Blå Coordinator

Coordinator Information Interface

1.0.4

Table of Contents

1 ABOUT THIS DOCUMENT 1
1.1 General 1
1.2 Related documents 1
1.3 Intended audience 1

2 INTERFACE OVERVIEW 2
2.1 Object model 3
2.1.1 External request 3
2.1.2 Mimedata 4
2.1.3 Service object 5
2.1.4 Syncdata 8

APPENDICES 10
Appendix A - SCHEMAS and WSDLs 10
Create Syncdata 10
Update Syncdata 10
Delete Syncdata 10
Create Serviceobject 10
Update Serviceobject 10
Delete Serviceobject 10
Create Mimedata 10
Delete Mimedata 10
External Request response (IN) 10
External Request (OUT) 10
Acknowledge 10
CII WSDL 10

Coordinator Information Interface

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1 About This Document

1.1 General

This document describes the concept of the Coordinator Information Interface (CII).

1.2 Related documents

- Coordinator Workflow Interface
- Coordinator Resource Interface
- Coordinator Integration Adapter Installation and Configuration

1.3 Intended audience

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

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2 Interface overview

This document describes how to perform XML based messaging operations via the Coordinator Resource Interface on different objects included in the Coordinator object model.

The Coordinator Information Interface (CII) is XML based and provides a simple, powerful and secure connection between 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. The information may be transported using MQ messages or by SOAP messages by using the CII web service.

CII is mainly used to provide outgoing External requests messages from the Coordinator server to the backend system. The backend system may choose to respond to the request via this interface or for example with a create work order message via the CWI interface.

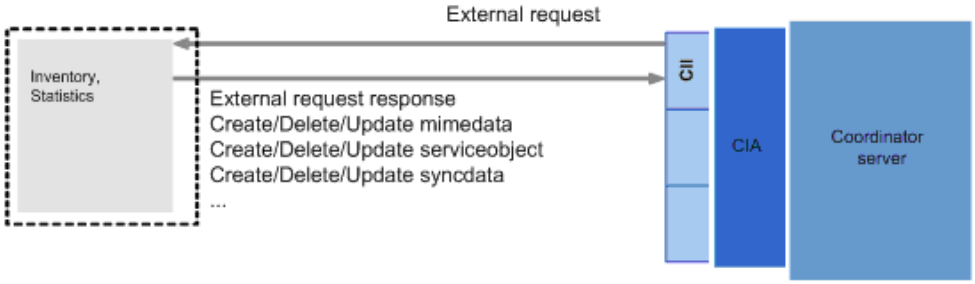

Figure - CII

The information 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 of the operations, the backend system submits a XML based message to the Coordinator server. Each incoming operation (IN) supports acknowledgement functionality. If Blå Coordinator receives a message that asks for an acknowledgement, a return message is sent back to the sending system.
CRI operations are defined according to xml schemas and WSDL definition as listed in Appendix A - SCHEMAS and WSDLs

Typical message exchange sequences for the CII are:

Send message to Blå Coordinator:

1. The backend system receives the message.
2. Depending on the rules in the backend system a certain response message should be prepared, containing the information requested by the user in Coordinator. There are two types of response messages for an External request. Either a generic External Request response as described in this document or a Create Work order as described in the CWI documentation.
3. The Coordinator Integration Adapter receives the messages from the back end system or via any integration middleware.
4. The Coordinator Integration Adapter uses the Blå CII to pass the request with its parameters to the Blå Coordinator server for processing.

Receive message from Blå Coordinator:

1. When a user in Coordinator wants to send an external request to a backend system for let's say a document, a stock report or a new work order the user creates a new external request. This external request is stored in the Coordinator database.
2. An XML message is generated out of the external request and sent to the back end system.

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2.1 Object model

The Coordinator Resource Interface interacts with the organization data via *object*s 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, description and so on.

2.1.1 External request

An external request is an object that represents a request for information or a work order; it is created by a user from Coordinator client applications like the Pocket and Dashboard. External requests can be used for offline Work order creation request and after it has been confirmed by a back end system, it works as an ordinary Work order in the system. The External request can also be defined for a specific Service object in the system; i.e any user having access to Service objects may also create defined External requests for that Service object. To provide this External request functionality, an External request xml definition is created similar to a Report definition. The xml-definition is loaded into the system in the same way as for a Report definition, Statemap definition etc.

When a user creates an External request out of an External request definition (similar relationship as report-report definition), the External request will result in an xml-message being sent out of the Coordinator through the CII integration interface where the backend system can listen for External requests. The backend system can then either submit a create work order integration message through the CWI (with External request id included in the create message), or it can send a External request response message where the backend system sends one or more files as attachments in the response message. The attachments can then be opened in the clients with the associated program for the attached file type.
The External requests will be deleted either manually or by a timer that is set by the *daysUntilDelete* attribute in the External request definition.

The CII supports the following operations for External request:

- **External Request (OUT)**
  - External requests messages from the Coordinator server to the backend system. The backend system may choose to respond to the request via the CRI interface and its response operation, or with a Create work order message through the CWI interface**.**

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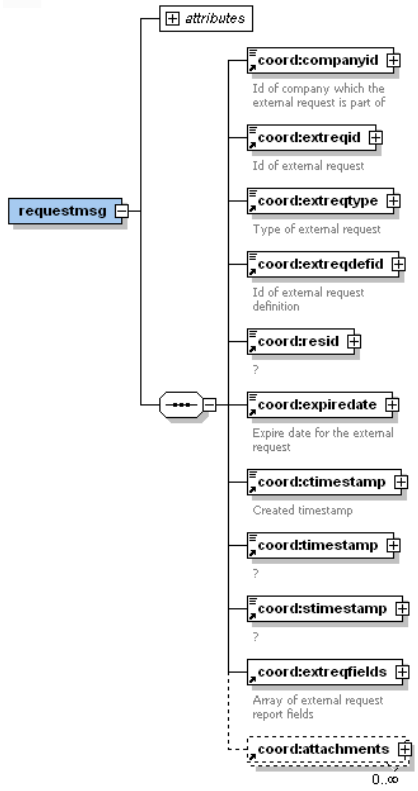

Figure – Schema overview – External request operation

- **External Request response (IN)**
  - The response to an external request is either a new work order as described in CWI documentation, or an input message containing the id of the request and a number of attachments representing the requested data. Attachments are sent as BASE64 encoded text inside the xml-document.

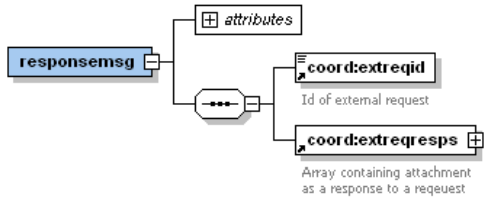

Figure – Schema overview – External request response operation

2.1.2 Mimedata

Basically the same as an Attachment but the Mimedata object is global and can be referenced from work orders in CWI while attachments are isolated to the object they are related to.
CII supports the following operations for the Mimedata:

- **Create Mimedata (IN)**
  - Creates a global Mimedata object. Coordinator has support for sharing Mimedata objects for either a Team or TeamCluster. This means that by using this operation you will create a Mimedata object that can be referenced by multiple work orders or service objects in the system. The Mimedata reference is set by adding a *mimedataref* attribute in the create/update work order/service object operations. This means that there will not be a new file created and downloaded by the clients for each work order. This is the difference from the Attachment functionality, which is isolated to a single work order or Serviceobject, not possible to reference from other work orders or service objects.

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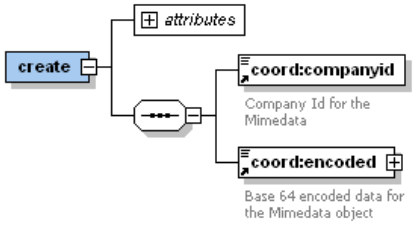

Figure – Schema overview – Create Mimedata operation

- **Delete Mimedata (IN)**
  - Deletes the global Mimedata object

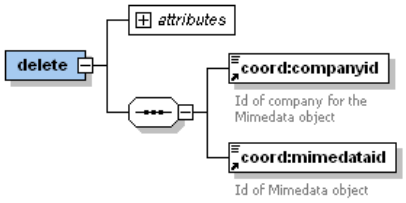

Figure – Schema overview – Delete Mimedata operation

2.1.3 Service object

A Service object in the Coordinator system maps to some real world "service object" that is part of the service commitments for a group of resources (Resource Group) in a service organization (Coordinator team). A Service object typically gets recurring maintenance/visits and contains data that otherwise would be duplicated on many Work orders if they relates to the same Service object.
Service Objects are normally visible for the Dispatcher in the Cockpit and WebCockpit clients and for a Team administrator in the Submarine client. The Service Object contains attributes like current status, what activities to perform on the object and which External Requests that may be created for the Service Object.

CII supports the following operations for Service object:

- **Create Serviceobject (IN)**
  - Creates a service object in the Coordinator database. Service objects can be referenced from work orders to get additional data on work orders related to a certain service object. Information that is sent in the create operations is for instance ID, name, type, status, attachments and CustomXML.

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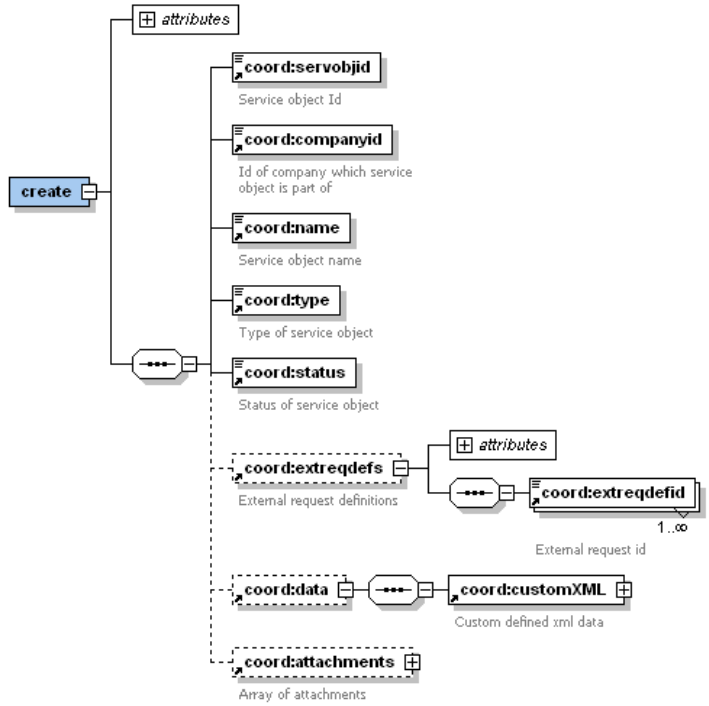

Figure – Schema - Create service operation

- **Update Serviceobject (IN)**
  - Updates service object data

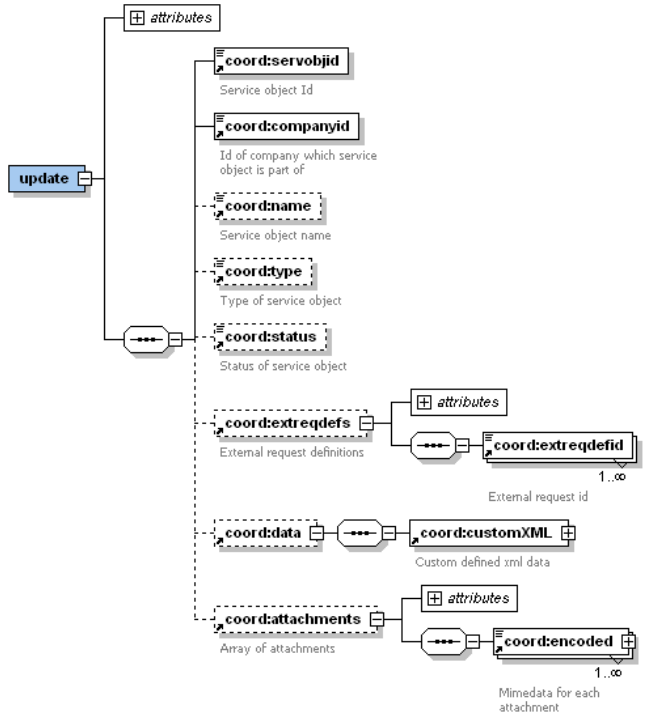

Figure – Schema - Update service operation

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- **Delete Serviceobject (IN)**
  - Delete a service object by its ID

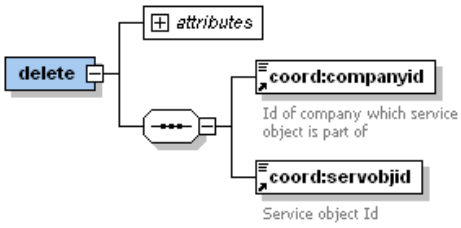

Figure – Schema – Delete service operation

2.1.4 Syncdata

Synchronization data or "Syncdata" in the Coordinator is xml based information that can be used to dynamically provide updated parts list, stock info etc to the mobile resources.
Syncdata is typically accessed from a report, like in a dropdown where the different options always may be up to date since they are dynamically provided within a sync data source file. The Syncdata file is inserted in the system via the create syncdata operation or via the CMC client. With the namespace (coord:ns) attribute set to a specific Coordinator client, the Syncdata is only accessible from that specific client.

CII has support for the following operations on Syncdata:

- **Create Syncdata (IN)**
  - Create a syncdata object in Coordinator database. The syncdata can contain any xml and can be referenced in xpaths on Work orders or Report definitions. Can be parts list, stock info etc. Contains name and namespace in addition to the xml-data.

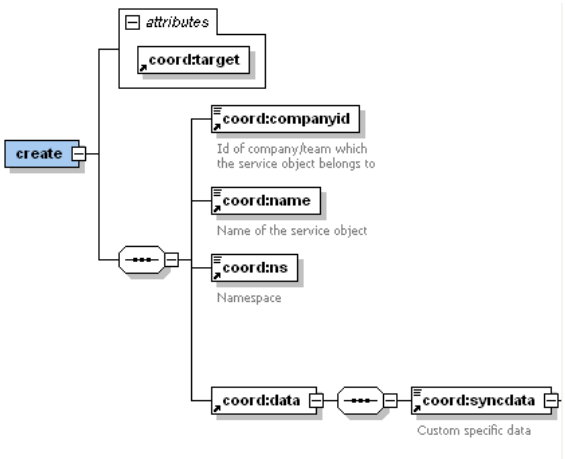

Figure – Schema – Create syncdata operation

- **Update Syncdata (IN)**
  - Update a syncdata object. Clients will get notifications that the syncdata objects they have downloaded have been updated and will do a re-sync

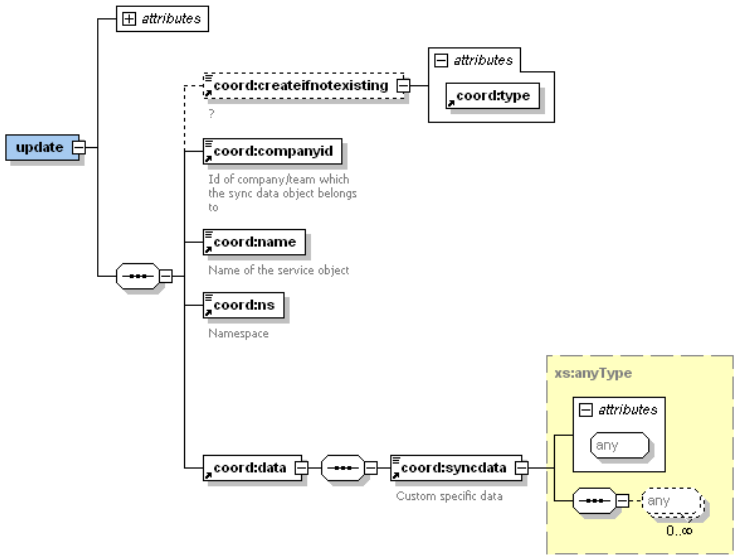

Figure – Schema – Update syncdata operation

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- **Delete Syncdata (IN)**
  - Delete a syncdata object by name

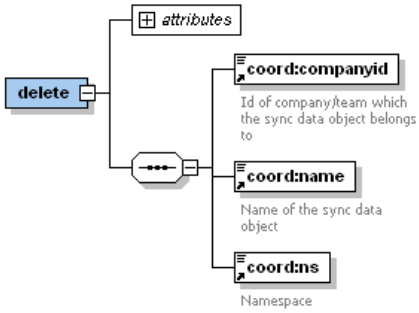

Figure – Schema – delete syncdata operation

Appendices

Appendix A - SCHEMAS and WSDLs

Create Syncdata
http://coord.ismobile.com/coordinator/cii/create_syncdata/releases/1.0.2/create_syncdata1.xsd

Update Syncdata
http://coord.ismobile.com/coordinator/cii/update_syncdata/releases/1.0.3/update_syncdata1.xsd

Delete Syncdata
http://coord.ismobile.com/coordinator/cii/delete_syncdata/releases/1.0.2/delete_syncdata1.xsd

Create Serviceobject
http://coord.ismobile.com/coordinator/cii/create_servobj/releases/1.0.4/create_servobj1.xsd

Update Serviceobject
http://coord.ismobile.com/coordinator/cii/update_servobj/releases/1.0.4/update_servobj1.xsd

Delete Serviceobject
http://coord.ismobile.com/coordinator/cii/delete_servobj/releases/1.0.2/delete_servobj1.xsd

Create Mimedata
http://coord.ismobile.com/coordinator/cii/create_mimedata/releases/1.0.2/create_mimedata1.xsd

Delete Mimedata
http://coord.ismobile.com/coordinator/cii/delete_mimedata/releases/1.0.2/delete_mimedata1.xsd

External Request response (IN)
http://coord.ismobile.com/coordinator/cii/ext_request_resp/releases/1.0.2/ext_request_resp1.xsd

External Request (OUT)
http://coord.ismobile.com/coordinator/cii/ext_request_out/releases/1.0.2/ext_request_out1.xsd

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

CII WSDL
http://coord.ismobile.com/coordinator/cii/ws/releases/1.0.7/cii.wsdl

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