HIGH ASSURANCE SECURITY PRODUCTS FOR COMMERCIAL OF-THE SHELF (COTS) PLATFORMS

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SWEDISH ICT SICS

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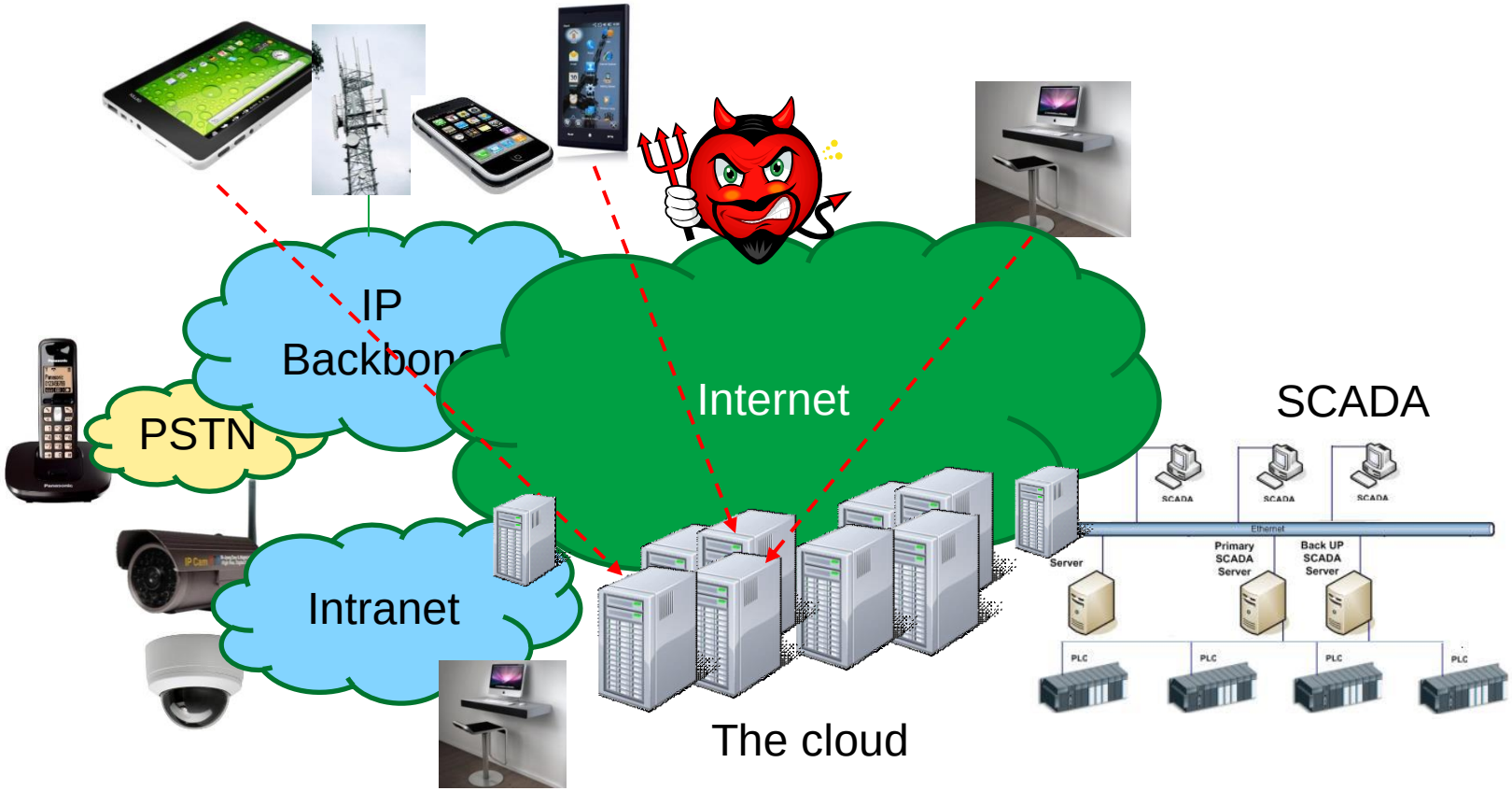
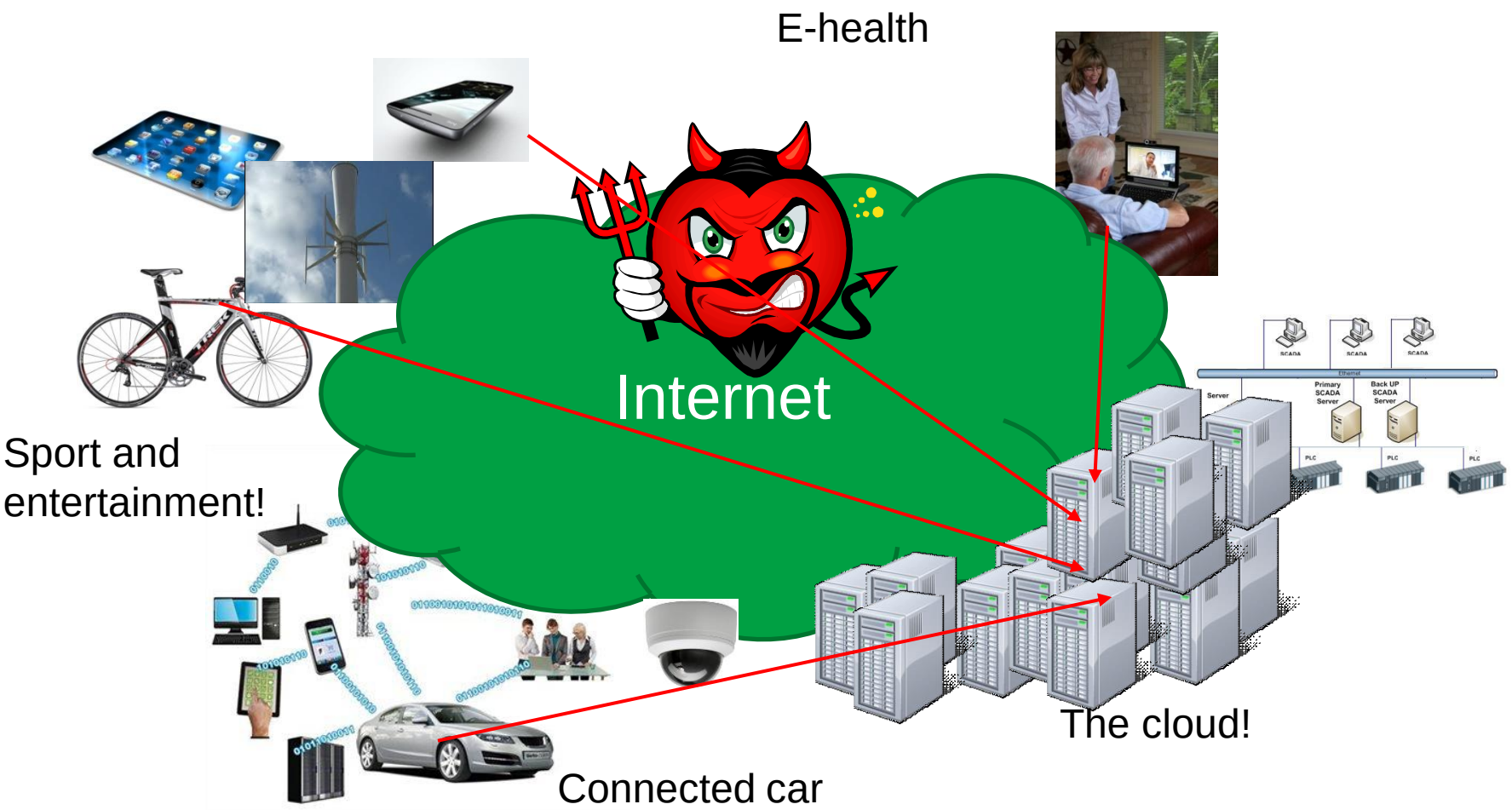
- A changing security threat landscape
- Why security on COTS?
- The way to high assurance on COTS products
- An IoT scenario example
- The Swedish HASPOC project

HOW THE COMMUNICATION LANDSCAPE USED TO LOOK LIKE



WHERE WE ARE HEADING?

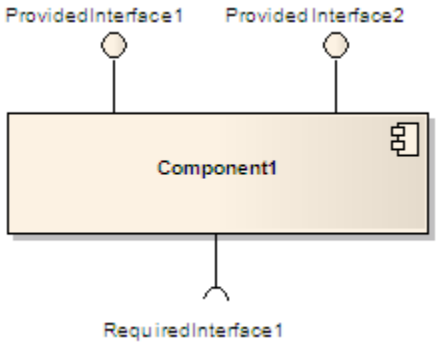


THE BIG CYBER SECURITY CHALLENGES

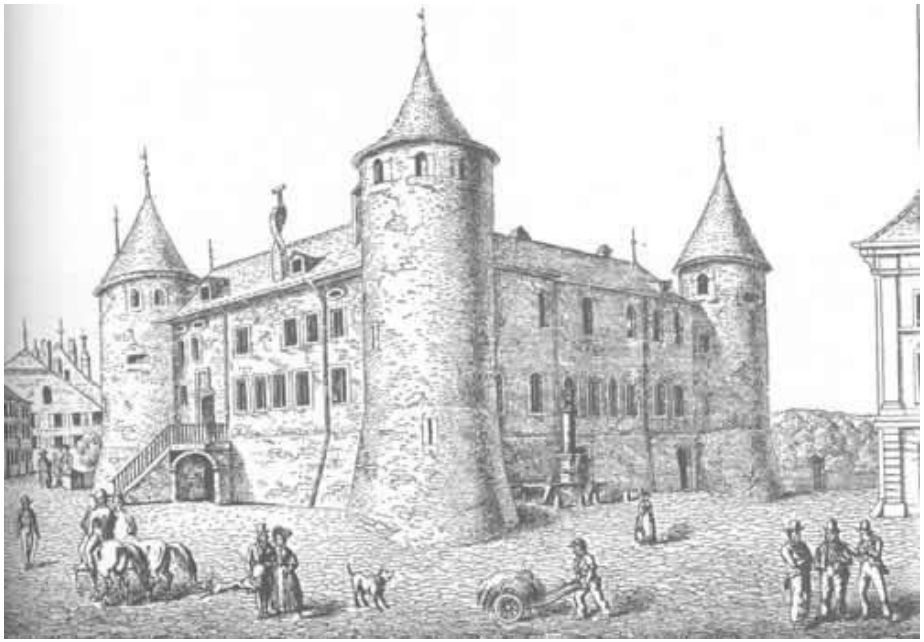
- As more and more systems get general internet connectivity, the different possibilities to disturbing them are growing
- The society is becoming more and more dependent on reliable IT solutions and hence more vulnerable to attacks
- The IT systems are getting more complex => more expensive and harder to make them robust and to protect them
- As many different system are connected and dependent on each other, a single attack on one component or a sub system can ruin the operation of many vital systems

HOW DO WE ACHIEVE HIGH SECURITY!?

- The systems are not more secure than the security of the system components!
  - BUT, the components typically
    - run SW from unknown sources
    - have several non-protected interfaces
    - are wrongly configured etc.



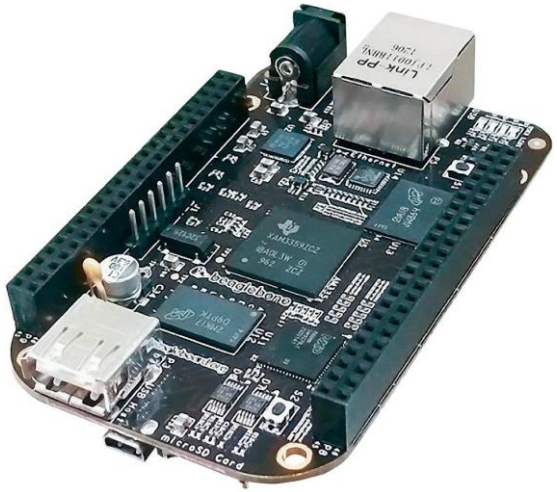
SECURE ISOLATION IS KEY



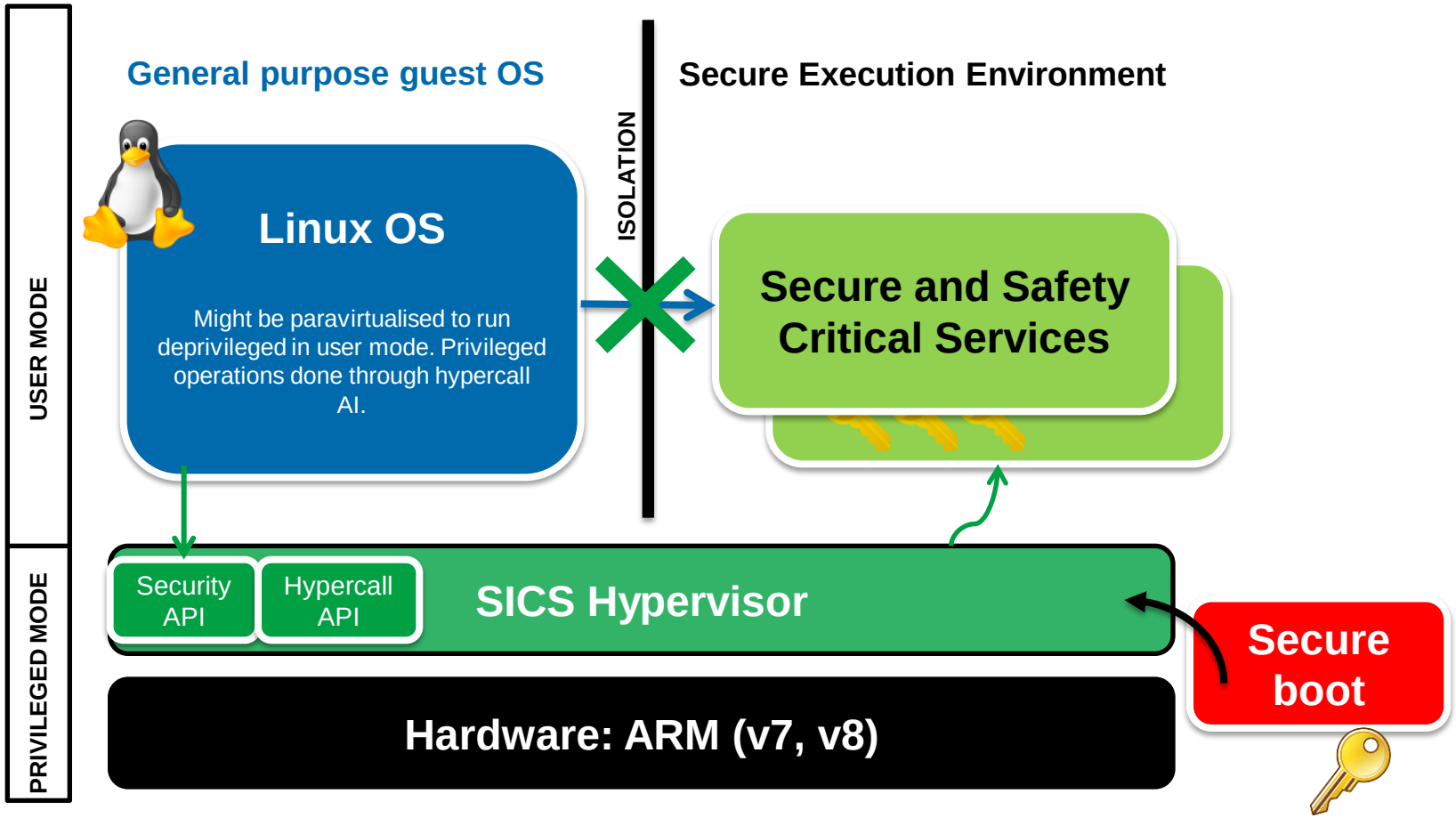
- By isolating the security critical parts of a system from the non-security critical parts a higher assurance level is achieved!

WHY COTS PLATFORMS?

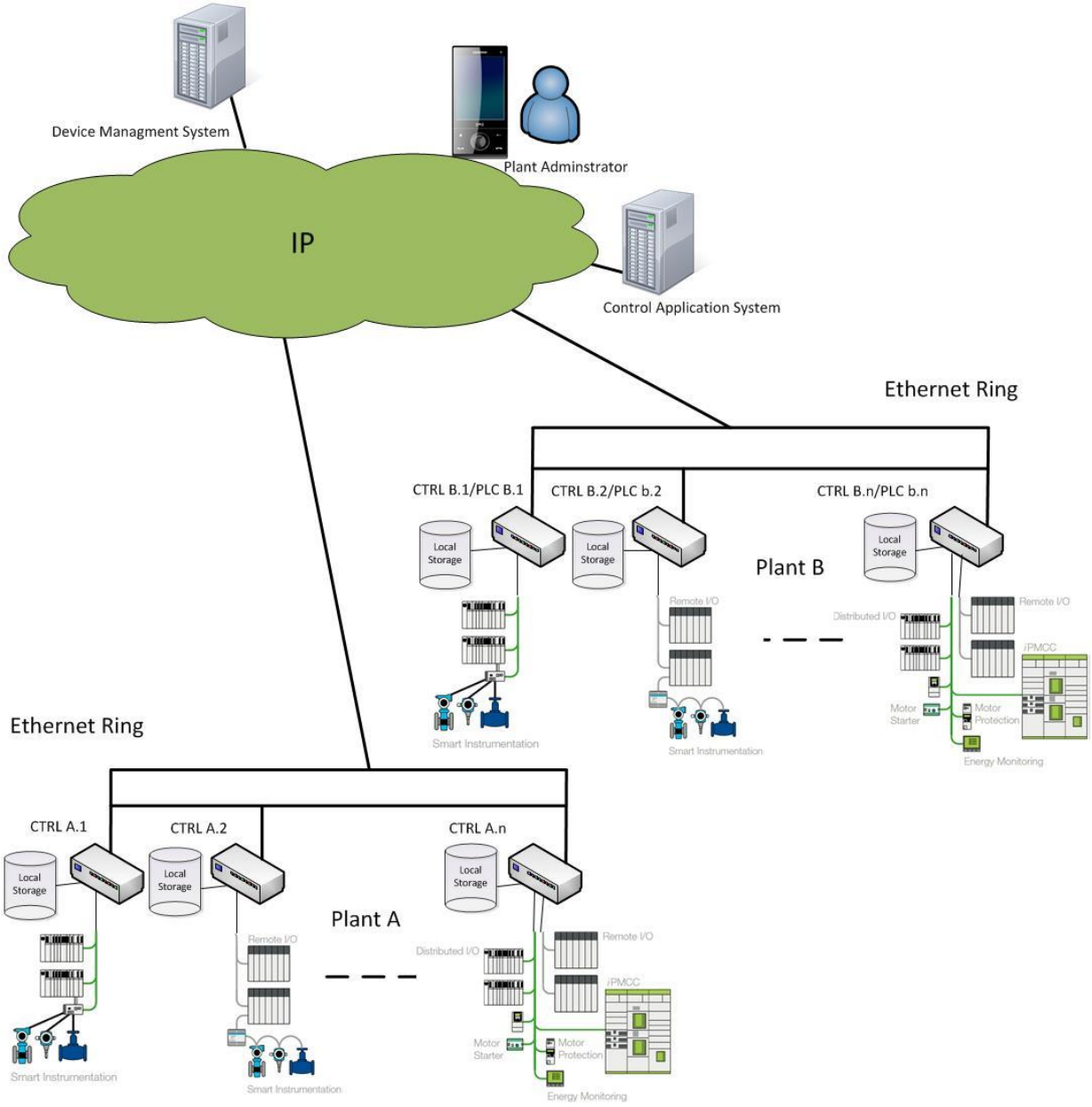
- The highest security is given by usage of special purpose hardware modules performing security critical tasks
- But, special hardware security modules are making the systems more expensive and requires substantial integration efforts
- Secure isolation on COTS have lots of cost benefits as long as we really are able to achieve *high security guarantees*



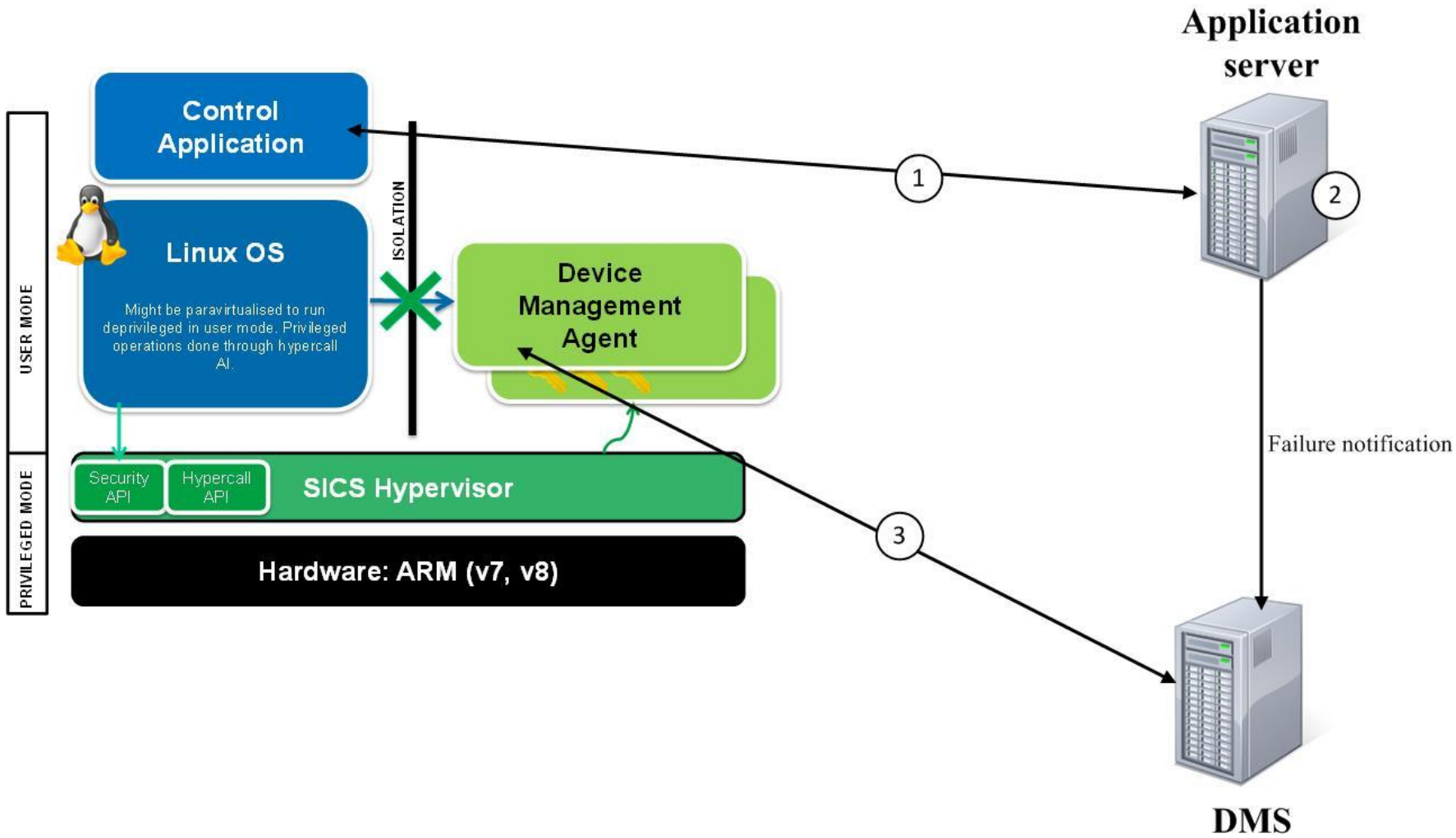
SECURE ISOLATION ON COTS PLATFORMS



AN IOT SCENARIO

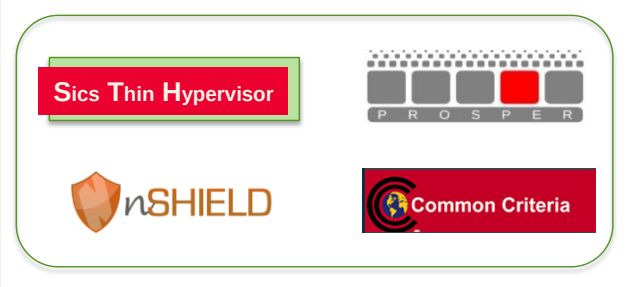


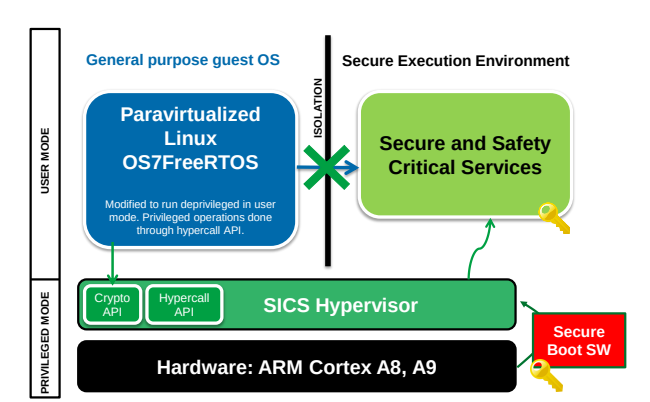
SECURE RECOVERY



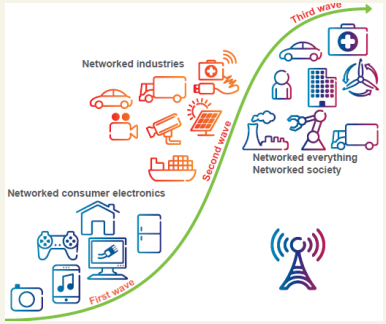
THE HASPOC PROJECT

High assurance security products on COTS platforms





Security for critical digital services and infrastructures



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HASPOC PARTICIPANTS

Partners

Reference Group
Requirements Owners

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