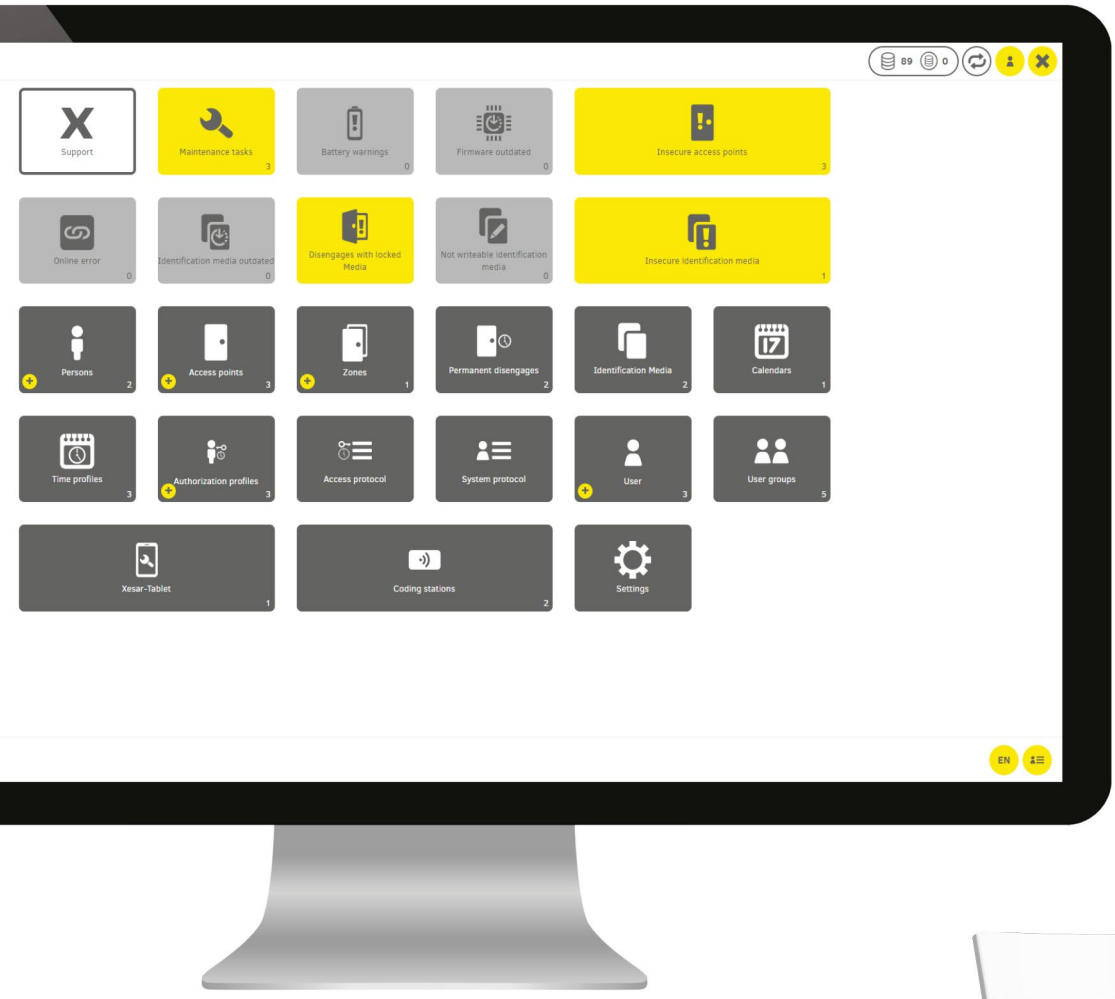


Xesar

Project checklist and system requirements

Imprint

Product code: I.X.R3-2.AN.PCLS.SEN | 24R1

Version: Xesar 3.2 | 3.2.x
Edition: 06/2024 UK
The original operating manual was written in German.

Publisher
EVVA Sicherheitstechnologie GmbH

Responsible for content
EVVA Sicherheitstechnologie GmbH

This edition shall not longer be valid upon publication of a new system manual.

You can find the latest edition in the EVVA download area:

https://www.evva.com/uk-en/service/downloads/

This manual is based on the state of the art at the time of creation. The content of the manual has been checked for consistency with the described hardware and software. Nevertheless, deviations cannot be excluded. We shall not assume any liability for technical or printing errors and their potential consequences. However, the data in this system manual is revised regularly and corrections are incorporated.

Table of contents

1 Introduction

This document is an excerpt from the Xesar 3.1 system manual.

The products and/or systems described in the Xesar system manual must exclusively be operated by persons that have been adequately qualified for the corresponding task. Qualified personnel is able to identify risks when handling products/systems and prevent potential hazards on the basis of their expertise.

1.1 General legal notes

EVVA shall conclude the contract for the use of Xesar on the basis of the EVVA GTC (General Terms and Conditions) and EVVA GTC (General Terms and Conditions) for the software for the product.

You can call up the EVVA General Terms and Conditions and EVVA General Terms and Conditions:

❯ **https://www.evva.com/uk-en/legal-notice/**

Please note that the use of the Xesar locking system may trigger legal obligations, in particular data protection authorisation, reporting and registration obligations (e.g. when setting up an information network system), as well as employee co-determination rights when used in companies. The user shall bear the responsibility for the legally compliant use of the product.

The above information must be observed in accordance with the manufacturer's liability for its products as defined in the Product Liability Act and must be communicated to operators and users. Non-compliance releases EVVA from any liability.

Unauthorised use, repair work or modifications not authorised by EVVA and improper service may lead to malfunctions and must therefore be avoided. Changes not expressly approved by EVVA will result in the loss of liability, warranty and separately agreed guarantee claims.

Keep the system components away from small children and pets. Risk of suffocation due to small parts that can be swallowed.

EVVA provides **architects and consulting institutions** with all the product information they need to comply with their information and instruction obligations under the Product Liability Act.

Specialist retailers and installers must comply with the information in EVVA documentation and they must pass on such information to customers, where applicable.

Additional information can be found in the Xesar product catalogue:

› **https://www.evva.com/uk-en/xesar**

1.2 EVVA Support

With Xesar, you have a sophisticated and tested locking system at your disposal. If you require additional support, please contact your EVVA partner directly.

You can access the list of certified EVVA Partners here:

› **https://www.evva.com/uk-en/retailer-search/**

Activate the “Electronics Partner” filter option to search specifically for EVVA partners who sell electronic EVVA locking systems and have qualified specialist knowledge.

› **http://support.evva.at/xesar/en/**

General information on Xesar can be found here:

› **https://www.evva.com/uk-en/xesar**

1.3 Explanation of symbols

The following symbols are used in the system manual to support illustration:

Symbol	Meaning
	Attention, risk of material damage in the event of non-compliance with the corresponding safety measures
	Notices and additional information
	Hints and recommendations
	Avoidance of errors or error messages
Option	Options
	Links
	Steps with instructions for action

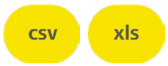
1.4 Explanation of Xesar software symbols

The following symbols are used within the Xesar software, Installation Manager and Periphery Manager:

1.4.1 General

#	Status	Symbol	Explanation
1	Confirm/save		Confirming or saving input
2	Adding		Adding, for example, a new person or installation location
3	Discard entries		Discarding an entry
4	Removal		Removal from e.g. a system, time profile or installation location
5	Edit		Editing a system (Installation Manager)
6	Start application		Starting the system (Installation Manager) or starting the connection between coding station and Xesar software (Xesar Periphery Manager)
7	Stop application		Stopping the system (Installation Manager) or stopping the connection between coding station and Xesar software (Periphery Manager)
8	Download		Download of e.g. Support Information
9	Continue		Continuing to next input
10	Load / transfer		Loading the AdminCard
11	Filter		Display of possible filter settings for the function
12	Update / connect		A task is performed on the dashboard in the backend

#	Status	Symbol	Explanation
13	Not updated / waiting for update / download of update		An update is available and can be downloaded
14	Search		Search for a specific event contribution
15	Maximise		Extending the Field of View
16	Minimise		Reduce the field of view
17	Go to		Open the browser window for the Xesar software
18	System event log		All actions carried out within the Xesar software by users and the system
19	Filtered by areas		Shows all areas to which a person has an access authorisation
20	Filtered by installation locations		Shows all locations to which a person has an access authorisation
21	Filtered by access media		Shows all identification media assigned to a person
22	Filtered by persons		Filter by persons
23	My profile		Edit my user profile: Add description and change personal password
24	Displayed language		Change language
25	Show KeyCredit units		Display of the KeyCredits to be debited (e.g. due to authorisation changes or issuance of new access media)
26	Show Xesar KeyCredit Lifetime		Displayed if KeyCredit Lifetime has been redeemed
27	Event log		Display events, e.g. for a person (all access events relating to a person are filtered and displayed)
28	Help information		Display of help texts

#	Status	Symbol	Explanation
29	Lists export		Export the displayed list as a csv file or as an xls file
30	List view settings		Illustration of list view regarding column selection, number of lines per page, save settings and reset
31	Backup button		A backup of the system data is created in the Installation Manager
32	Logout		End session
33	Battery full		Battery is full
34	Battery warning		Battery is empty, replace batteries as soon as possible
35	Component with cable interface		Access components that can only be synchronised via a cable connection to a tablet
36	Component with wireless BLE interface; BLE is activated		Access components that can be synchronised with wireless BLE and wired to the tablet; BLE function of the access component is activated
37	Component with wireless BLE interface; BLE is disabled		Access components that can be synchronised with wireless BLE and wired to the tablet; BLE function of the component is deactivated
38	Warning		e.g. there are still insecure installation locations

1.4.2 Access media status

#	Status	Visualisation	Explanation
1	Insecure blocked identification medium		The access medium is blocked. There are still insecure installation locations. Take the blacklist using the tablet or an updated access medium to the insecure installation locations.
2	Secure disabled identification medium		The access medium is blocked. There are no insecure installation locations. The system is secure.
3	Unauthorised access medium		The access medium does not have authorisation. Reason e.g. the eligibility period has been exceeded.
4	Currently valid		The access medium is valid and can be used according to the authorisation profile.
5	Currently invalid		The access medium is currently invalid.
6	Current valid access medium becomes an invalid access medium when updated		The access medium is currently valid. It becomes invalid, however, after an update at the online wall reader or at the coding station.
7	A currently invalid access medium reverts to a valid access medium when it is updated		The access medium is currently invalid. However, it will become valid after an update at the online wall reader or at the coding station.
8	Currently invalid access medium, which has a validity interval that lies in the future		The access medium is currently invalid. It remains invalid even after an update at the online wall reader or coding station.
9	Deactivated (blocked) access medium		The access medium has been deactivated; there are no more unsafe installation locations; the calendar is no longer important.

2 Project checklist and system requirements

2.1 Preface

This document is intended to support the project planning of Xesar 3.2 systems. It consists of 3 parts.

Part 1 is the project checklist, in which important requirements and the new Xesar 3.2 system data are systematically queried and documented for further planning.

Part 2 describes the technical system requirements for a Xesar 3.2 system on PC and for a Xesar 3.2 system on server.

Part 3 includes detailed technical information on the depicted layout and system communication of a Xesar 3.2 system as an appendix.

Use this document as a guide to planning your Xesar 3.2 system.

To clarify the necessary IT infrastructure according to the Xesar 3.2 system requirements, please contact your IT administrator.

If you have any questions about the project checklist or the Xesar 3.2 system requirements, please contact your EVVA Partner or the EVVA technical office.

3 Project checklist

Project title:

Contact persons:

Project:

Phone:

Email:

IT:

Phone:

Email:

System address:

Desired completion date:

3.1 System requirements – infrastructure

System type

Please refer to the following documents for a detailed description of system requirements:

- Xesar 3.2 single-user installation
- Xesar 3.2 multi-user installation

Single-user system: Windows 10 PRO PC type:

Multi-user: Server installation:

- Admin PC: Windows 10 PRO PC type:
- Client PC: Type:
- Server available? Yes / no

  If **yes**:
  Server hardware:

  Server operating system:

  Hypervisor e.g. VMware:

  (See also section 'System requirements to operate a Xesar 3.2 server'.)

  Is the server used only for Xesar? Yes / no
  If **no**:
  What other applications besides Xesar are still running on the server?

System type

New system

Upgrade of existing system Xesar version: X2.2 X3.0

Before upgrading to Xesar 3.2, the existing system must be updated to the Xesar version 2.2 V2.2.38.43 and the latest valid Xesar 2.2 firmware versions must be installed! Furthermore, all open maintenance tasks must be carried out.

Does the existing system feature the 2 wall readers and 1 control unit configuration?

Yes No

Network

WiFi available (requirement for Xesar tablet synchronisation)
Network name: Password:

LAN available

Ports are configurable

(See also section 'System requirements for the network'.)

Backup and data protection are defined and locally available (the responsibility for data backup lies with the operator/user).

Interface requirements

Data transfer or control from third-party system required

Description of the interface requirements:

Interface specification of the third-party system is available

Description:

3.2 System configuration

Desired payment model
(12 and 36-month KeyCredits are not transferable to the Xesar 3.2)

Unit-based KeyCredits (10/50/100) Xesar Lifetime KeyCredits

Number of workstations

Number of workstations with coding station:
(with system and access media management, PC administrator rights required)

Number of workstations without coding station: (System management only)

Number of Xesar tablets: (for maintenance and configuration tasks)

Number of doors planned (installation locations) units

Electronic access components

Escutcheon: Units

Handles: units

Online wall reader: units

Offline wall reader: units

Cylinders: units

Additional components: units

Hybrid system (electronic components and mechanical cylinders)

EVVA system number:

Number of mechanical cylinders: Units

Planned number of access media Units

Cards: Units

Key tags: Units

Combi key: Units

Existing mechanical locking systems
EVVA system number

3.3 Project planning

Installation with several distributed sites (multi-user installation):

Individual or third-party system management of the system (e.g. EVVA Partner, IT service provider):

Server location:

Access system network:

Planned system extensions:

Desired project support:

Frequency with which access authorisations are changed:

Creating lock charts and assigning authorisations:

Checking customer-owned access media (third-party media segmentation):

Fire protection regulations taken into account:

Escape route regulations taken into account:

Privacy requirements (e.g. General Data Protection Regulation) taken into account:

Occupational protection taken into account:

Maintenance and support (maintenance contract):

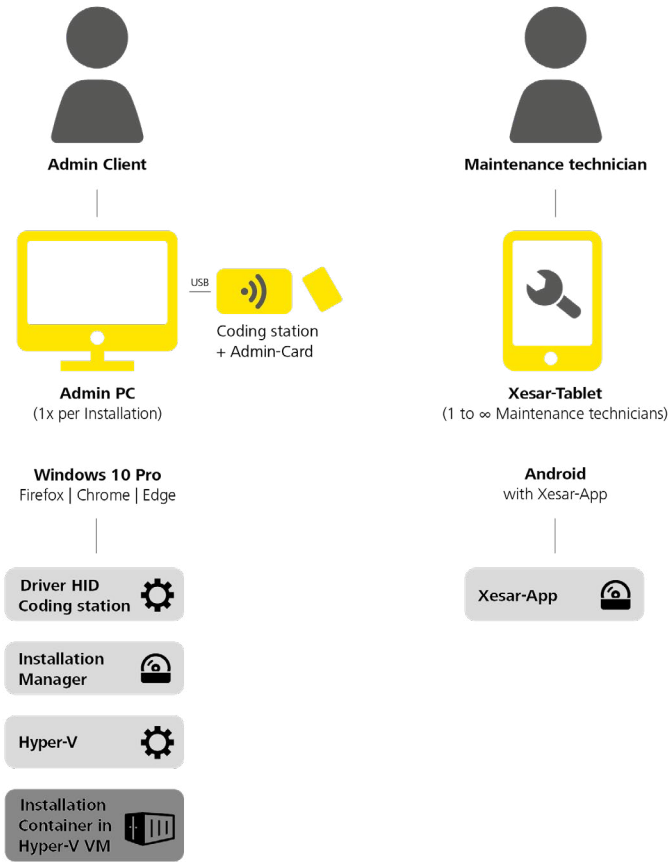
Other agreements:

4 System requirements for single-user and multi-station installations

Xesar can be operated as a single-user installation or multi-station installation. System requirements in the following section.

4.1 Xesar 3.2 single-user installation

24/7 continuous operation and use with online components (e.g. online wall reader) is not recommend for Xesar installations on PC. If the PC for the Xesar installation on PC is not in operation, the online wall reader is in offline mode and access media are not updated. The access system will continue to operate.



The following minimum requirements must be met to operate a Xesar installation on PC:

- x86-64 compatible processor (CPU), at minimum quad core ≥ 1.5-2.3 GHz
- Hardware support for virtualisation
- RAM: ≥ 16 GB (with OS); 4 GB free disk space for installation
- Hard disk space: ≥ 60GB
- Direct Internet access without proxy to unlock KeyCredits and licences to access EVVA secured authentic and unmanipulated software delivery
- Local LAN with low latency (ping <10 ms, roundtrip <30 ms);
  WiFi for Xesar tablet sync and access to the services provided
- 1 × USB Host 2.0
- 1 × EVVA coding station with slot for the admin card and support for contactless Radio Frequency Identification cards (Mifare Desfire EV1; ISO 14443)
- Keyboard and mouse
- Screen resolution: 1920 × 1080 pixels
- Operating system: Windows 10/11 Pro 64-bit
- HTML5/CSS3 compatible browser, with JavaScript enabled
- **Local network:**
  WiFi (wireless): IEEE.802.11 g, n
  Protocols:
  - IPv4
  - HTTP/HTTPS (with TLS)

Services provided by EVVA on the Internet:

Service	URL: Port:	Port addresses
Trusted Registry	https://sfw.evva.com:443 https://sfw.evva.com:4443	Fix
Licence service	https://licence.evva.com:8072	Fix

Service catalogue: Online wall reader communication – server (backend)

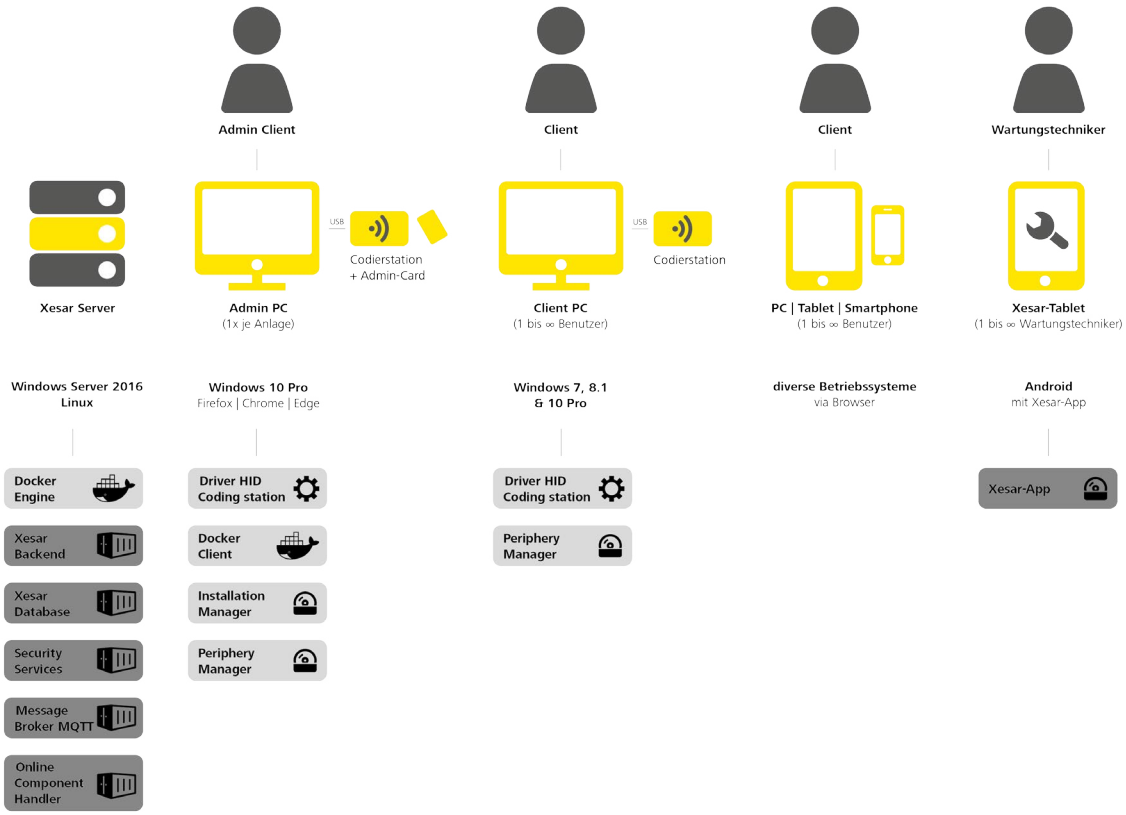
Service	Network	Default port	Port address	Protocols	TLS	Use	Utilising components	Providing component
Online dealership components	LAN/WLAN	9081	configurable	NWP	Yes	Communication with the Xesar software	Xesar online wall reader	Online component dealership

It may be possible to implement the following solutions (please consult EVVA Technical Offices):

- Installation manager operated on a virtual machine
- Installation manager operated on a different Windows operating system
- Use of other browsers compatible with HTML5/CSS3

4.2 Xesar 3.2 multi-user installation

The multi-user installation consists of one **server**, one **admin PC with coding station and admin card,** and potentially other **client PCs with/without coding station**. Optionally, **mobile devices** can also be used via a browser as a client without coding station. The **Xesar tablet** is used as a maintenance tool for installation management. Here is an overview of different variants:



4.2.1 System requirements for multi-user installations

24/7 server operation is required for a multi-user installation. The following minimum requirements must be met:

- x86-64 compatible processor (CPU), at minimum quad core ≥ 1.5-2.3 GHz
- Hardware support for virtualisation
- RAM: ≥ 16 GB (with OS, at least 4 GB for the server software stack)
- Hard disk space, SSD recommended: ≥ 60GB (note system size and planned runtime for dimensioning)
- Direct Internet access without proxy to unlock KeyCredits and licences to access EVVA secured authentic and unmanipulated software delivery
- Local LAN with low latency (ping <10 ms, roundtrip <30 ms)
- WiFI for Xesar tablet synchronisation with the server
- Access option from local LAN to server for provided services
- Docker Engine 1.12.0+ with support for API 1.24 (will be installed as part of Docker installation)

4.2.2 Service catalogue: Management of a Xesar 3 multi-user installation

See section "Server communication"

- Server – admin PC
- Server – client PC
- Server – online wall reader

Tested operating systems

OS	OS type	Version	Virtualisation possible
Ubuntu	Linux	18.04 / 20.04 LTS Server	Yes

Tested Hypervisor

OS	Version	Virtualisation possible
Windows Server	2016 / 2019 Standard / Datacenter	No
VMWare[1]	VMWare ESXi 6.x	No

1 Container optimised operating system recommended by VMware for VMware vSphere ESXi 6.x

Xesar must meet real-time requirements when communicating with its online components. In the event that Windows Server 2016/2019 is not exclusively available to Xesar software, when operating as a hypervisor, it must be ensured that the required resources are permanently allocated.

Due to the large number of possible operating systems not all variants can be tested for compatibility by EVVA.

If an operating system is to be used that is not tested by EVVA, please consult the responsible EVVA Technical Offices beforehand.

Due to the ongoing developments in the IT market, please consult your EVVA Partner or the EVVA Technical Offices with regard to the current compatibility list.

4.2.3 System requirements for administrator PC with coding station and admin card

The following minimum requirements must be met to operate the Xesar software (installation manager):

- x86-64 compatible processor (CPU) 1-2 core, 2.4 GHz or higher
- Support for virtualisation
- RAM: ≥ 16 GB (with OS, at least 4 GB for the applications: installation manager and periphery manager)
- Hard disk space: ≥ 16 GB
- Direct Internet access without proxy to unlock KeyCredits and licences to access EVVA secured authentic and unmanipulated software delivery
- Local LAN to access the services provided by Xesar 3.2 server
- 1 × USB Host 2.0
- 1 x EVVA coding station with support for contactless Radio Frequency Identification cards (Mifare Desfire EV1; ISO 14443) and slot for admin card
- Keyboard and mouse
- Operating system: Windows 10/11 Pro 64-bit
- HTML5/CSS3 compatible browser, with JavaScript enabled
- Docker Client with support for API 1.24, Docker Compose 1.10.0+ (installed as part of the Docker installation on the Admin PC)

4.2.4 Service catalogue: Management of a Xesar 3 system – administrator PC – server

See section "Server communication"

PC operating systems

OS	Version	Browser	Verified by EVVA	EVVA coding station
Windows	10 Pro (V 1511 (build 10586))	Firefox, from version 97.0.1 Chrome, from version 98.0.4758.102 Edge, from version 98.0.1106	Yes	Yes

It may be possible to implement the following solutions (please consult EVVA Technical Offices):

- Operation of the installation manager on a virtual machine on the server (admin card is connected via client PC)
- Periphery manager operated on other operating systems (on request only)
- Use of other HTML5/CSS3 compatible browsers

4.2.5 System requirements for client PC with coding station without admin card

The following minimum requirements must be met to operate a client PC **with coding station** within a multi-user installation:

- x86-64 compatible processor (CPU) 1-2 core, 2.4 GHz or higher
- RAM: ≥ 4 GB (with OS, at least 512 MB for the periphery manager application, 1–2 GB for a supported browser)
- Hard disk space: ≥ 2 GB
- Local LAN with access to the services provided by Xesar 3.2 server
- 1 × USB host 2.0
- 1 × EVVA coding station with support for contactless Radio Frequency Identification cards (Mifare Desfire EV1; ISO 14443)
- Keyboard and mouse
- Screen resolution 1920 × 1080 pixels
- HTML5/CSS3 compatible browser, with JavaScript enabled

4.2.6 Service catalogue: Server and workstations in multi-user installations – client PC – server

See appendix to project checklist 'Client PC communication – server (backend)'

Operating systems

OS	Version	Browser	Verified by EVVA
Windows	7 Pro, 64-bit	• Firefox, from version 97.0.1 • Chrome, from version 98.0.4758.102 • Edge, from version 98.0.1106	Yes
Windows	8.1 Pro, 64-bit		Yes
Windows	10 Pro, 64-bit		Yes

It may be possible to implement the following solutions (please consult EVVA Technical Offices):

- Periphery manager operated on other operating systems (on request only)
- Use of other HTML5/CSS3 compatible browsers

4.2.7 System requirements for client PC without coding station (PC/tablet/smartphone)

The following minimum requirements must be met to operate a client **without** coding station within a multi-user installation:

- x86-64 compatible processor (CPU) 1-2 core, 2.4 GHz or higher
- RAM: ≥ 4 GB (with OS; 1–2 GB for supported browser)
- Hard disk space: ≥ 2 GB
- Local LAN to access the web services provided by Xesar 3.2 server
- Keyboard and mouse
- Screen resolution 1920 × 1080 pixels
- HTML5/CSS3 compatible browser, with JavaScript enabled

4.2.8 Service catalogue: Service catalogue server and work places in multi-user system

See appendix to project checklist 'Client PC communication – server (backend)'

Operating systems

OS	Version	Browser	EVVA tested
Windows	7 Pro	• Firefox, from version 97.0.1 • Chrome, from version 98.0.4758.102 • Edge, from version 98.0.1106	Yes
Windows	8.1 Pro		Yes
Windows	10 Pro		Yes

It may be possible to implement the following solutions (please consult EVVA Technical Offices):

- Comparable browsers on other operating systems (on request only)
- Use of other HTML5/CSS3 compatible browsers

4.2.9 System requirements for network (local network and Internet)

Local network:
- Fast Ethernet 100Base-TX 100 Mbit, standard MTU (1500 bytes) or better
- Low latency between the connected components (ping < 10 ms, roundtrip < 30 ms)
- WiFi (wireless): IEEE.802.11 g, n

Protocols:
- IPv4
- HTTP/HTTPS (with TLS)
- MQTT (with TLS)
- EVVA NWP (with transport lock; online wall reader)

Services provided by EVVA on the Internet:

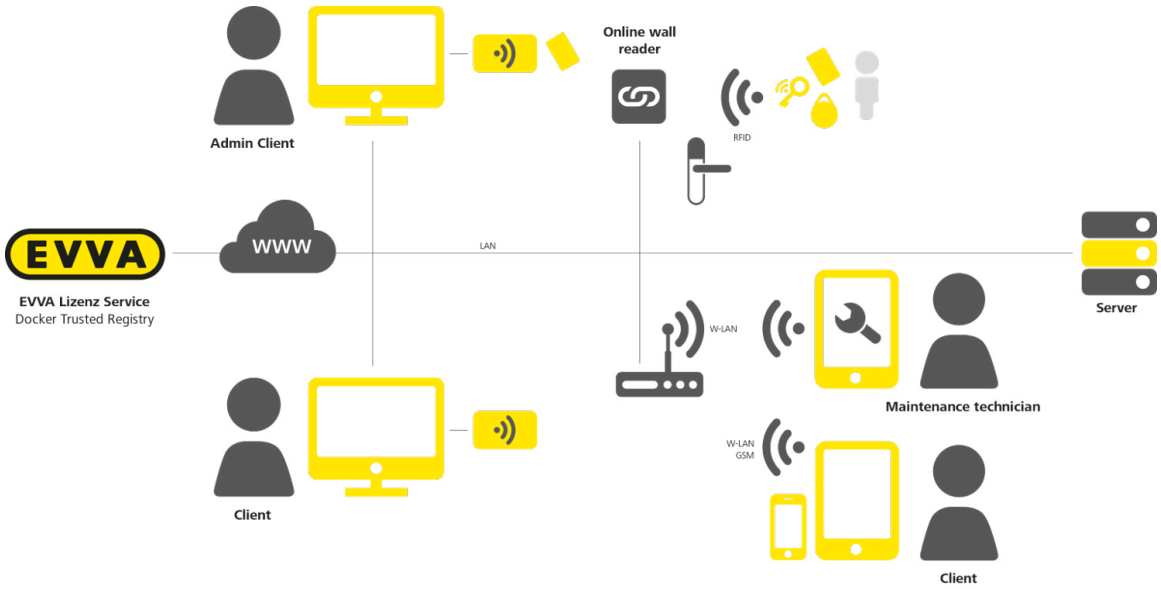
Service	URL	Configurable port
Trusted Registry	https://sfw.evva.com:443 https://sfw.evva.com:4443	No
Licence service	https://license.evva.com:8072	No

Services provided by Xesar 3.2 server within the local network:

Service	URL	What	Configur-able port
Docker Engine	tcp://<IP Installation>:2376	Host	Yes
Security-related service	https://<IP Installation>:8200	Installation	Yes
Message broker	mqtts://<IP Installation>:1883	Periphery, interface	Yes
Management	https://<IP Installation>:8080	Operation	Yes
Online components handler	tcp://<IP Installation>:9085	Operation	Yes

5 Appendix of the project checklist

5.1 Depiction of layout



5.2 Service-communication

Application*)	Service	Network	Default port	Port address	Protocol	TLS	Use	Utilising components	Providing component
1;2	Secure Shell (SSH)	LAN/WLAN	22	Configur-able	SSH	Yes	Setup and configuration of OS and Docker En-gine	Docker Machine, SSH Client	SSH service (OS)
1;2	Docker Engine API service	LAN/WLAN	2376	Configur-able	HTTPS	Yes	Setup the container and volumes	Docker Client	Docker Engine (Docker, OS)
1;2	Message broker	LAN/WLAN	1883	Configur-able	MQTTS	Yes	Asynchronous Xesar system interface	Installation Manager	Message broker
1;2	Service for the management of security information	LAN/WLAN	8200	Configur-able	HTTPS	Yes	Storage for security in-formation, passwords, keys	Installation Manager, installation management	Vault
3	Docker Trusted Registry sfw. evva.com	WAN	443; 4443	443; 4443	HTTPS	Yes	Provision of signed Docker images and verification of the signature	Docker Cli-ent, Docker Engine	Docker Trusted Registry (container image delivery)
4	Licence service licence.evva. com	WAN	8072	8072	HTTPS	Yes	Register-ing an In-stallation/ AdminCard and loading key-credit codes	Xesar Installation Manager	Licence service
5	AdminCard Terminal	USB	Fix	–	ISO 14443	–	Reading and writing of identification media	Installation management via the Periphery Manager (proxy only)	Coding station

Application*)	Service	Network	Default port	Port address	Protocol	TLS	Use	Utilising components	Providing component
6	Installa-tion and management of frontend Web Service	LAN/WLAN	8080	Configur-able	HTTPS	Yes	Web service and delivery of the web application for the browser	Browser	
7	Online dealership components	LAN/WLAN	9081	Configur-able	NWP	Yes	Communi-cation with the Xesar software	Xesar online wall reader	Online component dealership

*) **Applications:**

Admin PC with Xesar Installation Manager
1: System start
2: System stop
3: System update
4: Licence service (KeyCredits loading)
5: with coding station for AdminCard

Client PC
5: Coding station for identification media
6: Client PC Browser-Communication

Online wall reader
7: Online wall reader communication

5.3 Communication Client PC – Server (backend)

Service	Network	Default Port	Port address	Protocol	TLS	Use	Utilising components
Installation and management of frontend Web Service	LAN/WLAN	8080	Configurable	HTTPS	Yes	Web service and delivery of the web application for the browser	Browser
Message broker*	LAN/WLAN	1883	Configurable	MQTTS	Yes	Asynchronous Xesar system interface	Periphery Manager
Coding station*	USB	Fix	–	ISO 14443	–	Reading and writing of identification media	Installation management via the Periphery Manager (proxy only)

* Only for Client PC with coding station

5.4 Communication, Online wall reader – Server (backend)

Service	Network	Default Port	Port address	Protocol	TLS	Use	Utilising components	Providing component
Online dealership components	LAN/WLAN	9081	Configurable	NWP	Yes	Communication with the Xesar-Software	Xesar online wall reader	Online component dealership

www.evva.com