

# CLAS software version 2.2.38.99 Release Notes

This document summarizes the following firmware releases:

Software Release Number	Release Date	See page
V2.2.38.99	26-Feb-2020	Page 1

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## CLAS software v2.2.38.99

### RELEASE DATE: 26-Feb-2020

Zebra's CLAS software is a software suite that when used with ATR7000 readers provide real time EPC and location of RFID tags.

Users of CLAS software can consume real time location data streaming on a Kafka or MQTT interface for upstream analysis to facilitate a variety of RFID location-based solutions.

These Release Notes list new features, specific usage instructions, and any known issues.

**Note:** Please Note that in order to install the CLAS software, an active internet connection is required.

### Contents of the release package:

Component	Version	Date
RTLS CNM	3.20	26-Feb-2020
Radio CND	1.1.5.62	26-Feb-2020
Location Analytics	1.1.5.57	26-Feb-2020
RTLS Simulator	1.38.99	26-Feb-2020
RTLS Demo App	1.13_a31f629	26-Feb-2020

## Hardware Requirements

The following describes the hardware requirements for running CLAS.

- Quad Core CPU @ 2.4 GHz
- 16 GB RAM
- 16 GB of free hard disk space

## Device Compatibility

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CLAS software can only be used with ATR7000 readers. No other fixed readers are supported.

This release of CLAS RTLS software works with only with ATR software version 2.15.19 and above. Please make sure to upgrade the ATR software to 2.15.19 or above before upgrading the RTLS software.

## Installation Instructions

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### System Configuration

**NOTE:** For new installations, the user should refer to the CLAS Server and Software Installation Guide, MN-003197-xx. The remainder of this section addresses upgrades to existing installations.

**NOTE:** This release includes an NTP server and an FTP server as part of the RTLS release. So, the host machine should not already be running an NTP server or an FTP server. Also, while deploying the RTLS application it is mandatory to provide an upstream NTP server which is the NTP server with which the RTLS NTP server will use for time synchronization.

The following changes should be made to the config files before starting:

1. `rtls/config/aar_info.csv` to be updated with the list of deployed AAR hostname and position info
2. `rtls/config/rtls.conf` file to be updated with the following
  - a. IP and port number of the location endpoint
  - b. The field named `radio_c_and_d_config` must be set to bearing.

### Update Docker and Docker Compose

This version of CLAS software requires docker 18.09 or above and docker-compose version 1.24.0 or above.

To update docker, run the following commands:

1. `curl -fsSL https://get.docker.com -o get-docker.sh`
2. `sh get_docker.sh`

To update docker compose run the following commands.

1. `sudo curl -kL "https://github.com/docker/compose/releases/download/1.25.3/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose`
2. `sudo chmod +x /usr/local/bin/docker-compose`
3. `sudo ln -s /usr/local/bin/docker-compose /usr/bin/docker-compose`

### New CLAS Installation of V2.2.38.99

To deploy CLAS software the first time on a server from container registry, follow the below steps.

1. Extract the RTLS release package: `tar -xzf rtls_services_cr_x.y.z.tar.gz`
2. `cd rtls`

3. Edit the `.env` file and set the variables accordingly.
4. Login to Zebra Docker registry using the following command.  
**`docker login registry.devsecops.zebra.com -u <username>`**  
type in the password when prompted for it.  
NOTE: the user account details to login to the Docker registry will be sent via an email to the user.
5. CLAS software is automatically installed the first time it is run.
6. To start the CLAS software run **`./rtls.sh -ndk start`**. This would pull all the images from the registry the first time it is run. Subsequent starts will use the images already pulled unless an upgraded package is used.

**NOTE:** if the user is not added to the docker group, please use sudo for running `rtls.sh` script.

## API Documentation

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This release supports the RTLS REST interface version v2.1.18.

The release includes the live documentation support for REST API. To view the documentation, follow the steps mentioned in the previous section to build and start the RTLS server. Open a browser and enter the following URL `https://<IP:PORT>/doc`. Replace the IP and PORT values with the IP and PORT number where the RTLS is configured to run. A JSON file containing the API definition will be displayed in the browser.

## Changes in 2.2.38.99 with respect to 2.2.23

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CLAS V2.2.23 was the last release for customers. Following are the Changes and Enhancements in CLAS V2.2.38.99 over the last version.

- Improved Location Accuracy.
- Removed licensing requirement from CLAS.
- Added a unified interface to start CLAS and simulators using a single command line switch `./rtls.sh -s start`.
- Configuration Enhancements thru REST:
  - Added Static & Dynamic Threshold configuration
  - Added configuration of Data EndPoint (MQTT or Kafka)
  - Added support for `site_id`.
  - Added support for GS1-ISO tag encoding for Multi-tag items
  - Added support for adding and deleting foreign tags via the REST interface.
  - Added support to add and remove ATR readers using the REST Interface
  - Added LLDP Configuration support
- Container Registry based installation support
- Health Check & Recovery Enhancements
  - Added support for asynchronous data transfer from CND and LA to CNM via heartbeat channels.
  - Support for RTLS CNM event notification on a configurable kafka topic & MQTT
  - Introduction of Syslog aggregator service for all readers and forward to event channels.
  - Include ATR disk usage statistics as part of the status
  - Implementation of recovery framework for CND and LA components.

- Support for Secure MQTT
- Integration of RTLS Demo App as part of the CLAS installation
- Security Fixes for CVE's (CVE-2018-18074 and CVE-2018-20060) in IronPython
- Security Enhancements
  - Signed RTLS applications
  - Trusted User for RTLS
- Reference Tag Monitoring Support
- Enhancements of MultiTag Support in LA

## KNOWN ISSUES

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Following are the list of issues that currently exist in the CLAS software.

- Performing software update through API fails for the first time when the ATR7000 is reset to factory defaults.
- LA goes for recovery every time upon rtls/stop and rtls/start API.