

## **Acotel – Smart Router**



#### Acotel, an ICT Cloud Company

We provide **Cloud hardware** and **software solutions** that allow to increase the value of **Telco, Energy** and **Security**, in business and consumer segment.

#### **Our customers**







## Acotel focus is on **TELCO** and **ENERGY** sectors, key needs for consumer and enterprise environments





#### We collect and process

behavioral data of customers through different types of sensors in the consumer and business market



## **ACOTEL SOLUTION**



## Acotel Agent is a cloud-based solution that makes the customer's router smart.

Router collects hundreds of technical parameters related to quality of broadband service at home/office and information on customer behavior.

#### Acotel Agent is compatible with all major routers and is downloadable on the existing customer base.



#### **ACOTEL SOLUTION: Value for Telco**





## **COLLECTED DATA: Overview**



#### MORE THAN 500 PARAMETERS COLLECTED

Data categories

- Router Registry
- Router Configuration
- Wifi performance
- Broadband Connection performance
- Devices connected to the Router

Trasmitted to the cloud:

- Every 24 hours («static» data)
- Every 15 minutes («dynamic» data)





Router Registry (every 24h)

**29** Parameters

- Hardware model, production date and version
- MAC addresses of the components
- Router software release
- Average memory usage
- Number of restarts and causes
- User Agent release





Router Configuration (every 24h)

243 Parameters

- Lan settings
- Wan settings
- Firewall settings
- Number and information of IPs released
- Guest network settings
- USB ports and connected printers or keys settings





Performances (every 15 minutes)







- Memory usage and process number
- CPU Usage
- XDSL connection performance
- Fiber connection performance
- Wi-Fi connection performance (2.4GHz, 5GHz, 2.4GHz and 5GHz guest network)
- Ping
- Traceroute
- Speedtest





Devices connected to the Router (every 15 minutes)

More than **100** Parameters

90	
Parameters	

- All connected devices (Eth Wi-Fi)
- Number of active devices connected to the router
- Wi-Fi connectivity quality

14 Parameters For nearby Wi-Finetworks

#### For each network:

- Wi-Fi 2.4GHz/5GHz: channel in use
- Nearby Wi-Fi networks: channel in use and its power level





Devices connected to the Router (every 15 minutes)

#### For each device:

28 Parameters for device

- Connection protocol (device age)
- Signal strength
- MAC address (manufacturer, type of device, model)
- Connection time
- Number of re-associations (to be analyzed in relation to signal strength)
- Transmission speed in downlink and uplink



#### USE CASE THREE MAIN APPLICATIONS

## **1. CUSTOMER PROFILING**

Enrich customer profiling with information of single device use, type of device, broadband quality, wifi quality, network performances (**Data Monetization for upselling and customer satisfaction**)



#### 2. ASSURANCE

- Near real time diagnostic tool
- Wifi network E2E monitoring
- **Proactive resolution** of any critical issues on modem configurations and performances
- Automatic WiFi optimizations
- Reactive assurance

## 3. COMMERCIAL OFFER

Add value to basic commercial offer through **wifi optimization** proposition:

- Stand alone wifi optimization offer
- Bundle of wifi optimization with other services (eg. security)
- Bundle wifi optimization with premium Internet Offer





Data collected from the Agent can be used to develop **services for end customers** without using specific devices





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Router

Status

Presence

#### **2** ADDITIONAL SERVICES **VISITORS COUNTER FOR SHOPS**



The automatic connection access attempts are also logged in the Smart Router. It is therefore possible to have the smartphone number available which were visible to the Router, even if not connected to the Wi-Fi network.



#### **BUSINESS MODEL ARCHITECTURE based on MICROSOFT AZURE**





- Activation license: one shot fee for each single Agent
- Fee license: for each router monitored on the Platform
- Additional releases upon request (with the agreement of the Parties)
- Trial quotation upon request



# ACOTER

# Tank You