Enabling researchers to work safely with sensitive data

Answering the big research questions often requires the use of sensitive data, in domains like health, finance, and defence and security. In order to glean insights from this data while honouring the need for security and privacy, researchers are increasingly turning to ‘trusted research environments’ (TREs) – secure computing environments that allow authorised researchers to work safely with sensitive data.

For the past five years, the Turing’s data safe haven project has been developing digital infrastructure that allows our researchers to deploy cloud-based TREs for their work. This year, the team made its project open source – a major milestone that allows others to freely adopt and adapt the Turing’s code and documentation to deploy and manage a TRE of their own. The TRE code comes with a number of security controls, which can be configured to suit the project’s sensitivity level. One institute that is already making use of this open resource is the University of Nottingham, which has deployed the TRE infrastructure and made it available to any researchers working with sensitive data.

By opening up this resource, the Turing team is saving other institutes from having to develop their own TRE infrastructure from scratch, while also encouraging collaboration in this space. Key to the development of the project has been the research application management team, which is helping to connect our work to other UK teams building and using TREs. The Turing is also now a partner in the SATRE project, which is working towards a standardised template for UK TREs to ensure that there is a consensus around the essential properties of a safe and user-friendly computing environment.

“The University of Nottingham needed a secure computing environment for research involving sensitive data, but it would have been a massive undertaking to create our own from the ground up. Being able to adopt the Turing’s infrastructure has saved us a lot of time and money, and we are already using it for multiple health and engineering projects.”

Sam Cox
Senior Research Software Engineer, University of Nottingham

Read more: The Turing data safe haven on GitHub