



WiFiMon Probes for Digital Generations

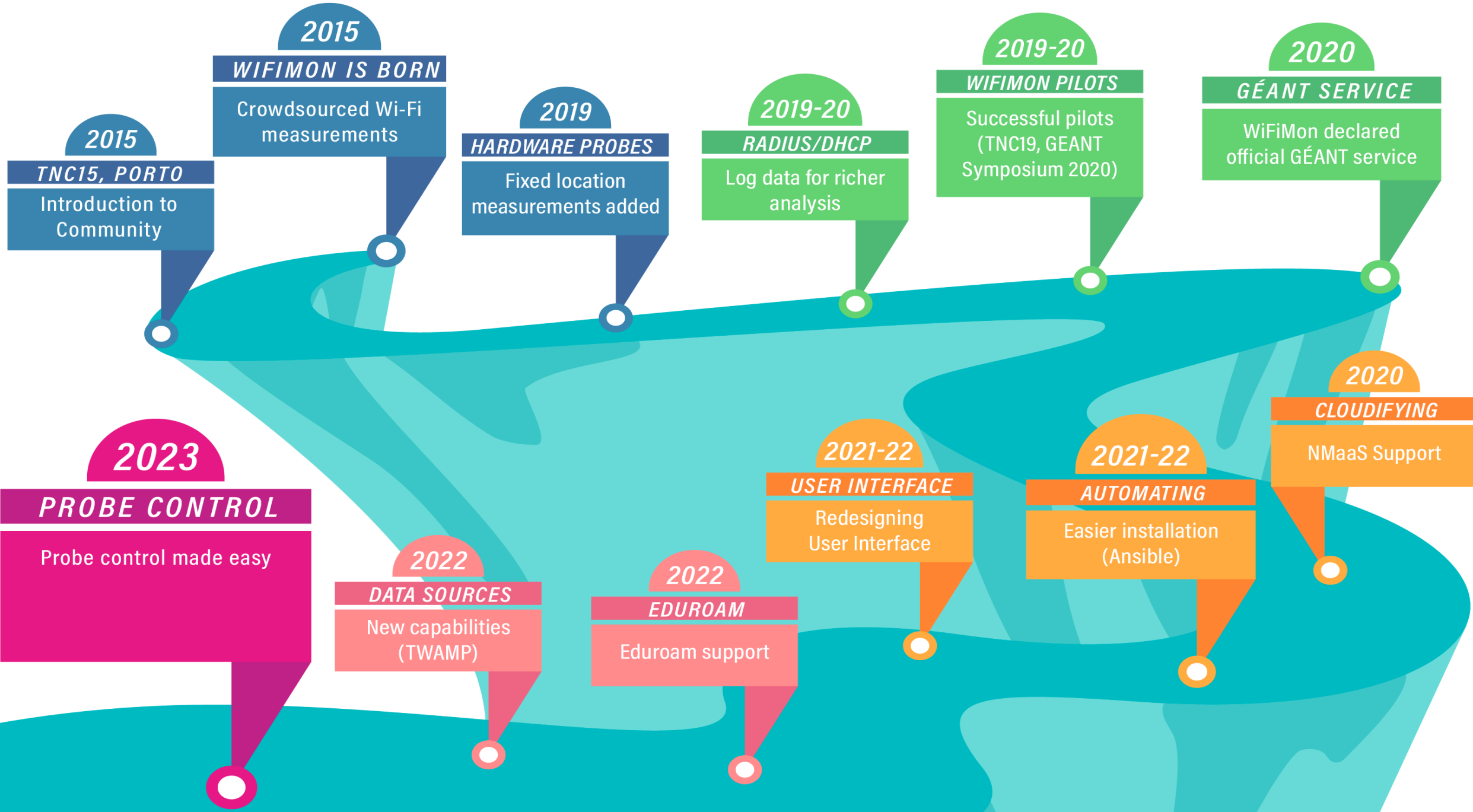
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WiFiMon Service Owner

TNC23/Tirana, Albania

June 2023



2015
TNC15, PORTO
Introduction to Community

2015
WIFIMON IS BORN
Crowdsourced Wi-Fi measurements

2019
HARDWARE PROBES
Fixed location measurements added

2019-20
RADIUS/DHCP
Log data for richer analysis

2019-20
WIFIMON PILOTS
Successful pilots (TNC19, GEANT Symposium 2020)

2020
GEANT SERVICE
WiFiMon declared official GEANT service

2023
PROBE CONTROL
Probe control made easy

2022
DATA SOURCES
New capabilities (TWAMP)

2022
EDUROAM
Eduroam support

2021-22
USER INTERFACE
Redesigning User Interface

2021-22
AUTOMATING
Easier installation (Ansible)

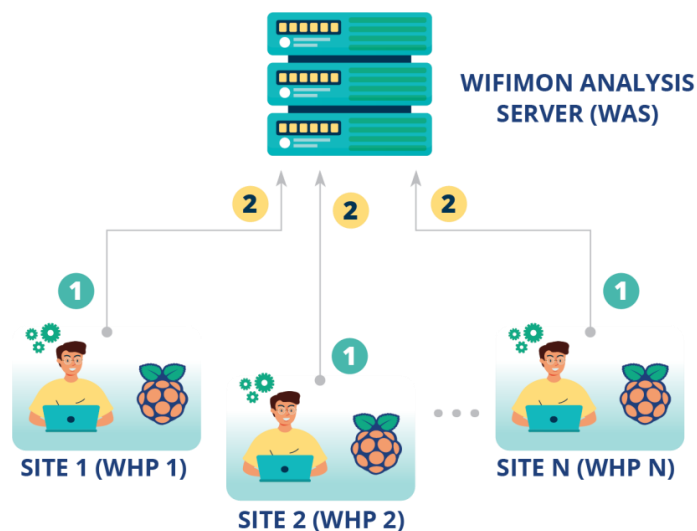
2020
CLOUDIFYING
NMaaS Support

WHP Configuration & Control

Old approach

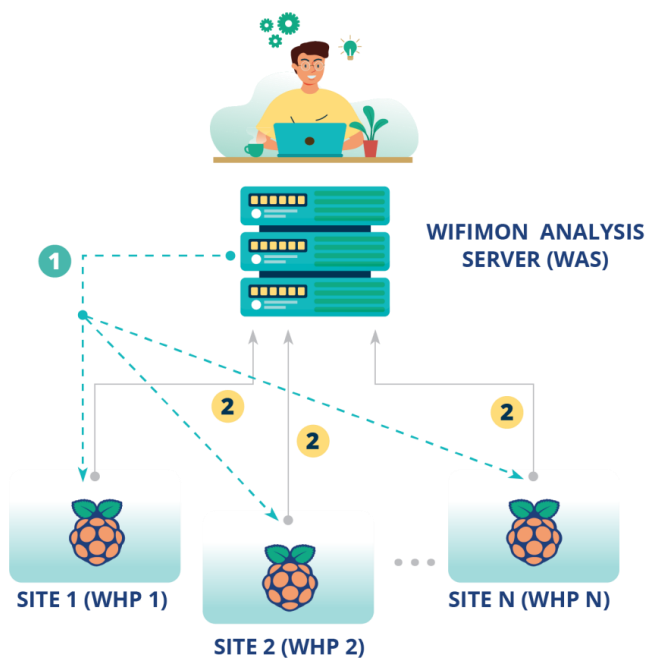
Administrator feedback demonstrated limitations:

- In NAT networks
- In public networks
- Administrators edit config directly



Novel approach required!!!

- ➔ Remote & user-friendly configuration of WHP's from a central point (WAS)
- ➔ Ability to control WHP's behind NAT networks

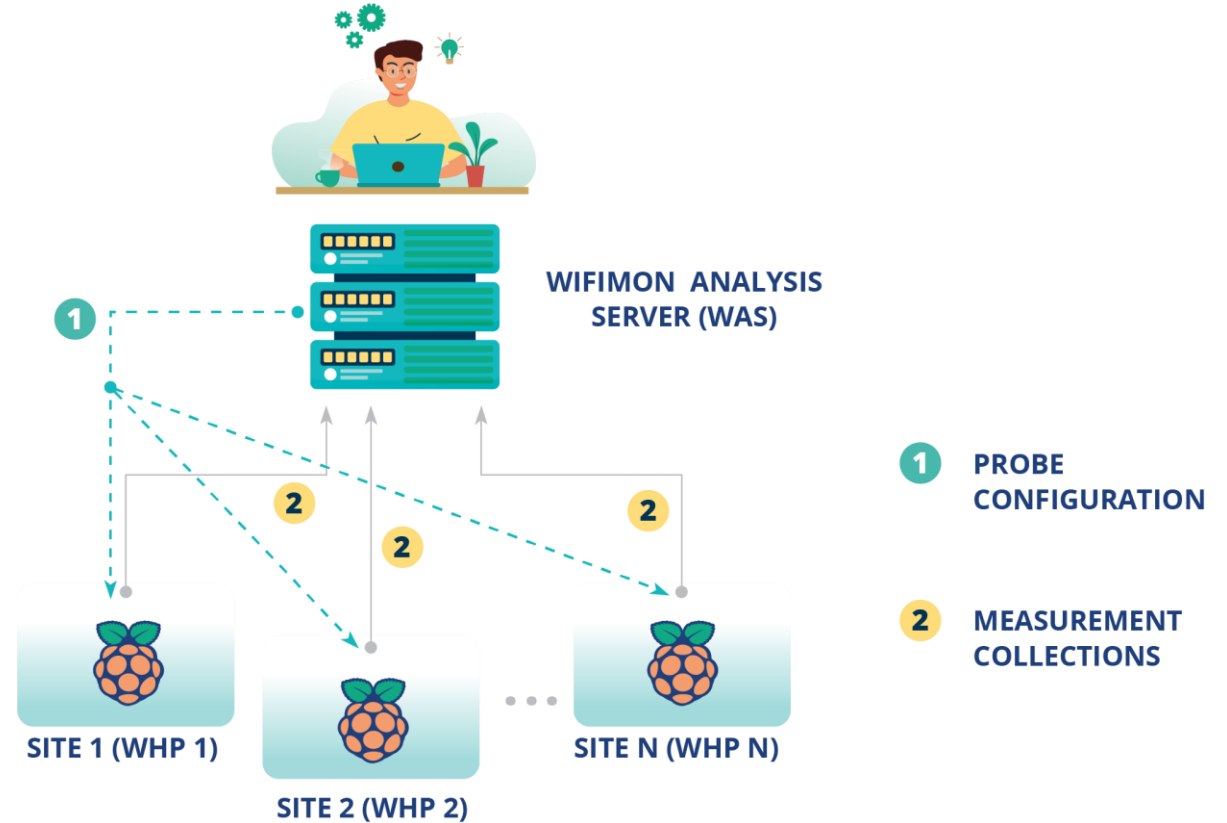
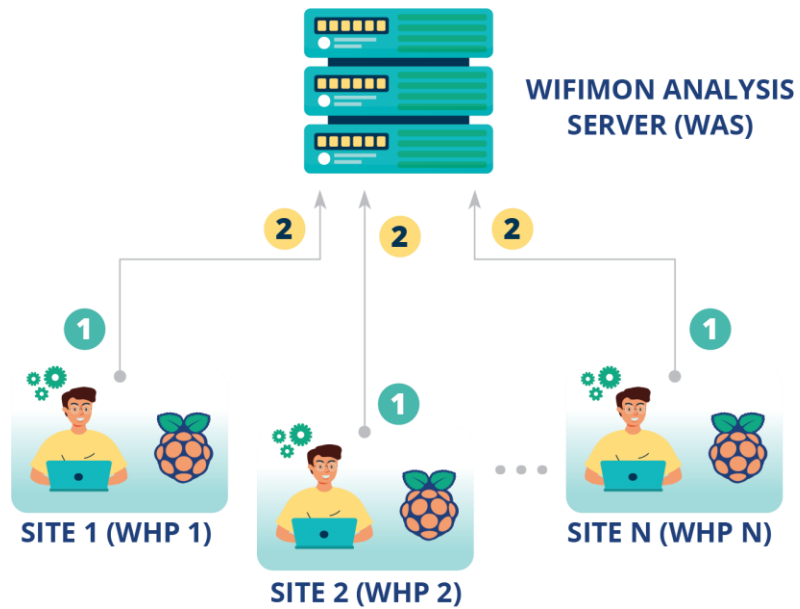


- 1 PROBE CONFIGURATION
- 2 MEASUREMENT COLLECTIONS



Novel approach required!!!

Old approach



WHP Configuration Made easy

- Administrators (re)configure WHP's from the WiFiMon UI

WIFIMON HARDWARE PROBE CONFIGURATION PAGE

Full in the following information to configure the probe

1

PROBES ARE IDENTIFIED BY AN INTEGER NUMBER

Insert WiFiMon Hardware Probe number:

2

PROBES TRIGGER MEASUREMENTS TOWARDS THE WiFiMon TEST SERVER (WTS)

Insert WTS FQDN or IP address:

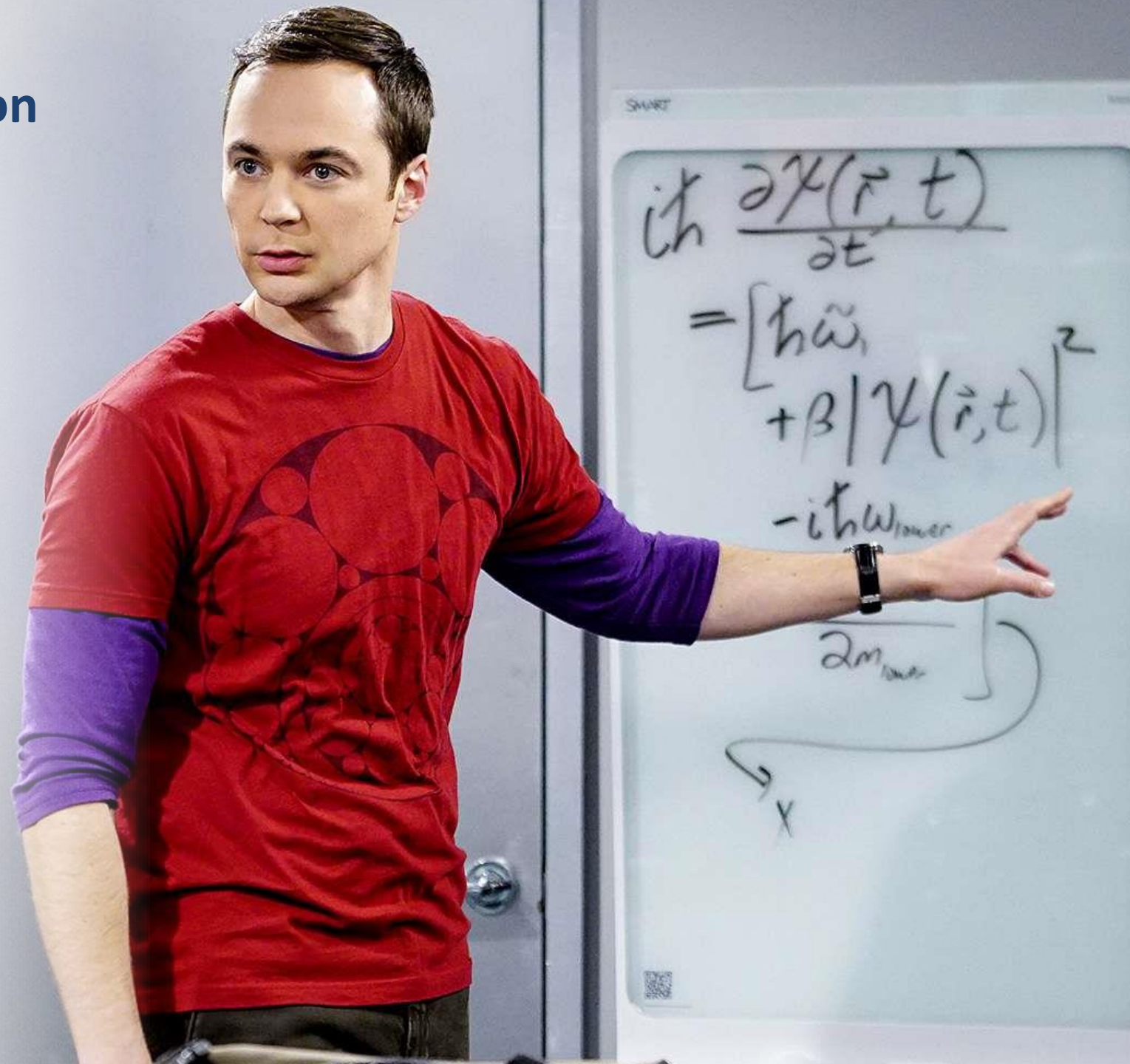
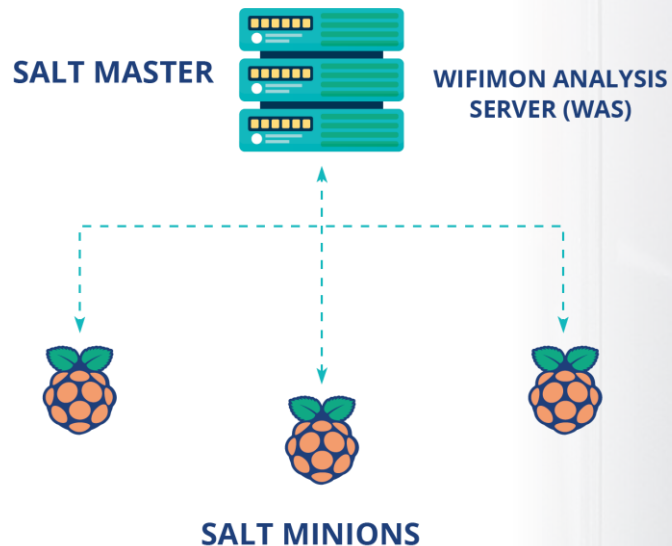


Remote WHP Configuration Made Possible

- Solution based on the **Salt** infrastructure management tool

WiFiMon Analysis Server
→ **Salt Master**

WiFiMon Hardware Probes → **Salt Minions**



Remote WHP Configuration Made Possible

- 1 Salt establishes application layer communication:**
 - WHP's are remotely configured from the WAS
 - Remote reconfiguration possible even for WHP's behind NAT
 - Public IP addresses are not required → IP space is consumed
- 2 Salt includes a ZeroMQ message broker:**

Parallel configuration regardless of the WHP number
- 3 Configuration files** generated from **templates** are transferred from the WAS to the respective probes





Thank You

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Co-funded by
the European Union