



# **PHINMS 3.2 Release Notes**

## **Public Health Information Network Messaging System (PHINMS)**

**Version 1.0**

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Centers for Disease Control and Prevention**

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**REVISION HISTORY**

<b>Version #</b>	<b>Implementer</b>	<b>Date</b>	<b>Explanation</b>
1.0	PHINMS Team	12-09-2020	Update 3.2 Release Notes from previous versions.
1.0	Jannie Williams	03-17-2021	Review and update.

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## ACRONYMS

AJP	Apache JServ Protocol
CA	Certificate Authority
CDC	Centers for Disease Control and Prevention
CPA	Collaboration Protocol Agreement
DN	Distinguished Name
DSN	Data Source Name
GA	General Availability
GUI	Graphical User Interface
HSQL	HyperXtreme Structured Query Language
HSQLDB	HyperXtreme Structured Query Language Database
HTTP	Hyper Text Transfer Protocol
JBDC	Java Database Connectivity
JDK	Java Development Kit
JVM	Java Virtual Memory
LDAP	Lightweight Directory Access Protocol
ODBC	Open Database Connectivity
PHINMS	Public Health Information Network Messaging System
SP1	Service Pack 1
SQL	Structured Query Language
SMTP	Simple Mail Transport Protocol
SSL	Secure Socket Layer
TransportQ	Transport Queue
URL	Uniform Resource Locator
WAR	Web Archive
XML	Extensible Markup Language

## 1 INTRODUCTION

### 1.1 Objective

The Centers for Disease Control and Prevention (CDC) Public Health Information Network Messaging System (PHINMS) Release Notes communicates the changes and enhancements in PHINMS Version 3.2 software for Windows environments. It also documents known problems and workarounds. This document is for users, developers, and IT support staff.

**Note:** Navigate to <https://www.cdc.gov/phinf/tools/phinms> when this manual references the PHINMS website.

### 1.2 Scope

This document describes new features and bug fixes implemented with PHINMS Release 3.2 and the supported upgrade path.

### 1.3 References

Name	Location
Quick How To	Located at <a href="https://www.cdc.gov/phinf/tools/phinms/">https://www.cdc.gov/phinf/tools/phinms/</a>
PHINMS Implementation Guide Version 3.2	Steps to install, upgrade, and configure PHINMS 3.2 are located at <a href="https://www.cdc.gov/phinf/tools/phinms/quick-tips.html#18">https://www.cdc.gov/phinf/tools/phinms/quick-tips.html#18</a>

### 1.4 Communication with Users

Send questions, suggestions, and/or comments concerning PHINMS support or documentation to the PHINMS website by using the **Contact Us** at [PHINtech@cdc.gov](mailto:PHINtech@cdc.gov).

## 2 RELEASE INFORMATION

The PHINMS 3.2 release supports clean installations and/or upgrades from Version 2.8.00 to 3.2. PHINMS 3.2 includes Java independence capability, Tomcat 9 updates, nonrepudiation option, and some bug fixes.

### 2.1 Compatible Products

PHINMS 3.2 has been tested on the following platforms:

- Operating systems (64-bit only):
  - Windows Server 2016.
  - Windows 10.
- Databases:
  - Default Databases - used for testing purposes: HSQL DB 1.8.0.4
  - Production Qualified Databases: Microsoft SQL Server 2016.
- Application Servers:
  - Tomcat 9
- Receiver Side Proxy Servers:
  - IIS 10
- JDBC drivers.

DB SERVER	VERSION	JDBC DRIVER NAME	VERSION	DATE
MS SQL	2016	Sqljdbc41.jar, sqljdbc42.jar	6.0	02/27/2018

*Table 1. JDBC Drivers*

**Note:** Java Database Connectivity (JDBC) drivers listed in this table were successfully tested for connectivity. However, CDC does not support potential defects of JDBC drivers. It is up to PHINMS users to decide which JDBC driver is appropriate for use. This table is provided for reference purposes only.

### 2.2 Resource Requirements

- Local administrator for Windows
- Minimum disk space: 6 GB
- Minimum memory: 4 GB
- TLS 1.2
- Java Open JDK or Oracle JDK from version 8 to 11.

## 2.3 New Installations

The Installation Wizard guides the user through the base installation of the PHINMS Sender and/or Receiver. It is the responsibility of the administrator to configure routes and database connections after completing the installation. The following major components are installed with the wizard:

- Tomcat 9.0.43 server
- PHINMS 3.2 Receiver and Sender applications
- PHINMS 3.2 default configuration files and directory structure
- Default database: Windows: HSQLDB 1.8.0.4 engine.

When PHINMS software is installed, Tomcat 9 will be installed in the Windows services panel with the display name of “PHINMS Tomcat Instance” and HSQLDB with “PHINMS Database Engine Service.”

When installed as a Windows service, the default startup type is configured as “Automatic.”

The alternative way to start the PHINMS instance is as follows:

- `<Install-dir>\Phinms\bin\ startHSQLDB.bat` to start the PHINMS default database (HSQLDB) for sender or receiver.

When the Tomcat server is running, the console can run by doing either of the following:

- Selecting “PHINMS Console” from the “Program Menu” or
- Double clicking `<installation directory>\bin\phinmsConsole.exe` file.

The PHINMS console is protected by a username and password by default. Contact the PHINMS Help Desk by email at [phintech@cdc.gov](mailto:phintech@cdc.gov) or by calling 1-800-532-9929. Use option 2 for the default console username and password and then change the default password.

## 2.4 Upgrade from Prior Versions of PHINMS

PHINMS 3.2 supports upgrading from PHINMS versions 2.8.00 or later. End users must provide the previous installation path during upgrade as well as a new path for installing the newer version. Upgrading from versions prior to PHINMS 2.8.00 is not supported; end users must do a new install to take advantage of the fixes and enhancements in PHINMS 3.2.

## 2.5 Re-installing PHINMS

PHINMS does not support re-installing PHINMS to the same install directory. The administrator must choose new install and a new install path from the wizard.



### **3 PHINMS 3.2 NEW FEATURES AND CHANGES**

The new features included in PHINMS 3.2 are listed in this section.

#### **3.1 Java Independence**

The major upgrade of PHINMS 3.2 is Java independence. Users can now use PHINMS 3.2 with any Java version of their preference. PHINMS 3.2 was tested and confirmed working with any Java version from Java 8 to Java 11, including Java from Oracle and open source Java.

**Note:** PHINMS 3.2 needs to use Java Development Kit (JDK) to work, not Java Runtime Environment (JRE).

#### **3.2 Update Bundled Tomcat Server**

The PHINMS Java application uses Tomcat as a web server engine. This release of PHINMS was updated to Tomcat Version 9.0.43 which currently has no security vulnerabilities.

#### **3.3 Nonrepudiation/Message Signing**

For added security, PHINMS 3.2 includes a nonrepudiation feature. Users have an option to sign their message/payload before sending to the receiver. This allows verification of the sender's identity upon receipt of data.

#### **3.4 Route-not-Read Enhancement**

More complete error and exception handling was added to the router to reduce/eliminate the chance of having false positive (sender received successful transport acknowledgment while receiver/router did not receive the data). Additionally, modern database technology was added to the router to enhance database performance.

#### **3.5 Sender Improvement**

Previous versions contained a bug that deleted some records in the out-queue table after Tomcat service restarted, this bug had been fixed in PHINMS 3.2.

Earlier versions missed parsing some error message responded from the receiver/router, more comprehensive parser had been added to the sender.

Prior to PHINMS 3.2 the delayed retry occasionally skipped sending some files in highly concurrent running environments, this release makes the delayed retry 'false' by default. It can be reconfigured to 'true' by user if needed.

### 3.6 Console/Interface Fix

Issue in older versions of PHINMS that disallowed the resetting of the login password from the console had been fixed. Users with administrator right can change the password from the console with PHINMS 3.2. (see note)

**Note:** After changing the password, it is imperative to exit the PHINMS console and restart the PHINMS Tomcat service.

## PHINMS KNOWN ISSUES

The following are either known product bugs that are not yet addressed in this release or limitations of the product that will be considered for resolution in future releases.

### 4.1 PHINMS 3.2 Limitations

- While users select database type for TransportQ and WorkerQ, one of the drop-down list options indicates “Access.” The MS Access database is not supported in PHINMS Versions 2.8 to 3.2. Please choose the other database types from the list. This option will be removed in a future release.
- When the auto-delete functionality is first turned on to delete older data, PHINMS waits until the start of the next cycle before any actual deletion occurs. This function is not a real-time deletion capability.
- Chunking (sending payloads larger than approximately 10 MB) only works with direct send and does not work with route not read (RnR). If an end user needs to use chunking and needs to send/poll RnR messages, then two instances of a PHINMS Sender will be required: One instance for direct-send with chunking turned on and the other PHINMS Sender for RnR messages with chunking turned off.

### 4.2 Additional Information and Recommendations

- The receiver does not append the timestamp in the file name for the zero payload messages.
- When chunked messages are received, some chunks may have a zero-size payload. This result is not a concern, as the receiver assembles all chunked messages after it receives the last chunked message.
- Default JDBC parameters are set for MS SQL Server to be SQL Server 2016.
- As with prior releases, PHINMS 3.2 does not have MS SQL Server, Oracle, and MySQL JDBC drivers (JDBC jar files) bundled with the release. End users using any of those databases as a transport queue or worker queue must download those drivers from the related vendor and import them using the PHINMS Console.

- Before starting the process of upgrading from a prior PHINMS release, users must first stop any running PHINMS application before it is upgraded. If existing PHINMS software is running as a Windows Service, end users should stop the service; otherwise, stop the PHINMS software from the command window if it is running in command line mode.

Contact the PHINMS Support Team when a bug or limitation is found. Navigate to <https://www.cdc.gov/phn/tools/phinms/> and click on the Contact PHINMS email link or contact the CDC PHIN Helpdesk at [PHINtech@cdc.gov](mailto:PHINtech@cdc.gov).

## 5 FILES LIST

This release consists of the files in the table below.

Filename	Description
PHINMS-3.2-install.exe	Installation file on Windows 10, Windows Server 2012/2016 (all 64 bit only).

*Table 2. Release File*