

Introduction NAV Module with Dynamicweb

NORRIQ lwi for Dynamicweb provides integration between Microsoft Dynamics NAV and Dynamicweb eCommerce.

The integration is mainly focused on two areas:

- Maintaining webshop metadata from within NAV and thereby reusing existing information
- Making business logic from NAV available to the webshop.

Metadata is updated via XML export/import while business logic like customer specific prices are calculated via real-time queries to NAV from eCommerce.

Architecture

The term “module” does not relate to a specific installation but to a logical group of functionality.

Depending on the infrastructure, more modules could be installed on the same server. For installations with medium security, you could install the NAV(Communication Control for NAV) and the Communication module(N-lwi manager) on the same server while in installations with high security requirements, theCommunication module would probably be installed on a server within a DMZ.

The Communication and NAV modules need to exchange data via the file system, either on a local disk if both are installed on the same server or via a file share.

Core functionality NAV integration module

The main purpose of this module is to make webshop maintenance as smooth as possible, delivering existing information and business logic from Dynamics NAV direct to the web.

In addition to data maintenance, the webshop should reflect customer specific prices as defined in NAV where relevant, including quantity, line and invoice discounts. This is done through live requests from the eCommerce solution to NAV.

Data maintenance is handled via export/import of XML files, generated from NAV. Each day at a predefined time, a NAS will initiate a full export. This export contains information necessary to populate a webshop in Dynamicweb eCommerce. Some of the information comes from existing NAV data (item information) while other is taken from the support tables installed with N-lwi, e.g. webshop categories and users.

The export does not contain detailed information about pricing – only a “suggested retail price” is included,taken from the “Unit Price” field in the item card.

When the NAS have completed generating the export file, it is saved to a local file folder or share.

The NlwiManager checks the folder for export jobs. If export files are present, the Manager will contact Dynamicweb for a pipeline execution list prior to transferring the export file to Dynamicweb using FTP.

After the file is transferred successfully, the import activities from the execution list are run through a pipeline runner on Dynamicweb to populate eCommerce.

Important: If FTP transfer of the export file fails, the pipeline runner will not be activated.

With a running shop, things starts to get a bit more complex. One of the goals is to be able to show “live” prices when a customer logs into the website. Since it is possible to define customer prices in a large number of ways in NAV, it would be next to impossible to export a price matrix containing this information.

Things get even more complicated if the NAV system has been modified in relation to the order/pricing process (and usually most installations have!), that would require custom modules to be written to handle that logic from Dynamicweb.

The live integration part of N-Lwi requests prices from NAV in the customer context of the logged in webshop user. But the integration also handles stock-levels witch is crucial for many companies

NAV module

At least one Navision Application Server (NAS) needs to be available for the integration. Note that a NAS is dedicated to a single company within the NAV database, so if multiple webshops are running for multiple companies, you must have additional NASs.

Two codeunits are started from NAS, one for export and one for real-time queries. Both could be started by the same NAS but note that a NAS can handle only one task at a time, meaning that it is not able to answer real-time queries while running an export job.

The typical setup involves one NAS with two startup parameters. The export runs automatically once every 24 hours, mostly at night. The problem with not being able to serve live price and order requests is therefore minimized. However, in some cases shops are forced updated during daytime, however a two NAS setup, one NAS for live requests and one NAS for exports, could ensure live requests being served at all times.

For webshops with high load, you could install multiple NASs to handle real-time queries.

The real-time codeunit uses the NORRIQ Communication Automation Control that needs to be installed

on the same server as the NAS.

Communication module

The NORRIQ Iwi AppManager acts as a communication gateway between NAV and Dynamicweb.

Upon service initiation the manager will contact NAV through the running NAS for configuration details.

When the manager detects a new metadata export from NAV, it will transfer the xml file to

Dynamicweb using FTP and the import scripts will be started on FTP completion.

Incoming requests from Dynamicweb will be sent to an appropriate NAS for execution.

The manager also checks Dynamicweb for failed orders, and will FTP found orders to the local export directory, for NAV processing.

System Requirements

Microsoft Dynamics NAV:

Version 5.01+ is supported by NORRIQ, but it's possible to adjust the module the to run on all previous versions of NAV.

NAV supporting Navision Application Server (NAS)

Server Operating System:

Windows 2000 Server or newer

Microsoft .NET framework version 2