Operating System

RF CONTROLS
IDENTIFY · LOCATE · TRACK™

Drag & Drop UI Facilitates Seamless Passive RTLS Integration

RFC-OS is the core setup & administrative platform for CS Smart Antenna Technology. Together, the system Identifies, Locates & Tracks RAIN RFID tags (Passive UHF) in real-time. A variety of modules are used for run-time, configuration and integration. RFC-OS allows for deployment, monitoring, and integrations to enterprise systems and it includes pre-integrated tools to aid in deployment, visualization, data-analysis, and system health.

Seamless Plug & Play Passive RTLS

Easy To Scale

- Install 1 or 100's of CS Smart Antennas together by drag and dropping them into regions, clusters and zones using RFC-OS
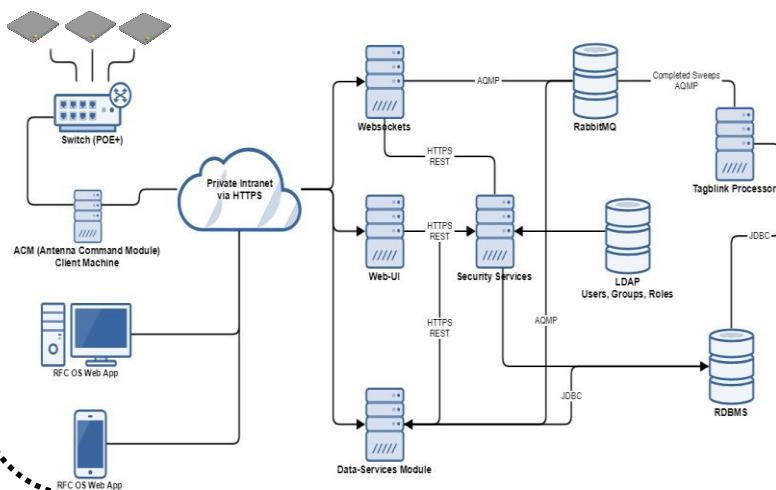
PoE / PoE+ Connect

- Power source & data feeds are PoE / PoE+
- Each CS Smart Antenna includes a proprietary reader + steerable phased array antenna

API Integration

- Utilize RFC-OS data services, either through REST APIs or Websocket Endpoints

Installation & Deployment Architecture

Operating System

MODULES

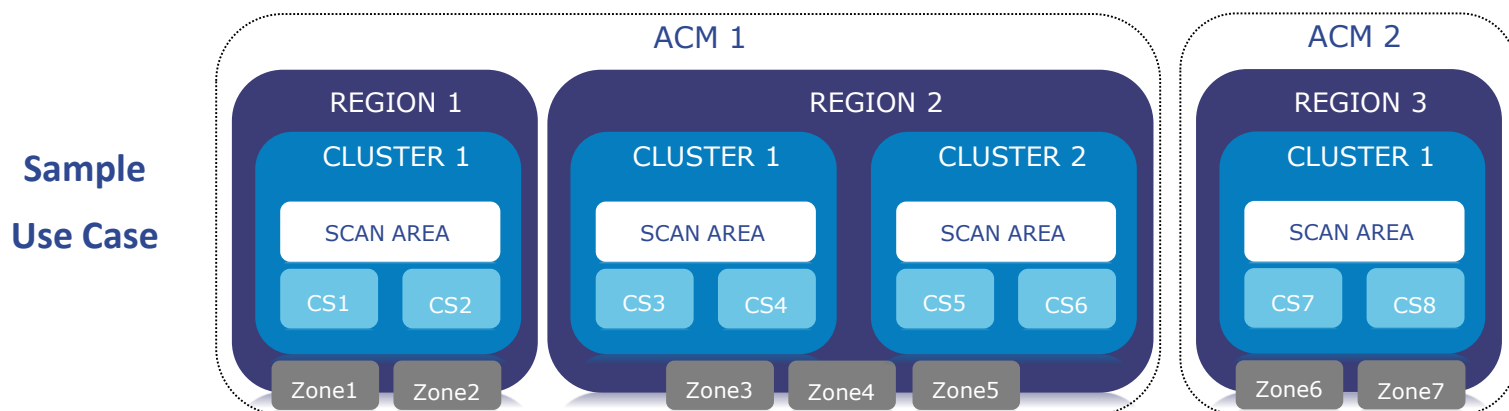| ACM | Tagblink Processor | Data Service |
| Security Services | Websocket | Web-UI |

IMPLEMENTATION TOOLS

| 3D Visualizer | Analyzer | System Health |

Introductions to Region Hierarchy & Setup

A Region is simply a logical part of a full installation that contains the configuration for many antennas. A Region is a hierarchical relationship of configuration settings including Clusters, Scan Areas, Antennas and Zones based on a logical grouping for antennas, physical location and functionality.

Sample Use Case

ACM 1		ACM 2
REGION 1	**REGION 2**	**REGION 3**
CLUSTER 1	CLUSTER 1 / CLUSTER 2	CLUSTER 1
SCAN AREA	SCAN AREA / SCAN AREA	SCAN AREA
CS1 CS2	CS3 CS4 / CS5 CS6	CS7 CS8
Zone1 Zone2	Zone3 Zone4 Zone5	Zone6 Zone7

Region
- Each Region runs off of an ACM and local origin (0,0,0) where all reads are measured
- Each Region defines how often and how much data to use for location processing prior to publishing and the location methods that should be used
- By tuning properties, the user configures a region that performs well in high motion environments or is better suited for static, high accuracy environments

Cluster
- A logical grouping of antennas that allow the antennas to work together
- Settings shared by the cluster include power level, reader scan profiles, tag filtering

Scan Area
- The scan area is segmented into scan points using chops, the number of segmentations within the scan area are used to create scan points

Antenna
- This component represents an antenna in physical space (location and orientation) along with its network configuration (hostname / IP address)

Zone
- A 3D representation of physical space that has nothing to do with how the antenna(s) or region perform. Zones are associated to a tag when it's inside the x,y,z position
- Zones can overlap, however it is best to create unique zones with descriptive names