Università Ca'Foscari Venezia

PROJECT ACRONYM AND TITLE: IAM access control policies verification and inference

FUNDING PROGRAMME: Amazon Research Awards (ARA)

CALL: Advancing cybersecurity with AI

HOST DEPARTMENT: Department of Environmental Sciences, Informatics and Statistics

SCIENTIFIC RESPONSIBLE: Pietro Ferrara

FINANCIAL DATA:

Project total costs	Overall funding assigned to UNIVE
€70.095,00	€ 70.095,00

ABSTRACT:
AWS IAM access control policies specify what AWS cloud resources are accessible by what identities. AWS SDKs allow developers to programmatically access these resources through applications that can be run by different identities. However, what resources are accessed and how depend on the (mostly string) values computed by the application. Therefore, forecasting what access control policy is required by a given application is rather complex. In this project, we apply abstract interpretation techniques to over approximate the string values computed by these applications, and then infer, validate or IAM the access control policies. Keywords – static analysis, abstract interpretation, access control policies.

Planned Start date	Planned End date
2020	2021