STEP LOCK

When it has to work.

StepLock Cloud

Encryption, secure communication & server overview

Encryption and secure communication

We protect all communication and stored information using established and internationally recognized security standards. This ensures that unauthorized parties cannot read, alter, or manipulate data within the system.

What this means for you?

- All traffic between devices and the cloud is encrypted.
- All stored data is encrypted.
- The system always verifies that it is communicating with the correct party.
- No unencrypted communication occurs.

Security throughout the entire chainn

▶ **Cloud platform**
All communication takes place via encrypted HTTPS connections, the same type of connection used when you conduct online banking or shop online. This ensures that data cannot be intercepted and that you are communicating with the correct server.

▶ **Stored information**
All data in the database is encrypted even when stored. This protects information even if someone were to gain physical access to the servers.

▶ **Controller and cloud**
Communication is both encrypted and signed. This ensures that data cannot be altered during transmission.

▶ **Controller and card reader**
We use the open and international security standard OSDP Secure Channel. This prevents manipulation or interception between the card reader and the controller.

▶ **Mobile access**
All communication between the mobile device and the system takes place via encrypted connections with certificate verification.

Technical protocol appendix

COMMUNICATION LINK	PROTOCOL	ENCRYPTION / CERTIFICATE	SECURITY FUNCTION
Cloud platform	HTTPS (SSL/TLS)	Public certificate	Encrypted transmission and server authentication. Public certificate SHA-256 with RSA encryption 2048 bits.
Storage	-	AES-256	All data is encrypted at rest in the database server.
Device	HTTPS (SSL/ TLS) (HMAC)	Public certificate AES-256	Encrypted and signed communication between device and cloud. Public certificate SHA-256 with RSA encryption 2048 bits.
Device ↔ Card reader (OSDP)	OSDP SC	AES-128	Encrypted and protected communication between controller and card reader according to the open international standard OSDP IEC 60839-11-5.
Mobile access	TLS	Public certificate	Encrypted communication between the mobile client and the system. Public certificate SHA-256 with RSA encryption 2048 bits.

StepLock Cloud server overview

This page describes our server locations within the EU, with a focus on GDPR compliance, high availability, and geographic redundancy for business critical services. Our systems are distributed within Microsoft Azure to ensure operational reliability and scalability.

Overview of server locations

DATACENTER	LOCATION	PROVIDER	REDUNDANCY	COMMENT
Sweden Central	Sandviken, Sverige	Microsoft Azure	High	Primary datacenter
Norway East	Oslo, Norway	Microsoft Azure	High	Region adapted telephony i Norway

Service distribution

SERVICE TYPE	LOCATION	COMMENT
Web services	Sweden Central	Hosts the entire frontend solution
API	Sweden Central	All API endpoints
App servers	Sweden Central	Operation of user applications
Databases	Sweden Central	Real time data and user information
Telephony (SE/DK)	Sweden Central	SIP/VoIP functions for Sweden and Denmark
Telephony (NO)	Norway East	SIP/VoIP functions for Norway, locally hosted

Platform and infrastructure

- Cloud platform: Microsoft Azure
- Datacenter classification: Tier III+
- Redundancy: LRS (Locally Redundant Storage)

Data protection

- Data is stored within the EU
- Encryption at rest and in transit (TLS 1.2+)
- Server backups according to a 30 day policy
- Customer data backups according to a 10 day policy

Operations and monitoring

24/7 operational monitoring.

Certifications and compliance

All datacenters comply with:

- GDPR compliance
- ISO 27001 – Information security
- ISO 27018 – Protection of personal data in the cloud
- ISO 22301 – Business continuity management
- SOC 1/2/3 – Control reporting
- EN 50600 – Datacenter design (Azure equivalent level)

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