



Blå Coordinator

CWI - Coordinator Workflow Interface

1.0.6

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Coordinator Workflow Interface

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1 About This Document

1.1 General

This document describes the concept of and how to use the Coordinator Workflow Interface.

1.2 Related documents

- ▶ Coordinator Information Interface
- ▶ Coordinator Resource Interface
- ▶ Coordinator Integration Adapter Installation and Configuration

1.3 Intended audience

Intended audience is internal isMobile personnel and external partners developing integration solutions for the Blå Coordinator.

2 Coordinator Workflow Interface

2.1 Interface overview

This document describes how to perform operations on the different Coordinator objects and their properties via XML based messaging

The Coordinator Workflow Interface is based on XML and gives a simple, powerful and secure connection between the organizations backend systems and the Blå Coordinator server.

The Coordinator Integration Adapter (CIA) module is the glue between the Blå Coordinator server and customer backend or otherwise external systems that need to interact in any way with the operations of the server. Transaction data integration includes work order creation, modification, assignment of resources to execute a work order, receive notification of work order or assignment status changes etc. The Coordinator server receives new work orders from the customer legacy system and sends via the CIA module, status updates and reports back. The interface supports different types of transport protocols together with customized transformation capability.

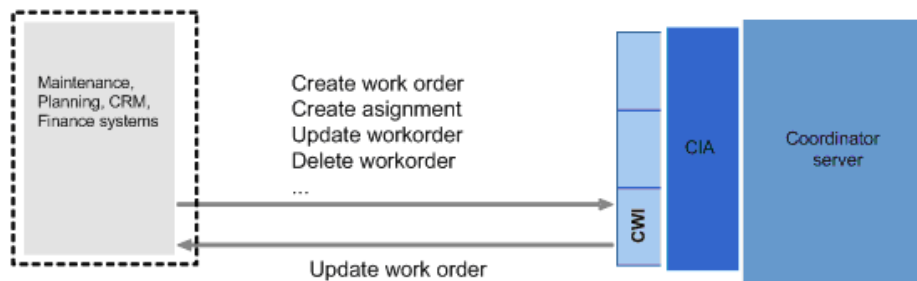


Figure – Coordinator Workflow Interface

The information that is used to create work orders is extracted from a backend system and transported to Blå Coordinator using JMS messages or SOAP messages. The Coordinator Integration Adapter receives the messages from the backend system and sends status updates and reports back to the backend system. The information is transported via JMS XML messages or via WSDL SOAP bindings as Document/literal style/use format.

For each operation an XML based message is sent between the Coordinator and back end system. When events occur in Coordinator that should be notified to the backend system an XML based message is sent to the backend system (Update work order/assignment OUT).

Each incoming operation (IN) supports acknowledgement functionality. If Blå Coordinator receives a message that asks for an acknowledgement (messageid is set in the operation message), a return message is sent back to the sending system.

CWI operations are defined according to xml schemas and WSDL definition as listed in Appendix A - SCHEMAS and WSDLs

Typical message exchange sequences for the CWI are:

Send message to Blå Coordinator

1. Information is prepared in the backend system.
2. Data is sent to integration platform at customer side.
3. The Coordinator Integration Adapter receives a message from the integration platform/backend system.
4. The Coordinator Integration Adapter uses the Blå Coordinator Common Integration Facade to pass the request with its parameters to the Blå Coordinator server for processing.

Receive message from Blå Coordinator

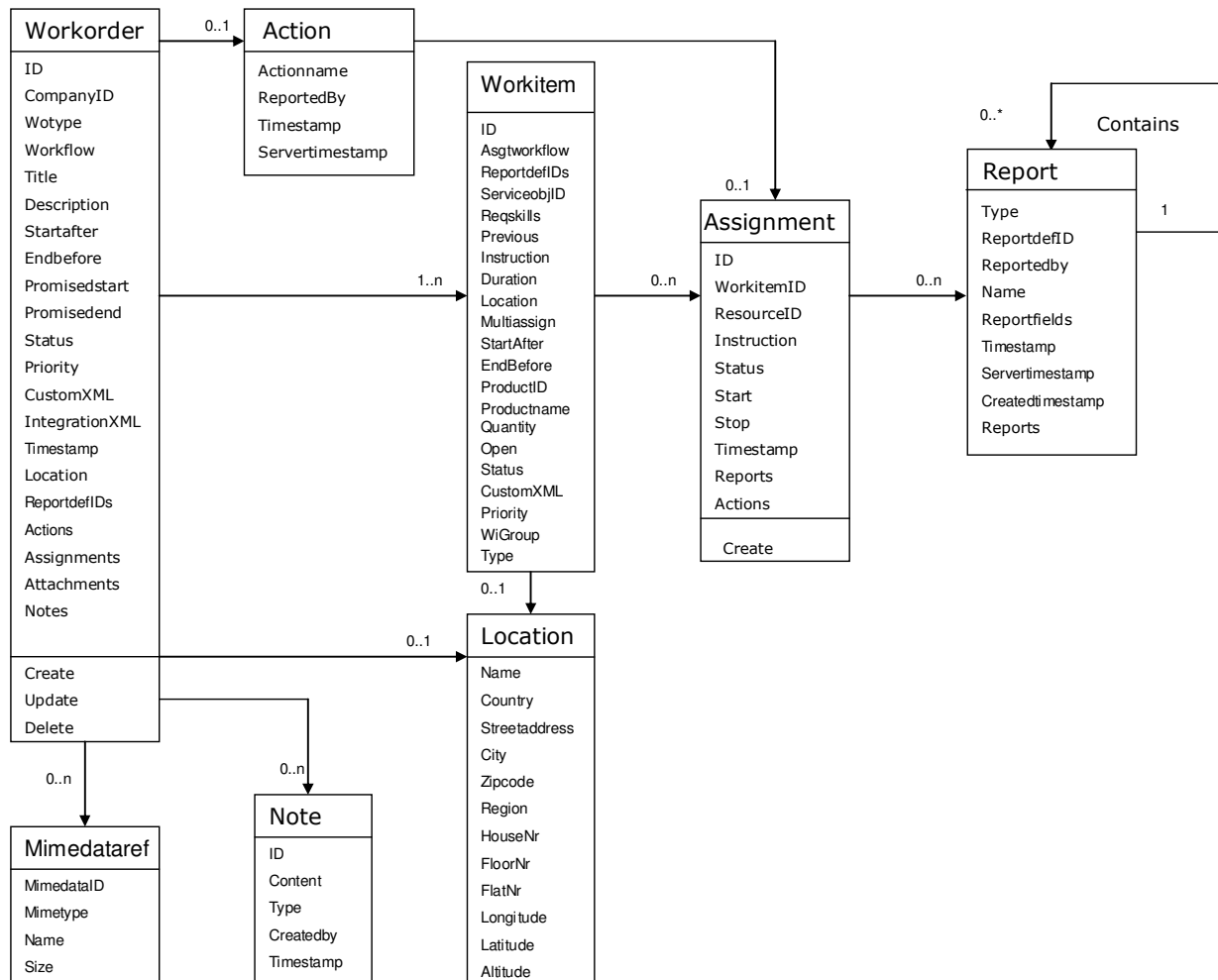
1. An event occurs in Coordinator that should be notified to the backend system.

2. The event triggers the sending of an XML based message using the Coordinator Integration Adapter.
3. This message is sent to the backend system via the integration platform.

2.2 Object model

The CWI interacts with the organization data via *objects* defined in an internal object model in the Coordinator. Object instances from this model are programmatic representations of data entities stored in the Coordinator server and/or a backend system.

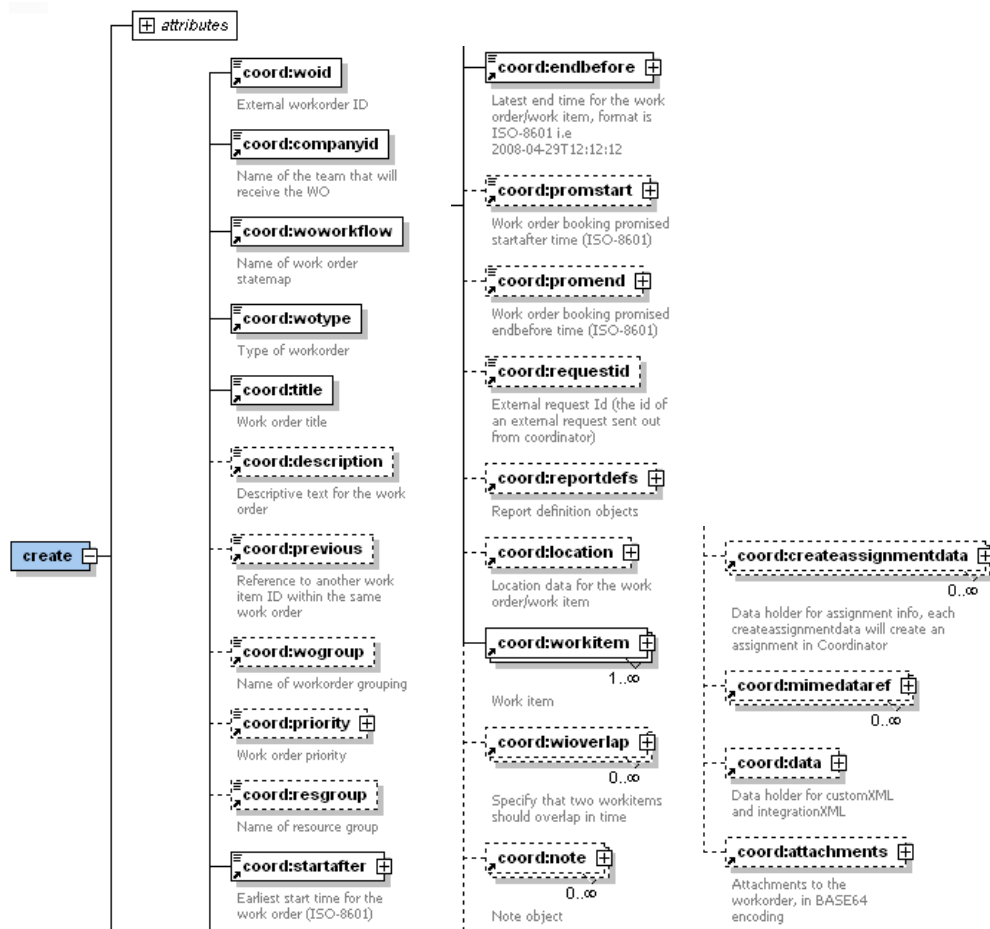
Object properties represent fields in those data entities; systems integrating with Coordinator set or retrieve data values via these properties. For example, a Resource object represents resource, and a Resource object has fields that represent the resource name, skills, and description and so on.



2.2.1 Work order

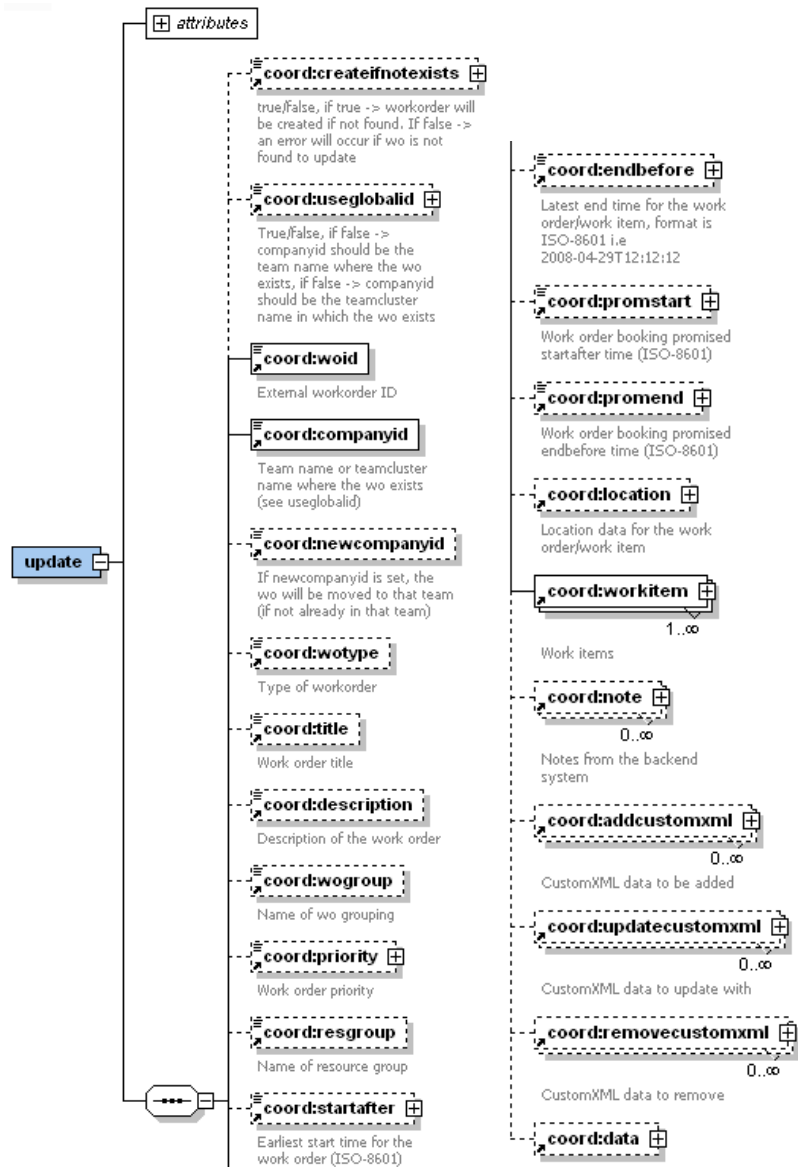
The CWI supports the following operations for work order:

- **Create work order incl. auto-assign (IN)**
 - Creates a work order in the Coordinator server. If assignment data is included in the message, the work order will be auto-assigned to the specified resource.



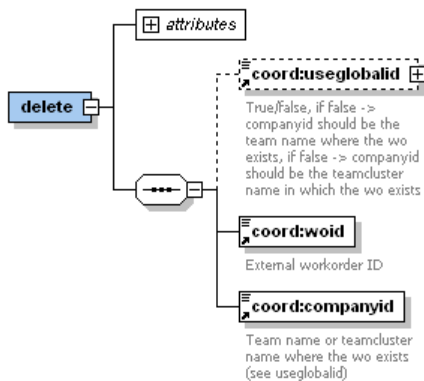
► Update work order (IN)

- Update a work order. Input message contains some of the properties for a work order; external ID and companyID are used for lookup of work order.



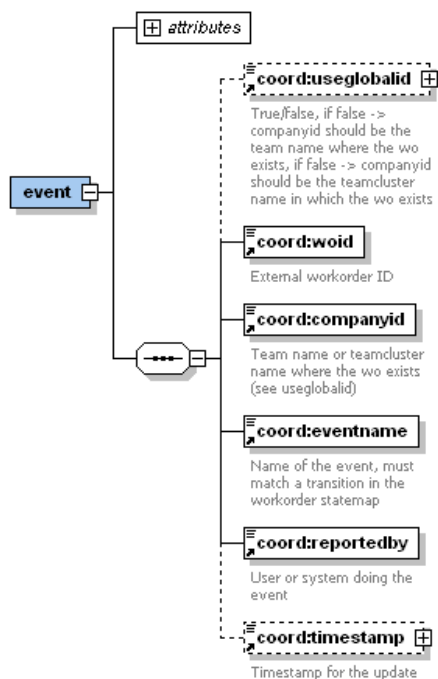
► Delete work order (IN)

- Delete a work order from the Coordinator server. Input message contains the *companyid* and *woid* of the work order to be deleted.



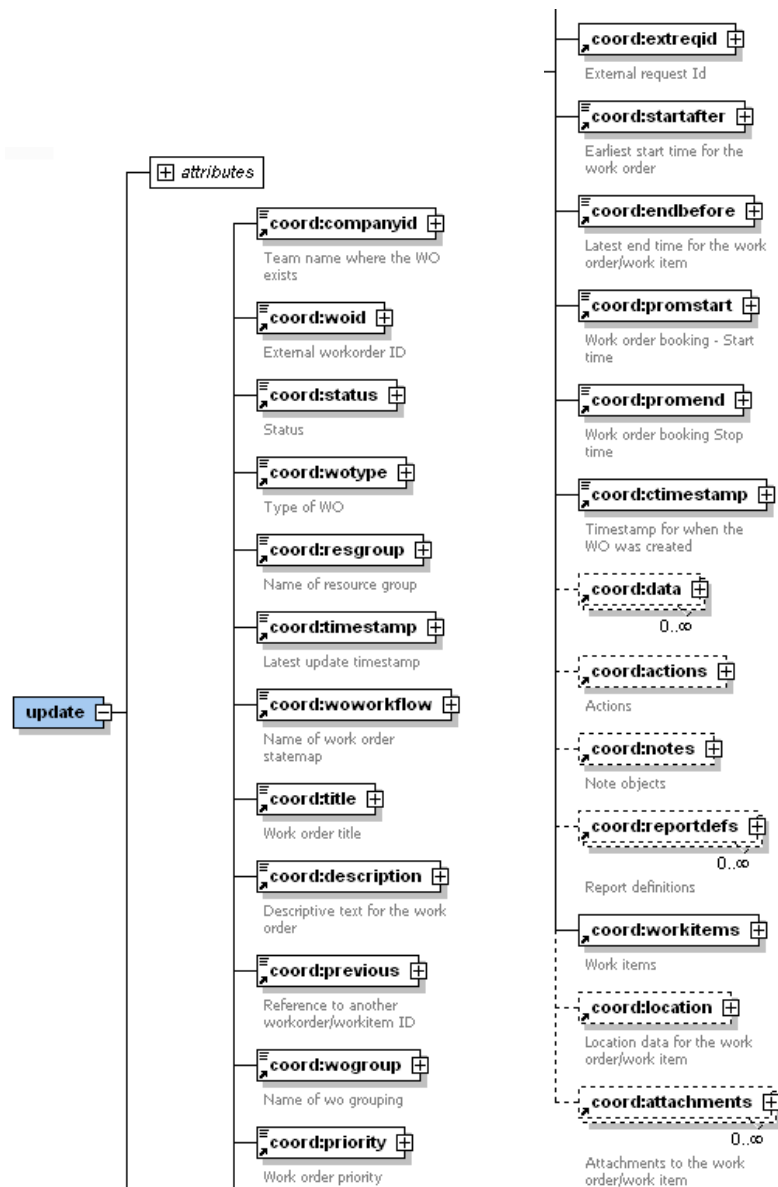
► Event work order (IN)

- Change state of the work order. Input message contains the companyID, external work order ID, the event name to be called (which has to be valid in the work order statemap), reportedby and timestamp.



► Update work order (OUT)

- When an update backend event occur in the Coordinator that require a notification of the back end system, an update work order message is sent to the backend system.



The custom xml part of a work order/work item can be partially added/updated/removed via the CWI interface and the *work order update* operation according to:

AddCustomXML:

The customxml part to be added is defined in:

```
<coord:xpath>/informationlist/blocklist</coord:xpath>
```

and the data to be added is defined by:

```
<coord:newXML>
```

```
<coord:block name = "custom" number = "aa">
```

Example of adding CustomXML:

```
<coord:addcustomxml coord:type = "struct">
  <coord:xpath>/informationlist/blocklist</coord:xpath>
  <coord:data>
    <coord:newXML>
      <coord:block name = "custom" number = "aa">
```

```
<coord:information name = "CustomerTaskID" value = "aa"/>
<coord:information name = "ProductCategory" value = ""/>
<coord:information name = "Description" value = ""/>
<coord:information name = "WareHouse" value = ""/>
<coord:information name = "SerialNumber" value = ""/>
</coord:block>
</coord:newXML>
</coord:data>
</coord:addcustomxml>
```

UpdateCustomXML:

The customxml part to be updated is defined in the

```
<coord:xpath>/informationlist/blocklist/block[@name='xxx']</coord:xpath>
```

Example of updating CustomXML:

```
<coord:updatecustomxml coord:type = "struct">
  <coord:xpath>/informationlist/blocklist/block[@name='SalesLine']</coord:xpath>
  <coord:data>
    <coord:newXML>
      <coord:block name = "SalesLine" number = "dest">
        <coord:information name = "CustomerTaskID" value = "snark"/>
        <coord:information name = "ProductCategory" value = ""/>
        <coord:information name = "Description" value = ""/>
        <coord:information name = "WareHouse" value = ""/>
        <coord:information name = "SerialNumber" value = ""/>
      </coord:block>
    </coord:newXML>
  </coord:data>
</coord:updatecustomxml>
```

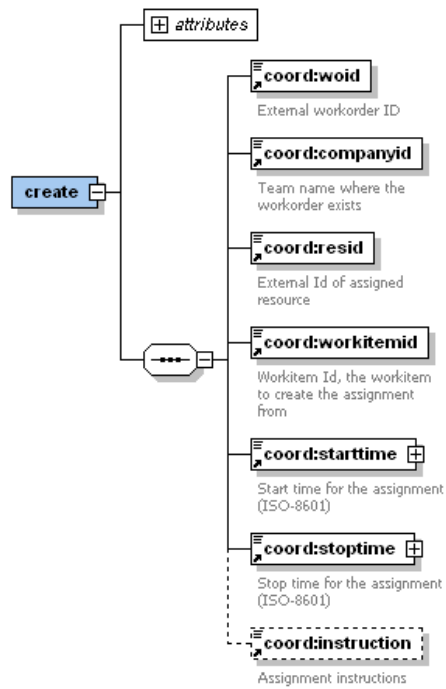
RemoveCustomXML:

Example of removing CustomXML:

```
<coord:removecustomxml coord:type = "struct">
  <coord:xpath>/informationlist/blocklist/block[@name='CustomerMaterial']</coord:xpath>
</coord:removecustomxml>
```

2.2.2 Assignment**► Create assignment (IN)**

- Create an assignment in the Coordinator server. Input message contains companyID, external work order ID, external resource ID, workitem ID, start time, stop time and instruction.



Appendix A - SCHEMAS and WSDLs

Create work order schema

http://coord.ismobile.com/coordinator/cwi/create_wo/releases/1.0.6/create_wo1.xsd

Update work order schema

http://coord.ismobile.com/coordinator/cwi/update_wo/releases/1.0.8/update_wo1.xsd

Event work order schema

http://coord.ismobile.com/coordinator/cwi/event_wo/releases/1.0.4/event_wo1.xsd

Delete work order schema

http://coord.ismobile.com/coordinator/cwi/delete_wo/releases/1.0.4/delete_wo1.xsd

Update work order output schema

http://coord.ismobile.com/coordinator/cwi/update_wo_out_options/releases/1.0.4/update_wo_out_options1.xsd

Create assignment schema

http://coord.ismobile.com/coordinator/cwi/create_asgt/releases/1.0.3/create_asgt1.xsd

Acknowledge

<http://coord.ismobile.com/coordinator/common/acknack/releases/1.0.2/acknack1.xsd>

WSDL

<http://coord.ismobile.com/coordinator/cwi/ws/releases/1.0.8/cwi.wsdl>