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**STADT FRANKFURT AM MAIN**

**Customer Data**
Industry:      Citys and Communes
Locations:     ~ 600 real properties
Employees:     ~ 10.000 Employees

**Projects**
End-User-Experience-Monitoring critical specialist
applications in the properties

# A customer's perspective on municipal IT-Services

**End-User Experience Monitoring for the city of Frankfurt/Main**

**Since the comprehensive digitalization of local government systems, almost all administrative processes have been handled by specialist applications. The City of Frankfurt's Department for Information and Communication Technology provides these applications as IT services to geographically distributed municipal sites. Until recently, there was no way to establish the actual quality of the services for the user. Now, the central infrastructure monitoring system at the IT Control Center for the City of Frankfurt, Germany, has been extended to monitor the end-user experience at a number of locations.**

**Monitoring of specialist application for the citizens of Frankfurt**

With the advances in digitalization since it was established over 25 years ago, the Department for Information and Communication Technology in Frankfurt has developed to become the central IT service provider to local government. Today, the municipal service provider operates approximately 100 IT services for a user base of around 10,000 city employees across 600 sites using a technical infrastructure comprising 500 servers and 2,500 network components. "We serve a highly decentralized environment – from daycare centers, through schools, to the zoo, and registry offices," reports Jens Hübel, Head of the IT Control Center.

The citizens of the City of Frankfurt rely on municipal processes, such as registering a marriage, being executed reliably and promptly. This can only happen if the City's administrators are able to access specialist applicationsat all times. "Ultimately, it is the citizens who are our custo-

mers and who finance our IT infrastructure through their taxes. The specialist municipal applications are the means by which we serve the citizens, albeit indirectly," continues Hübel. Monitoring the availability and performance of the IT services that are offered centrally is the responsibility of the IT Control Center: "Our job is to perform comprehensive monitoring of the IT services for the City of Frankfurt and to pinpoint and fix problems quickly when they occur." Central monitoring of the City's IT systems was initiated in 2012 in the form of basic monitoring of the infrastructure and the network. The central platform used is Microsoft's Systems Center Operations Manager (SCOM).

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**Enduser Experience at Distributed Sites:**
**IT Services from a User Experience**

"SCOM gave us the ability to monitor the technical availability of the infrastructure. But, despite this capability, those of us responsible for the services didn't know whether the users out there could actually work with the IT service," explains Hübel. Information about service quality at the point of use is important though, particularly given the distributed sites with high numbers of users executing

many critical municipal transactions every day. Following a suggestion from Sascha Höhn, head of the IT Control Center at the time, it was decided to introduce end-user experience monitoring at some representative sites, such as the registry office, in order to bring transparency to the user perspective.



*Can the users work with the IT service? Component Monitoring does not allow any conclusions to be drawn about the service quality of the users. End User Experience Monitoring makes the user experience transparent.*

The end-user experience can vary significantly from site to site, with the quality of the network playing a role, as well as the performance of the terminal device used. "A user with a modern PC, a very high-quality network connection, and a short distance to our data center will have a completely different perception of the service to a user based at a distant site surfing over a slow, restricted mobile connection." Hübel has formulated the requirements for a suitable end-user experience monitoring solution, which is designed to deliver site-specific information about "how a service is working for a specific customer."

This is intended to complement, not replace, the existing monitoring: "Infrastructure monitoring continues to be important for our technical administrators. For those responsible for service provision, it is the user perspective that

is crucial. The combination of the two methods offers a comprehensive overview of the IT service, meaning that we can get much more precise information, much more quickly," explains Hübel in regard to this comprehensive monitoring concept, which integrates both bottom-up and top-down approaches.

*"Infrastructure monitoring continues to be important for our technical administrators. For those responsible for service provision, it is the user perspective that is crucial."*

Jens Hübel, Head of Control Center
Departement for Information and
Communication Technology, Frankfurt/Main

**The Robot User**

In October 2015, the IT Control Center, under the leadership of Sascha Höhn, selected the Servicetrace® Robotic Solution to implement user-perspective monitoring. "This solution is the ideal extension to our infrastructure monitoring," says Höhn in regard to this investment.

Servicetrace GmbH based in nearby Darmstadt provides ‚robot' users that are able to automatically operate IT services using the graphical user interface – exactly like a human user.

Simultaneously, Servicetrace® Robots measure the availability and response times of selected transactions, for example logging into an email system, thus providing an objective assessment of the end-user experience Servicetrace® Robotic Solutions scored highly right from the proof of concept with their professional and efficient approach. All technical requirements were worked out in advance: "This meant we could work together on-site with the Servicetrace consultants to establish the complete environment in a very short time", reports Hübel.



*Image recognition, keyboard input, mouse clicks: Servicetrace robots work like human employees.*

**Universal, secure, easy**

During the proof of concept phase, the City of Frankfurt's IT management team recognized "a stable, mature, yet totally innovative piece of software." Servicetrace® Robots can be used for end-user experience monitoring of all specialist applications, without limitation.

> *"Servicetrace delivers a stable, mature, yet totally innovative piece of software."*

The desktop measurements themselves run as hidden tasks, which allows the monitoring solution to fulfil one of the main predefined requirements: "The overarching constraint is that we want to offer secure services", explains Hübel.

> *"It is therefore essential that we have a solution that provides secure access and meets data protection requirements."*

"As a public service, part of our work is official in nature. It is therefore essential that we have a solution that provides secure access and meets data protection requirements."

The City of Frankfurt's IT team were also impressed by how easy it was to set up monitoring projects with the graphical Workflow Studio and the flexibility with which these could be adapted. No knowledge of programming or scripts is required.

> *"It doesn't get any easier than with Servicetrace Workflow Studio."*

> Jens Hübel, Head of Control Center
> Departement for Information and
> Communication Technology, Frankfurt/Main

"We're measuring a complex IT environment here, and this naturally means there's a certain degree of complexity when creating workflows. But one thing is for sure: it doesn't get any easier than with Servicetrace Workflow Studio."

**Critical Performance threshold alerts**

In the medium term, the system will run across 30 selected sites – the pilot project is currently running at five locations. Using dedicated measurement machines, Servicetrace ® robots measure the availability and performance of the specialist applications from the user's perspective 24/7.

Measurement data collected at the customer front end is sent via a connector to the central SCOM monitoring platform, which escalates alarms to service managers at critical thresholds. "That was another reason why we chose Servicetrace: the open database structure with simple options for interfacing with SCOM."

The IT managers for the City of Frankfurt had hoped to improve customer-oriented service quality assurance by implementing end-user experience monitoring. All the expected benefits were immediately apparent at the sites
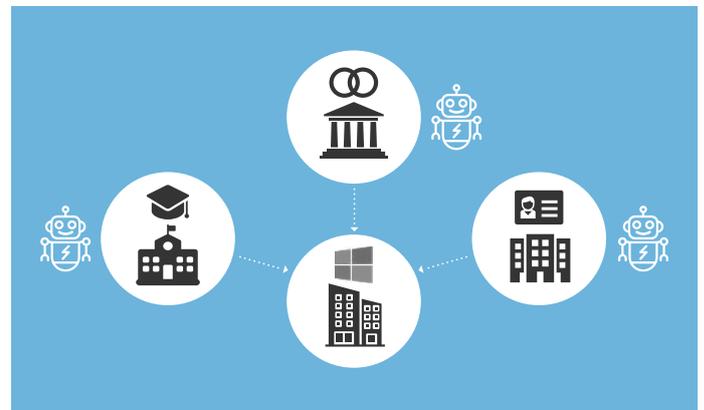


*Servicetrace Robots in den Frankfurter Liegenschaften: Die Messdaten landen zentral bei Microsoft SCOM*

involved in the pilot project: "When our services are not working, we now see the problems ourselves, before the customer calls, and can make early interventions to restore the IT services affected."

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Jens Hübel, Head of Control Center
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**Defined Service Levels**

The benefits of the Servicetrace® Robotic Solution don't just stop with automated support for proactive incident management though. In addition, the measurement data supplied by Servicetrace® Robots also provides a valid, data-driven basis for forming service level agreements relating to the customer experience.

"Previously we had to bill for IT services on a flat rate basis because we didn't have the precise measurement data needed for calculating at the service level. Servicetrace measurement data gives us the figures we need."

Once service levels have been agreed, reporting becomes important in order to document whether the SLAs have

been complied with. Service level reporting is straightforward too.

**Conclusion: Keeping the customers of municipal IT services happy means, above all else, seeing things from their perspective**. By introducing end-user experience monitoring for monitoring specialist applications from the user perspective, the City of Frankfurt has taken an important technical step towards delivering.

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