

Web Services

Memo

NAV 6.4

© Copyright 2012, LS Retail ehf. All rights reserved. All trademarks belong to their respective holders.

Contents

1	Ove	rview	. 1
	1.1	Requirements	. 1
	1.2	Member Management Module	. 1
	1.3	Use	. 1
2	Web	Services introduced in LS Retail NAV 6.2	. 1
3	Web	Services in LS Retail NAV 6.3	. 1
	3.1	New Functionality in LS Retail NAV 6.3	. 1
		3.1.1 Addtions and Changes to Codeunits	
		Web Service Setup	

Author Date : AOB : October 31, 2013

1 Overview

1.1 Requirements

The POS should be able to solve all transaction server requests through web server requests. This is done by adding new web requests to the existing web request module. For this to work on the POS all the requests have to be both implemented at the web server side and the web client side. The POS setup should be able to control for each request whether it is done by transaction server or by web server and when using the web service the request URI for each request shall be configurable.

1.2 Member Management Module

The Member Management module uses only Web Services and not Transaction Service.

1.3 Use

To monitor the web service communication, you use the **Web Service Monitor** that gives an overview over the communication between the offline call center and restaurant databases. The monitor window shows the latest result of the various processes going on and from here you can run the processes directly and check whether a call center or a restaurant are online through web services.

2 Web Services introduced in LS Retail NAV 6.2

The Web Service Framework introduced in the LS Retail NAV 6.2 is a set of table to define supported request and how their request and response xml are constructed. The module consists of:

- 1. Setup table to define if the module is active and some command Node Names to be used in xml documents.
- 2. Request setup table to define supported requests and if they are active or not.
- 3. Request xml setup table to define both request and response xml for each request.
- 4. Common support functions to read requests process and create response xml.
- 5. Report to print out xml document layouts.

When the web service module is activated for the first time and no request exists in the request table the system will create all the default requests. This is also valid if active later and no requests found. When each request is activated and xml setup is not found for the request (both request and response) the system will create default xml setup for both request and response document.

3 Web Services in LS Retail NAV 6.3

3.1 New Functionality in LS Retail NAV 6.3

The new functionality can be divided into 3 groups.

- 1. Implementing new requests at web service side.
- 2. Implementing new requests at web client side.
- 3. Implementing new web client functions as part of the POS Transaction Server Utility.



This modification include the ability to control for each of the 14 transaction server groups which requests are done through traditional transaction serve and which are done through the web services module. Each of the 14 groups have different numbers of web request to fulfill all request needed. The use should be able control which of each group web request to use, so for each group some of the request could be run a traditional transaction server request and others as web requests. This setup is controlled through the POS functional profile.

Web Request form 99008825 is found under LS Retail – POS, Profiles, Functionality Profiles, Profile button, select Web Requests.

This is a new list like form to show and control the 14 POS Functionality Profile web service groups. This form shows which web request are behind each transaction server group and gives the ability to activate and deactivate individual request for each group. For example for group 1 Send Transaction:

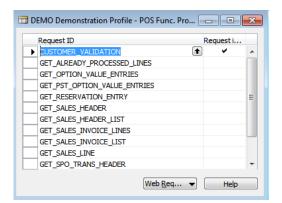
Request ID	Request i	
GET WORK SHIFT		
SEND_TRANS_HEADER		1
SEND_TRANSACTION		
SEND_WORK_SHIFT		

Form 99008826 _POS Func Profile Card is a new version of the POS Functionality Profile Card form the supports RTC, that is this is a RTC friendly version of the functionality card. Holds the same functionality as the original form, but filed have been arranged by frames to form fixed grouping for more controllable presentation.

Form 99008831 Web Request Type Server Ext. is a new list like form that show request type extended server setup.

Form 99008839 POS Func. Profile Web Requests is a new list like form the show requests that are available and active for a given functionality profile.





Form 99008949 POS Func. Profile Web Servers is a new list like form the show (chain) of web servers that the web client is allowed to use to fulfill web request in connection with a given POS functionality profile. It is found here: LS Retail – POS, Profiles, Functionality Profiles, Profile button, select Web Servers

	Priority	Local Req	Dist. Location	Description	
Þ	0		WEB	Hall Copmany Web	
_					
_					

Changes have been made to the **POS Functionalty Profile Card** on the Trans. Server tab at **LS Retail – POS, Profiles, Functionality Profiles, Trans. Server** tab:

DEMO Demonstration Profile -	POS Functionality Profile Card
General Amount Trans. Server	Data Director Windows Printing Staff & Logon Prepayment
General Amount Trans. Server Send Transaction Void Posted Transaction . Susp./Retr. Transaction . Susp./Retr. Transaction . Data Entries Data Entries Staff Validation	Data Director Windows Printing Staff & Logon Prepayment 0/4 Update Repl. Counter
	Profile Functions Help



This form is changed to support new web service functionality. New column that shows how may request out of total available are active for each group. By drilling down on this filed the user gets a list of all available request for this group and is able to either activate or deactivate individual requests. Add two new commands to the Profile menu button that is command to run the profile request setup form where all profile requests are accessible and command to run the general server setup form.

Changes have been made to the Distribution Location card at LS Retail – Scheduler, Distribution Location:

III HO Head Office - Distribution Location Card	- • •
General Replication Web Server	
Web Server	List F5 Distribution Group Membership Dist. Location Distribution Dist. Location Tables Dist. Location Fields Sublocations Application Server Setup List ICT Setup ICT Source Links ICT Transfer Links Show Batch Error Log Web Request Type Server Ext. System Log
Dis	Location V Functions V Help

This form is changed to support new web service functionality. Add new tab and fields to define web server information for this location. Add new command Web Request Type Serve Ext. to menu button Dis.Location to run the extended request type setup.

At LS Retail – BackOffice, Setup, Web Service Setup there is a changed form to support new web server and log functionality. Add new tabs and fields to define web server and log information. Add new command Web Request Type Serve Ext. to menu button Web service to run the extended request type setup.

Web Service Setup	
General Server Logs	
Only Local Request	
Service Name RetailWebServices	
Method Name WebRequest	
Web Server 172.22.4.3	
Company Name Hall Company	
Web Service URI http://172.22.4.3:7047/DynamicsNAV/	
Web Ser Help	
Web Requests	
Web Request Type Server Ext.	

The Web Request Setup form has now an additional Optional Comment column:



• 1			Source Type	Source	Node Name	Optional	Comment
	1	Тор	Text	Request	Request		
	2 F	ReqID	Text	Request_ID	Request_ID		
	21	Normal	Text	Request_Body	Request_Body		
	3 1	Normal	Text	Request_Type	Request_Type		By Trans. Range,By Statement Code
	3 1	Normal	Text	First_Trans_No	First_Trans_No		
	3 1	Normal	Text	Last_Trans_No	Last_Trans_No		
	3 1	Normal	Text	Statement_Code	Statement_Code		
-							

3.1.1 Additons and Changes to Codeunits

Codeunit 99009514 WS Default Data is a new codeunit to insert default data. This process used to part of the setup table but has now been move to separate codeunit, mainly because of the increase of requests and the needed to make both this and the normal process of the table more focusable.

Codeunit 99009515 Web Services Connection is a new codeunit to handle all needed web connections.

Codeunit 99001570 POS Transaction: Change to support new web service requests regarding transaction suspension and z-report.

Codeunit 99008900 POS Function: Change to support new web service requests regarding transaction suspension and loyalty points handling.

Codeunit 99008908 POS Data Client Utility. Change to support new web service request GET_POS_START_STATUS when used to solve request for TS POS Cash Mgt.

Codeunit 99008909 POS Transaction Server Utility. Change to support new web service requests. This codeunit acts as a connection point to the web services client depending on if the request should be solved as web service request or as transaction server request. This codeunit cover most of the connections with few exceptions.

Codeunit 99009510 Web Services: Extended and change to support different request types and to handle exceptions in more depth. Requests are now run in a separate codeunit in a protected mode and this codeunit now catches all exceptions (errors) and created a default response xml including the error as an answer to the request.

Codeunit 99009511 Web Requests: Extended and change to support new base web requests. This includes utilizing extended support from the WS Functions codeunit.

Codeunit 99009512 WS Functions: Extended and change to give better support for both web service and web services client. This includes function for repeatable actions and other support function to simplify the coding of individual request.

Codeunit 99009513 Web Requests: Extended and change to support new base web requests. This includes utilizing extended support from the WS Functions codeunit.

3.2 Web Service Setup

To set up the Web Service, for instance for the Member Management module, there are a few paths that are useful:

- 1. Go to LS Retail BackOffice, Setup, Web Service Setup. In this form all the common nodes, top, ID and response is defined.
- 2. On the General tab make sure that the field Web Service is Active is checked.



📰 Web Service Setup	
General Server Logs	
Web Service is Active 📝	
Request Top Node Request	
Response Top Node Response	
Request ID Node Request_ID	
Response Code Node Response_Code	
Response Text Node Response_Text	
Web Ser Functions	 Help

3. On the Server tab the Web Server URI is entered.

📰 Web Service Setup
General Server Logs
Only Local Request
Service Name RetailWebServices
Method Name WebRequest
Web Server
Company Name
Web Service URI
Web Ser ▼ Functions ▼ Help

To Activate: In the Web Service Setup form you can activate or deactivate the web service module. If no request exist in the WS Request table when you activate the system will create all the default requests.

To Activate Requests: Go to LS Retail – BackOffice, Setup, Web Service Setup. From the Web Service button select Web Requests. The WS Request appears. In this form you can activate or deactivate web requests. If no xml request setup exists in the WS Request Setup table the system will create the default xml request and response setup for the request. On the list form there is a **Request** button where requests are set up under **Request/Response xml**.



Request ID	Description	Web Req
CUSTOMER VALIDATION	Customer credit validation	~
DELETE_POSTRANS_BACKUP	Delete POS Trans. Backup	¥
DELETE_POSTRANS_SUSP	Delete POS Trans. Suspension	~
GET_ALREADY_PROCESSED_LI	Get Already Processed Lines (×
GET_CONTACT	Get Contact	¥
GET_CONTACT_BUS_RELATION	N Get Contact Business Relation	~
GET_CUSTOMER	Get Customer	~
GET_CUSTOMER_INVOICES	Get Customer Invoices	¥
GET_DATA_ENTRY	Get Data Entry	¥
GET_DATA_ENTRY_BALANCE	Get Data Entry Balance	~
GET_INVENTORY_LOOKUP	Get Inventory Lookup	~
	Request 🔻	Help
	Request x	ml
	Response	vinal

When activating the request the system creates the default setup for each request.