SAIMOS® VA 2021 R1 Release Notes

- **First Release Date:** 4th October 2021
- **CODENAME:** Jean-Luc
- **Current stable build:** 4.0.8 (2021-11-22)

General

SAIMOS® VA 2021 R1 (Jean-Luc) is our next generation release following up 2020 R3 and offers a full restructured backend, a new installer, more stability, heightened security, better performance and, of course, new functionality. For more information please refer to the following sections and if you have any questions, please don't hesitate our support via support@saimos.eu or at our support page.

Important Notes

As the build number base was increased to 4.* this indicates a fully redesigned backend with numerous changes to the underlying structure in the mantle of the 4th generation build of SAIMOS® VA. This means new architecture requirements as well as the necessity for a database migration for upgraded systems. Here are the most important facts for upgrading to or installing a fresh 2021 R1 release.

Structure

Utilizing our new installer, SAIMOS® VA now comes with a proper static/dynamic data separation also on Windows systems. That means on Windows, a newly installed release will have the following file structure:

- Static installation files and binaries are located at

  `C:\Program Files\SAIMOS VA`

- Dynamic configuration files, logs and configuration databases are located at

  `C:\ProgramData\SAIMOS VA`

Installation files as well as dynamic data located at `C:\ProgramData\cogvis3` will not be touched by the installation of the 2021 R1 release. To migrate old data towards the new release please refer to the Upgrade section below. After a successful migration the previous installation could be removed manually if desired.

Upgrade

Due to a complete change in file structure it is recommended to do a clean upgrade from older SAIMOS® VA versions to the 2021 R1 release. Necessary steps are:

- Create a fresh backup of the current running SAIMOS® VA release
- Save the backup dump to a save location
- Uninstall all previously installed SAIMOS® VA packages from the system
- Install SAIMOS® VA 2021 R1 on the system
- Restart the OS

- Perform a backup restore using the new SAIMOS® VA Command Prompt

After successfully completing the above steps, your previous SAIMOS® VA release should be successfully ported to 2021 R1. For further upgrade instructions, please refer to our new web based manual that is downloadable for offline use at the SAIMOS® VA software repository. If you need any help or have problems upgrading, please don't hesitate to contact our support.

License upgrade

The 2021 R1 release represents a major upgrade and will require re-licensing. Customers with active update plans will be able to acquire a refreshed license via our licensing portal or by contacting our support.

Customers without an active update plan should contact their SAIMOS® sales representative for upgrade options. After upgrade or installation of 2021 R1 a new 30 day trial period will be activated to guarantee continuous operation and to ease the update process. If you are facing any problems or have any questions, please don't hesitate to contact us.

CPU requirements

Due to the heavy use of the Intel® OpenVINO™ Toolkit SAIMOS® VA is compatible with the following CPU generations:

- 6th to 11th generation Intel® Core processors (or newer)
- 1st to 3rd generation of Intel® Xeon® Scalable processors

Older CPU models will not be able to run the Node runtime as well as channels. However, the SAIMOS® VA Server might still be operable (however it is not tested anymore by SAIMOS®). Backports for older CPU models will not be supported from this release onwards.

Major improvements and news

- **New product addition: SAIMOS VOD - Vehicle Occupancy Detector**

  SAIMOS VOD is a newly designed product analyzing 4 camera streams located at a car access point for a combined occupancy within a vehicle. It uses state of the art AI technology to do person detection and body part detection within the car interior to estimate the occupancy within the car. By reading and triggering a network I/O or relay it can assist access control stations with additional signals. A special positioning of the 4 cameras (driver, co-driver, backseat left, backseat right) as well as additional near-infrared lighting and lens filters can enable the SAIMOS VOD channel to look into car interiors with minimal reflection and through tainted windows. Please contact our support or pre-sales for more detailed information about this product and the necessary camera setup for optimal operation.

- **New MSI Installer**

  Now SAIMOS VA comes with a unified component based MSI installer. You can now choose within the installer what kind of components you want to install. Node + Server, just Node or just Server. The new Installer also comes with a new file structure that is now fully compliant to Microsoft Windows best practices.

- **OpenVINO 2021.4 LTS inside**

  Now the latest LTS for OpenVINO^{TM} is delivered with this release and ensures stability and better performance as well as feature additions for our deep learning inference.

- **Additional state of the art detectors for Face**

  We have added 4 new detector engines (utilizing OpenVINO^{TM}) for better accuracy or performance (you choose during configuration) and different use cases.

- **Age/Gender Statistics for Face**

- **Axis P8815-2 Stereo camera support for SAIMOS® Stereo channels**

  We have added the Axis P8815-2 device to our supported device list for SAIMOS® Stereo

- **SAIMOS Command Prompt for advanced users**

  Easy backup and restore, cloning channels, bulk configuration changes. For all users that just don't want to waste time within a graphical user interface and want to get things done the proper way the SAIMOS Command Prompt now offers the perfect platform for saving time and money on configuration and installation.

- **New HTML based Manual**

  A fully redesigned manual enables you to find desired answers faster and more efficient.

- **Fully encrypted backend communication by design**

  For internal backend communication, Server <--> Node <--> Channel, SAIMOS VA now communicates fully encrypted utilizing state of the art Curve25519 for real time e2e communication encryption (just like your most trusted messenger apps).

- **Improved and re-worked Milestone XProtect® Plugin**

  The new and improved Milestone XProtect® Plugin now allows for native generation of all camera based SAIMOS VA products and offers an improved UI experience and better web display integration utilizing the native Microsoft Edge Browser engine.

- **SAIMOS Centralized Search Plug-In for XProtect®**

  The newly added SAIMOS Centralized Search Plug-In for Face and LPR for the XProtect® Smart Client enables you to search natively for detected faces and license plates within Centralized Search. The advanced filter settings will enable you to perform detailed searches for age, gender and label (Face) or country, region, city, label (LPR).

Behind the scenes (security, stability, fixes)

- **Milestone Plugin:**
  - Browser engine swap to native Microsoft Edge Browser engine
  - Backend communication improvements

- Reactive UI design improvements
- Additional Component views
- Additional product additions for the native VA Server view
- Added Centralized Search Plugins for Face & LPR
- Improved installer
- UI/UX redesign
- Library updates
- **Server & Node:**
  - Added native MQTT client for external data retrieval (e. g. Axis P8815-2)
  - Decoupled internal zone name from device zone name for SAIMOS$^®$ Stereo channels
  - Added Age-Gender statistics for demographics analytics
  - Improved face detection engines, added 3 new DNN engines for high speed and high accuracy detection
  - Improved and reworked Face Log with additional Similarity search (also pre-ported in build 3.2.15)
  - Stability improvements for Lidar channels
  - Fixes for Report and Statistics views
  - Added external option for the removal of SAIMOS$^®$ branding in reports (server.conf)
  - Added link for Server Web-UI to Windows Menu
  - Added link for SAIMOS$^®$ Command Prompt in Windows Menu
  - Removal of Server and Node tray icon. Utilization of native Windows Service interface is recommended
  - New file structure for Windows OS with separated folder structure for static and dynamic files
  - Native Windows compile utilizing MSVC
  - Generalized channel executables (va_channel)
  - Adaption for Vivotek SC8131 Firmware g+ and basic authentication
  - Optimized ZMQ communication structure for improved stability and performance
  - Improved socket stability to decrease the probability for Node <--> Server communication failure
  - Upgrade BECOM Argos bta lib to 3.2.6 Linux and 3.3.0 for Windows
  - Upgrade embedded PostgreSQL to 12.8
  - Upgrade embedded Python to 3.8
  - Upgrade to Angular 12 for next generation web-ui components
  - Library upgrades for all externally used libraries (where available)
  - Added SAIMOS Command Prompt for Windows OS
  - Switch to component based MSI installer with enhanced upgrade functionality and better system integration for Microsoft Windows
  - Improved DB Admin scripts for easier backup and restore handling
  - Improved DB Administration page Web-UI (also pre-ported in build 3.2.15)

Service Builds

Build 4.0.8 - 2021-11-22

- [Fixed] Channel fails to connect to a camera if authentication is enabled and the password contains characters that are subject to URL-encoding

Build 4.0.5 - 2021-11-09

- [Fixed] Core channels: Stream Config UI does not allow changing Milestone camera or configuring ROI
- [Fixed] Server skips executing scheduled jobs (such as occupancy area reset or report distribution) when system CPU or disk load is high

Build 4.0.2 - 2021-10-08

- [Fixed] Server doesn't see a newly added node as being online until the node is restarted.
- [Fixed] Face channel edit display: Zone Edit popup doesn't allow viewing or editing the zone ROI.
- [Fixed] Channel View summary display doesn't show snapshots of VOD channels.
- [Fixed] Linux only: in rare scenarios the node stops receiving messages from server until the node is restarted.

Build 4.0.1 - 2021-10-05 (critical for non-English locale Windows systems)

- [Fixed] Installer might not be able to start PostgreSQL service due to a locale dependent Network Service authorization problem. Only relevant for non-English Windows system installations.