TECHNICAL DATA SHEET

SYNGUARD REQUIREMENTS

V3.08 - 3/03/2025

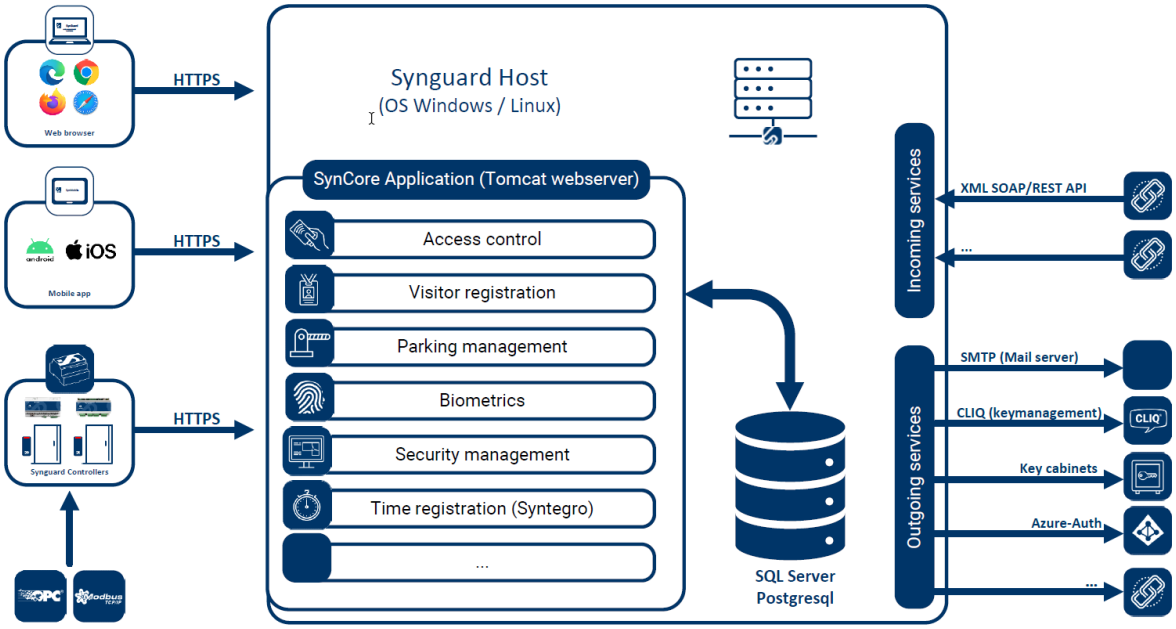
ALWAYS WITH YOU

SYNGUARD

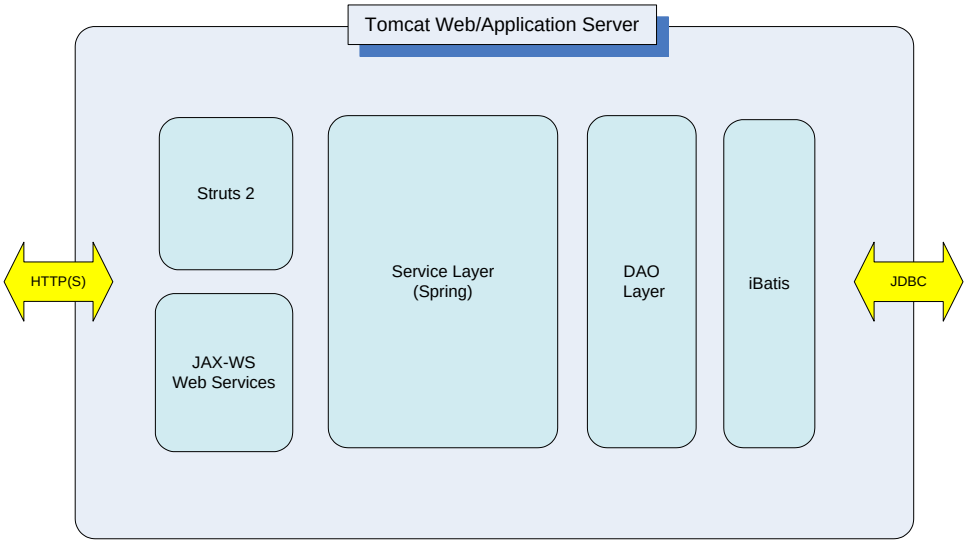
CONTENT

1. OVERVIEW

Synguard consists mainly of a Java-based Tomcat Application/Webserver environment. This environment runs as a service-process on a Windows/Linux host and provides all the necessary functionalities. This includes full processing of access control and time registration data, communication with the access control network, with the users (via web browser), with the database, with external servers (e.g. mail server, LDAPS/AD server/ etc), ...



2. SYNGUARD: INTERNAL SOFTWARE STRUCTURE



Synguard is built internally using a number of standard Java frameworks (Struts/ Spring/iBatis).

3. SUPPORTED OPERATING SYSTEMS (NEW INSTALLATIONS)

The operating systems listed below are all 64-bit.

- MS Windows 2016 server or later
- MS Windows 10 (for smaller installations)
- Linux RedHat EL / AlmaLinux / RockyLinux v8.x and v9.x

4. HARDWARE REQUIREMENTS

The requirements listed below are minimum requirements. They may be higher depending on the system size.

- Access control system => min 2 core CPU - min 4 GB RAM
- Time registration system => min 4 core CPU, min 8 GB RAM
- The CPU should be high performance, desktop/server class, no low power/low performance CPU.
- System with min 40 GB free disk space

5. INSTALLATION ON VIRTUAL PLATFORM

The operating system in which Synguard will be installed can run on physical hardware as well as on a virtualised environment.

The following virtualisation platforms, among others, are supported:

- VMware ESXi
- Microsoft Hyper-V
- Linux KVM

6. DATABASE SUPPORT

- Postgresql 14.x (our standard delivery)
- MS SQLServer 2014 or later
- MS SQL Server Express 2014 or later (for small installations)

7. INSTALLATION OF SYNGUARD ON SERVER

The installation of Synguard on a server includes:

- Installation of database software (not necessary if external database is used)
- Installation of Amazon Corett Java JDK
- Installation of the application software:
    - Windows: E.g. under C:\Syntegro\Syntegro + registration of Apache Tomcat web server as Windows Service
    - Linux: E.g. under /opt/Syntegro/Syntegro + registration of Apache Tomcat web server as a service.
- The only process that runs (outside the database) is an Apache Tomcat web server (Java based).

    - All ports on which this process listens can be reconfigured to avoid possible conflicts with existing applications (e.g. IIS).
- Memory use Tomcat application server: typically 1.5 GByte
- Memory usage database: typically 1 GByte
- Disk capacity:
    - 2GByte base (software + workspace)
    - ± 3 MByte/employee/year (highly dependent on parameterisation/desired functionality in the system)
    - To be increased with possible space for temporary local database backups.
- Performance
    - The application is mainly database-oriented. Fast disks + database-caching will always have a positive influence on performance.

8. SECURITY

- **Web browser communication**: Communication between web browser and server uses https (SSL/TLS encryption).
- **Access control network communication**: Communication between SynApps/SynTime's and the server is also encrypted and secured via SSL client authentication.

9. REMOTE LOGIN FOR SUPPORT PURPOSES

Application logon can be done via a secure HTTPS internet connection (by default to https port 8443 of the Synguard server).

For more in-depth support/upgrades/etc., it is best to enable a direct logon to the server. This can be done using standard protocols such as e.g:

- For Windows: Microsoft Terminal Services (RDP-protocol) + possibility to transfer files (for upgrades).
- For Linux: Secure Shell access (SSH protocol)

Necessary: port forwarding on the customer firewall to the internal server RDP / SSH port or possibly direct access via a (temporary) VPN connection.

- Other alternatives such as TeamViewer are also possible

VERSION HISTORY

Version	Date	Person responsible	Modification
2.01	01/01/2020		Document creation
2.02	13/02/2023	HAVTO	Customizing layout
2.03	16/05/2023	HAVTO	Adjustment lay-out + systemrequiremants
2.04	18/09/2023	HAVTO	Adding scheme
3.05	03/04/2024	HAVRO	Customizing layout
3.06	11/07/2024	HAVTO	Customizing SynCore and Java
3.07	20/02/2025	HAVTO	Adjustment security
3.08	03/03/2025	HAVTO	Change title