

PONTON X/P 4.2 user guide

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1. Graphical User Interface Quick Starter

Please find below a simple guidance on how to use the PONTON X/P User Interface.

1.1. Find your way around

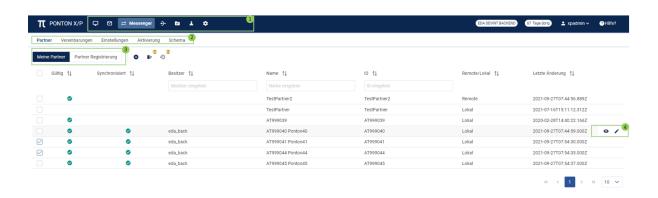
Navigating through the PONTON X/P Messenger is easy. The following navigation overview is helping you to quickly get you where you want to be and always ensures that you know where you are in the application.

Main Navigation bar: Enables you to navigate through the main functional areas of the PONTON X/P Messenger such as Monitor, Messages, Messenger, Listener, Hotfolder, Test Adapter and User Admin.

Sub-menu bar: Enables you to find subordinate segments of the main areas e.g. Messenger, which is separated into Partner, Agreements, Settings, Activation and Schema.

Tabs: Enables you to toggle between separated parts of a coherent functional application.

Quick Action Bar: When you hoover with your mouse over items in the table the quick action bar will appear, enabling you to view or edit the selected item.



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1.2. Select and execute actions

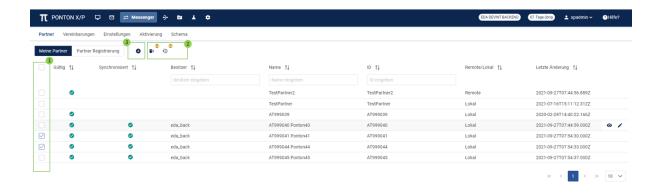
Select Table Row(s): Click on the checkbox to select or deselect the item (e.g. Partner, Agreement) you want to process. The number of selected item, which are actionable, is displayed next to the action icon.

Toolbar: When you have selected at least one actionable item you can click on the available action icon to execute the command. An icon tool-tip provides you with a hint about the underlying action.

Create: In order to create new Partners (Local and Remote), Agreements and Hotfolder Adapters click on the + icon in the action bar.

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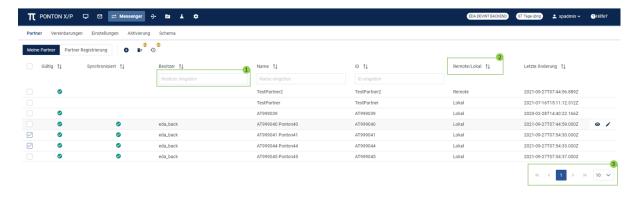


1.3. Arrange your data

Filter: Some table headings have a filter functions. Enter values in the filter text box and the table displays only values which contain the entered filter value. Filters can be combined.

Sorting: All table headings have a sort function. You can sort ascending and descending.

Pagination: The default pagination is 10 entries per page and can be changed to 25 or 50. Up to five pages are displayed in the page toggle bar, you can move forward or backward by clicking on the page number, the forward / backward icons or the first page / last page icon. The active page is highlighted in blue.



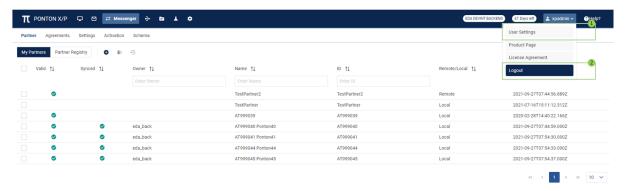
1.4. Change your settings and log-out

Change your settings: Change your language settings and password.

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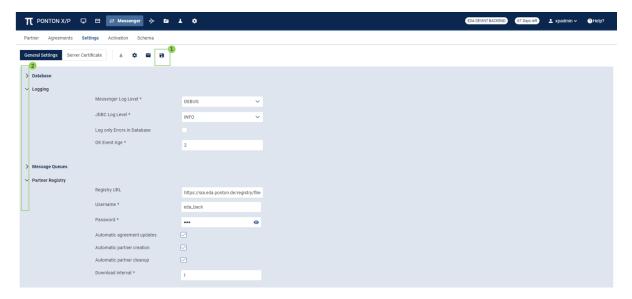




1.5. Configure settings

Configure: Open a configuration page (Partner, Agreements, Listener, Hotfolder, Messenger Settings), make the required changes by using drop-down menus, checkboxes, input fields etc. and click on save icon.

Hide/unhide: Use the accordion tabs to organize the layout.



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2. Main Navigation

2.1. Log-in

Please enter your username and password for logging-in to PONTON X/P. You can view the entered password by clicking on the view symbol •.

Failed login

If your login attempt failed you will not get any feedback why it failed. You will also not receive a notification that your account has been blocked due to too many failed attempts. This is best practice with regards to security.



2.2. Main Navigation (left)



ea Symbol Description	Subnavigation	Description
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Area	Symbol	Description	Subnavigation	Description
Monitor			 Dashboard 	
			Adapter Status	
Messages		View Messages and its details, Resend and Delete Messages		
Messenger	#		● Partner	Create and edit own / communication Partner; Add and manage Partner Certificates
			 Agreements 	Add, configure, delete Agreements
			 Settings 	Configure general Messenger settings; Manage Server Certificate
			 Activation 	Get licence info; Send activation requests; Install activation and licence
			• Schema	Install or update SchemaSets
Listener	﴾	Remote configuration of the connected Listener; Manage Listener Certificate and Client certificates		
Hotfolder		Add, configure, delete Hotfolder		
Test Adapter	I	Send test Messages; Ping receiver		
User Admin	*	Manage user accounts		

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2.3. Main Navigation (right)



2.3.1. Set Messenger instance name

On the navigation bar you see the **Messenger Instance Name** which can be configured to display a name that easily identifies the system.

Configure messenger name

The Messenger Instance Name (a text of up to 40 characters) can be configured in the following configuration file:

launcher/conf/wrapper.conf

set.MESSENGER_NAME="MyMessenger"

Further you see how many day are left until the licence expires as well as the user name of the user who is logged-in.

Area	Symbol	Description	Sub-Na	avigation	Description
User Menu	:		•	User Settings	Change your language settings and your password
			•	Product Page (external link)	Go to PONTON X/P product website
			•	Licence Agreement	View Licence Agreement
			•	Logout	Log out of PONTON X/P
Help?	0	User manuals and link to support portal			

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2.4. User Menu

2.4.1. Change your language settings

Click on the username icon so that the user menu drop-down opens and select "<u>User Settings</u>". Select the language you want from the drop-down menu. Click on the "<u>Save Settings</u>" button which becomes active when you have selected a new language.

Browser default language

When you select "browser default language" and PONTON X/P does not support your browser default language it will select English as default language.

2.4.2. Change your password

Click on the username icon so that the user menu drop-down opens and select "<u>User Settings</u>". Type in your current password as well as the new password and repeat password. The new and repeat password must match and meet the password criteria. You can view the password you have entered by clicking on the symbol or hide it by clicking on the symbol. The password criteria are as follows:

- minimal length of 12 characters
- at least one upper case letter
- at least one lower case letter
- at least one number
- at least one special character

When you have entered all three passwords, and they are valid and matching, the "<u>Save</u> Password" button becomes active.

2.4.3. Log-out

Click on the username icon so that the user menu drop-down opens and click on the Log-out button.

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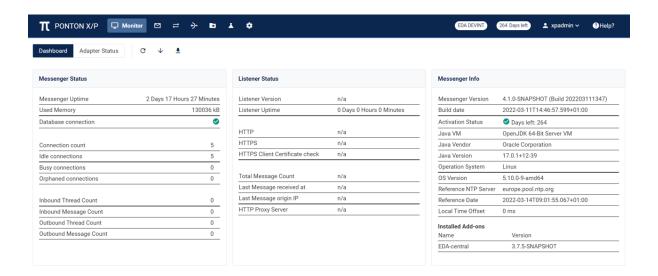


3. Monitor

3.1. Dashboard

Go to: MONITOR > Dashboard

After logging in to the PONTON XP Messenger the Monitor Dashboard screen is displayed. The Monitor Dashboard is showing information about the current server configuration and the status of different Messenger processes (Threads). You can always navigate back to the Monitor Dashboard by clicking on the **Monitor** icon on the navigation bar.



3.1.1. Restart Messenger

In case you want to restart the Messenger click on the restart \circlearrowleft icon. You need to confirm the restart. While the Messenger is restarted the connection to the server is lost and the PONTON X/P Messenger can not be used. The database connection symbol is displaying a symbol and there is no other status information visible on the Dashboard. When the server connection is established again, the database connection symbol is displaying a symbol and the PONTON X/P Messenger can be used again.

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3.1.2. Download config files

Click on the download config files icon $\stackrel{•}{\underline{\bullet}}$ to download the config files to a download folder in your local system.

3.1.3. Download log files

Click on the download log files icon $\stackrel{\ \, }{\smile}$ to download the log files to a download folder in your local system.

3.2. Adapter Status

Go to: MONITOR -> Adapter Status



An overview of the adapters connected with the PONTON X/P Messenger can be obtained by clicking on the "**Adapter Status**" tab next to the Dashboard tab. If the symbol in the status column is showing a check mark symbol which means that the adapter is working and accepting messages.

All table heading have a **Sort** function (icon). Sort can be ascending and descending. Underneath the table in the bottom right corner you find a **Pagination**. function The default pagination is 10 entries per page and can be changed to 25 or 50. Up to five pages are displayed in the page toggle bar, you can move forward or backward pages by clicking on the page number, the forward backward icons or the first page last page icon. The active page is highlighted in blue.

Adapters

Adapters running as embedded adapters are shown with an adapter URL as INTERNAL, these adapters cannot be deleted. Depending on the adapter type, there will be additional status

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information in the comment column.

3.2.1. Delete Adapter reference(s)

If an external adapter is no longer required, then the Adapter reference can be deleted manually. To delete Adapter reference(s) select the Adapter reference you want to delete with the checkbox on the left hand side of the table row. With the checkbox in the headings row you can select all Adapters. The number of selected Adapters is displayed above the delete icon. Click on the delete icon and confirm that you want to delete the selected Adapter references. When clicking on the "OK" button on the confirmation dialog, the Adapters will no longer be displayed in the table.

Adapters using the adapter API 2.0 will be shown with an adapter URL using websocket (wss) as protocol. Authorization of an adapter connected via API 2.0 is performed using the instance ID at the end of the adapter URL.

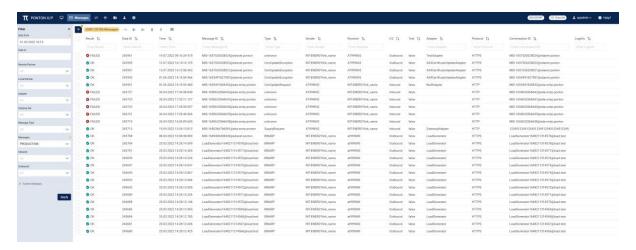
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4. Message Monitor

Go to: MESSAGES □

Messages sent and/or received by your Messenger can be viewed and filtered with the Message monitor.



4.1. Filter Messages

4.1.1. Select filter criteria

A date picker with date/month/year and hour/minutes is available for the following criteria:

- From filter messages created after the entered 'from' time (local server time), default filter setting: today-1 00:00
- To filter messages created before the entered 'to' time

A multi-select drop-down-list with search function (type in filter value into search text field above the drop-down-menu) is available for the following filter criteria:

- Remote Partner involved communication partner
- Local Partner involved own partner
- Adapter involved adapter
- Schema Set schemaset of the processed message
- Message Type message code according to schemaset
- Messages characteristic of the message (PRODUCTION, TEST or SIGNAL) with PRODUCTION as default filter setting.

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- Inbound state of the inbound message
- Outbound state of the outbound message

Active filter have a yellow dot next to filter indicating that the filter was selected. The Filter Badge shows the number of active filters.

4.1.2. Set further message filter attributes

An additional text filter is available for the following input fields:

Like Search

Use '%' as wildcard symbol for a like search

- Protocol Info protocol info of the processed message.
- Message ID message ID of the processed message.
- Conversation ID conversation ID of the processed message.

Click on the Toolbar $\overline{}$ icon in order to hide or show the filter bar. Alternatively you can close the filter bar by clicking on the \mathbf{x} icon in the top right corner of the filter bar.

4.2. View Messages and trigger message Actions

Select your filter criteria and click on the "<u>Apply</u>" button to get all Messages which match the filter criteria in the Messages table. The number of messages which meet the filter criteria is displayed in the yellow badge next to the filter icon. The Messages table displays a list of all Messages. The filter results are ordered by message timestamp descending (newest first). Each time a search has been successfully finished the user receives a success message, indicating that the search was finished, even though no new entries were found.

Records Found

As the amount of records can be very large with too wide filter settings, a fixed maximum number of records is returned with the filter (e.g 2000, this is configurable). The total number of found records is displayed (e.g. 2000 / 100.000 - which means 2000 messages were returned, but 100.000 were found with this filter criteria. Pagination and sorting in the GUI table is done within the initial result set. To retrieve a new set of records the filter criteria must be changed and applied by clicking on the "*Apply*" button again.

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4.2.1. Table headings

- **Result** Status of Message (OK, Failed, In Process, In Transit, Archived) with graphical representation with icon.
- Data ID Technical unique ID of the processed message
- Time Time when message was created in local server time
- Message ID- Message ID of the processed message
- Type Message type according to schemaset
- Sender Name of ID of sender
- Receiver Name of ID of receiver
- I/O Inbound or Outbound direction
- Test Test messages = true
- Adapter Adapter ID of the involved adapter
- Protocol Protocol info of the processed message
- Conversation ID Conversation ID of the processed message
- Loginfo Log Info of the processed message

The following functions are available to easily find the table entry in the Messages you are looking for:

- All table heading have a **Sort** function (icon). Sort can be ascending and descending.
- Some table Headings have a Filter functions. Enter values in the filter text box and the table displays only values which contain the entered filter value. Filters can be combined.
- Underneath the table in the bottom right corner you find a Pagination function. The
 default pagination is 50 entries per page and can be changed to 100, 500, 1000 or
 2000. Up to five pages are displayed in the page toggle bar, you can move forward or
 backward by clicking on the page number, the forward / backward icons or the first
 page / last page icon. The active page is highlighted in blue.

4.2.2. Resend messages

Select the Messages you want to re-send by clicking on the checkbox — on the left hand side of the Message table. The number of selected Messages is displayed next to the

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resend icon. When you click on the re-send icon, the process of re-sending the selected Messages is started and a progress window opens. During the process you can not use other functions of PONTON X/P GUI. You can stop the process at any time, but it will not affect Messages which have already been re-sent. The progress window displays the number of total Messages to be processed, already processed Messages and number of errors occurred. You can see details (Data ID and Message ID) of the errors by clicking on the > icon. When the process is finished (or you stopped it), you can click on the "Close window" button and continue using PONTON X/P GUI.

4.2.3. Delete messages

Select the Messages you want to delete from the database by clicking on the checkbox on the left hand side of the Message table. The number of selected Messages is displayed next to the delete icon. When you click on the delete icon a confirm dialog opens. Clicking on the "OK" button is starting the process of deleting the selected Messages and a progress window opens. During the process you can not use other functions of PONTON X/P GUI. You can stop the process at any time, but it will not affect Messages which have been already deleted. The progress window displays the number of total Messages to be processed, already processed Messages and number of errors occurred. You can see details (Data ID and Message ID) of errors by clicking on the > icon. When the process is finished (or you stopped it), you can click on the "Close window" button and continue using PONTON X/P GUI.

4.2.4. Delete messages from queue

Select the Messages with status "IN TRANSIT" you want to delete from the message queue by clicking on the checkbox on the left hand side of the Message table. The number of selected Messages is displayed next to the delete icon. When you click on the delete from queue icon a confirm dialog opens. Clicking on the "OK" button is starting the process of deleting the selected Messages and a progress window opens. During the process you can not use other functions of PONTON X/P GUI. You can stop the process at any time, but it will not affect Messages which have been already deleted. The progress window displays the number of total Messages to be processed, already processed Messages and number of errors occurred. You can see details (Data ID and Message ID) of errors by clicking on the > icon. When the process is finished (or you stopped it), you can click on the "Close window" button and continue using PONTON X/P GUI.

4.2.5. Send messages to new adapter

Select the Messages you want to send to a new Adapter by clicking on the checkbox \Box on the left hand side of the Message table. The number of selected messages is displayed next

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to the send to new adapter icon. When you click on the send to new adapter icon a dialog box opens where you can select the Adapter to which you want to send the selected Messages. Select the Adapter and click on the "Send" button, which is starting the process of sending the selected Messages to a new Adapter and opens a progress window. During the process you can not use other functions of PONTON X/P GUI. You can stop the process at any time, but it will not affect Messages which have been already sent to a new Adapter. The progress window displays the number of total Messages to be processed, already processed Messages and number of errors occurred. You can see details (Data ID and Message ID) of errors by clicking on the > icon. When the process is finished (or you stopped it) you can click on the "Close window" button and continue using PONTON X/P GUI.

4.2.6. Resend all messages with bulk resend

This function will resend either all inbound or outbound failed messages. You need enter a valid date in the "Date from" search field and select "FAILED" in the Outbound or Inbound selection of the filter bar before the icon becomes active. Selecting certain messages in the Message Monitor will not activate the button. When you have entered the above mentioned valid filter settings the number of failed Messages is displayed next to the bulk resend icon and the icon becomes active. When you click on the active bulk re-send icon a confirmation window will appear. When you click on "Yes" the dialog closes and the resending process is starting. You can only start one bulk re-sending process at a time. Should you nevertheless try to start a new re-sending process when a process is already in progress you will get an error dialog: "Request denied. There is already a re-transmission process in progress."

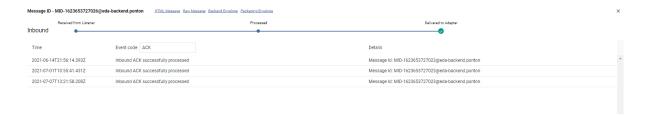
4.2.7. Toggle between failed and resolved status of messages

Select the FAILED (or resolved) Messages you want to change status by clicking on the checkbox \square on the left hand side of the Message table. The number of selected Messages is displayed next to the "Toggle Message Status" icon \rightarrow . When you click on the "Toggle Message Status" \rightarrow , a confirm dialog opens. Clicking on the "OK" button is starting the process of changing the status of all selected Messages from FAILED to RESOLVED or vice versa.

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4.2.8. View details of a message



You can view details of every Message displayed in the Message table. When you hoover with your mouse over the Message table, a view icon will appear for each Message. Click on the view icon of the Message which details you want to view and a detailed list of events will be shown for the chosen Message in the bottom half of the message screen. You can close the detailed view by clicking on the x symbol in the top right corner of the detailed view window.

The **Message ID** of the selected Message and the current processing step and process/transfer status of the Message is displayed in the graph. If the transfer was successful a green check-mark symbol is displayed, if something went wrong a red cross symbol is displayed.

Next to the Message ID you may find one or download links in various formats for the selected Message ID. The following formats might be available:

- HTML Message get the message content in HTML format generated by the messenger
- Raw Message get the original message content
- Backend Envelope get Backend Envelope as a list of key value or as XML depend of involved adapter
- Packaging Envelope get Packaging Envelope as a text or as XML depend of used packaging

When you click on one of the links mentioned above, the Message will be downloaded to a folder in your local directory in the selected format.

In the table below the status graph you can view the following details for the Message ID.

- Time time of the created message event (displayed as local server time)
- Event code description the occured message event
- Details additional description the occured message event

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4.2.9. Add or change the log info of a message

When you hoover with your mouse over the Message table, an "Edit log" will appear for each Message. Click on the "Edit log" icon the Message which logs you want to edit and a modal dialog will appear. Enter the log info and click on "Save". Please note that log info dialog is a free text field with max. of 128 characters. If you don't want to save the changes click on "Cancel". The Log info is now displayed in the Message Monitor table.

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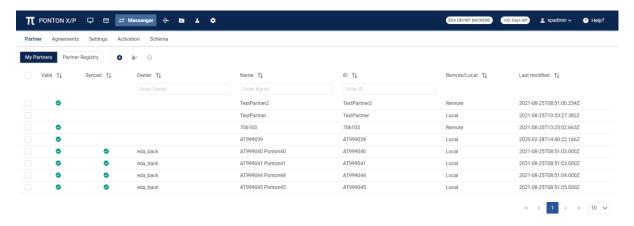
5. Messenger >Partner

A Partner profile can be seen as representing the communication capability of the respective Partner. A Partner may, for example, support HTTP(S), SMTP, SMIME and FTP(S) as transport protocols. An Agreement (see Agreements) between two Partners restricts the capabilities of two Partners to a choice of options that are supported by both sides. In the case of the transport protocol, the partners might define HTTP as the protocol they want to use.

PONTON X/P distinguishes between **Local** and **Remote** partners – this distinction indicates whether the partner refers to a local partner within your own PONTON X/P system or to a communication partner on an external system. The configuration steps might differ slightly. For example, you can submit a certificate request for a Local Partner, but not for a Remote Partner.

5.1. My Partners

Go to: MESSENGER ← > Partner > My Partner



The **My Partner** table provides an overview of all partners which have been created manually or imported from the Partner Registry (see below) and are therefore available for setting up an agreement.

The following functions are available to easily find the table entry you are looking for:

- All table heading have a Sort function (icon). Sort can be ascending and descending.
- Some table headings have a Filter functions. Enter values in the filter text box and the table displays only values which contain the entered filter value. Filters can be combined.

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Underneath the table in the bottom right corner you find a **Pagination** function. The
default pagination is 10 entries per page and can be changed to 25 or 50. Up to five
pages are displayed in the page toggle bar, you can move forward or backward by
clicking on the page number, the forward / backward icons or the first page / last
page icon. The active page is highlighted in blue.

5.1.1. Create a local partner

A Local Partner could be for example a department within your organization.

Select **MESSENGER** on the navigation and you land on the **Partner** page. Click on the "Create a new partner" cicon, which opens the "Create New Partner" dialog box.

Enter New Backend ID

Enter a "New Backend ID" in the text box. The "Local" radio button for creating a Local Partner is selected by default. Then click on the "Next Step" button which brings you to the Configuration page for the new partner. The Backend ID and type of partner is displayed below the sub-navigation bar. The next step is to specify the configuration details for this new Local Partner. There are different accordion tabs of the following configuration segments: Identification, Communication, Schema Sets, Default Packager and Contact Information.

You can only save a new Local Partner configuration when you have filled out all mandatory values marked with an asterisk (*). If you haven't filled out the mandatory fields when you click on the save cicon, an error message in red will be displayed underneath the field with the missing value. Please scroll down and make sure you have checked all fields in case you have received an error message.

Enter Identification settings

On the **Identification** segment, you can edit the different IDs used to refer to the given partner (in this case your new Local Partner):

Default IDs: By default, the Partner Display Name, the Backend Partner ID and the Party IDs are all set to the same value when a new Partner is created. In the Identification segment you can modify these settings if required.

- Partner Display Name the Display Name is used within PONTON X/P in menus, selection lists, etc.
- Backend Partner ID this identifier is used internally by PONTON X/P for communication with the backend and the file system. Hence this ID should match the ID in your respective backend system.

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• Party ID – the Party ID is used for the identification of business partners in the messaging process. Please note that the Party ID at the senders end must match the Party ID at the receivers end. For each Partner, you can configure several party IDs. You can add additional Party IDs if required by clicking on the + icon. You must also select a Party-ID-Type for the new Party ID. It is possible to delete Party IDs by clicking on the delete icon. Please note that at least one Party ID is required. When you send a message to a partner, all the party IDs you have defined for your own partner entry ('self') will be included in the Message. The receiver can then identify you as the sender if one of these party IDs matches a partner party ID in the receiver's partner configuration.

Party ID

Party IDs are used to identify partners externally. To avoid name clashes and duplication, well-known naming Schemas exist to identify partners, e.g., DUNS codes, VAT numbers, IANA codes etc. For this reason, trading partners should agree on a minimal set of identification types (like DUNS numbers and IANA codes) that is to be used by all partners.

- Party-ID-Types: Select a Party-ID-Type from the list in the drop-down menu. Each
 party ID has a specific party ID type. Please note that you can configure only one
 party ID per type.
- EbXml: Enable EbXml20 if you want to use this party ID with EbXml20.
- AS4: Enable AS4 if you want to use this party ID with AS4.

Enter Communication settings

The communication settings specify the URIs of Partner's Messenger Service for the supported communication protocols. Enter the address to be used to access the partner's Messenger via the given protocol, for example:

https://partner.server:8080/pontonxp/SoapListener. It is possible to use several URIs per protocol. This allows you for example to set up different Listeners for one partner by varying the address like http://partner.server:8080/pontonxp/AS2Listener. In case the partner can be reached at multiple URIs it is possible to define a fallback URI. If the Ping-All feature is activated, the Messenger switches to the defined fallback URI in the agreement if the partner is unreachable via the primary URI.

In the **Communication** tab, enter the communication settings for your new Partner configuration. Please specify the access details for the communication protocols you want to support: HTTP(S), SMTP, SMIME and FTP(S).

 URI of Messenger Service – when defining the URI for HTTP(S) or FTP(S), please be sure to include the port. For example: http://your.server.com:8080/pontonxp/SoapListener

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• **Preferred/Fallback**: By default the initial URI is marked as preferred. You can select additional URIs by clicking on the + plus icon and define which URI is the preferred URI or a fallback URI. It is only possible to select one preferred URI. It is possible to delete URIs by clicking on the delete icon.

Activate Schema Sets

The Schema Sets section allows you to specify which schema sets are "allowed" for message exchanges with this Local Partner. The actual set of Schemas to be used can be specified individually in each **Partner Agreement**. In the Schema Sets table you will see a list of the Schema Sets installed on your Messenger system. Each entry in the list comprises the following elements:

- A checkbox for activating/deactivating the given Schema Set.
- The name of the Schema Set.
- An unfold/fold icon to hide/view the document types for each Schema Set
- A numerical entry indicating the number of selected/defined document types in the Schema Set – for example, 8/10 means that there are 10 document types included in the schema set and 8 of them are currently activated.

You can select all Schema Sets by selecting the checkbox \Box in the Header row, c	r all
document types of a particular Schema Set by selecting the checkbox \square next to the Schemaset. You can also select individuell document types contained in a Schema	
Expand the Schema Set by clicking on the accordion tab > and select the docume	ent types
by selecting the the checkbox \Box . The number of selected document types and a document types in the Schema Set is highlighted in a yellow badge next to the nar Schema Set.	

Select Default Packager

You must select a default packager from the drop-down menu.

Enter Contact Information

We recommend to enter the contact details of your main contact person so that your business partner can contact if required.

- Contact Name
- E-Mail
- Phone number

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5.1.2. Create a remote partner

A **remote** partner – refers to your business partners, for example: customers, suppliers, carriers, warehouse operators, etc.

Select **MESSENGER** on the navigation and you land on the **Partner** page. Click on the "<u>Create a new partner</u>" icon • which opens the "Create New Partner" dialog box. Click on the save icon after you have filled out the required and optional fields below:

Enter New Backend ID

Enter a "New Backend ID" for your new remote partner in the text box and select the "Remote" radio button. Then click on the "Next Step" button, which opens the Configuration page for the new partner. The Backend ID and type of partner is displayed below the subnavigation bar. The next step is to specify the configuration details for this new Remote Partner. There are different accordion tabs of for the following configuration segments: Identification, Communication, Schema Sets, Default Packager and Contact Information. You can only save a new Remote Partner configuration when you have filled out all mandatory values marked with an asterisk*. If you haven't filled out the mandatory fields when you click on the save occupied icon, you will receive an error message in red will be displayed underneath the field with the missing value. Please scroll down and make sure you have checked all fields in case you have received an error message.

Update partner automatically

If the **Automatic updates** option is activated, the profile for the Remote Partner will be downloaded from the registry automatically whenever it changes, while you can not change this Partner manually. This is only the case, however, if the global setting to **Enable automatic updates** has been activated in the profile registry configuration.

Update agreements automatically

If the **Automatic Agreement updates** option is activated all the existing agreements with this remote partner will automatically be recreated as soon as the profile of this remote partner has been downloaded from the registry.

Enter Identification settings

On the **Identification** tab, you can edit the different IDs used to refer to the given partner (in this case your new Remote Partner):

Default IDs: By default, the Partner Display Name, the Backend Partner ID and the Party IDs are all set to the same value when a new partner is created. In the Identification tab you can modify these settings if required.

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- Partner Display Name the Display Name is used within PONTON X/P in menus, selection lists, etc.
- **Backend Partner ID** the Backend Partner ID is used for communication with the backend (ERP) system.
- Party ID the Party ID is used for the identification of business partners in the messaging process. Please note that the Party ID at the senders end must match the Party ID at the receivers end. For each Partner, you can configure several party IDs. You can add additional Party IDs if required by clicking on the + icon. You must also select a Party-ID-Type for the new Party ID. It is possible to delete Party IDs by clicking on the delete icon. Please note that at least one Party ID is required. When you send an XML message to a partner, all the party IDs you have defined for your own partner entry ('self') will be included in the Message. The receiver can then identify you as the sender if one of these party IDs matches a partner party ID in the receiver's partner configuration.

Identical Party IDs

Please ensure that identical Party IDs are used in the sender's as well as receiver's messenger configuration — otherwise there will be errors when you attempt to exchange messages with your partners. Other Party ID types can also be used, for example EIC, Duns Number, GLN (Global Location Number) or URI. For a single partner you can create multiple Party IDs by using different Party ID types.

- **Party-ID-Types**: Select a Party-ID-Type from the list in the drop-down menu. Each party ID has a specific party ID type. Please note that you can configure only one party ID per type.
- **EbXml**: Enable EbXml20 if you want to use this party ID with EbXml20.
- **AS4**: Enable AS4 if you want to use this party ID with AS4.

Enter Communication settings

The communication settings specify the URIs of Partner's Messenger Service for the supported communication protocols. Choose a protocol and enter the address to be used to access the partner's Messenger via the given protocol, for example:

https://partner.server:8080/pontonxp/SoapListener. It is possible to use several URIs per protocol. This allows you for example to set up different Listeners for one partner by varying the address like https://partner.server:8080/pontonxp/AS2Listener. In case the partner can be reached at multiple URIs it is possible to define a fallback URI. If the Ping-All feature is activated, the messenger switches to the defined fallback URI in the agreement if the partner is unreachable via the primary URI.

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In the **Communication** tab, enter the communication settings for your new Partner configuration. Please specify the access details for the communication protocols you want to support: HTTP(S), SMTP, SMIME and FTP(S).

- URI of Messenger Service when defining the URI for HTTP(S) or FTP(S), please be sure to include the port. For example: http://your.server.com:8080/pontonxp/SoapListener
- **Preferred/Fallback**: By default the initial URI is marked as preferred. You can select additional URIs by clicking on the + plus icon and define which URI is the preferred URI or a fallback URI. It is only possible to select one preferred URI. It is possible to delete URIs by clicking on the delete icon.

Activate Schema Sets

The Schema Sets section allows you to specify which schema sets are "allowed" for message exchanges with this Remote Partner. The actual set of Schemas to be used can be specified individually in each **Partner Agreement**. In the Schema Sets table you will see a list of the Schema Sets installed on your Messenger system. Each entry in the list comprises the following elements:

- A checkbox for activating/deactivating the given Schema Set.
- The name of the Schema Set.
- An unfold/fold icon to hide/view the Schema Set Type for each Schema Set
- A numerical entry indicating the number of selected/defined document types in the Schema Set – for example, 8/10 means that there are 10 document types included in the schema set and 8 of them are currently activated.

You can select all Schema Sets by selecting the checkbox \square in the Header row, or all
document types of a particular Schema Set by selecting the checkbox — next to the Schemaset. You can also select individuell document types contained in a Schema Set.
Expand the Schema Set by clicking on the accordion tab > and select the document types
by selecting the the checkbox \square . The number of selected document types and available document types in the Schema Set is highlighted in a yellow badge next to the name of the Schema Set.

Select Default Packager

You must select a default packager from the drop-down menu. The packager specifies how the messages sent by this partner will be packaged for transmission and backend processing. You can choose between different packaging standards, that offer diverse options to specify whether the relevant packaging elements will be used by this partner. EbXML, AS2 and AS4 are most widely used. For details on the specific settings please refer to the descriptions of packaging elements in the **Agreements** section.

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Enter Contact Information

We recommend to enter the contact details of your main contact person so that your business partner can contact if required.

- Contact Name
- E-Mail
- Phone number

Add Maintenance Period

You can add one or several maintenance periods by clicking on the + plus icon which opens the input field for "From" (start date/time of the maintenance period) and "To" (end date/time of the maintenance period). Clicking in the input field opens a date picker. Use the date picker to enter dates. The date picker is showing always the current date / time. Change the time first and then click on date you want to select. As soon as you click on the date the date picker will close and the selected date is displayed in the input field. Please ensure you have selected dates in the future and that the end date is after the start date. It is possible to delete a Maintenance Period by clicking on the delete

5.1.3. Delete partner(s)

Go to My Partners and select one or several partner by clicking on the checkbox on the left hand side in the table row. The number of selected partners is displayed next to the delete icon Click on the delete icon and confirm that you want to delete the partner. Alternatively you can delete a single partner which you have selected for editing by clicking on the delete icon.

5.1.4. Synchronize partner profile with the registry

Go to My Partners and select one or several partner with the checkbox on the left hand side in the table row. The number of selected partners is displayed next to the synchronise cion. Click on the synchronize icon to start the synchronisation process. A synchronised partner will be marked with a green check symbol.

Partner Profile Status:

- · Valid: if no installed certificate is expired
- Synced: if the partner profile is available in the partner registry and has the same modification timestamp

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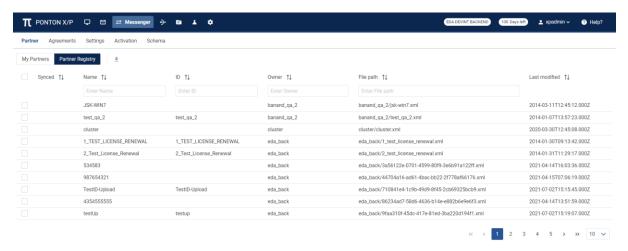


Please note that the Messenger has to establish a connection with the registry in order to compare the current partner configuration with the profile stored in the registry.

5.2. Partner Registry

Go to: MESSENGER ← > Partner > Partner Registry

If you and your communication partners use the Partners Registry then exchanging Partner profiles is very simple. You find a list of all Partner when clicking on the "<u>Partner Registry</u>" tab in the **Messenger > Partner** section.



The following functions are available to easily find the table entry you are looking for:

- All table heading have a Sort function (icon). Sort can be ascending and descending.
- Some table headings have a Filter functions. Enter values in the filter text box and the table displays only values which contain the entered filter value. Filters can be combined.
- Underneath the table in the bottom right corner you find a Pagination function. The
 default pagination is 10 entries per page and can be changed to 25 or 50. Up to five
 pages are displayed in the page toggle bar, you can move forward or backward by
 clicking on the page number, the forward / backward icons or the first page / last
 page icon. The active page is highlighted in blue.

5.2.1. Import partner profiles

To import one or more available profiles select one or several partner with the checkbox on the left hand side in the table row. The number of selected partners is displayed next to the

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import

icon. Click on the import icon to start the import process which automatically imports all available profiles from the registry into your local messenger. Profiles which have been modified since the last import are missing the Synced symbol in the Partner Registry table. Go to My Partner and click on synchronise in order to automatically download the modified partner profiles into the messenger.

Synchronised partners will be marked with a green check

✓ symbol.

Profile collision

Profiles which may collide with already existing profiles within your Messenger will not be imported.

5.3. Individual Partner configuration

5.3.1. Edit a Partner

Select a Partner (local or remote) by clicking on the edit icon which will appear on the right hand side of the table row when you hoover with your mouse over the Partner you want to edit. When you click on the edit icon the Partner configuration page opens. You can also right click the edit icon with the mouse and open the Partner configuration page in a new tab or new window. You can go back to the **My Partner** page by clicking on the "Back to Partner" button or leave the partner area by clicking on the navigation or sub-navigation bar. In case you have made changes to the partner, you will be asked to confirm that you want to leave the configuration page. You can change any of the fields on the configuration page, however you must enter valid values in the mandatory fields marked with an asterisk*. Click on the save

Disable a partner

This option allows you to disable a specific partner within your Messenger configuration, without deleting the partner configuration. In this case the Messenger will reject any message received from this Partner. Select the "Partner disabled" checkbox and click on the save

Re-enable a partner

Un-Select the "Partner disabled" checkbox and click on the save circon.

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5.4. Certificates

PONTON X/P supports X.509 certificates in binary (DER) as well as text format (PEM).

5.4.1. Partner Certificates

In order to request, install, export, delete or make changes to the Partner Certificates settings you need select a specific Partner (local or remote) by clicking on the edit icon which will appear on the right hand side of the **My Partner** table row when you hoover with your mouse over the partner in the list. After clicking on the edit symbol the Partner configuration page opens. Click on the **Certificates** tab next to the Configuration tab to access the Certificates section.

Request a new partner certificate

Remote partner certificates

In the case of **Remote Partners** you would receive the certificate from the partner directly or by downloading the partner's profile from the registry.

Requesting a Partner Certificate is only required for Local Partners. Click on the request new certificate icon + which opens the request certificate dialog box. Fill in the certificate request form. The mandatory fields are marked with an asterisk*:

- Certificate Name; Organisation; E-mail address
- Country (select); Key pair (select)
- Private key password
- Repeat password

Optional input fields are: Department; Locality; State or province; Phone number; Fax number. You can also select to build the request with PONTON attributes. When you have filled out all required fields the "*Request certificate button*" becomes active. When you click on "*Request certificate button*" the requested certificate will appear in a new modal window which enables you to copy the certificates text. Close the window by clicking on the "*OK*" button. The requested Certificate will also appear in the Requested Certificates table. You can view the requested certificate by clicking on the view certificate icon in the Certificate Request column.

Private password key

Please remember the private key password so that you can install the requested certificate later

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and prove that this certificate is actually yours.

Extending a partner certificate

You can also request a new certificates for an existing certificate that is going to expire in the near future. In that case click on the request certificate circle con, which appears on the right hand side of the Partner certificate table row when you hoover with your mouse over the Partner certificate for which you want to request a new certificate. On click the "Request certificate" dialog box opens. The certificate request form is pre-filled with the details of the existing certificate, but can be changed. The mandatory fields are marked with an asterisk. when you have filled out all required fields the "Request certificate button" becomes active.

Install a partner certificate

When you have received a certificate file from a CA or a communication partner, open the "Install Partner Certificate" Dialog by clicking on the Install Certificate icon. Either choose a file by clicking on "Choose files" or drag-and-drop the file into the marked area. The name and size of the file will appear in the dialog box. You can remove the file by clicking on the symbol. If the file is valid and you have entered the required password (local partner only) can click on the "Install" button to start the installation process. When the installation was successful the new certificate will disappear in the Partner certificates list.

Local Partner certificate

For **Local Partner** you will need to enter the private key password (i.e. the password you entered when you filled in the certificate request for this particular certificate) to confirm that this certificate is actually yours.

CA certificate

A partner certificate will only be accepted when the certificate of the issuing CA (certificate authority) has been installed. Otherwise the trust relationship between the partner and the CA cannot be traced. The certificate for the PONTON CA is automatically included in the default installation. For other certificate authorities you will need to obtain and install the relevant CA certificate.

Export a partner certificate

Exporting a certificate enables you to save and then reuse your own certificate as long as it is valid.

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Click on the export

icon, which appears on the right hand side of the Partner certificate table row when you hoover with your mouse over the Partner certificate you want to export.

When you click on the export icon, the "<u>Export Certificate</u>" dialog will appear. Select either Base64 PEM or Binary DER as format for the exchange of your partner certificate with remote communication partners. If you want to use the Partner certificate for other Local Partners in the same or a different Messenger you need to export the certificate with a private key password. Select that option and enter the private key password. Clicking on the "<u>Export</u>" button will download the Partner Certificate to your local folder. You can share your certificate with your business partners by sending the certificate file to them via e-mail and having them install it into their partner configurations.

Delete a partner certificate

Click on the delete icon, which appears on the right hand side of the Partner certificate table row when you hoover with your mouse over the Partner certificate you want to delete. When you click on the delete icon a confirmation dialog opens, Clicking on the "Yes" button will delete the Partner certificate.

Define default Certificates

You can install multiple Certificates for Partners. This enables you to use different certificates for functions like signing and encryption or for different partners. It is also possible to define certificates for different packagers such as AS1, AS2, EbXml etc. In that case the Agreements subsequently created for this Partner will automatically use the packager certificates as defined in Partner certificates. Move the slider next to the listed packager (EbXml, AS4, AS3, AS2, AS1 or Processing) to the right so that the radio-button in the respective column become active. Click on the radio-button so that the circle is filled in blue and click on the save continuous can also select which installed certificate you want to use as default certificate by clicking on the radio-button under the Default heading. Only one certificate can be used as default certificate.

Default Certificate

If 'default' certificate is chosen in the packager, the certificate used by the packager will automatically be updated as soon as another certificate is defined as the 'default' partner certificate.

Click on the save icon after you have made changes to the Partner certificate settings.

Default certificate

All certificates that you install for one Partner will become default certificate in the order of their valid-from date. Alternatively, you can manually select the default certificate and the certificate that should be default when this certificate expires.

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5.4.2. CA Certificates

In order to install, export or delete CA certificates you need select a specific Partner (local or remote) by clicking on the edit icon which will appear on the right hand side of the My Partner table row when you hoover with your mouse over the partner in the list. After clicking on the edit symbol the Partner configuration page opens. Click on the Certificates tab next to the Configuration tab to access the Certificates section.

Install a CA certificate

After requesting for a new certificate, you shall receive a valid certificate file via e-mail from the PONTON CA. Open the "Install Partner CA Certificate" dialog by clicking on the Install CA Certificate icon . Either choose a file by clicking on "Choose files" or drag-and-drop the file into the marked area. The name and size of the file will appear in the dialog box. You can remove the file by clicking on the symbol. When the file is valid you can click on the "Install" button to start the installation process. If the installation was successful, the new CA Certificate will disappear in the CA Certificates list.

Export a CA certificate

Click on the export $\stackrel{\blacksquare}{=}$ icon, which appears on the right hand side of the CA Certificate table row when you hoover with your mouse over the CA Certificate you want to export. When you click on the export $\stackrel{\blacksquare}{=}$ icon, the "*Export CA certificate*" dialog will appear. Select either Base64 PEM or Binary DER as format. Clicking on the "*Export*" button will download the CA Certificate to your local folder.

Delete a CA certificate

Click on the delete icon which appears on the right hand side of the CA certificate table row when you hoover with your mouse over the CA Certificate you want to delete. When you click on the delete icon a confirmation dialog opens, Clicking on the "Yes" button will delete the CA Certificate.

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6. Messenger >Agreements

Go to: MESSENGER → Agreements

The purpose of Partner Agreements is to specify the communication and data processing settings to be used when Messages are exchanged between two specific Partners. Each Agreement applies to a given combination of a Own and a Communication Partners.

6.1. View Agreements list



The **Agreements** table provides an overview of all Agreements which have been created in the Messenger. If the agreement is valid the symbol is shown. In case the agreement is not valid, the symbol is shown.

The following functions are available to easily find the table entry you are looking for:

- All table headings have a **Sort** function (icon). Sort can be ascending and descending.
- Some table headings have a Filter functions. Enter values in the filter text box and the table displays only values which contain the entered filter value. Filters can be combined.
- Underneath the table in the bottom right corner you find a **Pagination** function. The
 default pagination is 10 entries per page and can be changed to 25 or 50. Up to five
 pages are displayed in the page toggle bar, you can move forward or backward by
 clicking on the page number, the forward / backward icons or the first page / last
 page icon. The active page is highlighted in blue.

6.2. Create a new Agreement

Go to **MESSENGER** on the navigation and select **Agreements** in the sub-navigation bar.

Click on the "Add Agreement" con, which opens the "*New Agreement*" dialog box.

Select with the drop-down menu your Own Partner (Partner 1) and the intended

Communication Partner (Partner 2) for the new Agreement. Then select an Agreement template from the drop-down menu. The Agreement templates differ with regards to the default options for **processing** and **packager settings**. You can not change the template for

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already created Agreements. If you want to change the template of an existing Agreement you need to delete the Agreement and create a new one.

Available default templates are:

- EbXml20
- AS1
- AS2
- AS3
- AS4-ENTSOG
- Plain

Then click on the "<u>Next Step</u>" button which opens the Agreement configuration page. The next step is to specify the configuration details for this new Agreement. There are different accordion tabs > for the following configuration segments: **Processing, Packager, Schema Set, Integration** and **Communication**. Click on the save icon after you have checked fields below.

Agreements between two local partners

Before you can create an Agreement between two Own Partners " $\underline{Allow\ loopback}$ " in Messenger \rightarrow Settings \rightarrow General Settings \rightarrow Communication must be enabled.

While preparing the messages for outbound communication the Agreement settings are applied sequentially in the following order - **Processing, Packaging and then Communication**. In case of incoming messages the agreement settings are applied in the order - **Packaging, Processing and then Integration**.

6.2.1. Enter Processing settings

The available processing settings for the **Agreement Template** (EbXml20, AS2, AS3 AS4-ENTSOG, Plain) are identical, with the exception that additional options are pre-selected for EbXmL. The processing settings are applied to the payload and allow to sign and/or (de-) en-crypt the message content (payload).

XML Modifications are optional settings if special treatment is required for xml files received from / delivered to the backend. XML Modification enables change in encoding and the line ending of a document before sending or after receiving it, so that it is adapted to the

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requirements of the receiver or of an interior adapter. Additionally, there are options to change some XML elements in the payload that are especially helpful to guarantee the compatibility with older papiNet standards (version 1.0 and 1.1).

Modify sending XML payload:

- Update papiNet 1.x Envelope for sending payload: PapiNet 1.x documents have envelope information in the payload. If this option is enabled the protocol, the message ID, the time stamp, the sender and the receiver will be set to right values.
- Change Character Encoding: The document can be transferred to UTF-8 and UTF-16, several ISO encodings and some encodings for Japanese text.
- Change Line Ending: The line endings in the document can be changed to the LF, CR or CR LF.
- Pretty Print: Pretty xml documents are reformatted to increase human readability. It has no effect on the xml structure itself, however it can help badly implemented xml parsers to process the document.

Modify received XML payload:

- Update papiNet 1.x Envelope for received payload: PapiNet 1.x documents have envelope information in the payload. If this option is enabled the protocol, the message ID, the time stamp, the sender and the receiver will be set to right values.
- Change Character Encoding: The document can be transferred to UTF-8 and UTF-16, several ISO encodings and some encodings for Japanese text.
- Change Line Ending: The line endings in the document can be changed to the LF, CR or CR LF.
- Pretty Print: Pretty xml documents are reformatted to increase human readability. It has no effect on the xml structure itself, however it can help badly implemented xml parsers to process the document.
- **Sign payload:** If enabled the message will be signed. If activated you have to select the needed signature algorithm. You can select one specific certificate for signing in case you have installed multiple certificates for your Own Partner and want to use a non default certificate.
- Include signing cert: If enabled the used certificate is sent with the message.
- Process signed payload: Enable if you expect signed payload.
- Compress payload: Specifies whether compression is to be used.
- Process compressed payload: Enable if you expect compressed payload.

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- Encrypt payload: If enabled the message will be encrypted. You can select one specific certificate for encryption in case you want to use non default certificate of your Communication Partner.
- Process encrypted payload: Enable if you expect encrypted payload.
- Validate sending payload: Enables XML validation for outgoing messages.
- Validate received payload: Enables XML validation for incoming messages.
- Create Energylink XML format: This creates an XML signature and applies XML encryption as specified by the Energylink. Only "EDA Wechselprozess" messages are affected.
- Process Energylink XML format: This validates XML signatures and decrypts XML encrypted content as specified by the Energylink. Only "EDA Wechselprozess" messages are affected.
- **Custom validation of sending payload:** Enables an extra payload validation step when sending payloads. A validation plugin has to be provided for this.
- **Custom validation of received payload:** Enables an extra payload validation step when receiving payloads. A validation plugin has to be provided for this.

6.2.2. Enter Packager settings

The packager settings define the messaging standard to be applied. It allows you to apply globally defined standards to communicate with external parties. The PONTON X/P Messenger supports ebXML 2.0, AS1, AS2, AS3 and AS4. Furthermore the Messenger also allows exchange of plain messages. The available packaging settings depend on the **Agreement Template** you have selected.

EbXML settings (EbXML template)

The following options are available to make messaging more compatible between individual parties, since different parties might only accept / send Messages which fulfill certain criteria. Mandatory fields are marked with an asterisk (*).

- Role (from) / (to): EbXML allows you to define a role for sender and receiver (e.g. 'buyer' and 'seller'). This has no effect for PONTON X/P, but other messaging software might require specific values.
- **Service*/Service Type:** The EbXML Service / EbXML ServiceType settings can be used to specify the EbXML service that handles the Message.
- Action*: This setting identifies a process within the specified EbXML Service.
- **CPA ID*:** The CPA ID specifies the parameters governing the exchange of messages between the parties.

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- Request Acknowledgements/Request signed acknowledgements: Enable this
 option if you expect (signed) acknowledgements for sent messages.
- Request Duplicate elimination: If duplicate elimination is enabled, the receiver must eliminate duplicate messages.
- Request synchronous reply If you use a synchronous protocol, a reply can be received through the same connection.
- Attachment role EbXML allows you to define roles for the different attachment types. PONTON X/P uses these roles to identify attachments in case of multiple attachments.

The following variables can be used in the options **Role To**, **Role From, Service, Service Type, Action, CPA ID**: %MESSAGETYPE%, %TESTFLAG%, %MESSAGEVERSION%, %SCHEMASET%, %SENDERID%, %SENDER_DISPLAYNAME%, %RECEIVERID%, %RECEIVER_DISPLAYNAME%, %MESSAGEID%, %CONVERSATIONID%

AS1 settings (AS1 template)

AS1 is available for SMTP communication and the following settings are available for this standard:

- Request acknowledgements: You can request an MDN (Message Disposition Notification) for all outbound messages from your communication partner.
- Request signed acknowledgements: If you want the MDN to be signed, you have to activate this option. The MIC hash algorithm has to be selected from the list.
- **Expect Signed Acknowledgements:** Enable this option if you expect signed acknowledgements.
- Sign messages: If enabled the messages will be signed.
- Expect signed messages: Enable if you expect signed payloads.
- Sign acknowledgements: If enabled the acknowledgements will be signed.
- Compress messages: Specifies whether compression is to be used.
- Expect compressed messages: Enable if you expect compressed messages.
- Encrypt messages: If enabled the messages will be encrypted.
- Expect encrypted messages: Enable if you expect encrypted messages.
- Mail subject: This field defines the subject for all outgoing mails.

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- Use mail-client email format when sending mail with body content: The Messenger creates a body part with a static text for all outgoing messages.
- Accept mail-client email format: If this option is activated the Messenger tries to process eMails that are not AS1-compliant (for example eMails created by eMail clients like MS Outlook).
- **Ignore duplicate messages**: If ignore duplicate elimination is set, the Messenger will ignore messages with previously received message-IDs.

AS2 settings (AS2 template)

AS2 is available for communication by HTTP(S) and the following settings are available for this standard:

- Request acknowledgements: You can request an MDN (Message Disposition Notification) for all outbound messages from your communication partner.
- Request signed acknowledgements: If you want the MDN to be signed, you have to activate this option. The MIC hash algorithm has to be selected from the list.
- Asynchronous response URL: If this option is enabled, then the receiver will send the requested MDNs to the specified URL.
- **Expect Signed Acknowledgements:** Enable this option if you expect signed acknowledgements.
- **Sign messages:** If enabled the messages will be signed.
- Expect signed messages: Enable if you expect signed payloads.
- Sign acknowledgements: If enabled the acknowledgements will be signed.
- Compress messages: Specifies whether compression is to be used.
- Expect compressed messages: Enable if you expect compressed messages.
- Encrypt messages: If enabled the messages will be encrypted.
- **Ignore duplicate messages**: If ignore duplicate elimination is set, the Messenger will ignore messages with previously received message-IDs.

AS3 settings (AS3 template)

AS3 is available for communication by FTP(S) and the following settings are available for this standard:

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- Request acknowledgements: You can request an MDN (Message Disposition Notification) for all outbound Messages from your communication Partner.
- Request signed acknowledgements: If you want the MDN to be signed, you can select the algorithm.
- Asynchronous response URL: If this option is enabled, then the receiver will send the requested MDNs to the specified URL.
- **Expect Signed Acknowledgements:** Enable this option if you expect signed acknowledgements.
- Sign messages: You can select the algorithm with the drop-down menu to sign the Message with your Partner certificate. You can select one specific certificate for signing in case you have installed multiple certificates for your Local Partner.
- Expect signed messages: Enable if you expect signed payloads.
- Sign acknowledgements: If enabled the acknowledgements will be signed.
- **Compress messages**: Specifies whether compression is to be used.
- Expect compressed messages: Enable if you expect compressed messages.
- Encrypt messages: If enabled the messages will be encrypted.
- **Ignore duplicate messages**: If ignore duplicate elimination is set, the Messenger will ignore messages with previously received message-IDs.

AS4 settings (AS4-ENTSOG template)

Following settings are possible and can be defined while using the AS4 standard in the messenger, mandatory fields are marked with an asterisk*.

- Role (from) / (to): Role identifies the authorized role of the Party sending or receiving the message.
- Service*: This element identifies the service that acts on the message
- Service type: This indicates how the parties sending and receiving the message will
 interpret the value of the service element. if the type attribute is not set, the content of
 the Service element MUST be a URI.
- Action*: This string identifies an operation or an activity within the defined Service
- Agreement reference: The value of an Agreement reference element identifies the
 agreement that governs the exchange and must be unique within a namespace
 mutually agreed by the two parties.

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- Agreement reference type: This attribute indicates how the parties sending and
 receiving the Message will interpret the value of the reference. If the type attribute is
 not present, the content of the AgreementRef element MUST be a URI
- Send message properties: If this is enabled, then message related information is added to the AS4 envelope as Type/Value pairs. These values include ProductName, VendorName as well as Version of the messaging tool.
- **Send content properties:** If this is enabled, then payload related information is added to the AS4 envelope as Type/Value pairs.
- Support certificate update message: If a new certificate is installed in a Local
 Partner profile, all Agreements for this profile will be checked. If the flag is enabled, a
 certificate update message will be sent. You need at least one certificate for the
 Local Partner installed. This is the implementation of the ENTSOG AS4
 Profile ebCore Agreement Update feature, which follows the guidelines of the ebCore
 Agreement Update Specification.
- **Sign messages:** You can select the algorithm to sign the Message with your own certificate. In the outbound direction you can select one specific certificate for signing in case you have installed multiple certificates for your Local Partner.
- Expect signed messages: Enable if you expect signed payload.
- Compress messages: You can select to compress the Message before sending.
- Expect compressed messages: Enable if you expect compression.
- Encrypt messages: You can select the algorithm to encrypt the Message with your Partner's Certificate.
- **Send receipts:** Enable this to send an AS4 receipt message for any received message.
- Send signed receipts: sign AS4 receipt messages before sending.
- **Ignore duplicate messages:** If ignore duplicate elimination is set, the Messenger will ignore all received duplicate Messages

The following variables can be used in the options **Role To**, **Role From, Service, Service Type, Action, AgreementRef** as well as **AgreementRefType**: %MESSAGETYPE%, %TESTFLAG%, %MESSAGEVERSION%, %SCHEMASET%, %SENDERID%, %SENDER_DISPLAYNAME%, %RECEIVERID%, %RECEIVER DISPLAYNAME%, %MESSAGEID%, %CONVERSATIONID%

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Plain settings (Plain template)

Is available for HTTP(S) and FTP(S). Plain packaging allows sending and receiving pure messages without any packaging envelope. This packaging option is intended for the communication with a Partner that does not have a messaging software.

- Use transport results as acknowledgement: If enabled transport level results will be converted to Acknowledgement and sent to the specified Adapter.
- Reception password: The optional password is used to secure the reception of messages. If no password is defined, any Message that is posted to the PlainListener URL will be accepted.

6.2.3. Configure Schema Set

The Schema Sets section allows you to specify which Schema Sets are to be used for message exchange based on the current Partner Agreement. To access the **Schema Sets go to MESSENER > Schema Sets** sub-navigation tab.

Schema Sets

The Schema Sets available for selection in a given Partner Agreement are dependent on the schema settings in your partner profiles for the two relevant partners. Please keep in mind, however, that this consistency check is local, i.e. it applies to the partner profiles and Agreements in your own Messenger configuration. To ensure successful message exchange with your communication partners you will need to cross check the selected options (as well as your other configuration settings) with your Partners.

6.2.4. Enter Integration details

Select Default Adapter

Default Adapter*: the selected adapter will be used for all received messages unless overridden by an adapter rule.

Define adapter rules

Click on the "*Define adapter rules*" button and enter the values for:

 XPath*: Define a XPATH whose value will be compared with the VALUE by OPERATOR. If comparison matches, the adapter that will process the message will be changed. Special XPATH-expressions are available: '!MessageId', '!ConversationId', '!MessageType', '!MessageVersion', '!SchemaSet', '!TestFlag' and '!LogInfo'

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- Operator*: Select of the following operator from the drop-down menu: EQUAL, NOT_EQUL, LESS_THAN, GREATER_THAN, CONTAINS, CONTAINS_NOT
- Value*: Enter the value for the XPATH.
- Adapter*: Enter the Adapter that will process the message when the above condition is meet.

You can add additional **Adapter Rules** by clicking on the + icon. It is possible to delete Adapter Rules by clicking on the delete icon.

6.2.5. Enter Communication details

The communication settings define the communication URI for message delivery.

- Primary URI*: Primary URI specifies the transport protocol to be used for sending messages based on this agreement. It is mandatory to set one URI.
- Fallback URI: In case the partner is reachable at more than one URI, a fallback URI can be defined. The Messenger will use the fallback URI only if the primary URI has been identified as unreachable during previous transmission tries. The fallback channel is only used if the "PingAII" option is enabled in the agreement as well as globally under Messenger → Settings → General Settings→ Communication. PingAII enabled: By activating this option, the Messenger will periodically verify that the defined communication URIs are usable.
- **Username/password:** Username / Password only needs to be provided if the URI can only be accessed after authentication.
- **Retries*:** Retries determines how often the Messenger will try to send a message until it receives an acknowledgement. It is mandatory to choose a retry value.
- Retry Interval (seconds): Retry Interval determines how long the Messenger will try to send a message until it receives an acknowledgement. If less retry intervals than number of Retries are entered, then the last retry interval will be used for the remaining retries. You can add additional Retry Intervals by clicking on the + icon. It is possible to delete Retry Intervals by clicking on the delete icon.

Define communication rules

With communication rules it is possible to override the regular transmission URI based on message specific rules.

Click on the "Define communication rules" button and enter the values for:

 XPath*: Define a XPATH whose value will be compared with the VALUE by OPERATOR. If comparison matches, the adapter that will process the message will

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be changed. Special XPATH-expressions are available: '!Messageld', '!ConversationId', '!MessageType', '!MessageVersion', '!SchemaSet', '!TestFlag' and '!LogInfo'

- **Operator***: Select of the following operator from the drop-down menu: EQUAL, NOT_EQUL, LESS_THAN, GREATER_THAN, CONTAINS_NOT
- Value*: Enter the value for the XPATH.
- URI*: Communication URI that will be used when the rule is triggered

You can add additional **Communication Rules** by clicking on the ⁺ icon. It is possible to delete Communication Rules by clicking on the delete ⁼ icon.

6.3. Edit an agreement

Go to **MESSENGER** ← > **Agreements** and select an agreement by clicking on the edit



icon, which will appear on the right hand side of the table row when you hoover with your mouse over the Agreement you want to edit. When you click on the edit icon the **Agreement Configuration** page opens. You can also right click the edit icon with the mouse and open the Agreement configuration page in a new tab or window. You can go back to the **Agreement** page by clicking on the "**Back to Agreements**" button or leave the agreement area by clicking on the navigation or sub-navigation bar. In case you have made changes to the agreement, you will be asked to confirm that you want to leave the configuration page. You can change any of the fields on the configuration page, however you must enter valid values in the mandatory fields. Click on the save icon after entering or editing the configuration.

6.4. Delete agreements

Go to **MESSENGER** $\stackrel{\longrightarrow}{\leftarrow}$ > **Agreements** and select one or several Agreements by clicking on the checkbox on the left hand side in the table row. The number of selected Agreements is displayed next to the delete icon. Click on the delete



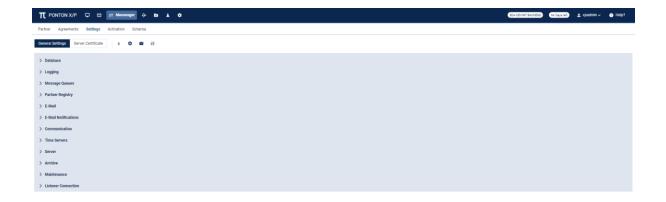
icon and confirm that you want to delete the Agreement. Alternatively you can delete a single Agreement which you have selected for editing by clicking on the delete icon.

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7. Messenger >Settings

Go to: MESSENGER ← > Settings



7.1. Test the connection to database

Click on the **Test connection** icon to establish a connection to your database and test the URL and user/password. You should receive a success toast when the connection was successful.

Use this test whenever changing database configuration details, **BEFORE** saving the configuration.

If it is not possible to connect to your database, your Messenger installation will not work.

7.2. Reconnect to database

Click on the **Reconnect database** icon to reconnect to the database, using the changed configuration.

Reconnect

Changes in database settings will only be applied when using the **reconnect database** action, or a restart of the Messenger is performed.

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7.3. Test sending e-mail

Click on the **Test sending e-mail** icon to test the e-mail configuration. Enter a receiver e-mail address in the e-mail field and click on the "Send" button. If you want to close the dialog and not send the test e-mail, click on the **x** button.

7.4. General Settings

Click on the save icon after entering or editing values in any of the sections below.

7.4.1. Enter database settings

The Messenger stores log entries in a database. These information is related to the processing of messages through the Messenger. Content of the files transacted via the Messenger is not stored in the database tables used by the Messenger.

HSQL database

PONTON X/P is installed with a pre-configured HSQL database, which is only intended for **test** purposes. For productive operations a supported database system must be used.

The log database is accessed via JDBC connection. The PONTON X/P distribution includes configuration scripts to manually set up the tables for the database systems mentioned in the **Hardware and System Requirements** document.

To configure the Messenger database please fill in the following values, mandatory fields are marked with an asterisk*:

- Database dialect*: Choose the required Database dialect from the drop-down list
- **Driver classname*:** Enter the driver classname
- URL*: Enter the URL for the JDBC connection to your database
- **User:** Enter the username for the connection (optional)
- Password: Enter the password for the connection (optional)
- **Minimum Connections*:** The minimum number of connections to the database. The Messenger will instantly establish this many connections when it is started and keep them open as long as the Messenger is running
- Maximum Connections*: The maximum number of connections to the database.
 The Messenger will open connections on demand up to this number

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- Connection Timeout*: Connection Timeout determines after which time idle database connections are terminated
- **Helper Threads*:** Slow JDBC operations are generally performed by helper threads that do not hold contended locks. Distributing these operations across multiple threads can significantly improve performance by allowing multiple operations to run simultaneously. Minimum number of Helper Threads is 6.

Connection standard

The database URL format depends on the database type. Please consult the relevant driver documentation for details on how to specify the database URL.

7.4.2. Define logging level

To specify the logging level please select the following settings, mandatory fields are marked with an asterisk*:

- Messenger Log Level*: Select the desired level for Messenger logs. There is a
 range of settings available: For example: OFF -turns logging off completely; TRACE logs all the messages output by the system.
- **JDBC Log Level***: Select the desired level for database logs. There is a range of settings available: For example: OFF -turns logging off completely; TRACE -logs all the messages output by the system.
- Log only Errors in Database: Logging all the message related events in the database reduces the performance but offers a better audit trail. This option allows to decide between maximum performance and maximum audit level.
- **OK Event Age***: The number of days after ok events will be deleted automatically.

Please keep in mind that the chosen logging level can have an effect on the performance of your system. In particular, it is advisable to use DEBUG or TRACE logging only while trying to troubleshoot and analyze errors.

7.4.3. Enter message queue settings

Mandatory fields are marked with an asterisk*:

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- **Inbound Queue Scan Interval*:** specifies the interval to scan the inbound message queues.
- Inbound Queue Delivery Timeout*: specifies the maximum time-frame expected for
 a successful message delivery to an adapter. The time-frame starts when a message
 is scheduled for delivery and ends when the Adapter acknowledges the correct
 reception. Whenever this expected time-frame is exceeded a warning message will
 be logged. In combination with the email notification this can be used to alert an
 administrator about the issue between Messenger and Adapter.
 So if the delivery timeout is specified as 5 minutes, a warning will be created once
 after 5 minutes.
- **Inbound Queue Retry Delay*:** specifies the delay after an unsuccessful message delivery attempt. This is used to reduce load on the receiving Adapter.
- Inbound Queue Notification Retry*: specifies how many times the failing of the delivery of a message to the adapter should be reported.
- Outbound Queue Scan Interval*: specifies the interval to scan the outbound message queue.

7.4.4. Enter Partner Registry Settings

The partner registry allows you to exchange profiles with other partners by uploading and downloading Partner configurations to/from a central registry. Here you can configure the connection and authentication to access the Partner Registry:

- Registry URL: enter the address where the Partner Registry is to be accessed.
 Leave it empty to use the default registry server.
- Username* / Password*: enter the user name and password for access to the registry. These will be provided by the Partner Registry administrator.
- Automatic agreement updates: this option allows your Messenger to automatically
 update the already existing Agreements with a specific remote Partner as soon as
 the profile of this Remote Partner has been updated in the Messenger from the
 Partner Registry.
- Automatic partner creation: this option allows your Messenger to automatically
 download profiles when needed. The Messenger will try to find a Partner profile in the
 Partner Registry based on the Backend Partner ID for outbound Messages and
 based on the default Party-ID for inbound Messages. When this option is enabled,
 also Partner Agreements are created when needed.

Currently the automatic partner creation option only works as intended when the Messenger is used in the Austrian EDA environment.

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- **Automatic partner cleanup:** this option allows your Messenger to automatically delete remote profiles, which were deleted on the Partner Registry.
- **Download interval*:** Defines the interval how often profile updates are downloaded from the registry.

When updating the Partner Certificates from the Partner Registry the client certificates on the Listener are also updated automatically.

7.4.5. Enable E-mail

In this section you can enable or disable inbound and outbound e-mail connections in your Messenger configuration. Mandatory fields are marked with an asterisk*:

Inbound

You can enable your Messenger to receive e-mail messages by setting up a POP/IMAP connection with the following entries:

- **Protocol***: set to POP3 / IMAP (depending on the type of mail server)
- Server*: the hostname or IP address of your mail server
- Interval*: the frequency for accessing the server for mail download
- Username* / Password*: must be properly set to authenticate the Messenger on the mail server
- **Inbox Folder*:** the folder on the server where new emails are stored. use "INBOX" to access the default folder.

Outbound

This connection is used for e-mail messages sent by your Messenger to your business partners and also for notification emails to administrators. The following data can be configured if enabled, mandatory fiels are marked with an asterisk*:

- From*: the sender's address to be used for e-mails sent from the Messenger.
- **Protocol*:** select the protocol from the available protocols in the drop-down menu.
- **SMTP:** the outgoing mail server to be contacted by your Messenger in order to submit the e-mail.

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 Username / password: must be entered if your mail server requires authentication for outgoing e-mails, in this case enter the settings to be used by the Messenger to log in on the mail server.

Email configuration is required before being able to use AS1 packaging successfully.

7.4.6. Enter E-mail Notification settings

E-mail notifications

E-mail notifications require an outbound e-mail connection.

You can use the notification service to send e-mails to specified addresses whenever certain events occur. For example, you might want to notify your system administrator whenever certain errors are encountered. The Messenger distinguishes between message related notifications and application (or system) related events.

Add message events receiver

To receive a notification in case a message could not be processed as expected the user can choose from a list of events for which he/ she requires a notification. This can be done by adding Message Event Receivers. Click on the "<u>Add Message Event Receiver</u>" button and enter the following, mandatory fields are marked with an asterisk*:

- e-mail address*: Enter e-mail address of the e-mail recipient.
- With HTML attachment: Select the checkbox if you want to include the message content as HTML rendered attachment
- **Message event*:** Select one or multiple message events from the drop-down list which will trigger an e-mail notification
- Subject Elements*: The default subject of the e-mail notification will be as follows:
 "Notification for message" + Message ID
 You can customize the subject of the e-mail notification by selecting Subject
 Elements from the drop-down list. If you define several subject elements, they will be

separated by blanks in the subject line. You can use the following element types:

- Text: a static text that you enter in the text box.
- Variable: a predefined variable such as the Message ID, the Message Type or the Receiver ID/Display Name.

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 Xpath: the xpath to an XML element/attribute contained in the payload message.

Please note that only a subset of the complete xpath syntax is supported for the definition of subject elements. In particular, the following restrictions apply:

- The xpath must be an absolute path starting with the root node of the payload document.
- The xpath must refer to an actual node within the document. In the case of multiple nodes that satisfy the xpath, the first occurrence will be used.
- Reference to node attributes is not possible.
- Use of conditional expressions is not possible.

The use of xpath values as notification subject elements may lead to decreased performance, because the entire payload message has to be parsed in order to resolve the xpath expression.

You can add additional **Subject Elements** by clicking on the ⁺ icon. It is possible to delete Subject Elements by clicking on the delete icon.

Add system events receiver

To receive a notification in case the application is experiencing an unexpected situation the user can choose from a list of events for which he/ she requires a notification. To specify an address and event(s) click on the "<u>Add System Event Receiver</u>" button. Mandatory fields are marked with an asterisk*.

- e-mail address*: Enter the e-mail address for this receiver in the text field.
- Subject*: Enter a subject for the e-mail.
- **System Event*:** Select the event from the drop-down list for which this receiver is to be notified.

You can add additional **System Event Receiver** by clicking on the $^+$ icon. It is possible to delete System Event Receiver by clicking on the delete $^{\blacksquare}$ icon.

Add Cron expression

To be able to receive mail notifications collectively for multiple events within a time interval the messenger allows you to define cron expressions. Click on the "<u>Add Cron Expression</u>" button. Mandatory fields are marked with an asterisk*.

 Cron expression*: Allows to manually set a standard unix "cron expression" to define the email scheduling. Cron expressions are described at http://en.wikipedia.org/wiki/CRON expression

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• Maximum notifications per e-mail*: The maximum number of notifications per transmitted eMail can be defined. As a result there will be multiple eMails created if the limit per transmission is reached.

You can add additional **Cron expressions** by clicking on the ⁺ icon. It is possible to delete Cron Expressions by clicking on the delete icon.

7.4.7. Enter Communication settings

Under **General Configuration** you can specify several additional settings, mandatory fields are marked with an asterisk*.

- Retransmission Handling: you can use this setting to specify the number of
 Retries* (retransmission attempts) and the Retry Interval* (in seconds) between
 attempts. If a message cannot be transmitted successfully in the specified number of
 retries, the Messenger will give up and mark the message as "failed".
- **Message ID Domain*:** this will be used as suffix when message IDs are automatically generated.
- SSL Server certificate check: if you enabled this option only communication with servers, that use SSL certificates that have been issued by a trusted CA known to your Messenger are allowed.
- Allow loopback: makes it possible to send messages from a Local Partner to another Local Partner.
- Requeue failed messages: if you enable this option the messages which could not
 be transmitted successfully (TTL expired) to the partners shall be re-inserted into the
 outbound queue. Thus enabling the Messenger to automatically retry the
 transmission of these messages.
- Ping-ALL: if this option is enabled the Messenger sends ebXML or AS4 Pings for all Agreements with activated Ping-All option and for all defined URLs (primary and fallback). The results can be queried with the JMX interface. During communication failures (TTL expired) the messenger switches to the defined fallback URI in the agreement if the partner is unreachable via the primary URI.
- **Ping-All Interval (minutes):** defined time intervals to check if the communication partner is reachable.

If your Messenger will be connecting to the Internet via a proxy server you must enable HTTP Proxy and/or FTP Proxy.

Enable HTTP Proxy Configuration

Mandatory fields are marked with an asterisk*.

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- Host*: Enter the IP address or hostname of your HTTP proxy server.
- Port*: Enter the port number of your HTTP proxy server.
- **Username/Password:** Enter user/password to be used.
- NT Domain: The NT Domain is only required if your proxy server uses NTLM authentication.

If you are using a PONTON X/P Listener you have the option of using the Listener as a proxy server for outgoing messages. In order to use the Listener as the Messenger's proxy server select enable for **Proxy** in <u>Listener > Configuration</u>.

Enable FTP Proxy Configuration

Mandatory fields are marked with an asterisk*.

- **Host***: Enter the IP address or hostname of your FTP proxy server.
- **Port*:** Enter the port number of your FTP proxy server.
- Username/Password: Enter user/password to be used.

7.4.8. Enable Time Server

PONTON X/P need to use a correct time setting to ensure trouble-free exchange of Messages and business transactions. The standard solution for this issue is to synchronize the local system time with a time server. There are many high-precision time servers – so-called NTP servers – that can be accessed on the Internet. In general, communication between applications and NTP servers is carried out via UDP packets on port 123. Time synchronization can be carried out at operating system level, or at application level.

If the computer that hosts the Messenger application already has automatic time synchronization at system level, it is recommended to disable the Time Server feature.

Depending on your requirements, you can activate/deactivate the Messenger's Time Server synchronization by selecting/de-selecting the "<u>enabled</u>" checkbox. Mandatory fields are marked with an asterisk*.

- NTP Server: Enter the NTP server IP or name
- Synchronize Interval*: This defines how often the application will synchronize with the NTP server(s) when enabled. The default setting is to synchronize every 24 hours.

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You can add additional **NTP Server** by clicking on the ⁺ icon. It is possible to delete NTP Server by clicking on the delete icon.

7.4.9. Enter Server settings

Connectors

You can add additional Connectors by clicking on the + icon. It is possible to delete Connectors by clicking on the delete icon. Mandatory fields are marked with an asterisk*.

- **Protocol***: Select the protocol (HTTP/HTTPS) you want to use from the drop-down list
- Port*: Enter the Port you want to use
- Service*: This defines what Services will be available on the port:
 - o LISTENERS: allows to received inbound HTTP messages
 - o ADAPTER_SERVICE: communication interface for external adapters
 - GUI: old webgui (does not have an effect)
 - o REST: provides an REST API and also the new webGUI

You can add additional **Services** by clicking on the ⁺ icon. It is possible to delete Services by clicking on the delete ⁼ icon.

You can define multiple connectors for the communication with the Messenger. A connector specifies the protocol and the port for one or multiple services.

7.4.10. Enter Archive settings

Archive Folder

Mandatory fields are marked with an asterisk*.

Archive Folder*: Setting can be used to indicate the location of the archiving folders.
These can be expressed either as an absolute path to the required folder or a relative
path beginning with '\$PONTONXP_HOME' – this placeholder refers to the folder
[installation root]\data.

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- Archive Failed Folder*: You can define a separate folder, which will be used to store failed messages. If you prefer to store all your data in a single archive, you can use the same path setting as the Archive Folder.
- Zip Compression: Enable Zip Compression to reduce the space of the archive on disk.

Archiveable Message Parts

Select which information should be archived in the a dedicated directory. Each part is stored in a separate file. Each of the listed parts of a message can be archived. You can enable or disable the archiving service for each part by activating/deactivating the corresponding checkboxes.

- Backend Envelope
- Packaging Envelope
- Payload this is the actual business document
- Certificate
- Signature
- Attachment

Archive Database and Filesystem Settings

Files older than the maximum age will be deleted from the filesystem and / or the database as long as "Delete Database entries" and "Delete in Filesystem" is enables and "Maximum Age for Files" and "Database Maximum Age" has been defined. Mandatory fields are marked with an asterisk*.

- Cleanup Time*: Deletion of files from the file system and / or the database will start at the specified cleanup time. If no value for the cleanup time is set and deletion is activated the messenger will automatically start the cleanup at 03:00:00 Hours.
- **Delete Database entries**: Select this option if you want to delete database entries when the maximum age has been reached.
- **Database Maximum Age (days)***: The 'Maximum Age' setting specifies the maximum number of days the message releated information is retained.
- **Delete in Filesystem:** Select this option if you want to delete in filesystem when the maximum age has been reached.
- **File Maximum Age (days)*:** The Maximum Age setting specifies how long the files will be archived expressed in days.

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7.4.11. Set-up Maintenance periods

Click on "Add maintenance period" to enable maintenance which requires to set up at least one maintenance period. Maintenance is used for disable message exchange with all remote partners.

- From: Start of maintenance period
- To: End of maintenance period
- **Stop delivery to adapters**: incoming messages remain in the inbound queue and will not be sent to adapters.
- **Stop delivery to partners:** outgoing messages remain in the outbound queue and will not be sent to partners.
- **Rejection of incoming messages:** No messages from partners are accepted by the Messenger. The sender will receive an error response.
- Rejection of outgoing messages: No messages from the backend adapters are accepted by the Messenger. The adapter will receive an error response.

7.4.12. Enter Listener Connection settings

Selecting "<u>enabled</u>" will allow you to enter the Listerner connection settings. Mandatory fields are marked with an asterisk*.

- **IP Address Listener*:** Enter the IP address for the Listener connection (Messenger to Listener).
- **Port*:** Enter the port for the Listener connection (Messenger to Listener). The standard port number for this connection is 9000
- Data connection count*: The Data connection count refers to the number of parallel communication channels between Listener and Messenger. This number also limits how many simultaneous message transmissions are accepted by the Listener. As per default this is set to 3, but can be increased up to 25.
- SSL: SSL is enabled by default. In case you set InternalCommunication.UseSSL=false in your Listener.properties then you have to disable SSL on this page as well. The Listener will only accept connections from known Messenger instances which are listed in the ListenerConfiguration\config\authorization.txt file in the Listener installation.

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First Connection

The first connection from a Messenger instance to a freshly installed Listener will always be accepted by the Listener!

Messenger Instance ID

While testing the connectivity between a Listener and a Messenger please make use of the ListenerInstallation\logs\listener.log where the incoming connections from the Messenger including its instance ID are logged.

7.5. Server certificate

This page allows you to request, install, export and delete certificates for your server. You need those certificates to be able to receive messages via HTTPS when no Listener is used.

When you have received the SSL certificate, open the "Install Server Certificate" Dialog by clicking on the Install Certificate icon. Either choose a file by clicking on "Choose files" or drag-and-drop the file into the marked area. The name and size of the file will appear in the dialog box. You can remove the file by clicking on the symbol. If the file is valid and you have entered a password for the private key you can click on the "Install" button to add this Server certificate to your Messenger configuration. When the installation was successful the new Certificate will appear in the Server Certificates list.

7.5.1. Request Server certificate

Click on the request new certificate + icon which opens the request certificate dialog box. Fill in the certificate request form. The mandatory fields are marked with an asterisk*:

- Certificate Name*
- SAN Value* (subject alternative name)
- Organisation*
- E-mail address*
- Country* (select)
- Key pair* (select)
- Private key password*

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Repeat password*

Optional input fields are: Department; Locality; State or province; Phone number; Fax number. You can also select to build the request with PONTON attributes. You can add additional SAN values by clicking on the by clicking on the + icon. It is also possible to delete a SAN value by clicking on the delete



icon. Please note that at least one SAN value is required. When you have filled out all required fields the "*Request certificate button*" becomes active.

7.5.2. Request Server Certificate (pre-existing)

Click on the request certificate ♥icon, which appears on the right hand side of the Server Certificate table row when you hoover with your mouse over the Server Certificate for which you want to request a new certificate. On click the request certificate dialog box opens. Fill in the certificate request form. The mandatory fields are marked with an asterisk*:

- Certificate Name*
- SAN Value*
- Organisation*
- E-mail address*
- Country* (select)
- Key pair* (select)
- Private key password*
- Repeat password*

Optional input fields are: Department; Locality; State or province; Phone number; Fax number. You can also select to build the request with PONTON attributes. You can add additional SAN values by clicking on the by clicking on the + icon. It is also possible to delete a SAN value by clicking on the delete



icon. Please note that at least one SAN value is required. When you have filled out all required fields the "*Request certificate button*" becomes active.

new SSL certificate

You need to restart PONTON X/P to let it use the new SSL certificate.

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7.5.3. Export Server Certificate

Click on the export $\stackrel{\blacksquare}{-}$ icon, which appears on the right hand side of the Server Certificate table row when you hoover with your mouse over the Server Certificate you want to export. When you click on the export $\stackrel{\blacksquare}{-}$ icon the Export Certificate dialog will appear. Select either Base64 PEM or Binary DER as format. If you select to "Export the certificate with Private Key" you need to enter the private key password. Clicking on the "*Export*" button will download the Server Certificate to your local folder.

7.5.4. CA Certificates

Install Server CA Certificates

When you receive the CA's root certificate as a file (e.g. *.cer) click on Install CA Certificate icon. Either choose a file by clicking on "Choose files" or drag-and-drop the file into the marked area. The name and size of the file will appear in the dialog box. You can remove the file by clicking on the symbol. If the file is valid click on the "Install" button to add this CA certificate to your Messenger configuration. When the installation was successful the new Certificate will appear in the Server CA Certificates list.

Export Server CA Certificates

Click on the export $\stackrel{\blacksquare}{=}$ icon, which appears on the right hand side of the Server CA Certificate table row when you hoover with your mouse over the Server CA Certificate you want to export. When you click on the export $\stackrel{\blacksquare}{=}$ icon the Export Certificate dialog will appear. Select either Base64 PEM or Binary DER as format. Clicking on the "*Export*" button will download the Server CA Certificate to your local folder.

Delete Server CA Certificates

Click on the delete con, which appears on the right hand side of the Server CA Certificate table row when you hoover with your mouse over the Server CA Certificate you want to delete. When you click on the delete con a confirmation dialog opens, Clicking on the <u>Yes</u> button will delete the Server CA Certificate.

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8. Messenger >Activation

Go to: MESSENGER ← > Activation



8.1. Get license info

On the Messenger Activation page you can find important information about the PONTON X/P Messenger licence. The following details are listed:

•

- Licensed for license owner
- Serial Number license serial number
- o Cluster Mode true, if cluster mode is allowed
- EbXML2 Messaging true, if EbXML (in the version 2.0/2.1) messaging is allowed
- o AS1/AS3 Messaging true, if AS1/AS2/AS3 messaging is allowed
- o AS4 Messaging true, if AS4 (ENTSOG) messaging is allowed
- Plain Messaging true, if plain messaging is allowed
- Maximum Number of Local Partners limitation for own partners
- Maximum Number of Remote Partners limitation for communication partners

The following chapters describes how to install and activate licenses for PONTON X/P. Please note that direct activation via HTTP is not available for trial licenses (included with the software distribution). To activate a trial version you will have to send the activation request by e-mail. Please go to the <u>Initial Setup</u> chapter for more information.

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8.2. Send Activation Request

Depending on your license conditions it may be necessary to activate your license after it is installed. To complete your license activation click on the send icon. This will activate the license almost immediately. If the license was successfully activated the updated licence name e.g. Licensed for: PONTON GmbH is displayed in the under licence info on the activation page and the remaining lifetime of the license is displayed on the right side of the navigation bar. e.g. Days left: 1096.

The activation by HTTP will only work if the PONTON activation server (the default URL is https://xpactivation.ponton.de/webactivation/HttpListener) is reachable from the Messenger server. Otherwise please use the activation by e-mail.

8.3. Mail the Activation Request

To submit your activation request by e-mail, click on the mail request icon and click on the "Copy to clipboard" which copies the complete activation request text in the dialog box to your clipboard. Create a new e-mail with your preferred e-mail client and paste the content in the e-mail. Send the e-mail to activation@ponton.de.

Notes

When sending your activation request by e-mail, make sure activation request code is complete and includes the lines "----- BEGIN ACTIVATION REQUEST -----" and "----- END ACTIVATION REQUEST -----".

8.4. Install activation/license

8.4.1. Installing a license activation

If you have submitted a license activation request via e-mail you will receive a reply containing your activation code. Click on the install licence icon and paste the activation code into the text box "Paste activation or license here". Make sure that the activation code is complete and includes the lines "----- BEGIN ACTIVATION -----" and "----- END ACTIVATION -----". Click on the "Install" button to install the activation. Following the activation the updated licence name e.g. Licensed for: PONTON GmbH is displayed in the under licence info on the activation page and the remaining lifetime of the license is displayed on the right side of the navigation bar. e.g. Days left: 1096

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New activation

Depending on your license conditions, you may need to repeat the license activation process after making certain changes to your own partner configuration.

8.4.2. Installing a license

You will generally receive your Ponton X/P license as a text or e-mail from PONTON GmbH or from your licensing organization. To install your license click on the install licence icon and paste the license code into the text box "Paste activation or license here". Make sure that the license code is complete and includes the lines "----- BEGIN LICENSE -----" and "----- END LICENSE -----". Click on the "Install" button to install the licence.

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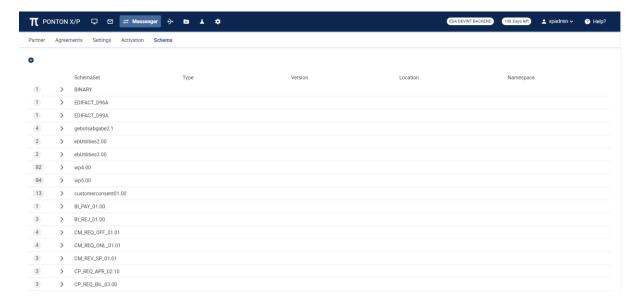


9. Messenger >Schema

Go to: MESSENGER → Schema

9.1. View available Schema Sets

The schema set table displays a list of all available Schema Sets. The number in the first column displays how many Message types are available in that specific Schema Set. You can expand the table rows by clicking on the fold/unfold icon before the Schema Set name. When you expand the Schema Set you will see entries for the Type, Version, Location and Namespace headings.



Activating Schema Sets

The Messenger distinguishes between available Schema Sets and activated Schema Sets. Just inserting entries in the schema configuration, as described in this section, does not activate the Schema Sets or the corresponding schema's for use by the Messenger. In order to make use of the schema's in a Schema Set, you have to activate the Schema Set in the Local Partner configurations > Schema Sets section (or Remote Partner configuration > Schema Sets) and the agreements configuration > Schema Set section

9.2. Import a new Schema Set

Click on the plus icon (top left) to import a new Schema Set which opens the "<u>Upload Schema Set</u>" dialog box. Either choose a file by clicking on "<u>Choose files</u>" or drag-and-drop a valid file into the marked area. Only ZIP files containing .dtd .xsd and .xml files are accepted by the GUI. The name and size of the file will appear in the dialog box. You can

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remove the file by clicking on the symbol. When the file is valid you can click on the "*Upload Schema Set*" button to start the upload process. When the upload was successful the new Schema Set will appear in the Schema Set list.

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10. Listener Configuration and Certificates

Go to: LISTENER >>

The Listener configuration enables you to specify the Listener configuration in a distributed installation.

10.1. Listener Configuration

To securely receive messages it is recommended to use the PONTON X/P Listener. The Listener can run on a computer in the DMZ, separate from the Messenger. The purpose of the Listener is to accept incoming connections and forward the data to the Messenger (across the firewall). The firewall rules must be set up to allow a connection from the Messenger to the Listener.

If you are going to receive messages via the Listener, your partners will have to enter the public URI of your Listener in their configurations (under **MESSENGER** $\stackrel{\longrightarrow}{\longleftrightarrow}$ \rightarrow Partners \rightarrow My Partners \rightarrow <select partner> \rightarrow Communication Tab \rightarrow URI of Partner's Messenger Service).

Listener installation

You also have the option of subsequently installing the Listener as a service under Windows – this service can then be configured to start automatically when the system starts up. The service installer lies directly underneath the main listener folder after unpacking.

10.1.1. Proxy Settings

Enable or disable the use of the Listener as a HTTP proxy server for outbound connections.

 IP Address / Port: Select the IP address and the port on which the HTTP proxy server will be started. Make sure that the firewall allows connections from the Messenger to the HTTP proxy server.

10.1.2. HTTP Settings

Enable or disable the use of the Listener for incoming HTTP and HTTPS connections. The Listener IP address and the port number is used to receive messages from communication partners. If no specific IP address is selected, the incoming connections will be accepted on all available IP addresses on the specified port number.

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- HTTP / HTTPS enables the Listener to handle the relevant protocols.
- **IP Address Listener /Port**: Enter the **IP address** and **port** for incoming connections of the relevant protocol (HTTP or HTTPS).
- Client certificate check specifies that the Listener will only accept HTTPS
 connections from clients that provide a known client certificate during HTTPS
 handshake. These client certificate can be installed under the Client Certificates
 tab.

You can not use this option if the HTTP is enabled too.

- Use partner certificates specifies that the communication partner certificates installed in your Messenger's partner configurations will be copied to the Listener configuration and used for authentication of incoming HTTPS connections. This also enables automatic synchronization of Partner Certificates between Messenger and Listener.
- Max. data size specifies the maximum size (in bytes) of incoming messages, including the transport envelope. The sender will receive a HTTP error when the message size is too large.

10.1.3. FTP Settings

Enable or disable the use of the Listener for FTP server connections. The data connection IP address and the port number is used to receive messages from communication partners.

- IP Address Listener /Port: Enter the IP address and port for the FTP server.
- IP Address Data Connection /Port: Enter the IP address and port-range for the
 Data connections. IP and Port are needed for FTP data transmissions. Please make
 sure that the correct public IP address is provided. The port-range limits how many
 simultaneous data transmissions can be executed, because each transmission
 requires a dedicated port.

When the FTP Listener has used up all data ports (one per data transfer), the next partner will have to wait for a data port to become available.

On the "Add Logins" button you can create, delete and edit FTP users and the mapping between FTP user and communication partner.

Login details

You must provide your communication partners with the FTP Login details (Login Name, Password, IP and PORT) so that they can deliver messages successfully to your FTP Listener.

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10.2. Listener certificate

The **Listener Certificate** tab provides an overview of the installed Listener Certificate (SSL Server Certificate) for HTTPS or FTPS connections. The CA certificate belongs to the Listener certificate.

10.2.1. Install Listener Certificate

Open the Install Listener Certificate Dialog by clicking on the Install Certificate icon . Either choose a file by clicking on "Choose files" or drag-and-drop the file into the marked area. The name and size of the file will appear in the dialog box. You can remove the file by clicking on the symbol. If the file is valid and you have entered a password for the private key you can click on the "Install" button to update the Listener Certificate. When the installation was successful the new Certificate will appear in the Listener Certificates list.

10.2.2. Request Listener Certificate

Click on the request certificate icon, which appears on the right hand side of the Listener Certificate table row when you hoover with your mouse over the Listener Certificate for which you want to request a new certificate. On click the request certificate dialog box opens. Fill in the certificate request form. The mandatory fields are marked with an asterisk (*):

- Certificate Name; SAN Value, Organisation; E-mail address
- Country (select); Key pair (select)
- Private key password
- Repeat password

Optional input fields are: Department; Locality; State or province; Phone number; Fax number. You can also select to build the request with PONTON attributes. You can add additional SAN values by clicking on the by clicking on the + icon. It is also possible to delete a SAN value by clicking on the delete icon. Please note that at least one SAN value is required. When you have filled out all required fields the "Request certificate button" becomes active.

10.2.3. Export Listener Certificate

Click on the export icon ♣, which appears on the right hand side of the Listener Certificate table row when you hoover with your mouse over the Listener Certificate. When you click on

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the export ticon the "<u>Export Certificate</u>" dialog will appear. Select either Base64 PEM or Binary DER as format. If you select to "Export the certificate with Private Key" you need to enter the private key password. Clicking on the "<u>Export</u>" button will download the Listener Certificate to your local folder.

10.2.4. Install Listener CA Certificate

Open the Install Listener CA Certificate Dialog by clicking on the Install CA Certificate icon. Either choose a file by clicking on "Choose files" or drag-and-drop the file into the marked area. The name and size of the file will appear in the dialog box. You can remove the file by clicking on the symbol. If the file is valid you can click on the "Install" button to add this Listener CA certificate to your Listener configuration. When the installation was successful the new CA Certificate will disappear in the Listener CA Certificates list.

Pre-installed CA certificate

The PONTON CA certificate is preinstalled, so you will not need to install a CA certificate if you use certificates issued by PONTON.

10.2.5. Export Listener CA Certificate

Click on the export $\stackrel{\blacksquare}{=}$ icon, which appears on the right hand side of the Listener CA Certificate table row when you hoover with your mouse over the Listener CA Certificate you want to export. When you click on the export $\stackrel{\blacksquare}{=}$ icon the "*Export Certificate*" dialog will appear. Select either Base64 PEM or Binary DER as format. Clicking on the "*Export*" button will download the Listener CA Certificate to your local folder.

10.2.6. Delete Listener CA Certificate

Click on the delete con, which appears on the right hand side of the Listener CA Certificate table row when you hoover with your mouse over the Listener CA Certificate you want to delete. When you click on the delete icon a confirmation dialog opens, Clicking on the "Yes" button will delete the Listener CA Certificate.

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10.3. Client Certificates

The client certificates tab provides an overview of all your client certificates, which are used for the authentication of HTTPS connections. The currently installed Client Certificates are shown in the Client certificates table.

10.3.1. Install Client Certificate

Open the Install Client Certificate Dialog by clicking on the Install Certificate icon. Either choose a file by clicking on "*Choose files*" or drag-and-drop the file into the marked area. The name and size of the file will appear in the dialog box. You can remove the file by clicking on the symbol. If the file is valid click on the "*Install*" button to add this Client certificate to your Listener configuration. When the installation was successful the new Certificate will disappear in the Client Certificates list.

10.3.2. Export Client Certificate

Click on the export $\stackrel{\blacksquare}{=}$ icon, which appears on the right hand side of the Client Certificate table row when you hoover with your mouse over the Client Certificate you want to export. When you click on the export $\stackrel{\blacksquare}{=}$ icon the "*Export Certificate*" dialog will appear. Select either Base64 PEM or Binary DER as format. Clicking on the "*Export*" button will download the Client Certificate to your local folder.

10.3.3. Delete Client Certificate

Click on the delete con, which appears on the right hand side of the Client Certificate table row when you hoover with your mouse over the Client Certificate you want to delete. When you click on the delete con a confirmation dialog opens, Clicking on the "Yes" button will delete the Client Certificate.

10.3.4. Install Client CA Certificate

When you receive the CA's root certificate as a file (e.g. *.cer) click on Install CA Certificate icon. Either choose a file by clicking on "Choose files" or drag-and-drop the file into the marked area. The name and size of the file will appear in the dialog box. You can remove the file by clicking on the symbol. If the file is valid click on the "Install" button to add this CA certificate to your Listener configuration. When the installation was successful the new CA Certificate will disappear in the Client CA Certificates list.

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10.3.5. Export Client CA Certificate

Click on the export

icon, which appears on the right hand side of the Client CA Certificate table row when you hoover with your mouse over the Client CA Certificate you want to export. When you click on the export

icon, the "Export Certificate" dialog will appear. Select either Base64 PEM or Binary DER as format. Clicking on the "Export" button will download the Client CA Certificate to your local folder.

10.3.6. Delete Client CA Certificate

Click on the delete icon , which appears on the right hand side of the Client CA Certificate table row when you hoover with your mouse over the Client CA Certificate you want to delete. When you click on the delete icon a confirmation dialog opens, Clicking on the <u>Yes</u> button will delete the Client CA Certificate.

CA Certificates

PONTON X/P uses trusted certificates to ensure the identity and authorization of communication partners. PONTON offers its own lightweight certification authority. This is the default CA Certificate in a standard PONTON X/P installation. If you want to use certificates issued by a 3rd party CA you will need to install the root certificate of the CA and all needed intermediate certificates. You will not be able to install partner certificates issued by a given CA until all needed CA certificates have been installed.

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11. Hotfolder

Go to: HOTFOLDER

11.1. View available Hotfolder

The **Hotfolder** table displays a list of all created Hotfolders. The following functions are available to easily find the table entry you are looking for:

- All table headings have a **Sort** function (icon). Sort can be ascending and descending.
- Some table headings have a Filter functions. Enter values in the filter text box and the table displays only values which contain the entered filter value. Filters can be combined.
- Underneath the table in the bottom right corner you find a **Pagination** function. The
 default pagination is 10 entries per page and can be changed to 25 or 50. Up to five
 pages are displayed in the page toggle bar, you can move forward or backward by
 clicking on the page number, the forward / backward icons or the first page / last
 page icon. The active page is highlighted in blue.



11.2. Create a new Hotfolder

Click on the "<u>Create a new hotfolder</u>" icon which opens the "Create New Hotfolder" dialog box. Enter a "**New Adapter ID**" in the text box and click on the "<u>Next Step</u>" button which opens the **Configuration** page for the new Hotfolder. The Adapter ID you have created is displayed below the sub-navigation bar.

11.2.1. Enter General Settings

Mandatory fields are marked with an asterisk (*).

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- Work Folder*: Enter the folder for the Work Folder in the text box either as absolute pathname to the required folder or as relative pathname beginning with '\$PONTONXP HOME' this placeholder refers to the Messenger's 'data' folder.
- Use XML acknowledgement: If you activate this option, the Hotfolder will store
 acknowledgements generated by Messenger for every outgoing message in the
 specified folder.
- XML Acknowledgement Inbox*: Enter the folder for your Acknowledgement Inbox in the text box using an absolute or a relative pathname.

Inbox path configuration	(Example) Filename created in the Inbox	Hint
\$PONTONXP_HOME\TEST- HF\inbox\File_%test_flag%\%sender%	\inbox\File_Test\EIC- CODE	 This folder will only be created once an incoming message has been received by the hotfolder
		 %sender% describes th sender of the incoming message
		 %receiver% describes the receiver of the incoming message

11.2.2. Enter Inbox Settings

Mandatory fields are marked with an asterisk (*).

- Inbox Folder*: Enter the folder for your incoming Messages in the text box either as absolute pathname to the required folders or as relative pathname beginning with '\$PONTONXP_HOME' this placeholder refers to the Messenger's 'data' folder.
- Filename Pattern*: Enables you to define individual filenames for the incoming files processed by the Hotfolder Adapter and individual folder structures while saving incoming messages and acknowledgements. The file name of incoming messages is defined by a naming scheme. The naming scheme is determined once per Hotfolder instance. The naming scheme consists of static and dynamic components. The dynamic components are represented as variables (please see the table bellow).

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- Max. number of parallel inbound messages*: Enter a value specifying the
 maximum number of messages, that this Hotfolder Adapter should be able to receive
 in parallel.
- Save BackEnd Envelope: If you activate this checkbox, the Hotfolder Adapter will
 wrap XML payloads with a BackEnd Envelope containing meta data of the
 transmission.
- **Support attachments:** If this option is activated, the Hotfolder Adapter will save any files attached to an incoming message into the selected inbox.

If your Messenger was using the default Hotfolder settings previously, the following default values will now be shown as preconfigured in the Hotfolder configuration: **Filename**Pattern: payload-id-%database_id%.%default_extension% and **File processing**: autodetect

Following parameter values are supported as Filename patterns in the Hotfolder:

Variable	Туре	Description of this value
%database_id%	Integer	Database ID of an incoming message.
%message_id%	Text	Message ID as defined by the sender.
%conversation_id%	Text	Conversation ID as defined by the sender.
%sender%	Text	Backend Partner ID of the sender in the local Messenger.
%receiver%	Text	Backend Partner ID of the receiver in the local Messenger.
%message_type%	Text	Message Type as recognised by the Messenger. This depends on the activated SchemaSets (and Message Types) as well as the agreement configuration in the Messenger.
%schema_set%	Text	SchemaSet as recognized by the Messenger. This depends on the activated SchemaSets (and Message Types) as well as the agreement configuration in the Messenger.
%timestamp%	Integer	Latest timestamp corresponding to the processing timestamp in the Hotfolder.
%test_flag%	Text	"Test" or "Production" depends on whether the Testflag is activated in the message or not.
%original_filename%	Text	The Filename without extension as sent by the sender of this message.
%default_extension%	Text	File extension determined by the Messenger for the received message content (payload).

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Variable	Туре	Description of this value
%original_extension%	Text	File extension as sent by the sender of this message.

A list of widely used filename patterns can be seen in the table below:

Example: Filename pattern configured in the messenger	Example: Result of the filename on the filesystem	Comment
BEGIN_%database_id%_%sender%_END	BEGIN_7654321_EIC- CODE_END	The incoming message will be saved on the filesystem without any extension, as there is none defined
%message_id%.%default_extension%	MID-1234.xml	%default_extension% as recognised by the messenger for the incoming message type and schemaset
%conversation_id%.%default_extension%	Con-1234.edi	As more than one incoming messages can have identical conversation IDs saving such duplicates on the filesystem could cause problems
%timestamp%.%default_extension%	1398778711000.xml	The timestamp corresponds to the time of saving the file on the filesystem as variant time.

11.2.3. Enter Outbox Settings

Mandatory fields are marked with an asterisk (*).

- Outbox Folder*: Enter the folder for your outgoing Messages in the text box either as absolute pathname to the required folders or as relative pathname beginning with '\$PONTONXP_HOME' this placeholder refers to the Messenger's 'data' folder.
- **Failed Folder***: Enter the folder for failed Messages in the text box either as absolute pathname to the required folders or as relative pathname beginning with '\$PONTONXP_HOME' this placeholder refers to the Messenger's '**data**' folder.
- Use partner subfolders: If activated, the Hotfolder Adapter will create a separate subfolder in the outbox for each communication partner if an agreement with this partner exists. The name of the folder is the Backend Partner ID of the communication partner.

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- **Sender:** If you enable Partner subfolders you must select a fixed sender for all messages from the drop-down list.
- **Scan interval*** (seconds): Enter a value in seconds specifying how often the Hotfolder Adapter should check for new files.
- **Min. file age** (seconds): Define a minimum age in seconds for your files to process. If you like to process files with a minimum age, the Hotfolder can filter your files by file age. The Hotfolder will wait until a given file age is reached and then process the file.
- Max. number of parallel outbound messages*: Enter a value specifying the
 maximum number of messages, that this Hotfolder Adapter should be able to send in
 parallel.
- **File extension***: Defines which files should be accepted by the Hotfolder for processing. You can add additional File Extensions if required by clicking on the + icon. It is also possible to delete a File Extension by clicking on the delete icon. Please note that at least one File Extension is required.
- **File processing*:** Specifying processing options for outgoing files and allows the Hotfolder Adapter to recognize the type of files regardless of the file extension e.g. XML, BINARY. Processing options help you to define the content of the files which are dropped into the Hotfolder outbox irrespective of their file extensions.

The following table provides an overview of file processing options:

File Extension	Processing option	processing description
 txt edi xml x12 	autodetect	Using this configuration of the Hotfolder following result can be expected: Only 'txt', 'xml', 'x12' and 'edi' Files are picked up from the outbox Files with other extensions will not be picked up from the outbox The files will only be processed by the messenger if the following conditions apply as an XML message if the content of the 'xml' file can be recognised as a valid XML and if the Message Type of the message is activated in he Agreement as a BINARY message if the file has the extension 'txt'

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File Extension	Processing option	processing description
		 and if BINARY as Message Type is activated in the Agreement
		Hint: All formats other than 'xml', 'x12' and 'edi' will be processed as BINARY as long as autodetect is activated
 txt edi xml x12 png pdf 	Binary	 Using this configuration of the Hotfolder following result can be expected: Only 'txt', 'xml', 'x12', 'png', 'pdf' and 'edi' Files are picked up from the outbox Files with other extensions will not be picked up from the outbox The files will only be processed by the messenger if the following condition applies: BINARY as Message Type is activated in the

Outbox Subfolders

In case some older partner subfolders (without an agreement) already exist in your Hotfolder Outbox, please delete those obsolete subfolders manually, so that only the files from valid partner subfolders are collected by the Hotfolder.

AckInbox Folder

The Acknowledgement Inbox folder as well as Inbox subfolders are only created once incoming Acks or messages are received for the respective partner.

11.3. Delete a Hotfolder

Select one or several Hotfolders by clicking on the checkbox on the left hand side in the table row. The number of selected Hotfolders is displayed next to the delete icon. Click on the delete icon and confirm that you want to delete the Hotfolder.

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11.4. Edit a Hotfolder

Select a Hotfolder by clicking on the edit icon which will appear on the right hand side of the table row when you hoover with your mouse over the Hotfolder you want to edit. When you click on the edit icon the Hotfolder Configuration page opens, You can go back to the Hotfolder page by clicking on the "Back to Hotfolder" button or leave the Hotfolder area by clicking on the navigation or sub-navigation bar.

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12. Test Adapter

Go to: **TEST ADAPTER**



12.1. Send a Ping message

PONTON X/P Messenger is delivered with a built in Test Adapter. It can be used to send EbXml or AS4 Ping messages to test the connectivity between your own Messenger and your communication partner. Select a sender and a receiver from the drop-down menus. Click on the icon in order to execute a ping from sender to receiver. This will send a Ping message to the chosen receiver. If your Ping message could reach the receiver and he recognizes you as a partner the response should be a **Pong message**. A Pong message does not ensure that your firewall allows incoming messages from your business partner.

12.2. Send a Test Message

To send a test message file to your partner using the test adapter, select a sender and a receiver from the drop-down menus. Enable the Test Message checkbox in case you want to flag the message explicitly as test message. Either choose a file by clicking on "Choose files" or drag-and-drop the file into the marked area. The name and size of the file will appear in the dialog box. You can remove the file by clicking on the symbol. When the file is valid you can click on the send icon.

The file is processed by your Messenger and will be send to the specified receiver. Only if the processing and packaging settings at the receivers end conform to the settings in your agreement and your network allows transmissions to your communication partner then the message delivery will be successful.

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13. Http Adapter

13.1. Configuration

To configure a *HttpAdapter* you must create a new Server Connector under Messenger Settings with only one Service: *HTTP_ADAPTER*

For security reasons a valid Messenger user with the *HTTP-Adapter* role is required to communicate with the HttpAdapter.

NOTE: After a Messenger user is created, log in with the user to change the initial password.

13.1.1. using multiple Http Adapters

It is possible to create multiple HttpAdapters by creating several Server Connectors with unique port numbers.

A configuration file for each instance has to be created in the configuration folder. These files have to be named "httpadapter_PPPP.properties" where PPPPP is the port number set in the Server Connector.

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Code Block 1 httpadapter_PPPP.properties

```
# required unique value
# it is the Adapter-ID value of this Http-Adapter.
httpadapter.id=HttpAdapter2
# required value
# The folder is used while processing messages.
httpadapter.work folder=$PONTONXP HOME/httpadapter PPPPP/work
# required value
# This folder will contain the inbound messages that were not fetched by the
backend yet.
httpadapter.inbound folder=$PONTONXP HOME/httpadapter PPPPP/inbound
# required value
# This folder will store messages that were transmitted from the backend.
httpadapter.outbound folder=$PONTONXP HOME/httpadapter PPPPP/outbound
# optional value
# If this value is set then only the defined user is authorized to use this Http-
httpadapter.accepted user=httpadapter
```

13.2. Outbound Direction

To send a message through the HttpAdapter send a *POST* request to http(s)://<PONTONXP_HOST>:<HTTP_ADAPTER_PORT>/httpadapter/outbound

- replace <PONTONXP_HOST> with the correct PONTON XP hostname.
- replace <http_ADAPTER_PORT> with the configured port for the HttpAdapter.

13.2.1. Request

The following HTTP Headers can be optionally set:

- X-MessageId use this header to set the Message ID
- X-ConversationId use this header to set the Conversation ID
- X-SchemaSet use this header to explicitly set the schemaset of the message
- X-MessageType use this header to explicitly set the message type of the message
- X-MessageVersion use this header to explicitly set the message version of the message

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- X-BackendSenderId use this header to explicitly set the Sender Backend ID of the message
- X-BackendReceiverId use this header to explicitly set the Receiver Backend ID of the message
- X-Filename use this header to explicitly set filename of the message

Values for the Headers must use ASCII character set.

The Request Body must contain the data of the message.

13.2.2. Response

One of the following response codes can be received with the response:

- 204 (OK) the message was successfully processed by the messenger
- 400 (Failed) an error occurred while processing the message
- 401 (Unauthorized) the used user is not accepted by the HttpAdapter

Depending on the response code the following *Request Headers* can be received with the response:

- X-MessageId the Message ID of the message
- X-ConversationId the Conversation ID of the message
- X-SchemaSet the schemaset of the message
- X-MessageType the message type of the message
- X-MessageVersion the message version of the message
- X-BackendSenderId the Sender Backend ID of the message
- X-BackendReceiverId the Receiver Backend ID of the message

13.3. Inbound Direction

To receive a next message via the HttpAdapter send a *GET* request to http(s)://<PONTONXP_HOST>:<HTTP_ADAPTER_PORT>/httpadapter/inbound.

- replace <PONTONXP_HOST> with the correct PONTON XP hostname.
- replace <HTTP ADAPTER PORT> with the configured port for the HttpAdapter.

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13.3.1. Request

The following *HTTP Headers* can be optionally set:

- X-DeleteAfterConfirmation If the value of the header is true, the HttpAdapter delivers the same next message until the reception of the message is explicitly acknowledged by the client (see Request Header X-LastId). Otherwise, the HttpAdapter delivers the next message without waiting for an acknowledgement. When this header does not exist, then no acknowledgement is expected.
- X-LastId use this header to acknowledge the last successfully received message (see Response Header *X-Id*).

Values for the Headers must use ASCII character set.

13.3.2. Response

One of the following response codes can be received with the response:

- 200 (Ok) the next message was successfully transmitted by the HttpAdapter
- 401 (Unauthorized) the used user is not accepted by the HttpAdapter
- 404 (Not found) there are no messages in the HttpAdapter

The following *Http Headers* are received with the response if the response code is 200:

- X-Id unique message id generated by the Ponton XP
- X-MessageId the Message ID of the message
- X-ConversationId the Conversation ID of the message
- X-SchemaSet the schemaset of the message
- X-MessageType the message type of the message
- X-MessageVersion the message version of the message
- X-BackendSenderId the Sender Backend ID of the message
- X-BackendReceiverId the Receiver Backend ID of the message
- X-Filename the filename of the message.

The Response Body contains the data of the message.

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14. User Admin

Go to: USER ADMIN 🌣



14.1. Enter and change security settings

14.1.1. Change user password validity

The expiry period for new user passwords is set by default to 365 days. To change this value please enter the new value (days) in the "User password validity" field and click on the save con. The value must be between 0 and 365 days and you can't leave the field empty.

With a value of 0 there will be no password expiry.

14.1.2. Change number of failed login attempts

A user account is temporarily locked when the number of failed login attempts exceeds a defined number. The default value for the maximum number of failed login attempts is 3. Enter the new number of failed attempts in the "Max. number failed login attempts" field and click on the save icon. You can't leave the field empty.

14.1.3. Change account lock duration

The duration of the temporary lock to prevent brute force attacks can also be adjusted. By default accounts are locked for 1 minute. Enter the new lock duration in minutes in the "Account lock duration" field and click on the save icon. You can't leave the field empty.

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Unlock account

It is possible to unlock an account by using an administrator account to reset the password of a locked account.

14.2. User settings

14.2.1. Create a new user

When you click on the "<u>Create new user</u>" + icon, a new row of input fields is added to the user settings table. Enter a **User ID** in the "<u>USER ID</u>" field and select a User role with the drop-down menu.

The following types of user roles are available to choose from:

- **Administrators** these users have full access to the Messenger's configuration interface.
- **Configuration Administrators** these users have the same rights as Administrators but can not create new user or change user settings.
- **Operators** these users are not allowed to make changes to the configuration, however they can view the current configuration.
- HTTP-Adapter API users with full access to the Messenger's configuration

Please enter a valid password as well as repeat password for the new user. The new and repeat password must match and must meet the password criteria. You can view the password you have entered by clicking on the symbol



or hide it by clicking on the symbol



. The password criteria are as follows:

- minimal length of 12 characters
- at least one UPPER case letter
- at least one lower case letter
- at least one number

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• at least one special character (!\"#\$%&'()*+,-./:;<=>?@[]^_`{|}`)

When you have entered all required details please click on the save a icon.

14.2.2. Delete a user

Click on the delete icon on the right hand side next to the user you wish to delete. A confirmation dialog opens. Clicking on the "<u>Yes</u>" button will delete the selected user and the row will disappear from the table. Clicking on the "<u>No</u>" button will close the dialog and not delete the user.

14.2.3. Change user role

Click on the drop-down menu of the user you want to change and select the new role. Click on the save **a** icon.

14.2.4. Edit user password

Click on the edit icon of the user which password you want to change. Enter a new valid password and matching repeat password. The password criteria are mentioned above (Create a new user). You can view the password you have entered by clicking on the symbol



or hide it by clicking on the symbol



. Click on the save \Box icon. In case you decide to leave the password unchanged click on the \mathbf{x} icon and discard the changes.

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15. Initial Setup

15.1. How to get started

15.1.1. Logging in

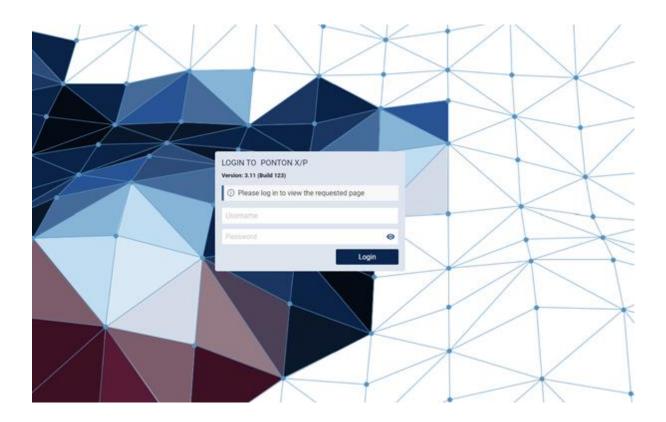
Open your web browser and enter the following URL:

https://<hostname>:8443/

or

https://localhost:8443/ if the Messenger is running on the local machine!

This will bring up the login screen, allowing you to log in to the Ponton X/P Administration Tool:



The initial user name and password depends on the type of installation.

For an on premise installation the default values are:

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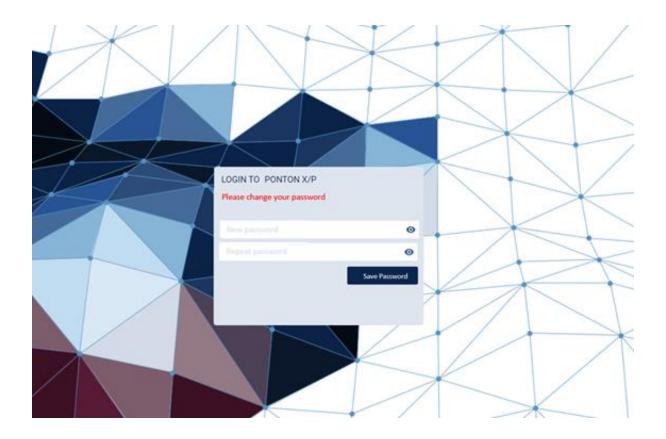
User: xpadmin **Password**: xppass

For an AWS installation the default values are:

User: xpadmin

Password: (EC2 instance_id)

The initial user login values must be changed on first login to prevent unauthorized access to the Administration Tool. After entering the username and password and clicking on the "*Login*" button you will be asked to enter a new password and repeat it. Once you entered valid and matching passwords click on the "*Save Password*" button.



15.1.2. Using the Navigation Bar

Click on the icons on the navigation bar to navigate the main pages.

Main Navigation (left)



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Area	Symbol	Description	Subnavigation	Description
Monitor	Ţ		 Dashboard 	
			Adapter Status	
Messages		View message details and delete Messages		
Messenger	⇄		• Partner	Create and edit local / remote Partner; Add and manage Partner Certificates
			 Agreements 	Add, configure, delete Agreements
			 Settings 	Configure general Messenger settings; Add and manage Server Certificates
			• Activation	Get licence info; Send activation requests; Install activation and licence
			• Schema	Install or update SchemaSets
Listener	•>→	Add, configure, delete Listener; Add and manage Listener certificates and Client Certificates		
Hotfolder		Add, configure, delete Hotfolder		
Test Adapter	I	Send test messages; Ping receiver		
User Admin	*	Change security settings and settings of others user		

Main Navigation (right)



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Set Messenger instance name

On the navigation bar you see the **Messenger Instance Name**, which can be configured to display a name that easily identifies the system. Further you see how many days are left until the licence expires as well as the user name of the user who is logged-in.

Area	Symbol	Description	Sub-Na	avigation	Description
User Menu	:		•	User Settings	Change your language settings and your password
			•	Product Page (external link)	Go to PONTON X/P product website
			•	Licence Agreement	View Licence Agreement
			•	Logout	Log out of PONTON X/P
Help?	0	User manuals and link to support portal			

15.1.3. **Need help?**

- Messenger Documentation
- Release Notes
- System Requirements
- Backend Integration Guide
- Adapter Programming Guide

In addition you find a link to the PONTON X/P support portal under "Support Panel":

15.1.4. Activate the software (trial version)

Before proceeding to the communication tests, it is required to activate your Messenger. You can run PONTON X/P Messenger as a trial version for up to 60 days. To activate the trial version, go to **MESSENGER > Activation** and click on the "<u>Mail Activation Request</u>"

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icon. This will open the Dialog "*Request activation with e-mail*" containing your activation request.



For the trial version, please click on the "<u>Copy to Clipboard</u>" button at the bottom of the dialog. This will copy the activation request to your clipboard. Please send the activation request to <u>activation@ponton.de</u> with your e-mail client (e.g. Outlook)

You will receive a reply e-mail containing the activation code for your system. Please copy the complete activation code and click on the "<u>Install Activation/License</u>" cicon, paste the activation code into the text box of the install dialog and click on the "<u>Install</u>" button. The software is now activated.

When sending your activation request by e-mail, it is important to copy the complete activation request code, including the lines "----- Begin Activation Request ----- End Activation Request ----- In the same applies when copying the activation code from the reply e-mail into the Install dialog box. Please also ensure to include the "Begin" and "End" lines.

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The "Send Activation Request by HTTP" option can only be used after a license has been installed.

15.1.5. Basic configuration

The basic functionality of PONTON X/P is to enable the secure exchange of Messages between business partners. This requires setting up at least two Partner configurations:

- a Local Partner (representing your own organization)
- a Remote Partner (representing your business partner's organization)

A Partner profile can be seen as representing the communication capability of the respective Partner. A Partner may, for example, support HTTP(S), SMTP and FTP(S) as transport protocols. An Agreement then restricts the capabilities of two Partners to a choice of options that are supported by both sides. In the case of the transport protocol, the partners might define HTTP as the protocol they want to use. If you use the Adapter notification mechanism, any changes in your Partner configuration will be reported to your Adapters. In practice you will exchange messages with a lot of business partners, so you need to define Remote Partner configurations for each business partner.

We recommend to initially set up a test installation preferably in a test environment. It might be easier to install two Messengers on separate PCs within your local environment as you avoid firewall restrictions. However, if you want to immediately test with a Remote Partner, please ensure with your technical administration staff that your firewall is configured to allow the necessary connections.

Create a local partner

As mentioned above, the Partner configuration distinguishes between **Local** and **Remote Partners** – this distinction indicates whether the Partner refers to a Local Partner within your own PONTON X/P system or to a Remote Partner on an external system. In certain cases, the configuration steps may differ slightly. For example, you can submit a certificate request for a Local Partner, but not for a Remote Partner. In the case of Remote Partners you would receive the certificate from the Partner directly or by downloading the Partner's profile from the Partner Registry.

See chapter 'Partner'

Please ensure that identical Party IDs are used in the sender's as well as receiver's messenger configuration – otherwise there will be errors when you attempt to exchange messages with your partners. Other Party ID types can also be used, for example EIC, Duns Number, GLN

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(Global Location Number) or URI. For a single partner you can create multiple Party IDs by using different Party ID types which need to be configured separately.

Create remote partners

To test your Messenger configuration, a Remote Partner is required.

When exchanging partner configurations with your business partners please keep in mind that identical party IDs have to be used in the local partner and remote partner configurations. The partner display names and internal IDs, on the other hand, may be different.

	ABC's local partner config.	ABC's remote partner config.	XYZ's local partner config.	XYZ's remote partner config.
Partner display name	ABC Local	XYZ Global	XYZ Local	ABC Corp
Internal partner ID	ABC015 (ERP ID)	XYZ381 (ERP ID)	401690 (DB ID)	494230 (DB ID)
Party ID	ABC12201	XYZ2950A	XYZ2950A	ABC12201

See chapter 'Partner'

Request certificates for remote partners

If you decide to run your initial tests without installing certificates for your partner configurations, please note that the following settings have to be modified to compensate for the absence of certificates.

- Deactivate the Signing and Encryption options in Messenger → Agreements →
 Configuration > Processing
- Deactivate the Use XML Signature option for EbXml in Messenger →
 Agreements → Configuration > Packager

Save the changes by clicking on the save licon.

A partner certificate will only be accepted after the certificate of the issuing CA (certificate authority) has been installed. Otherwise the trust relationship between the partner and the CA cannot be traced. The certificate for the PONTON CA is automatically included in the default installation. For other certificate authorities you will need to obtain and install the relevant CA certificate. All certificates that you install for one partner will become default certificate in the order of their valid-from date. Alternatively, you can manually select the default certificate and the certificate that should be default when this certificate expires.

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See chapter 'Certificates'

Delete a Partner

See chapter 'Delete Partners'

Using the Partner Registry

If your communication partners and you have a common Partner Registry then exchanging partner profiles is very simple.

Import all profiles

To import all available profiles navigate to Messenger \rightarrow Partners \rightarrow Partners Registry and select one or several Partner with the checkbox on the left hand side in the table row.

The number of selected Partners is displayed next to the import

icon, then click 'Import all'. This automatically imports all available Partner profiles from the registry into your local Messenger. Although, profiles which may collide within already existing Partner profiles within your Messenger will not be imported to avoid overwriting current Partner profiles.

Update individual profiles

Partner profiles, which have been modified since the last import are not displaying a green check symbol in the My Partners table. To syncronize the Partner profiles a go to:

MESSENGER → Partner > My Partner and select one or several partner with the checkbox on the left hand side in the table row. The number of selected partners is displayed next to the syncronize icon. Click on the synchronize icon to start the syncronization process. Alternatively, you could activate the option "Automatic updates" to enable your Messenger to update all downloaded Partner profiles periodically as described in the section Create Remote Partner.

Synchronize Partner Profile with the Partner Registry

To synchronize the current Partner configuration with the Partner Registry, go to the Registry tab. If the current partner configuration has not changed since it was last synchronized with the registry, a corresponding message will be displayed.

Please note that the Messenger has to establish a connection with the Partner Registry in order to compare the current Partner configuration with the Partner profile stored in the Partner Registry. For this reason you may experience a short delay when you open the Registry tab.

See chapter 'Partner Registry'

Set up a partner agreement

When the local as well as remote partner configuration is finished the next step is to define an agreement between these two partners, allowing them to successfully communicate with each other. Select **MESSENGER** on the navigation and than **Agreements** in the sub-

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navigation bar. Click on the "Add agreement" icon, which opens the "New Agreement" dialog box. Enter your local Partner ID as Partner 1 and the remote Partner ID as Partner 2 from the list of available partners. Select an agreement template from the drop-down menu. Then click on the "Next Step" button which brings you to the Agreement Configuration page. The Names of the two Partners and the selected template is displayed below the sub-navigation bar. Create the agreement with the default settings.

For further information see chapter 'Create a new Agreement'

Messenger Settings

You can specify how the Messages sent by a Partner will be packaged for transmission and backend processing. It is also possible to define certificates for different packagers such as AS1, AS2, EbXml etc. In that case the agreements created for this partner thereafter will automatically use the packager certificates as defined in the Partner configuration. You can choose between different packaging standards, that offer diverse options to specify whether the relevant packaging elements will be used by this Partner. EbXML and AS1/AS2/AS3 are most widely used. For details on the specific settings please refer to the descriptions of packaging elements in the 'Partner Agreements' section.

If 'default' certificate is chosen in the packager, the certificate used by the packager will automatically be updated as soon as another certificate is defined as the 'default' partner certificate.

15.1.6. Start communication

Check your proxy settings

In case your Messenger is not meant to communicate with external networks directly and/or there is no proxy available in your network for outgoing messages, you could download and install the PONTON X/P Listener as described in <u>Listener Configuration</u> in PONTON X/P Messenger end user documentation.

Send a Ping message

PONTON X/P Messenger is delivered with a built in Test Adapter. It can be used to send EbXml Ping messages to test the connectivity between your own messenger and your business partner. Click on **Test Adapter** on the navigation bar to access the test adapter. Please read the section <u>Test Adapter</u> in PONTON X/P Messenger end user documentation for further information.

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15.1.7. View Messages in the Message Monitor

Please read the section 'Message Monitor'

15.2. Security recommendations

15.2.1. Updating of Java Runtime

In the PONTON X/P distribution the latest compatible Java Version is delivered. It is recommended periodically (every six months) to update PONTON X/P. The X/P Messenger patches update the PONTON program code and also the Java Runtime Version.

15.2.2. Encrypt database communication

The communication between PONTON X/P and the database can only be encrypted if both support the encryption and if it is turned on. The required configuration depends on the used database driver in the Messenger. The configuration can be changed with the PONTON X/P GUI as follows:

Go to the database settings in MESSENGER > Settings and configure the database URL accordingly:

- Database URL for Oracle (Oracle Database JDBC Driver)
 - jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)(HOST=s ervername

)(PORT=2484))(CONNECT_DATA=(SERVICE_NAME=servicename)))

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- You find further details here:
 https://docs.oracle.com/en/database/oracle/oracle-database/19/jjdbc/client-side-security.html
- Database URL for MS SQL Server (Microsoft JDBC Driver)
 - o jdbc:sqlserver://serverhost:1433;databaseName=AdventureWorks;encrypt=true;trustServerCertificate=true
 - You find further details here: https://docs.microsoft.com/en-us/sql/connect/jdbc/connecting-with-ssl-encryption
- Database URL for MySQL (MySQL Connector/J)
 - o jdbc:<u>mysql://serverhost:3306/database?useSSL=true</u>
 - You find further details here: https://dev.mysql.com/doc/connector-j/en/connector-j-reference-using-ssl.html

15.2.3. Strict SSL check when sending messages

In the messenger default configuration the issuer certificate is not checked when transmitting messages. You can activate that in the PONTON X/P GUI as follows:

- Go to Messenger > Settings > General Settings and select the accordion tab > Communication
- 2. Enable "SSL Server Certificate check" with the checkbox
- 3. Click on "Save settings" in the top bar
- 4. Stop and Start the Messenger

15.2.4. Wrong certificate for Listener

Listener certificates can be changed under LISTENER> LISTENER CERTIFICATES in the PONTON X/P GUI. Please follow the following steps, a manual restart of the Listeners is not required.

- 1. Got to Server Certificates tab
- 2. Check if the following subject of the certificate is there: "CN=localhost"
- 3. If yes, a new corresponding certificate must be requested
- 4. Click on request certificate
- 5. Please enter the entire domain-name or public IP of the Listener in the filed "SAN Value" and in the field "Certificate name"

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- 6. Once you have filled out the other fields click on request certificate
- Copy the certificate request and raise a CSR support ticket in PONTONs Service Desk
- 8. Before you install the SSL Server Certificate check "Update CA certificate" below
- 9. Install SSL Server Certificate

15.2.5. Switch of weak TLS-encryption in the Listener

Weak TLS encryption in the Listener can be switched of as follows:

- 1. In the installation directory of the Listener you find in the /config folder the file "Listener.properties"
- 2. Open the file in a text editor
- 3. Replace the code line "SSLDisabledCiphers" with the following code line:
- 4. "SSLDisabledCiphers = *EXPORT*, *anon*, *DES*, * DH*, *NULL*, *SHA"
- 5. Save the file
- 6. Stop and start the Listener

15.2.6. Update CA certificate

In older versions of the PONTON XP Messengers und Listeners you might find an outdated PONTON Root CA certificate. This certificate must be replaced with the actual PONTON Root CA certificate:

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Code Block 2 PONTON Root CA Certificate

----BEGIN CERTIFICATE----

MIIEMjCCAxqqAwIBAqIJAK46AzQ+zY+NMA0GCSqGSIb3DQEBCwUAMIGdMQswCQYD VQQGEwJERTEQMA4GA1UEBxMHSGFtYnVyZzEfMB0GA1UEChMWUG9udG9uIENvbnN1 bHRpbmcgR21iSDEYMBYGA1UECxMPTmV0d29yayBTZXJ2aWN1MRcwFQYDVQQDEw5Q b250b24gUm9vdCBDQTEoMCYGCSqGSIb3DQEJARYZaW5mb0Bwb250b24tY29uc3Vs $\tt dGluZy5kZTAeFw0xMzA5MTcxMjMzMzhaFw00MzA5MTAxMjMzMzhaMIGdMQswCQYD$ VQQGEwJERTEQMA4GA1UEBxMHSGFtYnVyZzEfMB0GA1UEChMWUG9udG9uIENvbnN1 $\verb|bhrpbmcgR21iSDEYMBYGA1UECxMPTmV0d29yayBTZXJ2aWN1MRcwFQYDVQQDEw5Q| \\$ $\verb|b250b24gUm9vdCBDQTEoMCYGCSqGSIb3DQEJARYZaW5mb0Bwb250b24tY29uc3Vs|\\$ dGluZy5kZTCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAMcXG30x4Whw WIOKZAEycUXMd0Q8vYrWWhfgvD4kH4eyIyZ8AStkd8cMHDqkYJAszPL0pFwIPEM0 bGcxgCNcUvzWlsyc9Ia7gv7cV6lpG/HFO6fk5jH9phKsJnvKHHWf/WuIb5j/KlVR pQ/3wRuVD1zNSs4J25eAHzO2I5xMvVaUJoNU71WFsBNwPF39YKFZWnjpgxSaQPFE dba+xi55vQzIPq+7ZMsEth736pqQXRym3hSkftYmstdPbNVAuOXHabOe92qrr841 bevURoVtBXCUbRX+n09aEbw6jufRWQEz9TCEG01/JWoQonaWvNEi9N/V8bsvQvqS hk3VyhTE8P8CAwEAAaNzMHEwCwYDVR0PBAQDAqEGMA8GA1UdEwQIMAYBAf8CAQAw HQYDVR00BBYEFDPyUbiXrsoLT6TA3+pJNns3wzErMB8GA1UdIwQYMBaAFDPyUbiX rsoLT6TA3+pJNns3wzErMBEGCWCGSAGG+EIBAQQEAwIABzANBqkqhkiG9w0BAQsF AAOCAQEAOaKRf5yxLiHPWpFqWUS1E6tP1kBFY4OKKG6omRUgruf9h+AqWY1pn4QP qd1hS6OnGOcHjgw8F4dDFcmO3IYcGwdpF+2KFmVJB5NNYHja9PFN7rX2tooSyRNj T3bHyFVnWWeT58U2uqB06y/S1qEErppBbFPZcfGS8eSQ+F3cz8b05QG5RQYTup6V Wk+fHSccyO5b05gAhKVdhpAh0ebpfSpyko19f2mcPRZ2WAJyzmthzqHtunlN8zf1 ONLmM809tsr5qOhh4gnILlf8cuNKNCo671YBVD5MYpWq7rO4PO58vm03cvPszkHL cO5Ms+BvYqq14GLDxMeoa72aa9/t6w==

----END CERTIFICATE----

Please follow the following procedure in order to update the PONTON Root CA Certificate:

- 1. Go to LISTENER > LISTENER CERTIFICATES in the PONTON X/P GUI
- 2. Select "Install CA certificate" and install the certificate shown above
- 3. You will receive an error Message as the old certificate will be overwritten
- 4. Enable checkbox "Overwrite certificate" and save again
- 5. Go to "Client Certificates" and repeat installation steps
- 6. Go to MESSENGER > SETTINGS
- 7. Select "Server Certificate" and repeat installation steps

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16. Installation Guide

16.1. Installation procedure

16.1.1. Windows

The PONTON XP Messenger is delivered as a zip file which needs to be unpacked to a directory of your choice, the configuration files have to be edited manually.

Prerequisites

Please define and verify certain parameters such as the following before proceeding:

• You need a database installed (either locally or remote)

Step 1: Copy and unpack the .zip messenger installation file in your chosen directory.

To avoid errors during the installation procedure please define and verify certain parameters such as the following before executing the installer as a windows service:

Service installer configuration in launcher\conf\wrapper.conf

```
set.MESSENGER_NAME="set value in wrapper.conf"
# this value will be displayed in the web GUI to identify the Messenger
instance
set.NTSERVICE_NAME=pontonxpmessenger
# This value has to be a unique service identifier on the Windows system.
So if there are multiple Messenger instances on this system, you need to
modify this.
```

Step 2: The Messenger can then also be installed as a windows service. To do so please execute installService.bat in the freshly unpacked PONTON X/P Messenger installation.

A command line window will show up on the screen, stating that the PONTON X/P Messenger has been installed successfully.

```
wrapper | PONTON X/P Messenger installed.
```

Step 3: Before starting the PONTON X/P Messenger as an installed service:

Messenger database preparations

It is highly recommended to make the following preparations in the the database before running the service:

1) The required database tables have been defined in the database schema. Suitable SQL scripts are provided in the folder 'sql' within the messenger installation.

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2) Furthermore a compatible database driver will be required by the PONTON X/P Messenger. Please save a copy of the required driver in the folder lib_ext of the messenger installation.

Step 4: Start PONTON X/P Messenger as an installed service. If any errors occur during startup, this will be logged in the data\log\wrapper.log

16.1.2. **Linux/UNIX**

The PONTON X/P Messenger is delivered as a zip file which needs to be unpacked to a directory of your choice, the configuration files have to be edited manually.

Prerequisites

Please define and verify certain parameters such as the following before proceeding:

You need a database installed (either locally or remote)

Log in to the Linux/UNIX machine with the user intended to run the messenger. Ensure that this user has the right to read, write und execute!

Step 1: Copy and unpack the .zip messenger installation file in your chosen directory.

Step 2: Before proceeding with the installation process please ensure that the **PONTON XP 3.x/pontonxp** as well as the **PONTON XP 3.x/launcher/linux-.../wrapper** files are executable.

Step 3: Configure the necessary parameters in pontonxp: **Installation configuration in pontonxp**

```
APP_HOME="."  # Ensure that this location refers to your PONTON XP 3.x messenger installation.
```

Defining a suitable name for your messenger:

Defining the messenger name in launcher/conf/wrapper.conf

```
set.MESSENGER_NAME="set value in wrapper.conf"
```

Step 4: Before starting the PONTON X/P Messenger please set up your database

Messenger database preparations

It is highly recommended to make the following preparations in the the database before running the service:

1) The required database tables have to defined in the database schema. Suitable SQL scripts have been provided in the folder 'sql' within the messenger installation.

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2) Furthermore a compatible database driver will be required by the PONTON X/P Messenger. Please save a copy of the required driver in the folder lib_ext of the messenger installation.

Step 5: Start the messenger service

Manual start

```
./pontonxp start
```

Alternatively:

Control start/stop using systemd

Many current Linux distributions come with systemd replacing the old SysVinit script based service launcher.

This textfile in the right place plus the command # systemd daemon-reload registers the PONTON X/P Messenger as a systemd service :

/etc/systemd/system/pontonxp.service

```
[Unit]
Description=PONTON XP
After=network-online.target

[Service]
Type=forking
# Put user with write permissions below
User=username
# Put absolute path to pontonxp base-directory in all of the following
PIDfile=[path_to_pontonxpdir]/launcher/conf
ExecStart=[path_to_pontonxpdir]/pontonxp start
ExecStop=[path_to_pontonxpdir]/pontonxp stop

[Install]
WantedBy=multi-user.target
```

- Consider moving the pontonxp folder to a non-user and non-system directory like /usr/share/
- To run PONTON X/P Messenger as a service, we recommend to create a dedicated user without login shell for this use.
- Make this user owner of the pontonxp directory including all subdirectories

```
# systemctl enable pontonxp
```

The command above enables the pontonxp service over reboots.

Use *systemctl status pontonxp* to obtain runtime informations and log. *systemctl stop pontonxp* shuts down the messenger.

Both methods: If any errors occur during startup, this will be logged in the data/log/wrapper.log

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16.2. Importing the X/P configuration from a previous version

16.2.1. Messenger Version < 3.1

Configurations from Messenger Versions older than 3.1 are not compatible with the current version. Please contact our helpdesk to discuss your upgrade path.

16.2.2. Messenger Version 3.1 - 3.6

The configuration files and database content are compatible with the current Messenger version. However there was a change in the directory structure, therefore it is required to copy the old files to the correct folder as listed below:

- Copy and replace the following folders or files from the Installation Path of the old messenger (XP_OLD) into the Installation folder of new Messenger (XP_NEW)
- Copy the Database Driver file from the Installation path <XP_OLD>\xmlpipe\lib_ext into Installation path <XP_NEW>\lib_ext
- Rename the existing Config folder under Installation path <XP_NEW>\config into config_NotInUse
- Copy the Config folder from the <Installation path <XP_OLD>\xmlpipe\config into Installation path <XP_NEW>\config
- Copy the Archive folder from the <Installation path <XP_OLD>\xmlpipe\archive into Installation path <XP_NEW>\data\archive
- Copy the Archive_failed folder from the <Installation
 path <XP_OLD>\xmlpipe\archive_failed into Installation
 path <XP_NEW>\data\archive_failed
- **Copy the Hotfolder** folder from the <Installation path <XP_OLD>\xmlpipe\<hotfolder name> into Installation path <XP_NEW>\data\<hotfolder name>
- Stop the old Messenger (XP_OLD)
- Start the new Messenger (XP_NEW)

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16.2.3. Messenger Version 3.7 and up

The configuration files and database content are compatible with the current Messenger version. The following folders can be copied as needed:

- Copy and replace the following folders or files from the Installation Path of the old messenger (XP OLD) into the Installation folder of new Messenger (XP NEW)
- Copy the Database Driver file from the Installation path <XP_OLD>\lib_ext into Installation path <XP_NEW>\lib_ext
- Rename the existing Config folder under Installation path <XP_NEW>\config into config_NotInUse
- Copy the Config folder from the <Installation path <XP_OLD>\config into Installation path <XP_NEW>\config
- Copy the Archive folder from the <Installation path <XP_OLD>\data\archive into Installation path <XP_NEW>\data\archive
- Copy the Archive_failed folder from the <Installation path <XP_OLD>\data\archive_failed into Installation path <XP_NEW>\data\archive_failed
- Copy the Hotfolder folder from the <Installation path <XP_OLD>\data\<hotfolder name> into Installation path <XP_NEW>\data\<hotfolder name>
- Stop the old Messenger (XP_OLD)
- Start the new Messenger (XP_NEW)

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