

# Endpoint User Stories

User Story	Acceptance Criteria
As a system operator, I want to set the endpoint's unique ID, WLAN interface, cloud server URL, and auth via a config file or environment variables so that deployment is fast and repeatable.	<b>Given</b> a valid config file or environment variables <b>When</b> the scanner starts <b>Then</b> it loads all values and uses them for operation.
As a system operator, I want the scanner to start automatically on device power-on so that no manual intervention is required in the field.	<b>Given</b> the device is powered on <b>When</b> the OS boots <b>Then</b> the scanner service starts automatically.
As a system operator, I want minimal local dependencies (Python/bash + built-in tools like tcpdump) so that endpoints remain lightweight.	<b>Given</b> a fresh Raspberry Pi OS installation <b>When</b> dependencies are installed <b>Then</b> only a few lightweight libraries are required.
As a system operator, I want the endpoint to notify the server immediately when it comes online.	<b>Given</b> the scanner boots <b>When</b> the service initializes <b>Then</b> a "device online" message is sent.
As a system operator, I want all transmissions to use HTTPS (or another encrypted protocol).	<b>Given</b> an outbound transmission <b>When</b> data is sent <b>Then</b> it uses HTTPS/TLS.
As a system operator, I want each detected scan to include MAC address, RSSI, and timestamp.	<b>Given</b> a Wi-Fi device is detected <b>When</b> the scan data is sent <b>Then</b> MAC, RSSI, timestamp are included.

As a system operator, I want the endpoint to write all transmitted scan records to a local log file.	<b>Given</b> scans are sent <b>When</b> I check the log file <b>Then</b> entries are present.
As a system operator, I want the endpoint to resend scan data if the server temporarily goes down	<b>Given</b> the server is offline  <b>When</b> a scan occurs  <b>Then</b> the scan data is stored locally and sent when it's reconnected to the server
As a system operator, I want the endpoint to send a health update every minute	<b>Given</b> the endpoint is running  <b>When</b> 2 minutes pass  <b>Then</b> a health update is sent
As a system operator, I want the endpoint to log any errors that occur to make troubleshooting easier	<b>Given</b> an error occurs  <b>When</b> I check the log file  <b>Then</b> a detailed error message will be displayed