of the Architecture of (Legacy) Software

In many companies, much legacy software has accumulated in the system landscape over the years. Replacing them with new software is often not possible without further ado. In order to modernize these systems and prepare them for future requirements, we recommend a step-by-step approach in most cases. This approach might be best described as an iterative and incremental evolution of the legacy software's architecture. Following this itinerary, we already have been able to lead numerous customer projects to success.

Agile process models such as Scrum or Kanban represent key elements in the iterative and incremental evolution of the legacy software architecture. Since agile methods work with software increments, the development team immediately starts solving existing problems. The old software is being improved regularly so that the customer or an (external) test team can check the results frequently. Due to the continuous, flexibly adaptable planning it is possible to consider change requests at any time.

Another mainstay of this procedure is the customer's economic evaluation of costs and benefits of the improvements. This links any improvement of the legacy software's internal quality as well as any modernization of the architecture to the creation of business value. The modernization can thus be controlled based on business parameters. The fact that the customer himself prioritizes the improvements, brings his most urgent problems into focus.

The agile approach also improves communication, enhanced by constant contact and exchange between the project partners: short, efficient communication channels enable quick feedback. Decisions are made jointly. Regular meetings as well as Sprint Backlog and Product Backlog ensure high transparency.

Hexagon Architecture is Target Architecture

The architecture's goal should always be a separation of professionalism and technology. A hexagon architecture is particularly suitable for this (according to Alistair Cockburn; also: Ports and Adapters, Onion Architecture according to Jeffrey Palermo, Clean Architecture according to „Uncle Bob" / Robert C. Martin).

Instead of thinking in layers, this architecture distinguishes between inside and outside. The interior contains the domain model, i.e. the implementation of the domain-oriented use cases. The external area includes everything else like integration, persistence, and UI. The communication between inside and outside takes place via interfaces (Ports), which are implemented in the outer area (Adapters).

The Hexagon architecture follows these principles:

1. Inside doesn't know anything about outside.
2. The interior can handle any concrete implementations of the interfaces in the external area.
3. The professional logic is located exclusively inside.
4. The technical details are exclusively exterior.

Software built in the Hexagon architecture is easier to modify, test and understand. Compared to a classical layer architecture, this approach minimizes the danger that domain-oriented logic is implemented outside the domain-oriented core, e.g. in the user interface or the database, and is thus distributed uncontrolled. The result: less technical guilt and improved maintainability.

Proven Supporting Techniques

In addition to architecture migration techniques, proven methods support the iterative and incremental evolution of the architecture of (legacy) software:

A feature toggle allows a feature under development to be turned on and off at runtime.

More resilience is achieved through the use of stability patterns such as circuit breakers or bulkheads. This means that the software can also maintain its essential functions in the event of failures and malfunctions instead of failing completely.

With the help of experiments, the team can learn a lot and make better decisions.

Deployment variants with Blue/Green Deployment or Canary Release help to roll out the software with low risk.

The monitoring of the business services instead of the monitoring of hosts allows a significantly better monitoring of the software.

Aiming for the Highest Customer Satisfaction?

The company's IT assumed the task of continuously linking core processes, thereby networking individual processes across workflows. Europ Assistance manages this complex challenge using the software ConSol CM from IT service provider ConSol.

Europ Assistance Germany with headquarters in Munich focuses on travel insurances, healthcare services and roadside assistance coverage. Similar to many other companies, Europ Assistance did not have an integrated, consistent process landscape, resulting in frictional losses across departments as well as in system discontinuities and sometimes even media disruptions. The company's IT assumed the task of continuously linking core processes, thereby networking individual processes across workflows. Europ Assistance manages this complex challenge using the software ConSol CM from IT service provider ConSol.

The ConSol CM software solution can be used flexibly across sectors, providing elementary functions for business process management (BPM), customer relationship management (CRM) and case management. It can be a process platform for digitizing processes i.e. providing flexible configuration options covering company-specific as well as sector-specific processes. It supports individual process design and automated or semi-automated process execution. Open interfaces allow for the solution to be seamlessly integrated into existing IT landscapes.

Up to now, Europ Assistance has modelled more than ten processes using the ConSol solution, among others for key tasks in the areas of IT helpdesk, finance, facility management, human resources, underwriting, product launches, approvals, release management and the selection of service providers. At the beginning, design and implementation of the first processes were assumed by ConSol consultants, already working inhouse though. This way, Europ Assistance employees were able to obtain the necessary know-how for implementing all further workflows themselves.

Three examples highlight the solution potential:

ConSol CM, for instance, maps the entire tender and underwriting process, which is of central importance for each insurance.

The process includes, inter alia, the following steps:

- customer contact
- specification and recording of customer request
- feasibility check
- approval of feasibility and pricing by the management
- sending offer

The application range of ConSol CM is also reflected by the IT helpdesk sector using ConSol CM as an audit-proof tool. It provides the foundation for processing support requests, documenting change requests and logging.

ConSol CM maps all basic functions of a ticket system:

- tickets have defined ticket fields and optional mandatory fields;
- random comments and attachments can be supplemented;
- e-mails can be sent from the ticket and to the ticket;
- tickets are assigned to an editor;
- possibility to sort or filter according to priority and processing status;
- resubmission function.

Still fairly new is the product launch process. It starkly highlights the changes achieved with ConSol CM. In the past, numerous documents had been sent within the frame of a product launch, to some extent with redundant information. Executing subtasks had become difficult to trace. Overall, there had been no proper overview of the „state of affairs".

Based on the new product launch process – designed with ConSol CM – today there is only one single product launch ticket serving as information medium for all departments involved. It includes all relevant information, clearly defines responsibilities, monitors the status, and provides full traceability. This way, the insurer has a 100% overview right at the onset of a product launch.

„With ConSol CM, we have a powerful process and communication platform enabling us to streamline and optimize processes", says Sigrid Krug, IT Project Management with Europ Assistance . „Key advantages to us are the networking of departments as well as the superordinate view of subprocesses."

The solution is designed as low code development platform, basically providing departments and business analysts with the possibility to model processes largely independent of the IT. For a simple and intuitive design of business processes, the user interface provides users with state-of-the-art web technologies.

Among the functions are e.g. dashboards, drag-and-drop, quick-and-easy search, or keyboard shortcuts. The administration tool allows for a target-oriented management of the ConSol CM system, with settings e.g. for roles and access rights, user management and data models. A graphical configuration supports the process design and, by means of intuitive modelling tools, business processes can be tailored extremely flexibly and according to the respective requirements.
Natalia Wagner, responsible for the ConSol CM development at Europ Assistance, emphasizes: „From a technical viewpoint, the ConSol solution's simple and flexible design of processes is a definite highlight. It provides a high scalability, is extremely configurable in customization and able to map complex processes."

The ConSol CM advantages for Europ Assistance at a glance:

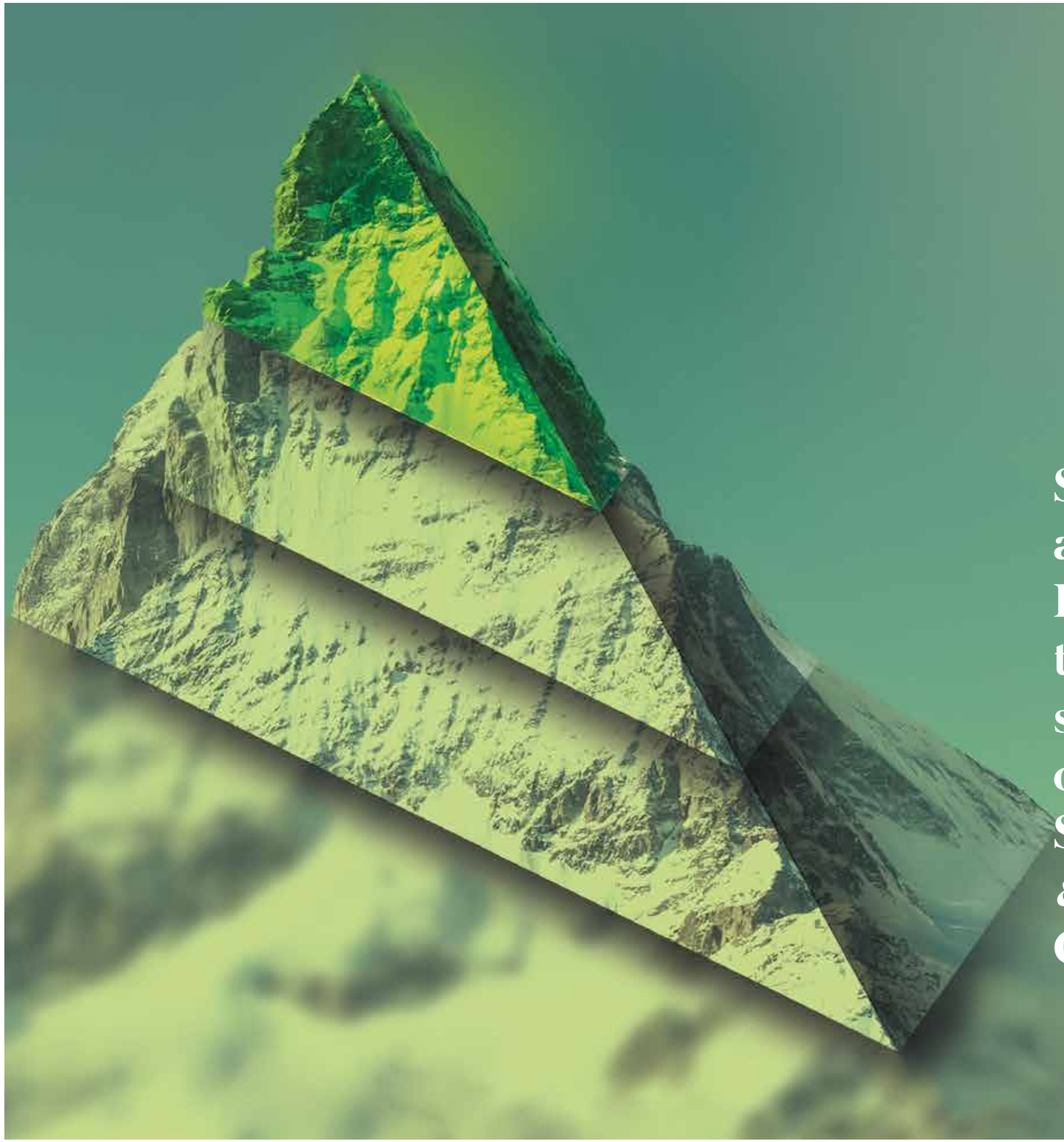
- audit safety
- flexibility
- transparence
- traceability
- avoiding redundancy
- networking various departments
- improved communication
- uniform „look & feel"

Besides ConSol CM, Europ Assistance also decided for the add-on CM/Track. This portal solution for instance enables all employees to use the IT helpdesk in the intranet.

A user of this solution may e.g.

- open tickets
- monitor tickets
- comment on tickets
- send attachments or
- search for solutions in the FAQ.

Europ Assistance IT is continuously analyzing the possibility of mapping process scenarios with the solution. It has already been decided to introduce a project portfolio management process. Currently in consideration are also subjects like contract management or product approval. „In general, it is recommended to always explore the possibility to use ConSol CM for implementing entirely new processes", Sigrid Krug emphasizes. „After all, the solution is used by almost all our departments and the IT has many years of experience plus comprehensive know-how in working with this solution. And last but not least, we can always count on ConSol's dedicated support."



High Level End-2-End Monitoring

Software malfunctions cost time and money and frustrate users. E2E-Monitoring identifies potential problems at an early stage. But implementation and operation is not an easy matter. Support is provided with 10 tips & tricks from our E2E experts at ConSol.

Monitoring is a powerful tool to track system health.

Everybody knows this situation: trying to buy something awesome online but being stuck in endless page-load loops, error messages and buttons that seem to not do anything. Nowadays customers can just switch to another online-supplier, leaving the shop-owner without a turnover and a bad reputation.

End-2-End Monitoring helps to ensure all functionality, track the performance, and thereby the user experience of your system, enabling operations to act fast in case of an issue, even before the user will notice anything malicious. But setting up real End-2-End Monitoring can be complex and overwhelming. Choosing the right technologies, identifying your business-critical processes, configuring proper threshold and using smart alerts are only some of the tasks to consider.

If you are looking for an End-2-End monitoring solution, you are probably going to come across application performance management.

With the rise of cloud-based microservice applications, many companies are facing the same issues. Tracking the performance and availability of the application has become increasingly difficult. APM is about discovering anomalies in the application and its components.

Application Performance Management vs. End-2-End Monitoring

Tracking the hardware, virtual machines, containers or infrastructures such as databases, caches or the network to find errors and bottlenecks and proposing solutions is its key task. This approach only covers system analysis from a technical perspective – without integration and communication between all those services. In contrast, the purpose of End-2-End monitoring is about the availability and performance of the application facing the end-user – running checks on the application (in the best-case scenario, simulating a real user with tools like https://sakuli.io) to mimic real user experience and observing the performance of an application, implicitly all its subsystems, at all times.

Observing data like the efficiency of a database, the CPU load or the general availability of servers is a task "traditional monitoring" is doing perfectly fine. But is this enough to ensure your complex system architecture is performing at its best?

10 Step Guide

1. Keep the Checks Small

Compared to technical monitoring of, for example, VM CPU and memory usage, End-2-End checks are more complex: They can be resource-intensive, high maintenance and a dedicated test machine, test farm or container setup is required to execute End-2-End monitoring cases regularly. Therefore, it is important to prioritize important business workflows and focus on the essential and business-critical paths of your application. As a result, End-2-End monitoring ensures incredibly fast reaction times in case "something" is wrong with the system, thus ensuring a stable revenue stream and conversion rate.

2. Be Where the Party is

It is best to run End-2-End monitoring on production systems to measure user experience. Of course, running on another stages is possible, but these rarely have the same setup, nor could a stage environment be as important for revenue generation as production. Therefore, the checks should run on production to derive maximum utility from the results.

3. Choose your Thresholds Wisely

An important task is to choose the right thresholds. If the performance of your application drops under a certain threshold, your throughput and conversion rate will be dramatically reduced as the system feels "too slow" for the expectations of a user nowadays. There are a few studies on this topic, according to one of them, "the presence of feedback prolongs Web users' tolerable waiting time and the tolerable waiting time for information retrieval is approximately 2 seconds."(Nah 1) Therefore, it is important to specify the thresholds in consultation with the business managers to keep users happy and the business up and running 24/7/365.

4. Don't Panic!

Even if an alert has been sent with a warning, don't panic. With correctly set thresholds, alarms will go off early enough to be able to react. In complex systems, a peak of concurrent users, network traffic or database and messaging reconnections might cause fluctuations in the systems' performance without rising to a serious issue. Therefore, a warning might not require instant reaction, but observation whether the system stabilizes itself or requires action. The following aspects are worth keeping in mind when rating a warning: How critical is the step that failed regarding business? Which functionality was checked, and how many systems were involved? How often did the check fail in the last hours? Is there any planned maintenance or release going on?

5. Location Matters

If your application is used by an international audience, set up End-2-End monitoring in each region/market your application is targeted on. It might sound costly but will generate insight into why and where multi-region routing could be necessary. Don't underestimate latency, routing efficiency, processing overhead, congestion etc. to affect the user experience negatively.

6. Read vs. Write

There is not much of a difference between a monitoring system having read or write access to an application. As soon as there is an interaction, some data will be stored, hit rates and page loads will be manipulated, etc. It is therefore very important to ensure, that check-data does not impair your daily business. As soon as data is made persistent within a business process (e.g. a checkout process within the webshop), the following actions should be considered. To avoid interference with daily business, business intelligence or other analytical systems, close coordination with all involved parties is necessary. Test-transactions need to be excluded by accounting and third-party systems by using identifiable test data and dummy credentials. Before writing data automatically into a productive system, it is important to think about the possible consequences.

7. Test Data on Production

Test management meets monitoring – namely test data management. Test data and test accounts in production should be named unique to separate them from customer data. In addition, this data should be managed and documented transparently. The responsible team maintaining the data and its documentation should be the same setting up the checks for the End-2-End monitoring.

End-2-End Monitoring can be a challenge! Especially subtleties, like choosing the right threshold or what to cover in a check, are not obvious at first glance. Experience with End-2-End monitoring technologies is essential to set it up efficiently. Our tips & tricks provide an overview of the most important topics to consider but there is much more to be aware of as soon as you start implementing the mentioned concepts.

8. Be Compliant

Another point to consider is compliance. Imagine you create a test account on production. Over time, many people might access the test account for debugging purposes or check development. When someone leaves the company, they can still log in to the test account if the password was not changed or completely disabled. Changing the passwords, altering test cases and informing people are few of the necessary tasks, which cause a lot of effort. Therefore, do not hand out credentials for the test users. Modern End-2-End testing and monitoring frameworks come with security mechanisms – like secrets in Sakuli – where credentials are fully encrypted. If you do not hand out technical user credentials, you will not have to change them later on. In the case of debugging and check development, create personalized accounts for everybody working with the monitoring suite. Those accounts can easily be disabled and exchanged with the credentials of the technical user when checks go live.

9. Look at the Bigger Picture

One red test between thousands is not an indicator of your application failing. It might have been a hiccup at your ISP, infrastructure, internal services, or network. So rather than inspecting results individually, search for patterns from the overall results. If the duration of the login process increased dramatically after a new release, it might be a good idea to look into that. Therefore, pay attention to certain events like future release dates and major changes to the overall system.

10. Avoid Conditional Statements in Checks

Conditional statements are key elements in every programming language. However, using these in monitoring checks might cause inconsistent results. Monitoring is designed to collect metrics, to track certain performance, to load indicators and to display the collected data graphically to highlight issues of the system and its infrastructure. However, if checks contain conditional steps, the collected metrics of the application are incommensurable as the performed check changes based on the implemented condition. This makes it impossible to compare information about the performance and availability of the application reliably. Therefore, conditional statements should be avoided in End-2-End monitoring checks.

Trust on all levels

IT Consulting: Open source monitoring, cloud computing or architecture consulting – our specialists may either support you with their expertise or assume your entire IT project management. Your individual situation defines the range of our optimal support.

Software Engineering: Modern software architecture, future-proof IT integration, a tailored CI/CD pipeline or Web application development – we will help you master the challenges of digitization. Our focus is always on the best possible solution: the one promoting your business model.

IT Operations: Managed services, IT operations or support – have experts handle availability, performance and safety of your IT systems and applications. You define your SLAs. We ensure the efficient and smooth performance of your IT, supporting you 24/7.

IT Solutions: We are Red Head partners and experts for Red Hat products like OpenShift. In test automation and monitoring we use inhouse developed open-source products like Citrus or Sakuli. With ConSol CM we also provide a solution for digitizing business processes. Together we will tackle every technological challenge!

DIGITAL TRANS FORMA TION?

digitization definitely comes with more IT

Flexible, Reliable, Future-Oriented, Versatile, Advanced:
ConSol Consulting & Solutions Software GmbH