

# Hardware and System Requirements PONTON X/P Messenger 4.5.0

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## 1 Minimum system requirements

These are requirements for the software without any specific context, which might not match any stricter requirements on a system which is officially supported by a specific industry solution like EFETnet or papiNet!

These system requirements are valid for PONTON X/P Messenger 4.5.0 and higher Versions until PONTON has published new system requirements.

PONTON does not support the PONTON X/P Messenger on environments with versions of Operating Systems and Databases which are not supported by the vendors.

Please contact the PONTON help desk via <https://support.ponton.de> if you have a system environment, which is not mentioned as supported.

## 2 Hardware

Minimum hardware requirements for installing the Messenger are as follows:

Property	Value
Available Disk space for PONTON X/P Messenger	1 GB
Free RAM available for PONTON X/P Messenger	512 MB
Processor	Dual Core, 2 GHz

## 3 Operating Systems

PONTON X/P Messenger is compatible and supported with the following operating systems:

- Windows Server 2019
- Windows Server 2022
- Linux
  - Debian 10 (Buster) with package rng-tools5
  - Debian 11 (Bullseye) with package rng-tools5
  - Debian 12 (Bookworm) with package rng-tools5
  - Red Hat Enterprise Linux 7 with package rng-tools
  - Red Hat Enterprise Linux 8 with package rng-tools
  - Red Hat Enterprise Linux 9 with package rng-tools
  - Oracle Enterprise Linux 7 with package rng-tools
  - Oracle Enterprise Linux 8 with package rng-tools
  - Oracle Enterprise Linux 9 with package rng-tools



## 4 JAVA Runtime

PONTON X/P Messenger is compatible and supported with the following JAVA Runtimes:

- Oracle Java 21
- OpenJDK 21

## 5 Databases

PONTON X/P is delivered with an embedded **HSQL** database which may be used for **testing** purposes during the **TRIAL** period only! Please only use officially supported databases for **production** purposes.

PONTON X/P Messenger is compatible and supported with the following databases:

Database / Version	JDBC Driver
Oracle 19c	Oracle Thin Driver ojdbc11 Version 23.3.0.23.09
Oracle 21c	Oracle Thin Driver ojdbc11 Version 23.3.0.23.09
MS SQL Server 2019	Microsoft JDBC 12.4.2.jre11
MS SQL Server 2022	Microsoft JDBC 12.4.2.jre11
MySQL 8.0 (with InnoDB Engine)	MySQL Connector/J 8.0.33
MySQL 8.3 (with InnoDB Engine)	MySQL Connector/J 8.3.0
PostgreSQL 12	pgJDBC v42.6.2
PostgreSQL 13	pgJDBC v42.6.2
PostgreSQL 14	pgJDBC v42.6.2
PostgreSQL 15	pgJDBC v42.6.2
PostgreSQL 16	pgJDBC v42.6.2

**Database performance considerations**

The performance of the database is relevant for the performance of the PONTON X/P Messenger. For example the latency for receiving and sending messages is dependent on the performance of the database in use. Different databases use different locking strategies depending on their database configuration. Optimum setup of the database depends on the requirements such as the amount of messages transmitted (per time unit), the maximum rate at which messages are expected and how time-critical the message transmission is. Based upon these criteria following steps should be considered:

- The database settings have to be optimized or/and
- The limitations of the different databases

**Hint:** MySQL Database might not be the best choice for critical installations.

## 6 Supported Browsers

- Firefox ESR 115.9+
- Microsoft Edge v123+
- Google Chrome v123+

Other Browsers may be supported with minor restrictions.

The web UI is optimized for a resolution of 1920×1080 pixel.

## 7 Network

- The PONTON X/P Messenger supports only IPv4 environments.
- PONTON recommends to use permanent internet connections and no dial up connections.

PONTON X/P uses several network ports. The following table shows the standard configuration, which can be changed in every individual installation:

Port	direction	Protocol	Remark
2600	inbound	https	Adapter API v2
8080	inbound	http	Adapter API v1
9000	outbound	https	Offered by the X/P Listener (websocket communication)
8443	inbound	https	Offered by X/P Messenger (admin-GUI)

## 8 Default SSL Settings

### 8.1 Included SSL Protocols

TLSv1  
 TLSv1.1  
 TLSv1.2  
 TLSv1.3

### 8.2 Excluded SSL Protocols

SSLv3

### 8.3 Included SSL Ciphers

TLS\_AES\_128\_CCM\_8\_SHA256  
 TLS\_AES\_128\_CCM\_SHA256  
 TLS\_AES\_128\_GCM\_SHA256  
 TLS\_AES\_256\_GCM\_SHA384  
 TLS\_CHACHA20\_POLY1305\_SHA256  
 TLS\_ECDHE\_ECDSA\_WITH\_AES\_128\_CBC\_SHA256  
 TLS\_ECDHE\_ECDSA\_WITH\_AES\_128\_CCM  
 TLS\_ECDHE\_ECDSA\_WITH\_AES\_128\_CCM\_8  
 TLS\_ECDHE\_ECDSA\_WITH\_AES\_128\_GCM\_SHA256  
 TLS\_ECDHE\_ECDSA\_WITH\_AES\_256\_CBC\_SHA384



TLS\_ECDHE\_ECDSA\_WITH\_AES\_256\_CCM  
TLS\_ECDHE\_ECDSA\_WITH\_AES\_256\_CCM\_8  
TLS\_ECDHE\_ECDSA\_WITH\_AES\_256\_GCM\_SHA384  
TLS\_ECDHE\_ECDSA\_WITH\_ARIA\_128\_CBC\_SHA256  
TLS\_ECDHE\_ECDSA\_WITH\_ARIA\_128\_GCM\_SHA256  
TLS\_ECDHE\_ECDSA\_WITH\_ARIA\_256\_CBC\_SHA384  
TLS\_ECDHE\_ECDSA\_WITH\_ARIA\_256\_GCM\_SHA384  
TLS\_ECDHE\_ECDSA\_WITH\_CAMELLIA\_128\_CBC\_SHA256  
TLS\_ECDHE\_ECDSA\_WITH\_CAMELLIA\_128\_GCM\_SHA256  
TLS\_ECDHE\_ECDSA\_WITH\_CAMELLIA\_256\_CBC\_SHA384  
TLS\_ECDHE\_ECDSA\_WITH\_CAMELLIA\_256\_GCM\_SHA384  
TLS\_ECDHE\_ECDSA\_WITH\_CHACHA20\_POLY1305\_SHA256  
TLS\_ECDHE\_RSA\_WITH\_AES\_128\_CBC\_SHA256  
TLS\_ECDHE\_RSA\_WITH\_AES\_128\_GCM\_SHA256  
TLS\_ECDHE\_RSA\_WITH\_AES\_256\_CBC\_SHA384  
TLS\_ECDHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384  
TLS\_ECDHE\_RSA\_WITH\_ARIA\_128\_CBC\_SHA256  
TLS\_ECDHE\_RSA\_WITH\_ARIA\_128\_GCM\_SHA256  
TLS\_ECDHE\_RSA\_WITH\_ARIA\_256\_CBC\_SHA384  
TLS\_ECDHE\_RSA\_WITH\_ARIA\_256\_GCM\_SHA384  
TLS\_ECDHE\_RSA\_WITH\_CAMELLIA\_128\_CBC\_SHA256  
TLS\_ECDHE\_RSA\_WITH\_CAMELLIA\_128\_GCM\_SHA256  
TLS\_ECDHE\_RSA\_WITH\_CAMELLIA\_256\_CBC\_SHA384  
TLS\_ECDHE\_RSA\_WITH\_CAMELLIA\_256\_GCM\_SHA384  
TLS\_ECDHE\_RSA\_WITH\_CHACHA20\_POLY1305\_SHA256  
TLS\_RSA\_WITH\_AES\_128\_CBC\_SHA256  
TLS\_RSA\_WITH\_AES\_128\_CCM  
TLS\_RSA\_WITH\_AES\_128\_CCM\_8  
TLS\_RSA\_WITH\_AES\_128\_GCM\_SHA256  
TLS\_RSA\_WITH\_AES\_256\_CBC\_SHA256  
TLS\_RSA\_WITH\_AES\_256\_CCM  
TLS\_RSA\_WITH\_AES\_256\_CCM\_8  
TLS\_RSA\_WITH\_AES\_256\_GCM\_SHA384  
TLS\_RSA\_WITH\_ARIA\_128\_CBC\_SHA256  
TLS\_RSA\_WITH\_ARIA\_128\_GCM\_SHA256  
TLS\_RSA\_WITH\_ARIA\_256\_CBC\_SHA384  
TLS\_RSA\_WITH\_ARIA\_256\_GCM\_SHA384  
TLS\_RSA\_WITH\_CAMELLIA\_128\_CBC\_SHA256  
TLS\_RSA\_WITH\_CAMELLIA\_128\_GCM\_SHA256  
TLS\_RSA\_WITH\_CAMELLIA\_256\_CBC\_SHA256  
TLS\_RSA\_WITH\_CAMELLIA\_256\_GCM\_SHA384

## 8.4 Excluded SSL Ciphers

TLS\_DHE\_DSS\_WITH\_3DES\_EDE\_CBC\_SHA  
TLS\_DHE\_DSS\_WITH\_AES\_128\_CBC\_SHA  
TLS\_DHE\_DSS\_WITH\_AES\_128\_CBC\_SHA256  
TLS\_DHE\_DSS\_WITH\_AES\_128\_GCM\_SHA256  
TLS\_DHE\_DSS\_WITH\_AES\_256\_CBC\_SHA  
TLS\_DHE\_DSS\_WITH\_AES\_256\_CBC\_SHA256  
TLS\_DHE\_DSS\_WITH\_AES\_256\_GCM\_SHA384



TLS\_DHE\_DSS\_WITH\_ARIA\_128\_CBC\_SHA256  
TLS\_DHE\_DSS\_WITH\_ARIA\_128\_GCM\_SHA256  
TLS\_DHE\_DSS\_WITH\_ARIA\_256\_CBC\_SHA384  
TLS\_DHE\_DSS\_WITH\_ARIA\_256\_GCM\_SHA384  
TLS\_DHE\_DSS\_WITH\_CAMELLIA\_128\_CBC\_SHA  
TLS\_DHE\_DSS\_WITH\_CAMELLIA\_128\_CBC\_SHA256  
TLS\_DHE\_DSS\_WITH\_CAMELLIA\_128\_GCM\_SHA256  
TLS\_DHE\_DSS\_WITH\_CAMELLIA\_256\_CBC\_SHA  
TLS\_DHE\_DSS\_WITH\_CAMELLIA\_256\_CBC\_SHA256  
TLS\_DHE\_DSS\_WITH\_CAMELLIA\_256\_GCM\_SHA384  
TLS\_DHE\_RSA\_WITH\_3DES\_EDE\_CBC\_SHA  
TLS\_DHE\_RSA\_WITH\_AES\_128\_CBC\_SHA  
TLS\_DHE\_RSA\_WITH\_AES\_128\_CBC\_SHA256  
TLS\_DHE\_RSA\_WITH\_AES\_128\_CCM  
TLS\_DHE\_RSA\_WITH\_AES\_128\_CCM\_8  
TLS\_DHE\_RSA\_WITH\_AES\_128\_GCM\_SHA256  
TLS\_DHE\_RSA\_WITH\_AES\_256\_CBC\_SHA  
TLS\_DHE\_RSA\_WITH\_AES\_256\_CBC\_SHA256  
TLS\_DHE\_RSA\_WITH\_AES\_256\_CCM  
TLS\_DHE\_RSA\_WITH\_AES\_256\_CCM\_8  
TLS\_DHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384  
TLS\_DHE\_RSA\_WITH\_ARIA\_128\_CBC\_SHA256  
TLS\_DHE\_RSA\_WITH\_ARIA\_128\_GCM\_SHA256  
TLS\_DHE\_RSA\_WITH\_ARIA\_256\_CBC\_SHA384  
TLS\_DHE\_RSA\_WITH\_ARIA\_256\_GCM\_SHA384  
TLS\_DHE\_RSA\_WITH\_CAMELLIA\_128\_CBC\_SHA  
TLS\_DHE\_RSA\_WITH\_CAMELLIA\_128\_CBC\_SHA256  
TLS\_DHE\_RSA\_WITH\_CAMELLIA\_128\_GCM\_SHA256  
TLS\_DHE\_RSA\_WITH\_CAMELLIA\_256\_CBC\_SHA  
TLS\_DHE\_RSA\_WITH\_CAMELLIA\_256\_CBC\_SHA256  
TLS\_DHE\_RSA\_WITH\_CAMELLIA\_256\_GCM\_SHA384  
TLS\_DHE\_RSA\_WITH\_CHACHA20\_POLY1305\_SHA256  
TLS\_DH\_anon\_WITH\_AES\_128\_CBC\_SHA  
TLS\_DH\_anon\_WITH\_AES\_128\_CBC\_SHA256  
TLS\_DH\_anon\_WITH\_AES\_128\_GCM\_SHA256  
TLS\_DH\_anon\_WITH\_AES\_256\_CBC\_SHA  
TLS\_DH\_anon\_WITH\_AES\_256\_CBC\_SHA256  
TLS\_DH\_anon\_WITH\_AES\_256\_GCM\_SHA384  
TLS\_DH\_anon\_WITH\_ARIA\_128\_CBC\_SHA256  
TLS\_DH\_anon\_WITH\_ARIA\_128\_GCM\_SHA256  
TLS\_DH\_anon\_WITH\_ARIA\_256\_CBC\_SHA384  
TLS\_DH\_anon\_WITH\_ARIA\_256\_GCM\_SHA384  
TLS\_DH\_anon\_WITH\_CAMELLIA\_128\_CBC\_SHA  
TLS\_DH\_anon\_WITH\_CAMELLIA\_128\_CBC\_SHA256  
TLS\_DH\_anon\_WITH\_CAMELLIA\_128\_GCM\_SHA256  
TLS\_DH\_anon\_WITH\_CAMELLIA\_256\_CBC\_SHA  
TLS\_DH\_anon\_WITH\_CAMELLIA\_256\_CBC\_SHA256  
TLS\_DH\_anon\_WITH\_CAMELLIA\_256\_GCM\_SHA384  
TLS\_ECDHE\_ECDSA\_WITH\_3DES\_EDE\_CBC\_SHA  
TLS\_ECDHE\_ECDSA\_WITH\_AES\_128\_CBC\_SHA



TLS\_ECDHE\_ECDSA\_WITH\_AES\_256\_CBC\_SHA  
TLS\_ECDHE\_ECDSA\_WITH\_NULL\_SHA  
TLS\_ECDHE\_RSA\_WITH\_3DES\_EDE\_CBC\_SHA  
TLS\_ECDHE\_RSA\_WITH\_AES\_128\_CBC\_SHA  
TLS\_ECDHE\_RSA\_WITH\_AES\_256\_CBC\_SHA  
TLS\_ECDHE\_RSA\_WITH\_NULL\_SHA  
TLS\_ECDH\_anon\_WITH\_3DES\_EDE\_CBC\_SHA  
TLS\_ECDH\_anon\_WITH\_AES\_128\_CBC\_SHA  
TLS\_ECDH\_anon\_WITH\_AES\_256\_CBC\_SHA  
TLS\_RSA\_WITH\_3DES\_EDE\_CBC\_SHA  
TLS\_RSA\_WITH\_AES\_128\_CBC\_SHA  
TLS\_RSA\_WITH\_AES\_256\_CBC\_SHA  
TLS\_RSA\_WITH\_CAMELLIA\_128\_CBC\_SHA  
TLS\_RSA\_WITH\_CAMELLIA\_256\_CBC\_SHA  
TLS\_RSA\_WITH\_NULL\_SHA  
TLS\_RSA\_WITH\_NULL\_SHA256





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