ASSUREM

Digital Security of Smart Satellites Use Case

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Review meeting

Online | 27 April 2022

www.project-assured.eu

Demonstrator Overview

ASSURE

- Two main devices: CubeSats (CS) and Ground Station(GS)
- The CS:
 - Low earth orbit satellites
 - Collects data while on flight
 - Shares the data to the GS
- The GS:
 - Receives and stores all the data from the CS
 - Hosts software updates to be installed on the CS

CubeSat (1)

KUBOS v1.21/ Linux 4.2 distr. (OS) | BBB DH Binary (C) | CS Service (Rust) CPU: ARM 33X Cortex | TPM: v1.2 (Atmel) IP: 192.168.100.20

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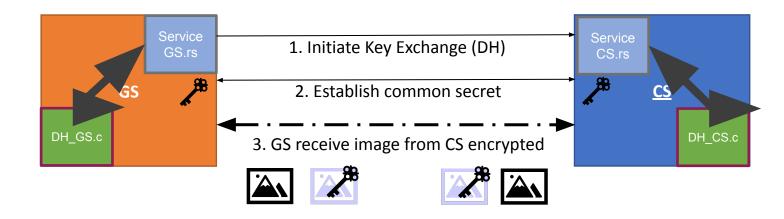
Ground Station (GS)

UBUNTU (20.04) – VM GS Service (Python) | DH Binary (C) TPM: v2.0 / Rev. 1.16 (NTC 7.2.0.1) IP: 192.168.100.2

Current flow

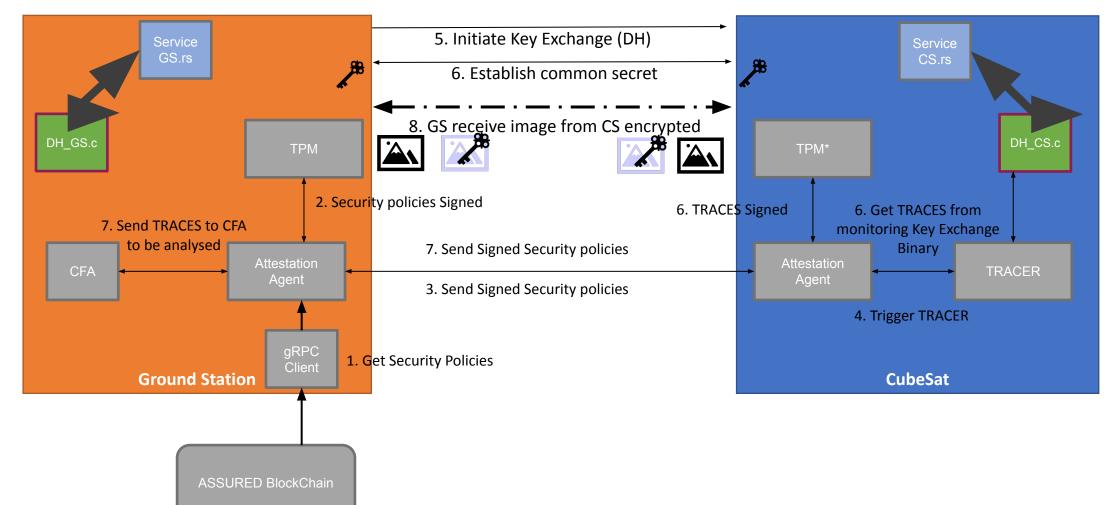


- Data transmitted in open air.
- Each time data should be received a new key is established.
- Requirements:
 - Secure data transmission, protected from baseline communication attacks
 - Ensure proper execution of DH Key Agreement



Secure flow to be demonstrated







Moving on to the DEMO



DIGITAL SECURITY OF SMART SATELLITE COMMUNICATIONS

USE CASES: DISCOVER MORE >>

Meet the consortium



































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ASSURED project is funded by the EU's Horizon2020 programme under Grant Agreement number 952697