

SBA-K1

SBA Research gGmbH

Programme: COMET – Competence Centers for Excellent Technologies

Programme line: COMET-Centre (K1)

Type of project: Trusted Cloud Computing, ongoing, multifirm



cyan SECURITY GROUP GMBH: INNOVATIVE SOLUTIONS BY JOINT RESEARCH

TANGIBLE RESULTS DEMONSTRATE THE LASTING BENEFIT OF THE COMET PROGRAM – FROM BASIC TO APPLIED RESEARCH

cyan Digital Security GmbH is the leading provider of revolutionary network-integrated & endpoint security solutions. Its products enable companies to offer comprehensive protection of the digital lives of their end customers. Besides those seamless security solutions, cyan also provides its digital and cloud-based BSS/OSS Platform to existing and potential players of the telco industry.

Based in Vienna and with its holding company located in Munich, cyan offers its expertise to over 300 companies worldwide and holds a reputation as one of the world's leading IT security experts. In March 2018, the company was listed on the Frankfurt Stock Exchange.

With over 15 years of experience, its own R&D centers and almost a decade of joint R&D with SBA Research, cyan ensures an early recognition of trends and technical development. Those scientific insights then serve as the basis for the further development of their white-labeled security solutions which can be fully integrated into the customer's network environment or implemented as stand alone solutions.

Core products, such as their whitelabel product "Child Protection" are a direct result of this collaboration. Recently, cyan has obtained a patent, covering a method for detecting harmful actions on websites or in smartphone apps. This jointly developed sandbox, simulates and executes user interactions, fully

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automatically. Furthermore, communication channels are analyzed in real time. Web pages and apps are technically screened in order to identify conspicuous behavior patterns and to ward off potential attacks in an isolated area – the sandbox. This analysis method imitates human usage, interacts with the content and automatically monitors the input and output points in the context of the smartphone. It is one of multiple different analysis methods we jointly developed over the years with which cyan checks potentially dangerous content and constantly improves the quality of their cyber security filters. In FP2, cyan plans to incorporate our ongoing research prototype results in combinatorial testing as they might prove to be an additional analysis method for web technologies and communication protocols without competition worldwide.

Impact and effects

10 years of joint efforts in information security within the COMET program has led to a plethora of new and innovative approaches. Apart from the sandbox mentioned above, cyan Security Group GmbH and SBA Research are currently working on new challenges such as DGAs (domain-generating algorithms), DNS Tunnelling and IoT DNS security.

Regarding to DGAs, the joint work currently focuses on the development of the overall architecture for a central database, the individual detection algorithms and the secure and high-performance communication between different modules. Integration of a "security-by-design" approach, and optimization of the algorithms with regard to DGA generation and the problem of the associated data volumes, are critical challenges to address.

The COMET program allowed cyan to join efforts with SBA Research to significantly increase their R&D capabilities. Beyond the cooperation itself, the program enables cyan Security Group GmbH to fast-track the the information flow on the latest security trends as well as research developments while having

the possibility to find new partners and alliances within the SBA network.

The latest tangible result of these research endeavours, is the Aon CySec App, a whitelabel endpoint solution by cyan, which incorporates many of the jointly developed solutions and approaches. The app was designed using Aon's corporate brand image and is available now in the Android Play Store and iOS App Store, initially in Austria and Switzerland. Aon CySec protects Android and iOS devices against online threats such as viruses, malware or phishing attacks. Moreover, the solution identifies potential cyber risks and provides a real-time response by addressing threats before they get a chance to capture personal information from companies and private individuals who would have been exposed otherwise. With this digital endpoint protection a pioneering step has been taken towards more prevention and higher levels of digital security beyond the industry standards.

A decade of cooperation between cyan and SBA Research has brought a substantial value for the company and the organizations working along with it. Today, cyan holds significant technological as well as competitive advantages in the cybersecurity industry. The joint research and the exceptional results of the company's digital solutions, reflect in the displayed success on a global scale.



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Project coordination (Story)

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