CYCLONE: Multi-cloud applications deployment and management platform for research and academic community

Yuri Demchenko, Fatih Turkmen, Cees de Laat (UvA), Eduard Escalona, Mathias Slawik, Christophe Blanchet (CNRS-IFB), Oleg Lodygensky (CNRS-LAL), Cal Loomis (SixSq), Ralf Fischer (QSC)

CYCLONE as a Secure Multi-cloud Infrastructure for Data Intensive Applications

CYCLONE Security Features
- Infrastructure for consistent access control, security credentials and context management for multi-cloud applications.
- Federated identity management for users or applications on their behalf when regulating access to sensitive resources.
- Federated access control management in multi-provider and multi-tenant settings.
- Implementation of shared responsibility model to support different types of multi-cloud application deployment paradigms.
- Data protection in all phases of data handling lifecycle: at-rest, on-the-move and during-processing.
- Bootstrapping of trust on dynamically provisioned cloud resources.
- Security Service Lifecycle Management from registration, deployment to decommissioning of security services.
- Ensuring compliance at the EU and international levels for security.

CYCLONE Security Infrastructure employs (among others):
- eXtensible Access Control Markup Language (authorizations)
- Keycloak (federated IDM)
- Kibana/Logstash (distributed logging)
- TPM (cryptography)

Acknowledgement
CYCLONE project is supported by the Horizon 2020 EU funded Integrated project. CYCLONE project, grant number 644925.

References

For more information refer to
CYCLONE website - http://www.cyclone-project.eu/
CYCLONE github - https://github.com/cyclone-project

Contact: Yuri Demchenko <y.demchenko@uva.nl>
Eduard Escalona <eduard.escalona@i2cat.net>