DEVELOPERS GUIDE

LOGTRADE CONNECT DYNAMICS NAV

LogTrade

2019-03-05

ABSTRACT

This documentation is targeted towards developers and describes technical aspects of LogTrade Connect and integration with standard NAV.

The reader of this document should first read the user's guide which explains the application, how it communicates with LogTrade, the Setup Wizard, fields in tables etc.

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1   LOGTRADE WEBSERVICE INTERFACE

All communication with LogTrade is through webservice calls. Be enabling the message log in the advanced setup all communication with LogTrade including request-/response xml data can be monitored.

The description of LogTrade webservices can be found here:
http://webservices.logtrade.info/distribution/logtrade.distribution.v3.asmx

The description of the LogTrade Control Tower can be found here:
http://webservices.logtrade.info/distribution/logtrade.controltower.v2.asmx?

LogTrade Connect use the following LogTrade web services:

Webservice method	Description
GetLicensedForwardersAndProducts	Returns a list of forwarders and products included in the LogTrade license.
	This webservice is called from the Setup Wizard and from the list of forwarders to download new forwarders and/or products.
GetAllowablePackageTypes	Returns a list of allowable package types for a forwarder product.
	This webservice is called subsequentially for each product when GetLicensedForwardersAndProducts is called
GetAllowableShipmentServices	Returns a list of allowable services for a forwarder product.
	This method is called subsequentially for each product when GetLicensedForwardersAndProducts is called to enable setup based on shipment services.
	When adding a service to a consignment this method is called based on the actual consignment to retrieve a list of allowable services for the consignment.
GetAllowableTermsOfDeliveryCodes	Returns a list of allowable terms of delivery codes for a forwarder product.
	This method is called subsequentially for each product when GetLicensedForwardersAndProducts is called to enable setup where NAV shipment terms are linked to LogTrade delivery terms.
GetPrintQueueIds	Returns a list of print queues.
	This method is called by the Setup Wizard and from the list of print queues.
GetShipmentTemplates	Returns a list of shipment templates.

	This method is called from the Setup Wizard and from the list of shipment templates.
GetSenderAddressTemplates	Returns a list of sender address templates.
	This method is called from the Setup Wizard and from the list of sender addresses templates.
CreateOrUpdateUser	This method is called from the LogTrade Connect User Setup list to create or update users in LogTrade.
CreateShipmentEX	This method is called when sending the consignment to LogTrade.
	When the user clicks on "Send" or "Print" on the consignment the function SendConsignment in codeunit 12057520 is called which in turn executes codeunit 12057524 (or any other codeunit for sending consignments specified in the advanced setup).
	If the datetime field "Sent to LogTrade" in the consignment header is empty the command "Create" is used in the webservice call, otherwise "Replace" is used. "Create" can only be used once for one specific consignment number.
	A consignment can be sent to LogTrade with different statuses: • *Saved*. The consignment data is saved and accessible in the LogTrade Web GUI. • *Prepared*. The consignment is validated against constraints on weight, volume, post code rules etc. Normally labels are printed at this stage. • *Released*. This consignment is validated as above and also released for transport.
GetPriceQuote	This method is called from the consignment to get the transport cost for a consignment. It can also be called from a sales order by using the function "GetPriceQuote" in the Standard NAV integration codeunit (12057533).
BookShipments	This method is called from a consignment to book the transport.
ChangeShipmentStatusEX	This method is used to release a prepared consignment. It can be called from the Consignment worksheet for batch usage or from a single consignment.
GetAgentAddresses	This method is called from a consignment to select an agent from the list of agents returned by the webservice call.
GetShipmentStatus	This method returns the status of a consignment. In a scenario where a consignment is sent to LogTrade with status "Saved" e.g. a 3:rd party warehouse can continue to work on the consignment in the LogTrade Web GUI and prepare/release the consignment. This method can then be called from the consignment worksheet to update the NAV data. The update can also be automated with the Job Queue by scheduling codeunit 12057603.

GetTimeTable	This method is called from a consignment to get the pickup and delivery date/time from the forwarder. The method can also be called from a sales order by calling the function GetTimeTable in the Standard NAV integration codeunit (12057533).
LogTradeAdvice	This method creates an SMS message and is called from the SMS functionality in LogTrade Connect.

LogTrade Connect use the following LogTrade Control Tower web services:

Webservice	Description
GetExportedInvoices	This method returns a list of invoices and is called from the list of shipping agent invoices (page 12060680). Any new invoices are imported to the company generic table LogTrade Forwarder Inv. Status (table 12060718) together with the invoice xml as blob data. If the invoice xml data contains a reference to a package id that exist on a released shipment in the current company the invoice data is imported to table 12060675/ 12060676.
GetStatus	This method returns tracking information for a released consignment and can be called from a released consignment or the function TrackPackage in the Standard NAV integration codeunit (12057533).

2 INTEGRATION WITH STANDARD NAV

LogTrade Connect is fully functional without any changes in standard objects. However, a customer often wants to create a consignment directly from e.g. a sales order, warehouse shipment etc. To enable this codeunit 12057533 "LogTrade Std. NAV Integration" contains functions that can be access from standard NAV pages.

For NAV2013 a separate fob with "demo objects" are available with page actions for integration with LogTrade Connect.

For NAV2017 there's a separate extension with page actions in all relevant pages for integration with LogTrade Connect. This extension can be used together with LogTrade Connect implemented traditionally as imported objects or as an extension.

Function	Description
GetExportedInvoices	This method returns a list of invoices and is called from the list of shipping agent invoices (page 12060680). Any new invoices are imported to the company generic table LogTrade Forwarder Inv. Status (table 12060718) together with the invoice xml as blob data. If the invoice xml data contains a reference to a package id that exist on a released shipment in the current company the invoice data is imported to table 12060675/ 12060676.
CreateFromSalesOrder	Creates a consignment based on a sales order
CreateFromSalesReturnOrder	Creates a consignment based on a sales return order
CreateFromTransferOrder	Creates a consignment based on a transfer order
CreateFromPurchaseOrder	Creates a consignment based on a purchase order
CreateFromPurchaseReturnOrder	Creates a consignment based on a purchase return order
CreateFromServiceOrder	Creates a consignment based on a service order
CreateFromInvtPick	Creates a consignment based on an inventory pick
CreateFromCustomer	Creates a consignment based on a customer
CreateFromVendor	Creates a consignment based on a vendor
CreateFromEmployee	Creates a consignment based on an employee
CreateFromResource	Creates a consignment based on a resource
CreateFromRespCenter	Creates a consignment based on a responsibility center
CreateFromLocation	Creates a consignment based on a location

CreateFromWhseShipment	Creates a consignment based on warehouse shipment lines. One consignment per unique recipient, shipping agent/-service and currency code is created (by the function CreateWhseShipmentRecipients in codeunit 12057520). If there are more than one source documents for a recipient source document 2..n are linked to the consignment as "Linked Source Documents". This function respects any filter that has been set on warehouse shipment line when calling the function.
CreateFromWhseShipmentLine	Creates a consignment based on a warehouse shipment line. The source document number is fetched from the warehouse shipment line and all lines within the same warehouse shipment for the same source document are used for calculations of weight, volume, items etc.
CreateFromWhsePick	Creates one or more consignments based on a warehouse pick.
CreateFromSalesShipment	Creates a consignment based on a sales shipment
CreateFromReturnShipment	Creates a consignment based on a purchase return shipment
CreateFromTransferShipment	Creates a consignment based on a transfer shipment
CreateFromServiceShipment	Creates a consignment based on a service shipment
TrackPackage	Takes a tracking number as parameter, finds the corresponding released consignment and call LogTrade ControlTower to get tracking information back and display that in a page.
GetTimeTable	Takes source document type and numer as argument, creates a temporary consignment header and calls LogTrade to get date/time for pickup and delivery back and presents that to the user.
GetPriceQuote	Takes source document type and numer as argument, creates a consignment header with a formatted timestamp as "No.". This consignment is then used for calling LogTrade for a price quote. When the price quote page closes the consignment is deleted.
OnDeleteShipAgent	This function can be called from the delete trigger in table 291 to remove the shipping agent code from the linked forwarder.
OnDeleteShipAgentService	This function can be called from the delete trigger in table 5790 to remove the shipping agent service code from the linked forwarder product.

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