

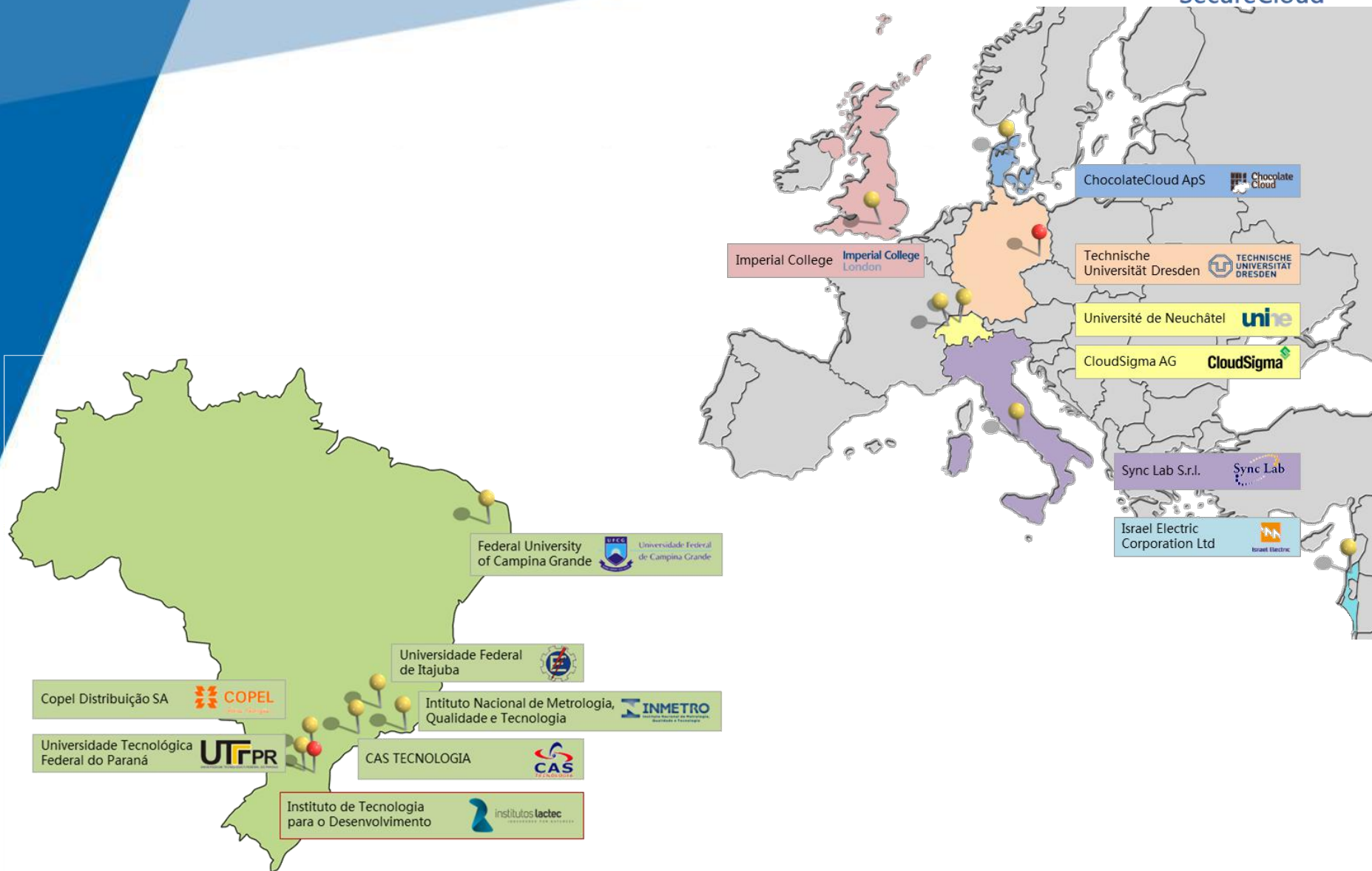
SecureCloud

Secure Big Data Processing in Untrusted Clouds

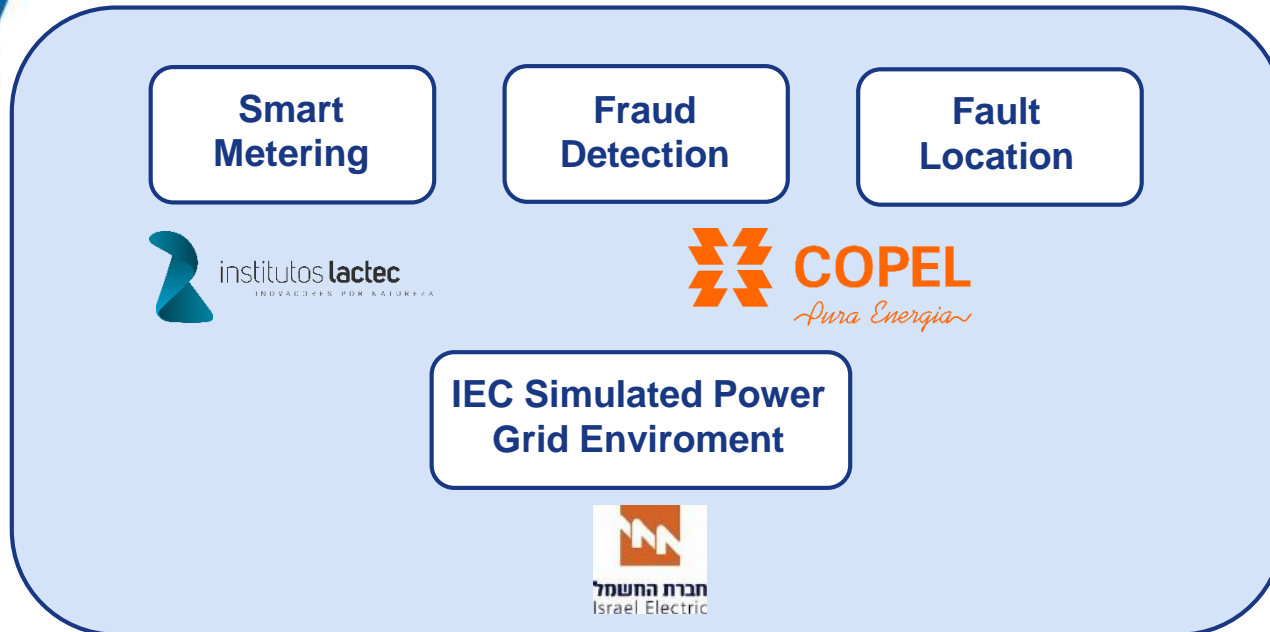
A bird's eye view of the project

Prof. Daniel E. Lucani, PhD

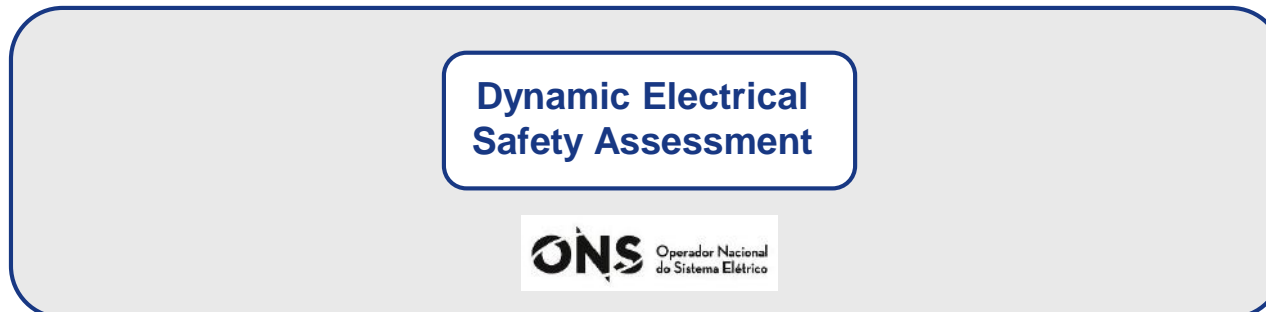
Use case overview



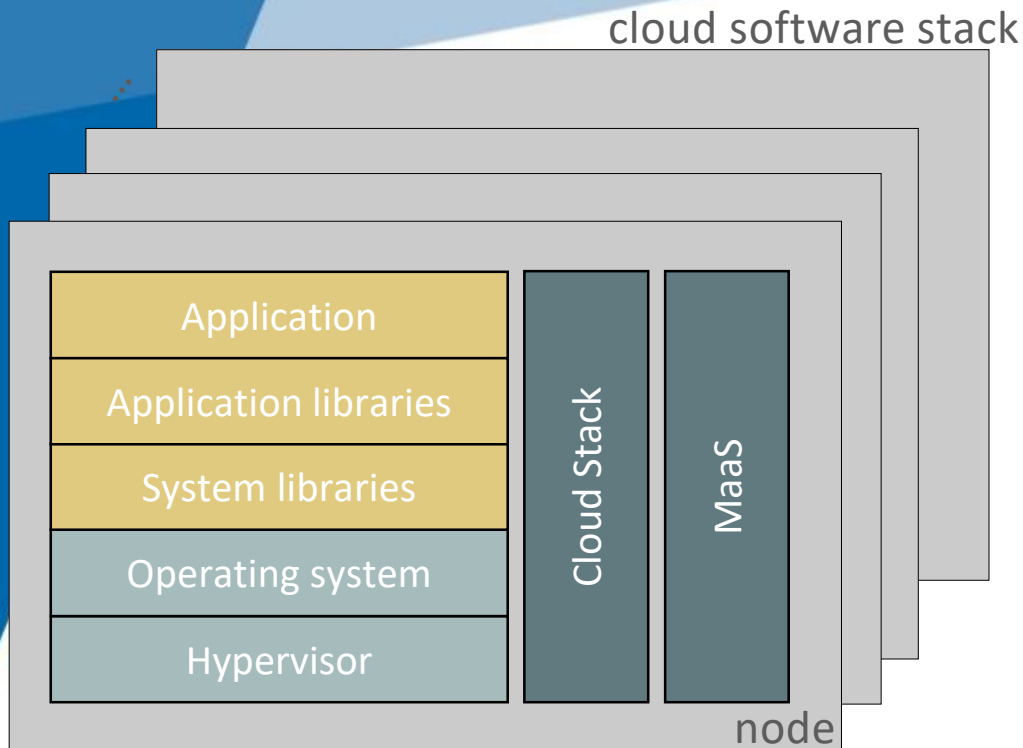
Privacy - Preserving Smart Metering



QoS – Guaranteeing Smart Grid



Defender's Dilemma

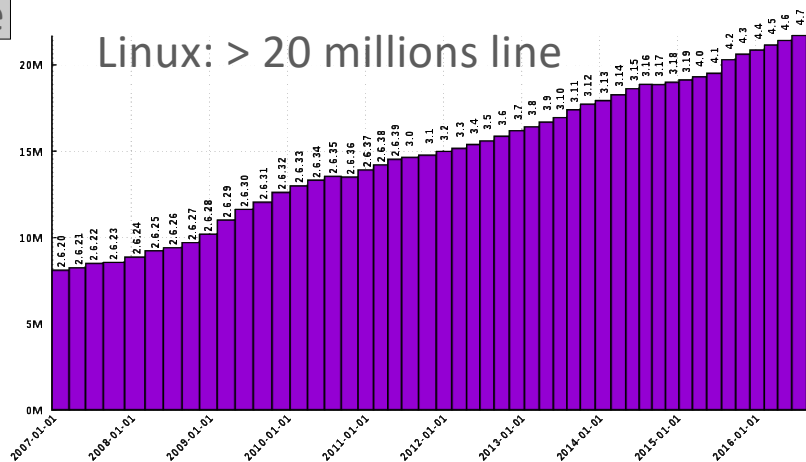
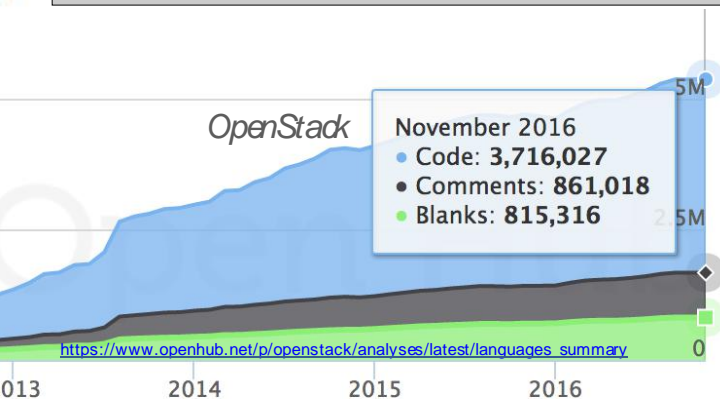


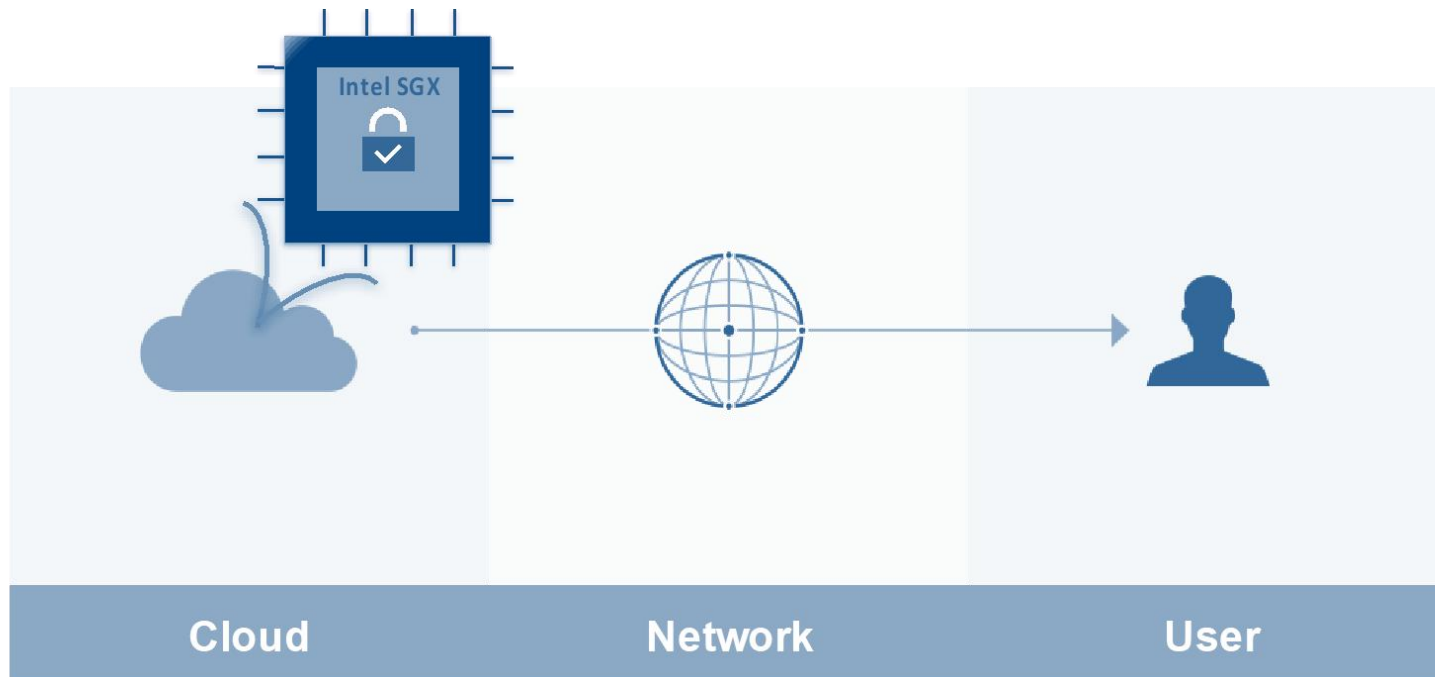
Defender:

must protect against every vulnerability
millions of lines of source code

Attackers:

success by exploiting a single vulnerability

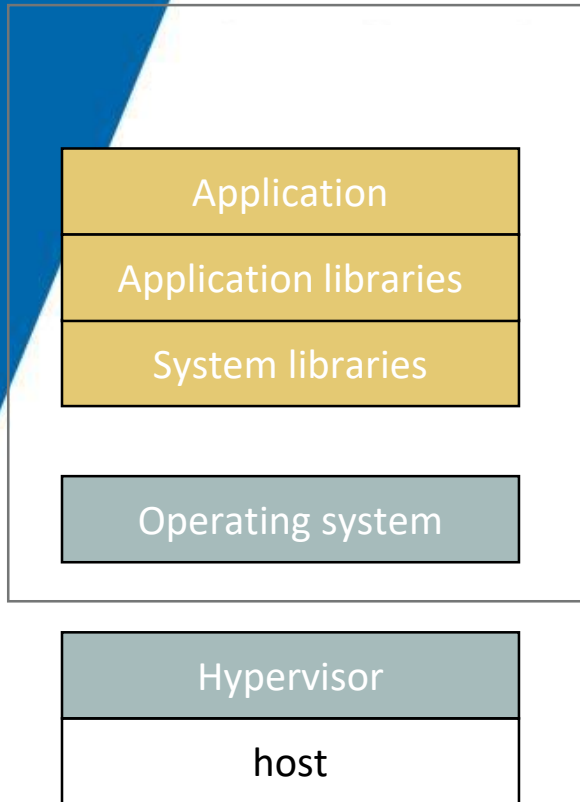




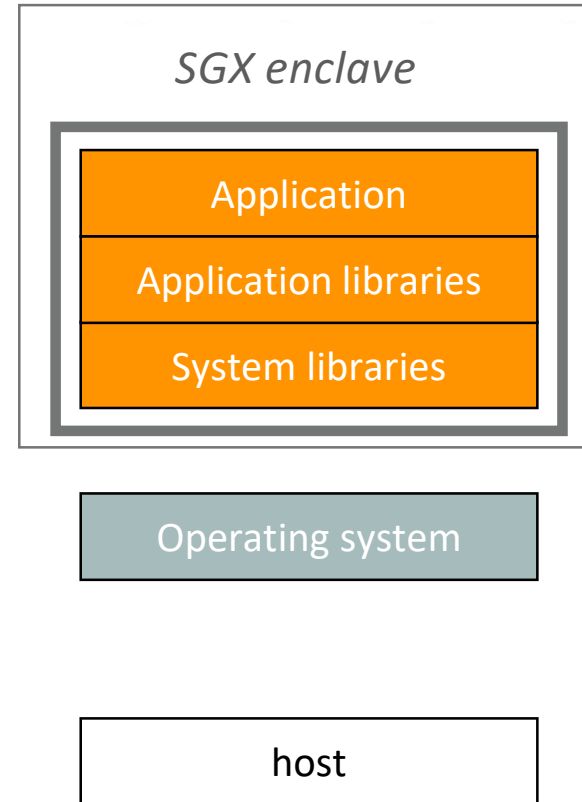
Secure Containers



virtual machine (VM)



secure container



hardware virtualization

operating system virtualization

secure containers are more light-weight and more secure than VMs

Practical & timely approach:

lots of industry interest in SecureCloud platform
TUD considers startup to commercialise TUDs
technology

Publications:

SAC2017, EuroSys2017, DATE2017, IC2E2017,
IPDPS2017, PDP2017, BITCOIN'17
Middleware2016, OSDI2016, IEEE Security &
Privacy

Demonstrators:

Please come to the 15h session for one of them

Main Achievements

