Providing Tamper-Secure SoC Updates through Reconfigurable Hardware

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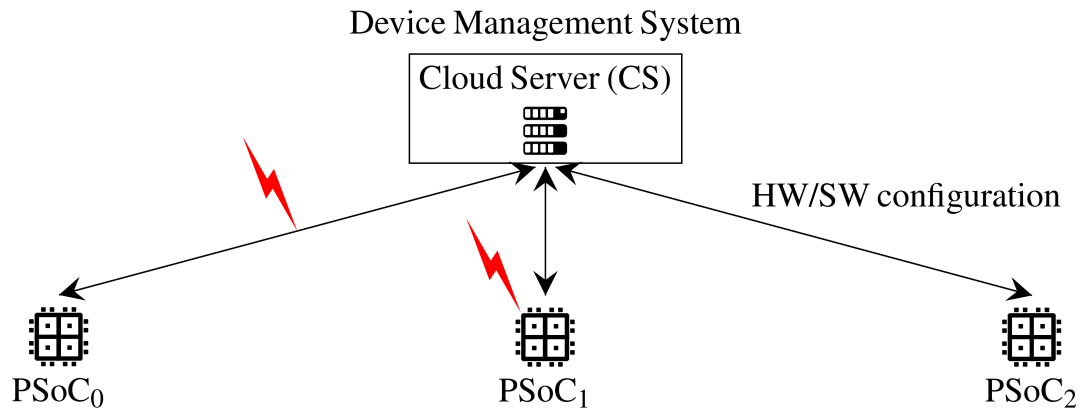
Curious about IoT Device Security and Cryptographic Hardware?

Motivation

- Remote firmware updates guarantee secure deployment of IoT devices
- **Questions:**
  - How to secure the **confidentiality** of secret keys?
  - Still possible if the system's **software** is compromised?
- **Idea:**
  Entirely relying on **hardware-intrinsic secrets**
  → We propose a partial reconfigurable hardware design called
  Trusted Update Unit (TUU)



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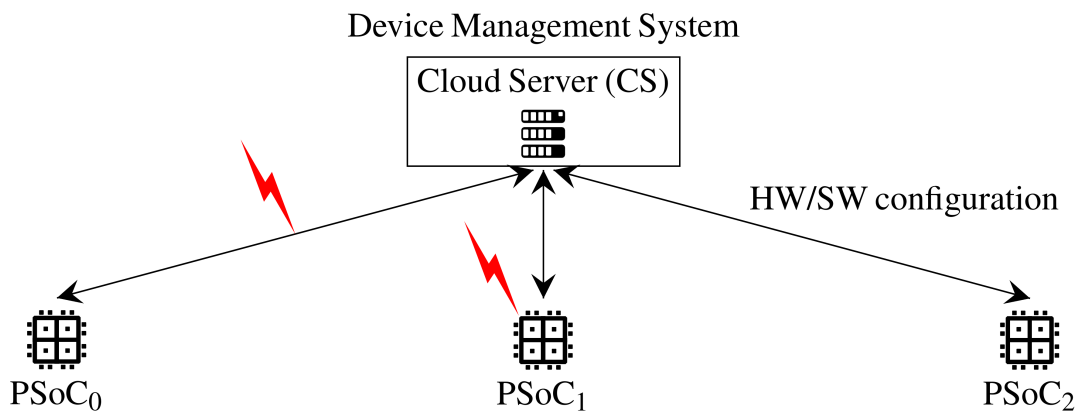

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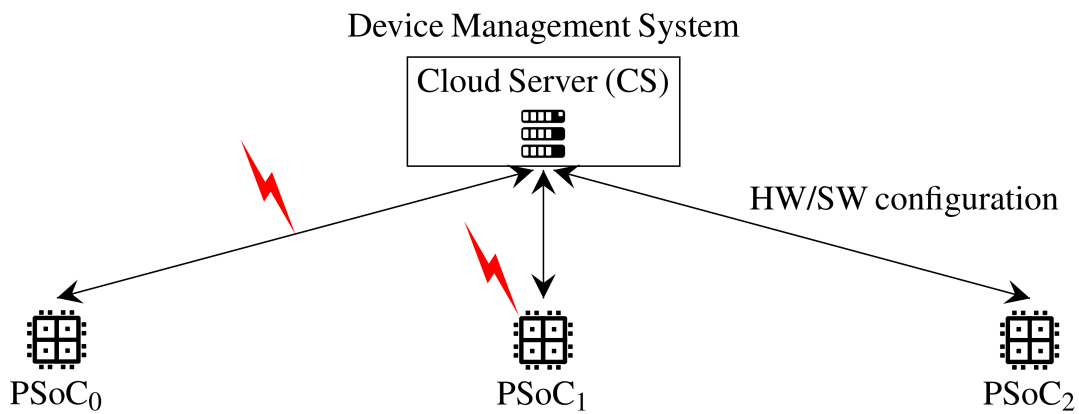

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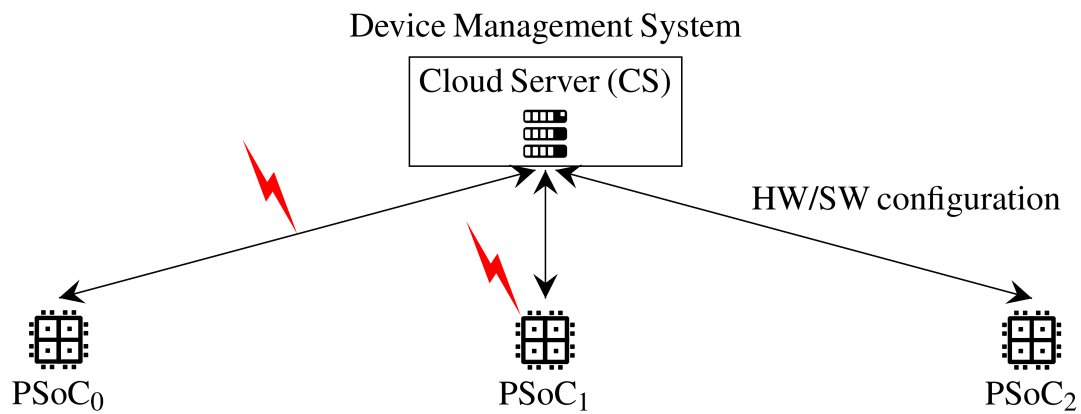

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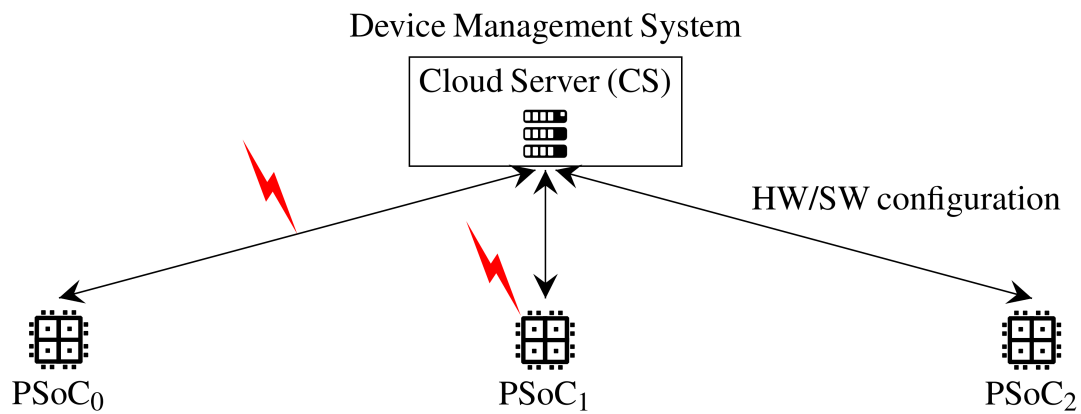

Thank you!

Hope to see you in the interactive poster session!