WWKS2 Extension for Reservations (V5)

Document history

Version	Date	Change	Author
V1	2021 October 13th	Initial draft version	Vincent Naert
V2	2022 May 17th	Changed privateness and ownership of reservations	Vincent Naert
V3	2023 March 30th	-Added packinfo in *ReservationInfoResponse* (scancode, expiry date, batchnumber, external id). -Fixed a typo: message id of asynchronous messages is 1 (not 0).	Vincent Naert
V4	2023 May 11th	Added extra criteria ("Reserved: Boolean") in the *StockInfoRequest*	Vincent Naert
V5	2024 March 12th	-Correction in documentation: Pack Id in ReservationAddRequest was documented as "String", corrected to Integer 64-bit >0 -Some minor (transparent) text correction(s)	Vincent Naert

Contents

1. Introduction

This document is a WWKS2 extension that allows box reservations to be made and managed in a robot.

2. Abbreviations / terminology

PS	Pharmacy Software. This term is used for any software that connects to the robot through the WWKS2 protocol. This can also be hospital software, vending machines,…

3. Reservations: ownership and privateness/openness

All reservations that are made belong to the creator of the reservation (the "**owner**" of the reservation). The robot will remember the owner for each reservation that has been made.
The protocol fully supports every pharmacy software to view, eject and manage all reservations (even if they are not the owner).
If additional access rights would be required (eg: PS3 can <u>not</u> deliver reservations made by PS2, but PS1 can), these will need to be added to the robot software. Access rights are out of the scope of this protocol extension.

Let's make an illustration of a situation where 2 pharmacy softwares are connected and both make reservations:

Initial situation: 5 boxes of product X are in the robot, and we have 2 different pharmacy softwares (PS) connected to the robot. The PackId's of the 5 boxes are 1,2,3,4,5.
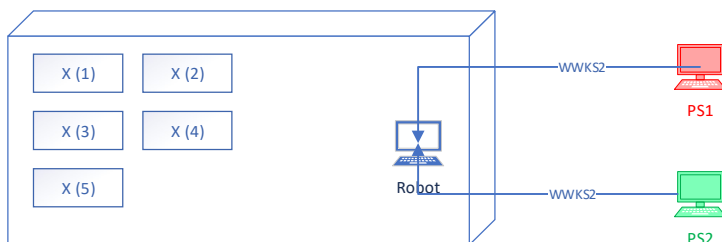
Next: PS1 reserves 2 boxes with a reservation id of "ABC":
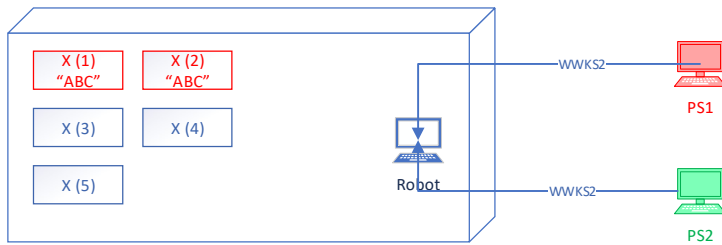
Next: PS2 reserves 1 box with a reservation id of "ABC":
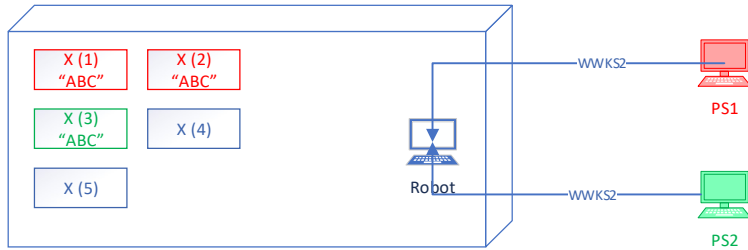
In the example, the reservation id "ABC" is the same as the reservation id made by PS1. However, the reservations can and will not be mixed and have no connection with each other because they belong to a different owner.

This is how the robot will store these reservations: ReservationId + Owner per pack:

PackId	ReservationId	Owner
1	ABC	1 (PS1)
2	ABC	1 (PS1)
3	ABC	2 (PS2)

This is how the stock info will be communicated to PS1 and PS2 for a *StockInfoRequest* for ArticleId="X":

Please also see 4.6 StockInfo (change) to see the changes in the StockInfo messages.

Note on access rights: The reply is the same for both receivers. Note that State (which in WWKS2 means "available for output: yes or no") is always "Available", even for packs that were reserved by an other party. If in the future access rights were added that prevent an other pharmacy software from ejecting reserved boxes, this would be visible in the state being "Unavailable" to that PS connection. So if access rights prevent deliveries to a PS, then the reply would be different depending on the receiver.

Note: if a PS does not support Reservations, then State will be "NotAvailable" for that PS.

Request:
```
<WWKS Version="2.0" TimeStamp="2021-04-16T11:14:00Z">
  <StockInfoRequest Id="1003" Source="100" Destination="999"
                    IncludePacks="True">
    <Criteria ArticleId="X"/>
  </StockInfoRequest>
</WWKS>
```

Reply:
```
<WWKS Version="2.0" TimeStamp="2021-04-16T11:14:00Z">
```

```
<StockInfoResponse  Id="1003" Source="999" Destination="100">
 <Article Id="X">
  <Pack Id="1" State="Available" Reserved="True" ReservationId="ABC"
                ReservationOwnerId="1"/>
  <Pack Id="2" State="Available" Reserved="True" ReservationId="ABC"
                ReservationOwnerId="1"/>
  <Pack Id="3" State="Available" Reserved="True" ReservationId="ABC"
                ReservationOwnerId="2"/>
  <Pack Id="4" State="Available" Reserved="False"/>
  <Pack Id="5" State="Available" Reserved="False"/>
 </Article>
</StockInfoResponse>
</WWKS>
```

This is how the stock info will be communicated to PS1 and PS2 for a *StockInfoRequest* for ArticleId="X", but with "IncludePacks" = False:

Please also see 4.6 StockInfo (change) to see the changes in the StockInfo messages.

Request:

```
<WWKS Version="2.0" TimeStamp="2021-04-16T11:14:00Z">
  <StockInfoRequest Id="1003" Source="100" Destination="999"
                    IncludePacks="False">
    <Criteria ArticleId="X"/>
  </StockInfoRequest>
</WWKS>
```

Reply:

The reply is independent of the fact that the PS supports Reservations or not, and independent of access rights if these might exist. So the robot replies Quantity="5" to any receiver. If a PS wants to check more details on the total quantity, it must set "IncludePacks" to True.

```
<WWKS Version="2.0" TimeStamp="2021-04-16T11:14:00Z">
 <StockInfoResponse Id="1003" Source="999" Destination="100">
  <Article Id="X" Quantity="5">
  </Article>
 </StockInfoResponse>
</WWKS>
```

Summary:

Attribute	Value visibility	Value
"Reserved" , "ReservationId", Owner Info	Everyone	Everyone sees everything (unless access rights would be added in the future)
"State" *(which means "available for output or not")*	"Available" / "NotAvailable", depending on receiver of the information	Will be "Available" for everyone, unless: 1) access rights would prevent this in the future 2) the receiver does not support reservations

4. Message Reference

4.1 HelloRequest/HelloResponse (change)

4.1.1 HelloRequest (change)

These extra capabilities are added to the *HelloRequest*:
-ReservationAdd
-ReservationCancel
-ReservationInfo

4.1.2 HelloResponse (change)

See extra capabilities in *HelloRequest*.

4.2 ReservationAdd

4.2.1 ReservationAddRequest

Structure

```
<WWKS>
  <ReservationAddRequest>
    <Article>
      <References>
        <Reference>
      </References>
      <Packs>
        <Pack/>
      </Packs>
    </Article>
  </ReservationAddRequest>
</WWKS>
```

Elements

Element	M/O	Data type	Description
ReservationAddRequest	M	Tag	Message type
Attributes	**M/O**	**Data type**	**Description and Values**
Id	M	String	ID of the reservation request. This ID is returned in the *ReservationAddResponse*.
Source	M	Integer 32-bit >0	ID of the system sending the *ReservationAddRequest*.
Destination	M	Integer 32-bit >0	ID of the system intended to receive the *ReservationAddRequest*.
ReservationId	M	String	The identifying string for this reservation. The string cannot be empty.

Element	M/O	Data type	Description
Article	M	Tag	Article Details follow. This element may occur more than once.
Attributes	**M/O**	**Data type**	**Description and Values**
Id	O	String	Id of the article. Can be omitted if -all packs of this article are specified by a PackId; or -an Article <References> node is supplied. See "Restrictions".

Element	M/O	Data type	Description
References	O	Tag	Only allowed if the Id attribute is missing in the Article node. This element may occur <= 1 time. If multiple Reference nodes are given, an article will match if >=1 reference(s) match(es). In other words, all Reference nodes will be evaluated as "OR".

Element	M/O	Data type	Description
Reference	M	Tag	A product reference (like CNK, PZN, EAN,…) which can be used to identify the product when the ArticleId is unknown. This element may occur >= 1 time(s).
Value	M	String	Content of the reference.

Element	M/O	Data type	Description
Packs	M	Tag	Packs to be reserved follow. This element must occur 1 time.

Element	M/O	Data type	Description
Pack	M	Tag	A reservation will be attempted for each Pack node present. This element may occur >= 1 times.
Id	O	Integer 64-bit >=0	A PackId can be specified if the requestor wants to reserve a specific pack. If no specific pack is required, then the Id attribute must be absent. Most of the time this field will be absent meaning any box of that product can be reserved.

Restrictions

- The identification of the article can be done in 2 ways:
    - passing the Id attribute in the Article node; or
    - passing the References node.
  - ➔ Only 1 of the 2 options are allowed: if Article Id <u>and</u> a <References> node are passed, the request will be rejected.
- An empty <Article> node (no Article.Id and no Article.References) can be given without any identification if <u>all</u> underlying <Pack> nodes are identified by a Pack Id. If no article identification is given and some packs don't have a Pack Id, the request will be denied.

Example for 2 pack reservations where the article id is known

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationAddRequest Id="1003" Source="100" Destination="999"
ReservationId="RES_13007" >
    <Article Id="1449503">
      <Packs>
        <Pack/>
        <Pack/>
      </Packs>
    </Article>
  </ReservationAddRequest>
</WWKS>
```

Example for 2 pack reservations where the article id is <u>not</u> known (eg: the product's CNK and GTIN are passed)

```xml
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationAddRequest Id="1003" Source="100" Destination="999"
ReservationId="RES_13007" >
    <Article>
      <References>
        <Reference Value="1449503"></Reference>
        <Reference Value="01234567890123"></Reference>
      </References>
      <Packs>
        <Pack/>
        <Pack/>
      </Packs>
    </Article>
  </ReservationAddRequest>
</WWKS>
```

Example for a reservation for 2 <u>specific</u> packs (without any article identification)

```xml
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationAddRequest Id="1003" Source="100" Destination="999"
ReservationId="RES_13007" >
    <Article>
      <Packs>
        <Pack Id="4020211003235800"/>
        <Pack Id="4020211003235959"/>
      </Packs>
    </Article>
  </ReservationAddRequest>
</WWKS>
```

4.2.2   ReservationAddResponse

Structure
```xml
<WWKS>
  <ReservationAddResponse>
    <Article>
      <References>
        <Reference>
      </References>
      <Packs>
        <Pack>
      </Packs>
    </Article>
  </ReservationAddResponse>
</WWKS>
```

Elements

Elements

Element	M/O	Data type	Description
ReservationAddResponse	M	Tag	Message type
Attributes	**M/O**	**Data type**	**Description and Values**
Id	M	String	ID of the corresponding reservation request.
Source	M	Integer 32-bit >0	ID of the system sending the *ReservationAddResponse*.

Destination	M	Integer 32-bit >0	ID of the system intended to receive the *ReservationAddResponse*.
ReservationId	M	String	The identifying string for this reservation.
ReservationOwnerId	M	Integer 32-bit >0	The id of the PS in the robot configuration.

Element	M/O	Data type	Description
Article	M	Tag	Article Details follow.
Attributes	**M/O**	**Data type**	**Description and Values**
Id	O	String	*Same as in the request*

Element	M/O	Data type	Description
References	O	Tag	*Same as in the request*

Element	M/O	Data type	Description
Reference	M	Tag	*Same as in the request*
Value	M	String	Content of the reference.

Element	M/O	Data type	Description
Packs	M	Tag	*Same as in the request*

Element	M/O	Data type	Description
Pack	M	Tag	
PackReservationSeq	M	Integer 32-bit >=0	The sequence number of the reservation for this specific pack. The value "0" means that the sequence number is unknown (for instance when the reservation could not be made).
RequestedPackId	M	Integer 64-bit >=0	The PackId that was specified in the *ReservationAddRequest*. This value will be 0 if no PackId was specified in the request.
AssignedPackId	M	Integer 64-bit >=0	The PackId of the box that was reserved. If no box is reserved (yet), this value will be 0.
Reserved	M	Boolean	True or False
InStock	M	Boolean	True or False
ErrorText	O	String	Must be empty if no error occurred, otherwise can contain error details. This message is for pharmacist or logging purposes only (not for the end customer who is trying to make the reservation).

Example where only 1 of 2 packs could be reserved

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationAddResponse Id="1003" Source="999" Destination="100"
                          ReservationId="RES_13007" ReservationOwnerId="1">
    <Article Id="1449503">
      <Packs>
        <Pack PackReservationSeq="10475" RequestedPackId="4020211003230000"
              AssignedPackId="4020211003230000" Reserved="True" InStock="True"
              />
```

```
            <Pack PackReservationSeq="0" RequestedPackId="0"
                  AssignedPackId="0" Reserved="False"InStock="False"
                  ErrorText="Reservation failed" />
          </Packs>
        </Article>
      </ReservationAddRequest>
</WWKS>
```

Example where 2 packs could be reserved, but the 2ⁿᵈ pack is not in the robot yet (eg: in backorder at the wholesaler)

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationAddResponse Id="1003" Source="999" Destination="100"
                          ReservationId="RES_13007" ReservationOwnerId="1">
    <Article Id="1449503">
      <Packs>
        <Pack PackReservationSeq="10475" RequestedPackId="4020211003230000"
              AssignedPackId="4020211003230000" Reserved="True" InStock="True"
              />
        <Pack PackReservationSeq="10476" RequestedPackId="0"
              AssignedPackId="0" Reserved="True" InStock="False" ErrorText=""
              />
      </Packs>
    </Article>
  </ReservationAddRequest>
</WWKS>
```

4.2.3   ReservationAddMessage

Same structure as *ReservationAddResponse*. This message is sent asynchronously (the message id will be 1) to all connected PS'es when a reservation has been created.

4.3 ReservationCancel

4.3.1   ReservationCancelRequest

Usage

This dialog can be used to cancel an <u>existing</u> reservation. It must not be used to clean up the reservation(s) that no longer exist(s). In other words, after a box is delivered/removed from the robot, the reservation no longer exists and does not need to be cancelled by the pharmacy software (this cleanup must be managed by the robot and not by the pharmacy software).

Structure
```
<WWKS>
  <ReservationCancelRequest>
    <Pack/>
  </ReservationCancelRequest>
</WWKS>
```

Elements

Element	M/O	Data type	Description
ReservationCancelRequest	M	Tag	Message type
Attributes	**M/O**	**Data type**	**Description and Values**

Id	M	String	ID of the request. This ID is returned in the *ReservationCancelResponse*.
Source	M	Integer 32-bit >0	ID of the system sending the *ReservationCancelRequest*.
Destination	M	Integer 32-bit >0	ID of the system to which the *ReservationCancelRequest* is sent.

Element	M/O	Data type	Description
Pack	M	Tag	This element may occur multiple times.
Attributes	**M/O**	**Data type**	**Description and Values**
PackReservationSeq	M	Integer 32-bit >0	The sequence number of the reservation for this specific pack.

Example

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationCancelRequest Id="1003" Source="100" Destination="999">
    <Pack PackReservationSeq="10475"/>
    <Pack PackReservationSeq="10476"/>
    <Pack PackReservationSeq="10477"/>
    <Pack PackReservationSeq="10478"/>
  </ReservationCancelRequest>
</WWKS>
```

4.3.2   ReservationCancelResponse

Structure

```
<WWKS>
  <ReservationCancelResponse>
    <Pack/>
  </ReservationCancelResponse>
</WWKS>
```

Elements

Element	M/O	Data type	Description
ReservationCancelResponse	M	Tag	Message type
Attributes	**M/O**	**Data type**	**Description and Values**
Id	M	String	ID of the corresponding *ReservationCancelRequest*.
Source	M	Integer 32-bit >0	ID of the system sending the *ReservationCancelResponse*.
Destination	M	Integer 32-bit >0	ID of the system to which the *ReservationCancelResponse* is sent.

Element	M/O	Data type	Description
Pack	O	Tag	
Attributes	**M/O**	**Data type**	**Description and Values**
PackReservationSeq	M	Integer 32-bit >0	The sequence number of the reservation for this specific pack.
Status	M	String	Status of the cancellation. Possible values: "Unknown" if the PackReservationSeq is not known

			"Cancelled" if the pack reservation could be canceled "CancelError", if the cancel of the pack reservation failed
ErrorText	O	String	Must be empty if no error occurred, otherwise can contain error details. This message is for pharmacist, end user and logging purposes.

Example
```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationCancelResponse Id="1003" Source="999" Destination="100">
    <Pack PackReservationSeq="10475" Status="Cancelled" ErrorText=""/>
    <Pack PackReservationSeq="10476" Status="Cancelled " ErrorText=""/>
    <Pack PackReservationSeq="10478" Status="Unknown"
        ErrorText="Reservation not found."/>
    <Pack PackReservationSeq="10477" Status="CancelError"
        ErrorText="Reservation could not be cancelled."/>
  </ReservationCancelResponse>
</WWKS>
```

4.4 ReservationInfo

4.4.1   ReservationInfoRequest

Structure
```
<WWKS>
  <ReservationInfoRequest>
    <Criteria/>
  </ReservationInfoRequest>
</WWKS>
```

Elements

Element	M/O	Data type	Description
ReservationInfoRequest	M	Tag	Message type
Attributes	**M/O**	**Data type**	**Description and Values**
Id	M	String	ID of the *ReservationInfoRequest*. This ID is returned in the *ReservationInfoResponse*.
Source	M	Integer 32-bit >0	ID of the system sending the *ReservationInfoRequest*.
Destination	M	Integer 32-bit >0	ID of the system to which the *ReservationInfoRequest* is sent.

Element	M/O	Data type	Description
Criteria	O	Tag	This element may occurr multiple times. Multiple criteria will be handled as "OR".
Attributes	**M/O**	**Data type**	**Description and Values**
ReservationId	O	String	
ReservationOwnerId	O	Integer 32-bit > 0	The id of the PS in the robot configuration.

Example: get all reservations (made by any pharmacy software)
```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationInfoRequest Id="1003" Source="100" Destination="999">
```

```
    </ReservationInfoRequest>
</WWKS>
```

Example: get all reservations made by a specific pharmacy software
```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationInfoRequest Id="1003" Source="100" Destination="999">
    <Criteria ReservationOwnerId="1"/>
  </ReservationInfoRequest>
</WWKS>
```

Example: get info for a specific reservation made by a specific pharmacy software
```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationInfoRequest Id="1003" Source="100" Destination="999">
    <Criteria ReservationOwnerId ="1" ReservationId="RES_ABC" />
  </ReservationInfoRequest>
</WWKS>
```

4.4.2 ReservationInfoResponse

Structure
```
<WWKS>
  <ReservationInfoResponse>
    <Reservation>
      <Article>
        <References>
          <Reference/>
        </References>
        <Packs>
          <Pack/>
        </Packs>
      </Article>
    <Reservation/>
  </ReservationInfoResponse>
</WWKS>
```

Elements

Element	M/O	Data type	Description
ReservationInfoResponse	M	Tag	Message type
Attributes	**M/O**	**Data type**	**Description and Values**
Id	M	String	ID of the corresponding *ReservationInfoRequest*.
Source	M	Integer 32-bit >0	ID of the system sending the *ReservationInfoResponse*.
Destination	M	Integer 32-bit >0	ID of the system to which the *ReservationInfoResponse* is sent.

Element	M/O	Data type	Description
Reservation	O	Tag	This element will be present for each reservation that matches the requested criteria.
Attributes	**M/O**	**Data type**	**Description and Values**
Id	M	String	The reservation id that was specified in the ReservationAddRequest.
OwnerId	M	Integer 32-bit > 0	The id of the PS in the robot configuration.

Element	M/O	Data type	Description
Article	M	Tag	The article info that was specified in the *ReservationAddRequest*.
Attributes	**M/O**	**Data type**	**Description and Values**
Id	O	String	The article id that was specified in the *ReservationAddRequest*.

Element	M/O	Data type	Description
References	O	Tag	The references that were given in the *ReservationAddRequest*. This element may occur <= 1 time.

Element	M/O	Data type	Description
Reference	M	Tag	Same as was given in the *ReservationAddRequest*.
Value	M	String	

Element	M/O	Data type	Description
Packs	M	Tag	

Element	M/O	Data type	Description
Pack	M	Tag	
PackReservationSeq	M	Integer 32-bit >0	The sequence number of the reservation for this specific pack.
RequestedPackId	M	Integer 64-bit >=0	The PackId that was specified in the *ReservationAddRequest*. This value will be 0 if no PackId was specified in the request.
AssignedPackId	M	Integer 64-bit >=0	The PackId of the box that was reserved. If no pack is available/in stock for this reservation (yet), this value will be 0.
AssignedPack_BatchNumber	M	String	The batchnumber of the pack (if AssignedPackId>0). This attribute must be present but can be an empty string when the batchnumber is unknown.
AssignedPack_ExternalId	M	String	The externalid (serial number) of the pack (if AssignedPackId>0). This attribute must be present but can be an empty string when the externalid is unknown.
AssignedPack_ExpiryDate	M	String	The expiry date of the pack (if AssignedPackId>0). This attribute must be present but can be an empty string when the expiry date is unknown.
AssignedPack_ScanCode	M	String	The scancode of the pack (if AssignedPackId>0). This attribute must be present and cannot be empty.
InStock	M	Boolean	True or False
Available	M	Boolean	True or False Indicates whether the pack is available for output or not.

Example: 2 packs are reserved, 1 is not in stock yet (eg: in backorder at wholesaler)

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationInfoResponse Id="1003" Source="999" Destination="100">
    <Reservation Id="RES_ABC" OwnerId="1">
     <Article Id="1449503">
        <Packs>
          <Pack PackReservationSeq="10475" RequestedPackId="4020211003230000"
                AssignedPackId="4020211003230000"
                AssignedPack_BatchNumber="LOT123"
                AssignedPack_ExternalId="1234567890"
                AssignedPack_ExpiryDate="2024-11-05"
                AssignedPack_ScanCode="1449503"
                InStock="True"  Available="True"/>
          <Pack PackReservationSeq="10476" RequestedPackId="0"
                AssignedPackId="0"
                AssignedPack_BatchNumber="" AssignedPack_ExternalId=""
                AssignedPack_ExpiryDate="" AssignedPack_ScanCode=""
                InStock="False" Available="False"/>
        </Packs>
     </Article>
    </Reservation>
  </ReservationInfoResponse>
</WWKS>
```

Example (without known ArticleId)

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <ReservationInfoResponse Id="1003" Source="999" Destination="100">
    <Reservation Id="RES_ABC" OwnerId="1">
     <Article>
        <References>
          <Reference Value="1449503"></Reference>
          <Reference Value="01234567890123"></Reference>
        </References>
        <Packs>
          <Pack PackReservationSeq="10475" RequestedPackId="0"
                AssignedPackId="4020211003231500"
                AssignedPack_BatchNumber="LOT123"
                AssignedPack_ExternalId="1234567890"
                AssignedPack_ExpiryDate="2024-11-05"
                AssignedPack_ScanCode="1449503"
                InStock="True" Available="True"/>
          <Pack PackReservationSeq="10476" RequestedPackId="0"
                AssignedPackId="0"
                AssignedPack_BatchNumber="" AssignedPack_ExternalId=""
                AssignedPack_ExpiryDate="" AssignedPack_ScanCode=""
                InStock="False" Available="False"/>
        </Packs>
     </Article>
    </Reservation>
  </ReservationInfoResponse>
</WWKS>
```

4.4.3   ReservationInfoMessage

Identical to the *ReservationInfoResponse*, but this message is sent asynchronously whenever a reservation changes (eg: when a reserved box that was not in stock becomes in stock; or when the state of a reserved box would change). In this asynchronous message, the message Id will be 0.

4.5 Output (change)

4.5.1 OutputRequest (change)

To deliver a reserved pack, an additional criteria attribute must be passed: ReservationId. Without the ReservationId, a reserved pack can never be delivered.

Element	M/O	Data type	Description
Criteria	O	Tag	Output filters follow. This element can be used multiple times.
Attributes	**M/O**	**Data type**	**Description and Values**
ReservationId	O	String	The identifying string of a reservation.
ReservationOwnerId	O	Integer 32-bit >0	The id of the PS in the robot configuration. When passing a ReservationId, the ReservationOwnerId must also be valid.

Reserved packs can also be delivered with the combination of ReservationId and PackId criteria to deliver specific packs.

4.5.2 OutputResponse (change)

If the ReservationId was present in the OutputRequest, it will be present in the OutputResponse as well:

Element	M/O	Data type	Description
Criteria	O	Tag	Output filters follow. This element can be used multiple times.
Attributes	**M/O**	**Data type**	**Description and Values**
ReservationId	O	String	The identifying string of a reservation.
ReservationOwnerId	O	Integer 32-bit >0	The id of the PS in the robot configuration.

Remark!
When a pack is delivered/removed from the robot, the reservation of this pack is also removed:
-it will be no longer visible in the *ReservationInfoResponse*
-the reservation that existed for that pack is automatically removed by the robot and must not be removed (with a *ReservationCancelRequest*) by the pharmacy software.

4.5.3 OutputMessage (change)

Here the ReservationId and the ReservationOwnerId will be added too:

Element	M/O	Data type	Description
Pack	O	Tag	Pack information follows. This element may occur multiply.
Attributes	**M/O**	**Data type**	**Description and Values**
ReservationId	O	String	If a delivered pack belonged to a reservation, the ReservationId will be present.
ReservationOwnerId	O	Integer 32-bit >0	The id of the PS in the robot configuration.

4.5.4 Examples

Example of an output session for a reserved pack (with a known ArticleId)

1. OutputRequest

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <OutputRequest Id="1004" Source="100" Destination="999">
    <Details Priority="Normal" OutputDestination="3"/>
    <Criteria ArticleId="1449503" Quantity="1" ReservationId="RES_ABC"
          ReservationOwnerId="1"/>
  </OutputRequest>
</WWKS>
```

2. OutputResponse

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <OutputResponse Id="1004" Source="999" Destination="100">
    <Details Priority="Normal" OutputDestination="3" Status="Queued"/>
    <Criteria ArticleId="1449503" Quantity="1" ReservationId="RES_ABC"
          ReservationOwnerId="1" />
  </OutputResponse>
</WWKS>
```

3. OutputMessage

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <OutputMessage Id="1004" Source="999" Destination="100">
    <Details Priority="Normal" OutputDestination="3" Status="Completed"/>
    <Article Id="1449503">
      <Pack Id="4020211003230000" OutputDestination="3"
          ReservationId="RES_ABC" ReservationOwnerId="1"/>
    </Article>
  </OutputMessage>
</WWKS>
```

Example of an output session for 2 reserved packs without specifiying the ArticleId

1. OutputRequest

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <OutputRequest Id="1004" Source="100" Destination="999">
    <Details Priority="Normal" OutputDestination="3"/>
    <Criteria PackId="4020211003230000" Quantity="1" ReservationId="RES_ABC"
          ReservationOwnerId="1"/>
    <Criteria PackId="4020211003232315" Quantity="1" ReservationId="RES_ABC"
          ReservationOwnerId="1"/>
  </OutputRequest>
</WWKS>
```

2. OutputResponse

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <OutputResponse Id="1004" Source="999" Destination="100">
    <Details Priority="Normal" OutputDestination="3" Status="Queued"/>
    <Criteria PackId="4020211003230000" Quantity="1" ReservationId="RES_ABC"
          ReservationOwnerId="1"/>
    <Criteria PackId="4020211003232315" Quantity="1" ReservationId="RES_ABC"
          ReservationOwnerId="1"/>
  </OutputResponse>
</WWKS>
```

3. OutputMessage

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <OutputMessage Id="1004" Source="999" Destination="100">
    <Details Priority="Normal" OutputDestination="3" Status="Completed"/>
    <Article>
      <Pack Id="4020211003230000" OutputDestination="3"
            ReservationId="RES_ABC" ReservationOwnerId="1"/>
      <Pack Id="4020211003232315" OutputDestination="3"
            ReservationId="RES_ABC" ReservationOwnerId="1" />
    </Article>
  </OutputMessage>
</WWKS>
```

4. OutputMessage (when the 2 packs would be 2 different products)

```
<WWKS Version="2.0" TimeStamp="2021-10-13T11:14:00Z">
  <OutputMessage Id="1004" Source="999" Destination="100">
    <Details Priority="Normal" OutputDestination="3" Status="Completed"/>
    <Article>
      <Pack Id="4020211003230000" OutputDestination="3"
            ReservationId="RES_ABC" ReservationOwnerId="1"/>
    </Article>
    <Article>
      <Pack Id="4020211003232315" OutputDestination="3"
            ReservationId="RES_ABC" ReservationOwnerId="1"/>
    </Article>
  </OutputMessage>
</WWKS>
```

4.6 StockInfo (change)

4.6.1 StockInfoRequest

In the Criteria element, the Reserved, ReservationId and ReservationOwnerId attribute are added:

Element	M/O	Data type	Description
Criteria	O	Tag	Request filter follows. Multiple criteria can be defined.
Attributes	**M/O**	**Data type**	**Description and Values**
Reserved	O	Boolean	Flag indicating whether the pack has to be reserved ("True") by anyone or not ("False").
ReservationId	O	String	By setting this filter, only packs with the specified ReservationId are included.
ReservationOwnerId	O	Integer 32-bit >0	The id of the PS in the robot configuration. When passing a ReservationId without ReservationOwnerId, the result can include reservations from other PS'es as well.

4.6.2 StockInfoResponse

Element	M/O	Data type	Description
Pack	O	Tag	Pack information follows. This element may occur multiply.
Attributes	**M/O**	**Data type**	**Description and Values**
Reserved	O	Boolean	Flag indicating whether the pack is reserved

			("True") by anyone or not ("False").
ReservationId	O	String	The reservation id that was used when the pack was reserved. This field will only be present when Reserved is True.
ReservationOwnerId	O	Integer 32-bit >0	The id of the PS in the robot configuration. This field will only be present when Reserved is True.

4.6.3   StockInfoMessage

Same as StockInfoResponse.

4.6.4   Examples

Please see 3 Reservations: ownership and privateness/openness