

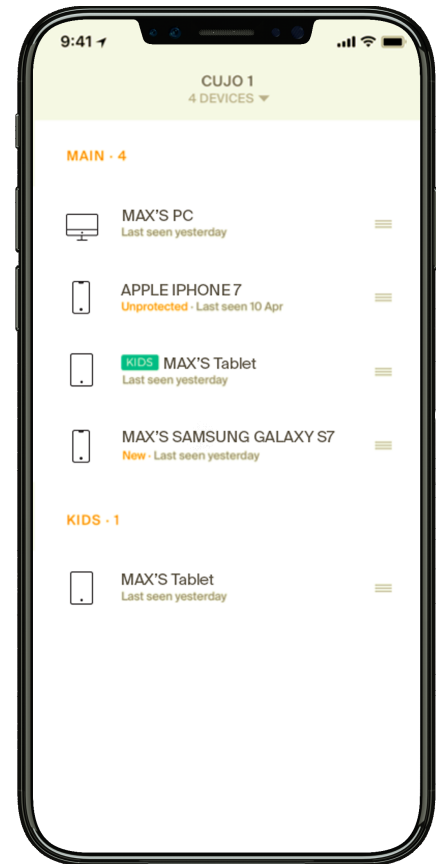
# Device Intelligence for Network Operators

**CUJOAI**

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Homes are full of connected devices, from laptops and cameras to tablets and cell phones. There is no easy, intelligent way to know what is connected to home user's LAN gateways or if specific software services are up to date.

Most Network Operators use basic identifying methods such as listing brand name or MAC address for devices. It allows them to provide generic device identification, in the best case scenario only recognizing personal computers and smartphones. In most cases, Internet of Things (IoT) devices are left unidentified and unprotected.



## Key Risks with Unrecognized Devices on Customer Networks:

**Undefined device behavior.** Each device has its own network behaviour pattern, depending on their category and specific features. Fingerprinting all of them allows Network Operators to create different behavioural pattern silos within a home network and precisely adapt security controls. This way, it's possible to effectively address a threat landscape common to a specific set of devices.

**'Talkative' vs. 'Silent' tech.** Some devices are more active (talkative) than the others. PCs, laptops, and network attached storage (NAS) devices will be noisy, while light bulbs, smart thermostats, and other generic IoT gadgets aren't expected to produce too much noise on a home LAN. When a device is not active, Network Operators and security services cannot identify and fingerprint them. Recognizing them is the first step towards quality protection.

**New device categorization.** New types of devices are manufactured and added to home networks every day. They must be categorized and recognized if the home user wants to get the full smart home experience as well as stay protected.

**Device Intelligence is the foundation for personalized wifi.** To provide services like Network Security, Parental controls or Anti-Piracy Monitoring it is critical for Network Operators to get granular device intelligence details for a customer's LAN. If the identification is not precise, the services will be not delivered in their full capacity.

## How Can Device Intelligence Benefit Network Operators?

Using Device Intelligence, Network Operators can offer personalized WiFi experience for their customers. This, in turn, will improve customer retention and acquisition in different areas:

**Create quality-of-service features** aimed at lowering customer service calls and at improving the overall experience. For example, if a user's 4K TV is not achieving streaming potential due to a wrong network configuration or poor extenders, a Network Operator can send an alert.

**Provide valuable device information** to the customer service team that will improve troubleshooting. For instance, if a customer is calling about an issue with their iPhone 7, the customer support representative can get valuable data about this smartphone model and common related issues.

**Offer additional services** based on device intelligence and upsell to the current customer base. If after analysis it's noticed that one of a customer's devices lack antivirus software, they can automatically get a notification urging them to install a recommended solution.

**Alert network security team** if a user device is susceptible to an exploited vulnerability or common cyber threat. After identifying a risk, a customer would get an alert notifying them that their device might be vulnerable.

## The Ultimate Solution Powered by Artificial Intelligence

The CUJO AI Device Intelligence service is designed to analyze a selected network and determine what devices are on it. The service uses predictive algorithms

powered by Artificial Intelligence. It monitors metadata from the gateway, analyzes it in the Network Operator's cloud environment, and ensures a safe internet experience in real-time.

The key features include:

- Identifying Device Type, Brand, Model and Other Features
- Detecting the Operating System
- Detecting the Endpoint Antivirus Agent

*Find out more about the service and get a full white paper at:*

[\*\*https://www.getcujo.com/platform/\*\*](https://www.getcujo.com/platform/)

*Contact our team for more information:*

[\*\*isp@getcujo.com\*\*](mailto:isp@getcujo.com)