



iMRC

KEEP CONTROL OF YOUR IOT NETWORK

+ WHAT IS iMRC?

As the IoT has become an entry point for hackers, CEA-Leti is working with CEA-List and Tiempo to develop a new type of IoT component that can:

- Detect attacks
- Take back control of the system if attacks occur

This demonstrator illustrates the detection of DoS (Denial of Service)-type malware corresponding to a loss of communication between the object and its control server. It reproduces an attack on a home automation unit controlling several sensors and actuators – camera, light bulb, house door, meter – linked to a smartphone/tablet or PC app.

+ APPLICATIONS

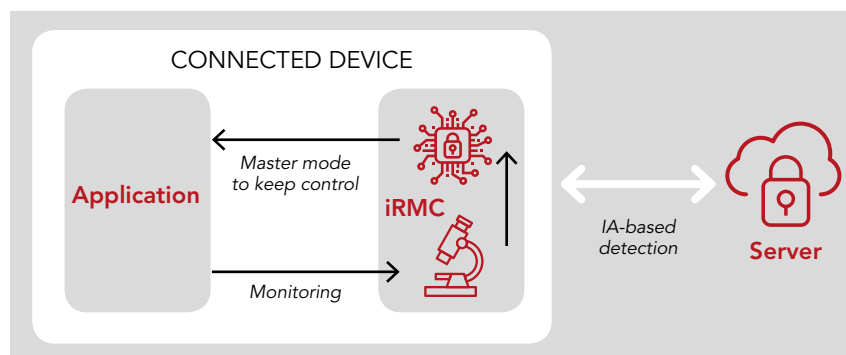
This technology covers all the IoT's high-level security needs and is essential for many sectors, including:

- Transports
- Future of medicine
- Smart grids
- Smart cities
- Industry 4.0

+ WHAT'S NEW?

To ensure the IoT network resilience after an attack, the iMRC solution includes the following innovations:

- Integrating a certified secure element, developing its ability to take control of the rest of the system and integrating it into a smart object
- Extracting internal signals to monitor the object's behavior
- Detecting attacks using artificial intelligence algorithms on a secure server
- Secure communication between the secure element and the server to send behavioral data and updates



KEY FACT

- Winner of the "Great Cyber Challenge" (French 2021 recovery plan)



+ WHAT'S NEXT?

Future versions of iMRC and the updated demonstrator will include:

- Automatic detection of attacks by the object thanks to an automatic connection to an AI server
- Taking back control of an infected object remotely
- Updates to a fleet of objects when a vulnerability is detected in one or more smart objects

INTERESTED IN THIS TECHNOLOGY?

Technical contact:

Pierre-Henri Thevenon
pierre-henri.thevenon@cea.fr
 +33 438 789 807

Sales contact:

Marion Andrillat
marion.andrillat@cea.fr
 +33 438 784 651

CEA-Leti, technology research institute

Commissariat à l'énergie atomique et aux énergies alternatives
 Minatec Campus | 17 avenue des Martyrs | 38054 Grenoble Cedex 9 | France

www.leti-cea.com



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