

N.E.W.S.-WMS General Description

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1 Overview

1.1 Glossary

The following terms and abbreviations are used in the document:

WMS	Warehouse Management System
HS	Host System - ERP system or CRM sending orders
PC	Personal computer
RF	Radio frequency terminal
OS	Operation system
DB	Database
HW	Hardware
SW	Software
UI	Users Interface
ASN	Advanced shipment notice
SKU	Stock Keeping Unit
TU	Transport Unit - means of storing and transporting SKUs
WDC	Weight Dimension Characteristics. Set of attributes characterising an object (weight, overall dimensions, volume)
UOM	Unit of Measure

1.2 General Information

N.E.W.S.-WMS is intended for automation of business processes within warehouses. It includes the areas of warehouse resource management, warehouse configuration, task management.

1.2.1 Architecture

Architecture of N.E.W.S.-WMS is built on three-level principle.

- the first component (part of the system visible to users) is a web-interface which is used for performing input, changes and deleting of data. It allows a user to perform different operations and view their results. This component is accessible on a PC and RF.
- the second component (the part of system hidden from users), the database server, performs data storage. The user through the client application initiates procedure of request of the select, input, change or removal of data in a DB.
- the third component - the business logic (Set of "tasks" and "processes" which are provided by specialized programs) carries out data processing, initiated by the user, and returns the processed data DB, reporting to the user by means of the client application about completion of request.

1.2.2 Implementation purposes

- active warehouse management;
- increase in speed of a pick of items;
- receipt of exact information on the items location in a warehouse;
- effective management of the items having limited expiration dates;
- receipt of the tool for increase of efficiency and development of processes in handling of items in a warehouse;
- optimization of use of warehouse areas.

1.2.3 Overview

The area of a warehouse divides into zones by types of technological operations for the automation of processes: receiving, placement, storage, handling and shipment of items. This allows to order work of personnel on different parts and effectively to distribute spheres of responsibility.

At an implementation stage in system the description of physical characteristics of a warehouse, parameters of all used equipment and the rule of work with it is brought.

To each storage location the storage address, use type (picking, storage, etc.), a storage type (piece, box, pallet), the size and amount of location, storage restriction is appointed (flammable, dangerous, fragile, etc.)

The system considers all requirements to storage conditions in case of distribution of storage locations for the items arriving on a warehouse. For example, humidity, temperature condition, expiration dates, producers, implementation terms, suppliers, rules of compatibility and any other parameters can be considered.

All arriving items are marked with barcodes. Besides, in system the description of various characteristics of items is kept: physical attributes, date of production, expiration dates, lots code.

Carrying out technological warehouse operations under the control of the system is based on barcode data of items, storage locations, the transport units. Warehouse employees are equipped with radio terminals of input-output of data which represent the portable computer communicating with the server of system on a radio channel. The system can use any of the existing types of codes or print labels with an internal barcode.

N.E.W.S.-WMS automatically selects storage locations for the received items and generates tasks for warehouse employees. Tasks show up on the screen of radio terminals in the form of elementary step-by-step commands for each individual employee.

The system develops optimal routes of movement of equipment on the territory of a warehouse that allows to reduce idle running loading equipment. On execution of operations, the system assigns the equipment, the use of which best fits the task at hand. Task performance is confirmed by scanning of a barcode. Thus, the system controls all actions of the employee and allows to exclude almost completely a possibility of wrong placement or wrong completing of the order.

In system, all information on location of items, availability of them in a warehouse, actions of employees and the made operations is instantly updated. By results of work or to a warehouse condition the system allows to create different reports.

1.3 Overview of the N.E.W.S.-WMS system

The N.E.W.S.-WMS suggests the following supply chain stock management components:

- Inbound logistics;
- Storage management;
- Outbound logistics.

1.3.1 Inbound logistics

Advanced shipment notices (ASNs) offer a form of collaboration that speeds the inbound process by enabling to receive information about entire inbound loads, without entering individual line information. ASNs may contain such information as purchase order number, item number, item serial number, item lot number, and so on.

When products are received, N.E.W.S.-WMS can direct users to start placement procedure according to the pre-defined business rules engine and strategies.

The list of the inbound logistics tasks supported by N.E.W.S.-WMS:

- Receiving;
- Inbound receipt;
- Quality control;
- Bar code printing;
- Directed placement and storage optimization.

1.3.2 Storage

N.E.W.S.-WMS provides advanced products movement tracking tools throughout a warehouse, which improve stock management. It also provides advanced lot and serial attribute tracking, quality control status of products as well as advanced storage space utilization capabilities.

The summary of the storage and facility management tasks supported by N.E.W.S.-WMS is:

- TU management;
- Automatic ID labels generating and printing;
- Replenishment management;
- All operations with products are TU based.
- Task dispatching;
- Product quality control status management;
- Lot and series genealogy and tracking;
- Production and expire dates monitoring;
- ABC classification and analysis.

1.3.3 Outbound logistics

N.E.W.S.-WMS automates and helps to manage warehouse picking tasks. These tasks include the following:

- TU management;
- Automatic ID labels;
- Assigning tasks to pickers;
- Direction to pick locations based on picking strategies that are configured by mans of the N.E.W.S.-WMS Rules Engine;
- Packing and consolidation of products into TUs;
- Generation of picking waves;
- Picking methodologies;
- Gateway assignments;
- Task dispatching and interleaving
- Task monitoring;
- Control of picking;
- Forming of cartons and packing;
- Interface with compliance labeling system;
- Shipment stage, consolidation, and loading.

1.4 Warehouse Configuration

The key components of N.E.W.S.-WMS include the following:

- TU management;
- Concept of Reservations;
- WMS Rules Engine;
- WMS Routing.

TU management enables you to track the contents of any container in receiving, storage, transfer and shipping areas. Reservations allow to mark out available quantity of SKU in a warehouse. The WMS rules engine enables you to customize task strategies that optimize warehouse performance and management. The WMS routing enables you to automate moving of an employee and placing of SKU.

1.4.1 TU management

N.E.W.S.-WMS provides full items review access to all Transport Units. N.E.W.S.-WMS considers any object that exists in its topology and may contain SKUs as a Transport Unit. TU could be as simple as a label on a collection of items. N.E.W.S.-WMS enables users to track TUs and their contents.

Using TUs, you can do the following:

- Receive, store, and pick SKU by TU;
- View available stock by TU;
- View contents of TUs, including SKU number, serial number, quantity, and so on;
- Move multiple items in a transaction by one TU;
- Perform completions into prepacked TUs.

1.4.2 Concept of Reservations

Any movement of SKU on a warehouse generates directed vectors (from a node source to a node target), the called reservations.

Types of reservations:

- HD (Hard Direct) hard,
- SR (Soft Recursive) soft recursive,
- HR (Hard Recursive) hard recursive,
- SD (Soft Direct) soft (it isn't supported under the agreement).

The reservation is hard if lot ID is specified, otherwise – soft.

1.4.3 WMS Rules Engine

The N.E.W.S.-WMS Rules is a modeling tool which consists of business practices and restrictions. It enables to compose and use a best possible process for a particular warehouse function.

1.4.4 WMS Routing Engine

To move between zones is possible directly or through a gateway. Gateway can be two types: entering and leaving. Locks can be used as:

- intermediate point,
- link with the equipment,
- sorting controller (special sorting gateway).

2 System Configuration

2.1 Hardware and Software Requirements

HW specification for WMS installation:

Minimal: (Xeon 6 core) X 2, 64 GB RAM,
500GB high-performance disk array (RAID 1 or RAID10)

Optimal: (Xeon 8 core) X 2, 64 GB RAM ECC,
1TB disk array SSD (RAID 1 or RAID10).

It is recommended to have the same server that runs in stand-by mode for availability and reliability reasons.

SW specification for WMS installation:

Operation System

Any OS, which supported Oracle, e.g. Windows, Linux.

Oracle Database Edition

Minimal: Oracle Database 11g Standard Edition One Release 2.

Recommended: Oracle Database 11g Enterprise Edition Release 2 (usage of this version will significantly simplify administration and performance control, especially in non-stop operation, but increase the cost of the software licenses dramatically).

UI is web-based and accessible via any modern Internet browser. UI is multilingual and it is easy to be recustomized from one language to another.

2.2 Hardware and Software Installation

Installation of hardware and software is possible only by the vendor.

Setup of the WMS server and deployment of the software N.E.W.S.-WMS are also executed only by the vendor.

2.3 User Access Levels

Users receive access to different WMS functionality based on licenses assigned to them. User licenses are created, maintained, and have access to the system assigned by a system Administrator. An Administrator is a user who has access to whole functionality of the system. Creation of an administrator profile is possible only by the vendor.

3 Getting Started

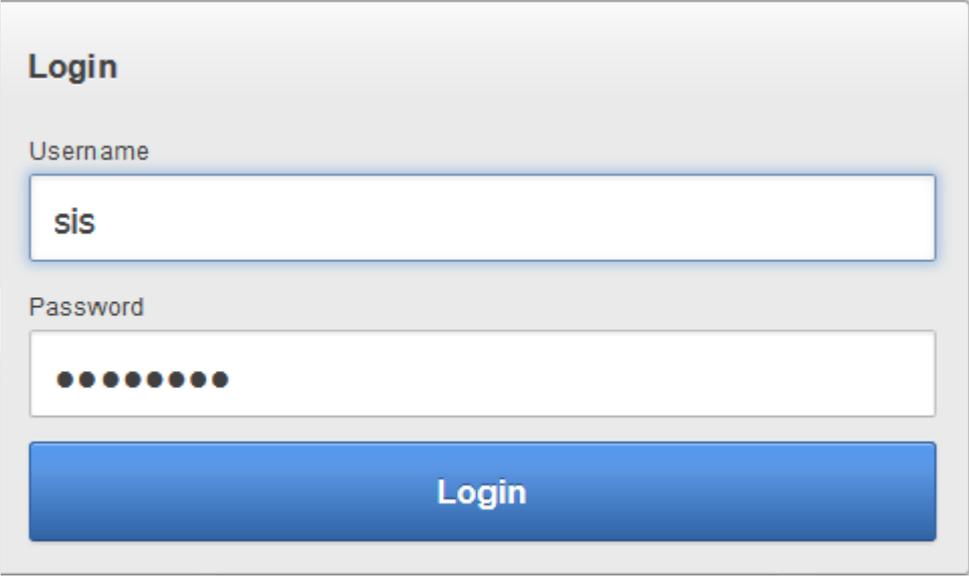
Prior to getting started a user should receive a login and a password. An Interactive access to the UI is provided through Internet via a web browser. For correct operation of client part any modern browser shall be used.

3.1 Logging

In the opened window, it is necessary to fill in the fields:

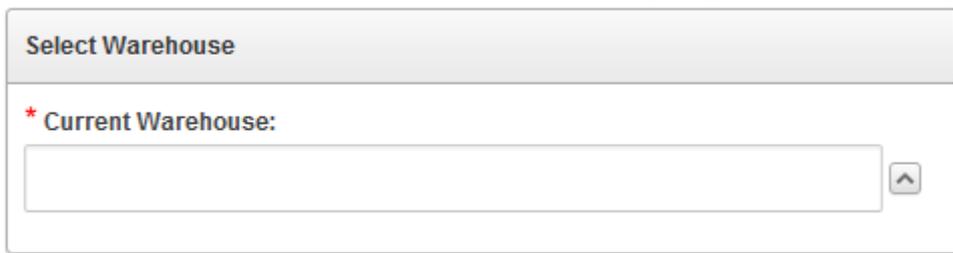
Username - logical name of a user;

Password – a password for login.



The screenshot shows a login window titled "Login". It contains two input fields: "Username" with the text "sis" entered, and "Password" which is masked with ten black dots. Below the fields is a blue button labeled "Login".

In the next window select a warehouse.



The screenshot shows a window titled "Select Warehouse". It features a dropdown menu labeled "* Current Warehouse:" which is currently empty. A small upward-pointing arrow icon is visible on the right side of the dropdown.

If the Home page opens, then the system works normally. If it isn't, then it is necessary to contact the support desk.

3.2 Standard Window Tools

Interactive report regions enable users to customize reports. Users can alter the layout of report data by selecting columns, applying filters, highlighting, and sorting. Users can also define breaks, aggregations, charts, grouping and add their own computations. It is possible for users to customize a subscription, so that an HTML version of a report will be emailed to them with a preset interval. Users can create multiple variations of a report and save them user defined names, for either public or private view settings.

Home Administration and Settings Locations

Q- Go Rows 5 Actions Create + Create Multi

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Edit	Address	Use Type	WVC Class	ABC	A1	A2	A3	A4	A5	Pick Stn No	Repl Stn No	Pick Flow	Pick Order	Repl Or
	00.00.00.00.00	Receiving	Receipt	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	-	
	01.00.00.00.00	Receiving	Receipt	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	-	
	01.01.00.00.01	Buffer	Pallet Floor	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	1	
	01.01.00.00.02	Buffer	Pallet Floor	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	1	
	01.01.00.00.03	Buffer	Pallet Floor	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	1	

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[Address Book](#) [Manage Locations](#) [Manage Transport Units](#) [Manage Transport](#) [Manage SKU](#) [PRP Rules](#) [Shipping Routes](#) [Shipping Stops](#)

An interactive report can be customized by means of the Search bar, the Actions menu, or the Column Heading menu.

3.2.1 Search Bar

There is a search region at the top of each report page.

This region (or Search bar) provides the following features:

1. Selection of a column title enables you to identify which column to search (or all).
2. The text area enables you to enter case insensitive search criteria (wild card characters are implied).
3. Go button executes the search.

Part of the interface beneath the Search Bar displays user defined and preset default settings.

3.2.2 Rows

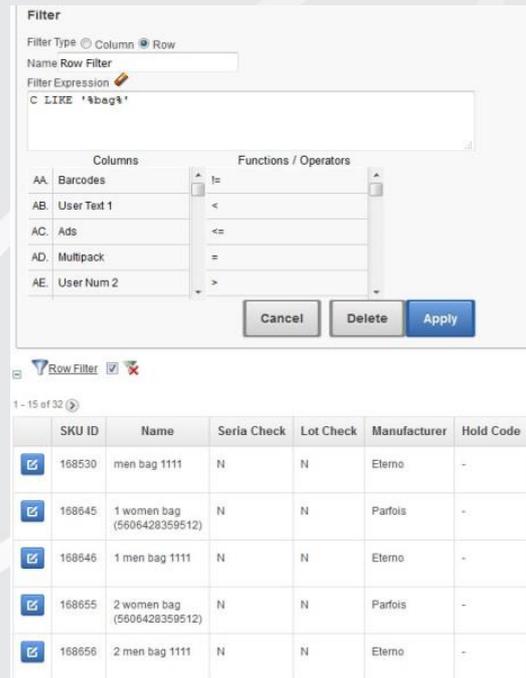
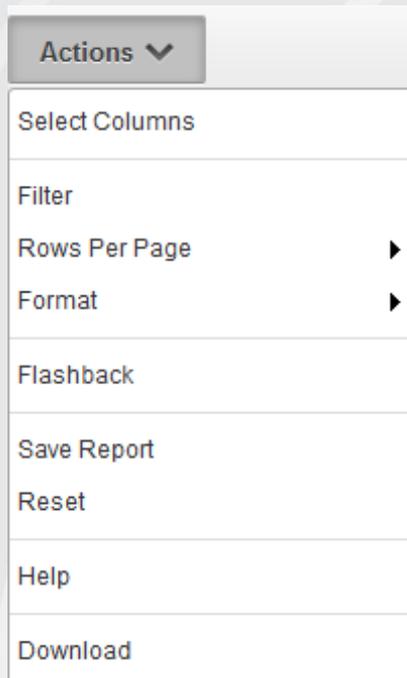
Rows sets the number of records to display per page.

3.2.3 Actions Menu

The Actions menu appears to the right of the Go button and Rows window in the Search bar. Use this menu to customize an interactive report.

Select Columns

Is used to modify displayed columns. The list of column titles included to the report is displayed in the right window. The column titles displayed in the left window are hidden. You can reorder the displayed columns using the arrows placed near the right window. Reports may contain columns which are calculated from data taken in other columns (e.g. volume). These columns are prefixed with **.



Filter

Helps you to select columns or rows which correspond to a specific declarator out of the whole report.

If you filter by column, select a column (it does not need to be one of the displayed), select a standard Oracle operator (=, !=, not in, between), and enter an expression to compare with. Expressions are case sensitive. Use % as a wild card (for example, STATE_NAME like A%).

If you filter by row, you can create a complex declarator using column titles and functions or operators listed in the Functions / Operators area (for example, C LIKE '%bag%', where C is the alias for Name).

Note:

This works only for columns. You can click on a column title that contains a declarator which you would like to use as a parameter for a filter and pick the value. The filter will already be applied.

Rows Per Page

Sets the number of rows displayed per page.

Format

Enables you to customize the display of the report. Format contains the following submenus:

Sort is used to sort columns in ascending or descending order. You can also specify how to sort NULLs. The default setting always displays NULLs last or always displays them first.

Control Break divides a whole report into separate groups of rows according to the values of one or several columns which are taken as a master record.

Highlight enables you to define a filter. The rows that meet the filter criteria displayed as highlighted using the color characteristics set in the filter.

Options include:

- Name is used only for display;
- Sequence defines the “weight” of a filter in case when a raw match for more than one declarator;
- Enabled identifies if a rule is enabled or disabled;
- Highlight Type identifies whether a row or a cell should be highlighted. If Cell is selected, the referenced column is highlighted;
- Background Color is the new color for the background of the highlighted area;
- Text Color is the new color for the text in the highlighted area;
- Highlight Condition defines your filter conditions.

Compute - enables you to add computed columns to your report. These can be mathematical computations (for example, NBR_HOURS/24) or standard Oracle functions applied to existing columns. Some display as examples and others (such as TO_DATE) can also be used).

Options include:

- Computation enables you to select a previously defined computation to edit.
- Column Heading is the column heading for the new column.
- Format Mask is an Oracle format mask to be applied against the column (for example, S9999).
- Computation is the computation to be performed. Within the computation, columns are referenced using the aliases displayed.

Below computation, the columns in your query display with their associated alias. Clicking on the column name or alias includes them in the Computation. Next to Columns is a keypad. This keypad functions as a shortcut to commonly used keys. On the far right are Functions.

The following example computation demonstrates how to display total compensation:

```
CASE WHEN A = 'SALES' THEN B + C ELSE B END
```

(where A is ORGANIZATION, B is SALARY and C is COMMISSION)

Aggregates are mathematical computations performed against a column. Aggregates display after each control break and at the end of the report within the column they are defined.

Options include:

- Aggregation enables you to select a previously defined aggregation to edit.
- Function is the function to be performed (for example, SUM, MIN).
- Column is used to select the column to apply the mathematical function to. Only numeric columns display.

Chart - you can define one chart per saved report. Once defined, you can switch between the chart and report views using links below the Search bar.

Options include:

- Chart Type identifies the chart type to include. Select from horizontal bar, vertical bar, pie, or line.
- Label enables you to select the column to be used as the label.
- Axis Title for Label is the title that displays on the axis associated with the column selected for Label. This is not available for pie chart.
- Value enables you to select the column to be used as the value. If your function is a COUNT, a Value does not need to be selected.
- Axis Title for Value is the title that displays on the axis associated with the column selected for Value. This is not available for pie chart.
- Function is an optional function to be performed on the column selected for Value.
- Sort allows you to sort your result set.

Group By - you can define one Group By report per saved report. Once defined, you can switch between the group by and report views using links below the Search bar. To create a Group By report, you select:

- the columns on which to group (up to 3 columns can be selected)
- the columns to aggregate along with the function to be performed (average, sum, count, etc.)
- the columns to use for sorting (up to 3 columns can be selected along with direction and null sorting options)

Flashback

A flashback query enables you to view the data as it existed at a previous point in time. The default amount of time that you can flashback is 3 hours (or 180 minutes) but the actual amount will differ for each database.

Save Report

Saves the customized report for future use. You provide a name and optional description and can make the report accessible to the public (that is, all users who can access the primary default report). You can save four types of interactive reports:

- Primary Default (Developer Only). The Primary Default is the report that initially displays. Primary Default reports cannot be renamed or deleted.

- Alternative Report (Developer Only). Enables developers to create multiple report layouts. Only developers can save, rename, or delete an Alternative Report.
- Public Report (End user). Can be saved, renamed, or deleted by the end user who created it. Other users can view and save the layout as another report.
- Private Report (End user). Only the end user that created the report can view, save, rename or delete the report.

If you save customized reports, a Reports selector displays in the Search bar to the left of the Rows selector (if this feature is enabled).

Reset

Resets the report back to the default settings, removing any customizations that you have made.

Download

Enables the current result set to be downloaded. The download formats differ depending upon your installation and report definition but may include CSV, HTML, Email, XLS, PDF, or RTF.

3.2.4 Column Heading Menu

Clicking on any column heading exposes a column heading menu. Options include:

- Sort Ascending icon sorts the report by the column in ascending order.
- Sort Descending icon sorts the report by the column in descending order.
- Hide Column hides the column. Not all columns can be hidden. If a column cannot be hidden, there will be no Hide Column icon.
- Break Column creates a break group on the column. This pulls the column out of the report as a master record.
- Column Information displays help text about the column, if available.
- Text Area is used to enter case insensitive search criteria (no need for wild cards). Entering a value reduces the list of values at the bottom of the menu. You can then select a value from the bottom and the selected value will be created as a filter using '=' (for example, column = 'ABC'). Alternatively, you can click the Flashlight icon and enter a value to be created as a filter with the 'LIKE' modifier (for example, column LIKE '%ABC%').
- List of Unique Values contains the first 500 unique values that meets your filter criteria. If the column is a date, a list of date ranges is displayed instead. If you select a value, a filter will be created using '=' (for example, column = 'ABC').

3.2.5 Report Settings

If you customize an interactive report, the report settings display below the Search bar and above the report. This area can be collapsed and expanded using the icon on the left.

Home Administration and Settings Locations

Q- Go Rows 15 Actions

Use Type = 'Receiving'

1 - 2 of 2

Edit	Address	Use Type	WVC Class	ABC	A1	A2	A3	A4	A5	Pick Stn No	Repl St
	00.00.00.00.00	Receiving	Receipt	-	NA	NA	NA	NA	Heonp.	-	-
	01.00.00.00.00	Receiving	Receipt	-	NA	NA	NA	NA	Heonp.	-	-

1 - 2 of 2

For each report setting, you can:

- Edit a setting by clicking the name.
- Disable/Enable a setting by unchecking or checking the Enable/Disable check box. Use this control to temporarily turn a setting off and on.
- Remove a setting by clicking the Remove icon.

If you have created a chart or group by, you can toggle between them and the base report using the Report View, Chart View, and Group By View links shown on the right. If you are viewing the chart or group by, you can also use the Edit link to edit the settings.

3.2.6 Editing

The Edit button



appears in the left column on the table. Use this button to call a window for editing line.

3.2.7 Menu Bar

At the bottom of report page is a click-through region. It is intended for fast click-through on menu item from the list.

[Address Book](#) [Manage Locations](#) [Manage Transport Units](#) [Manage Transport](#) [Manage SKU](#) [PRP Rules](#) [Shipping Routes](#) [Shipping Stopes](#)

3.2.8 Additional

In case of enter of parameters of different objects the symbol "*" marks fields mandatory for enter.

4 Setting Up N.E.W.S.-WMS Management System

This section includes the detailed setup steps for N.E.W.S.-WMS.

4.1 Warehouse Setup

Warehouse configuration requires that you set up your warehouse. Warehouse configuration also includes defining the appropriate topology to represent the zones within your warehouse, as well as defining appropriate locations, flows, gateways, routes, assigning gateways to their related zones.

Setup for N.E.W.S.- WMS is divided into the following sections:

- Setting up Warehouse;
- Setting up Locations;
- Setting up TU;
- Setting up Transport;
- Setting up Gateways
- Setting up Routes;
- Setting up Flows.

4.1.1 How to Set Up Warehouse

For definition of a warehouse, setting or updating of parameters of its functioning, navigate to the Warehouse window.

Home > Administration and Settings > Manage Warehouses

Warehouses List Create Warehouse +

ID	Warehouse Name	Address Format	Updated	Updated By
1	Warehouse	Zone:**:Y,Row:99:Y,Section:99:Y,Level:99:Y,Location:**:Y	4 weeks ago	LLS_WMS

1 - 1

Manage Application Mode Manage Users Manage User Groups Manage Roles Manage Warehouses

Warehouse Cancel Create

Warehouse Name

Address Format

SKU Barcode User Code

Min Expired Date

Locations Address Format Add Level +

Level No	Level Name	Code Input Mask	Is Virtual
No data found.			

1. In the Warehouse Name field, enter a name of warehouse.
2. The Address Format field is a location address format. This field is disabled and it receive value after building hierarchical structure of address system of a warehouse.
3. The SKU Barcode User Code field – is the name of subset (field "Name") of the external SKU codes. It has to be the subset containing bar codes of SKU.

User Codes - Categories

Go Actions

Row text contains 'ext'

1 - 1 of 1

Edit	Name	Short Name	Code	Updated	Updated By	Warehouse	View/Edit Codes
<input checked="" type="checkbox"/>	External SKU Codes	EXT_CODE	SKU_CROSS_CODES	8 months ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)

1 - 1 of 1

Home > Administration and Settings > User Codes - Categories > **User Codes - Edit Codes**

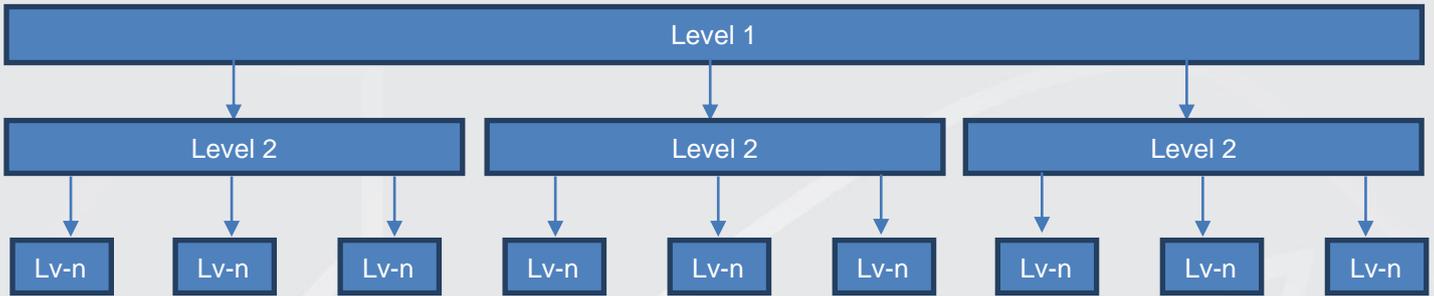
Edit Codes: External SKU Codes

<input type="checkbox"/>	<u>Id</u>	<u>Name</u>	<u>Short Name</u>
<input type="checkbox"/>	60	<input type="text" value="Barcode"/>	<input type="text" value="BC"/>

4. In the Min Expired Date field, enter Minimum of an expiration date of SKU.
5. The Location Address Format unit for setting up structure of warehouse address system.

4.1.1.1 Structure of warehouse address system

The address system of a warehouse represents hierarchical structure.



Elements of the last level are locations. Elements of remaining levels are warehouse segments of address system.

4.1.1.2 How to Set Up Structure of Warehouse Address System

In the Location Address Format unit, it is necessary to press the button Add Level, to appear a line for filling.

Add Level +

Level No	Level Name	Code Input Mask	Is Virtual	
1	<input type="text" value="New Level"/>	<input type="text" value="New Ma"/>	Y	<input type="button" value="↑"/> <input type="button" value="↓"/>

1 - 1

1. The field Level No filling automatically, it is the number of level.
2. In the field, Level Name enter name of level.
3. In the field, Code Input Mask enter mask for level.
4. In the Is Virtual field, use the list of values to select the type of level.

Note: If you need to change a sequence of levels - use buttons



Example of structure of warehouse address system.

Warehouse

Warehouse Name:

Address Format:

SKU Barcode User Code:

Min Expired Date:

Locations Address Format (R/O)

Level No	Level Name	Level Code Mask	Is Virtual
1	Zone	**	Y
2	Row	99	Y
3	Section	99	Y
4	Level	99	Y
5	Location	**	Y

1 - 5

Note: Pay attention that the field Address Format is the short form of structure of warehouse address system from Location Address Format.

! ATTENTION: If the structure of addressing is created, it isn't subject to change.

4.1.2 How to Set Up Locations of Warehouse

Locations identify physical areas within warehouse where you store items.

4.1.2.1 How to Set Up Location Attributes

Before entering locations, it is necessary to fill in the related reference manuals namely:

- Location Use Types;
- Weight and Volume Classes.

4.1.2.1.1 Reference Book Location Use Types

Depending on business processes the warehouse shall be divided into zones, for example: Receiving, Picking, Storage, Shipping, etc. To set up Location Use Types navigate Location Use.

Home > Administration and Settings > Location Use

Location Use

Search: Go Actions Add +

Edit	Warehouse	Name	Single SKU	Single Seria	Allow Negative Qty	Consolidation	Shipping	Updated	Updated By
	1	Pick Exit	N	N	N	N	N	5 weeks ago	BERNAKEVICH
	1	Conveyor	N	N	N	N	N	5 weeks ago	BERNAKEVICH
	1	Consolidation	N	N	N	Y	N	5 weeks ago	BERNAKEVICH

Home > Administration and Settings > Location Use > Create/Edit Location Use

Create/Edit Location Use Cancel Create

Name

* Single SKU

* Single Seria

* Allow Negative

* Consolidation

* Shipping

1. In the Warehouse Name field, enter a name of warehouse.
2. In the Single SKU field use the list of values Yes or No to set flag only one SKU.
3. In the Single Seria field use the list of values Yes or No to set flag only one series.
4. In the Allow Negative field use the list of values Yes or No to set flag the negative quantity is valid.
5. In the Consolidation field use the list of values Yes or No to set flag use only consolidation.
6. In the Shipping field use the list of values Yes or No to set flag use only shipping.

4.1.2.1.2 Reference Book Weight Dimension Characteristics

Reference Book Weight Dimension Characteristics contains information about WDC of objects of topology of a warehouse.

Home > Administration and Settings > Weight and Volume Classes

Weight and Volume Classes

Q- Go Actions ▾ Create +

1 - 15 of 35

	Type	Name	Weight	Length	Width	Height	Volume Cap	Weight Cap	Min Load	Max Load	TU Type Compatibility
<input type="checkbox"/>	Locations	Pallet Floor	-	-	-	-	-	-	-	-	-
<input type="checkbox"/>	Locations	Quarantine	-	-	-	-	-	-	-	-	-

Home > Administration and Settings > Weight and Volume Classes > Weight and Volume Class

Weight and Volume Class Cancel Create

Common properties

* Type: Locations ▾

* Name:

W&V properties

Weight (kg):

Length (mm):

Width (mm):

Height (mm):

Capacity properties

Volume (m3):

Weight (kg):

Min Load %:

Max Load %:

TU Max Cnt: 0 - no TU allowed

TU Max Cnt Type: ▾

TU Compatibility Change

no TU compatibility restrictions

Common properties:

1. In the Type field select one of the value: location; transport unit; transport location; SKU. It is an object type to which there corresponds the Weight and Volume Class.
2. In the Name field enter the Name of class.

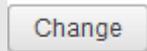
Weight Dimension Characteristics:

1. In the Weight field enter weight.
2. In the Length field enter length.
3. In the Width field enter width.
4. In the Height field enter height.

Capacity properties:

1. In the Volume field enter volume.
2. In the Weight field enter weight.
3. In the Min Load % field enter maximum loading in percent.
4. In the Max Load % field enter maximum loading in percent.
5. In the TU Max Cnt field enter maximum quantity TU. Value 0 for TU is unacceptable.
6. In the TU Max Cnt Type enter the type of TU.

TU Compatibility: is the list of allowed type TU for this class. Would press the button



to construct list.

Kompatybilnosc Typow TU

Green QC Bin Type
Pallet
QC tote
Red QC Bin Type
RETURN tote
SH-BOX
Tray
Trolley
Virtual Tote for Conveyor
Yellow QC Bin Type

Plastic tote big
MP

Anuluj Zatwierdz zmiany

4.1.2.2 How to Set Up Location

For setting or updating of warehouse locations, navigate to the Locations window.

Home > Administration and Settings > Locations

Location Address:

Edit	Address	Use Type	WVC Class	ABC	A1	A2	A3	A4	A5	Pick Stn No	Repl Stn No	Pick Flow	Pick Order	Repl Or
<input checked="" type="checkbox"/>	00.00.00.00.00	Receiving	Receipt	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	-	-
<input checked="" type="checkbox"/>	01.00.00.00.00	Receiving	Receipt	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	-	-
<input checked="" type="checkbox"/>	01.01.00.00.01	Buffer	Pallet Floor	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	1	-
<input checked="" type="checkbox"/>	01.01.00.00.02	Buffer	Pallet Floor	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	1	-
<input checked="" type="checkbox"/>	01.01.00.00.03	Buffer	Pallet Floor	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	1	-
<input checked="" type="checkbox"/>	01.01.00.00.04	Buffer	Pallet Floor	-	NA	NA	NA	NA	Heonp.	-	-	PF 1	1	-

Locations Map Collapse All Expand All

- Zone 00
- Row 00.00
- Zone 01
- Zone 02
- Zone 03
- Zone 04
- Zone 05
- Zone 06
- Zone 07
- Zone 08
- Zone 09
- Zone 0P
- Zone 0Q
- Zone 0R
- Zone 0S
- Zone 13
- Zone 23

There are two ways to enter of locations: single (one location)



and multiple (group of locations).

Create Multi 

4.1.2.2.1 Setting Up of One Location

Home > Administration and Settings > Locations > Location Properties

Location Properties Cancel Delete Apply Changes

Zone.Row.Section.Level.Location

* Location Address

* Location Use

* WV&C Class

* A1 TYPE

* A2 LOCN2

* A3 LOCN3

* A4 LOCN4

* A5 LOCN5

Hold Code

ABC Cat

Pick Station No

Repl. Station No

* Pick Flow

Pick Order

* Repl Flow

Repl Order

1. In the Location Address field enter address of location by fopmat.
2. In the Location Use field, use the list of values to select the location use type.
3. In the WV&C Class fields, use the list of values to select the WDC Class.
4. In the A1-A5 fields select analytics codes. Some setting categories of analytics, which will allow to classify objects for processing of information and/ or reporting purposes.
5. In the Hold Code field, use the list of values to select the code of location blocking.
6. In the ABC Cat field, use the list of values to select ABC category.
7. In the Pick Station No field enter the number of pick station.
8. In the Repl. Station No field enter the number of replenishment station.
9. In the Pick Flow field, use the list of values to select pick flow.
10. In the Pick Order field enter the order of round of location for pick process.
11. In the Repl. Flow field, use the list of values to select replenishment flow.
12. In the Repl. Order field enter the order of round of location for replenishment process.

4.1.2.2.2 Setting Up of Multiplay Locations

Step 1. Set up Address Range

Home > Administration and Settings > Locations > Address Range Create Step 1

Address Range Locations Properties Confirm

Cancel Next >

_99.99.99.

* Location Address from

Zone.Row.Section.Level.Location

* Location Address to

* When Exists Action Generate Error, cancel operation Skip and resume creation Overwrite location pr

1. In the Location Address from field enter the address of location by fopmat with which the group begins.
2. In the Location Address to field enter the address of location by fopmat on which the group of addresses comes to an end.
3. Remark one from actions.

Step 2. Set Up Locations Properties

Home > Administration and Settings > Locations > Address Range Create Step 2

Address Range **Locations Properties** Confirm

* Location Use

* WVC Class

* A1 TYPE

* A2 LOCN2

* A3 LOCN3

* A4 LOCN4

* A5 LOCN5

ABC Cat

Hold Code

Pick Station No

Repl. Station No

* Pick Flow

* Repl Flow

Pick Order

Repl Order

1. In the Location Use field, use the list of values to select the location use type.
2. In the WVC Class fields, use the list of values to select the analitic codes.
3. In the A1-A5 fields select analytics codes. Some setting categories of analytics, which will allow to classify objects for processing of information and/ or reporting purposes.
4. In the Hold Code field, use the list of values to select the code of location blocking.
5. In the ABC Cat field, use the list of values to select ABC category.
6. In the Pick Station No field enter the number of pick station.
7. In the Repl. Station No field enter the number of replenishment station.
8. In the Pick Flow field, use the list of values to select pick flow.
9. In the Pick Order field enter the order of round of location for pick process.
10. In the Repl. Flow field, use the list of values to select replenishment flow.
11. In the Repl. Order field enter the order of round of location for replenishment process.

Step 3 To confirm settings

Home > Administration and Settings > Locations > Address Range Create Step 3

Address Range Locations Properties **Confirm**

Address From	11.11.11.11.11
Address To	22.22.22.22.22
When Exists Action	Skip and resume creation
Location Use	Conveyor
Wvc Class	Conveyor
A1	Heavy Location
A2	N_A
A3	N_A
A4	N_A
A5	N_A
Abc Cat	AY
Hold Code	To Delete
Pick Station No	-
Repl Station No	-
Pick Flow	PF 1
Repl Flow	RF 1
Pick Order	-
Repl Order	-

1 - 1

4.1.3 Routing Engine

4.1.3.1 How to Set Up Routes

Navigate to the Routes Window to define Routes.

Home > Administration and Settings > Routes

Routes Create

Q-

Edit	Address From	Gateway From	Address To	Gateway To	Cost	Created	Created By	Updated	
<input type="checkbox"/>	01	GTW 01 OUT 13	13	GTW 13 IN	0	5 weeks ago	BERNAKEVICH	5 weeks ago	B
<input type="checkbox"/>	01	GTW 01 OUT 23	23	GTW 23 IN	0	5 weeks ago	BERNAKEVICH	5 weeks ago	B

Home > Administration and Settings > Routes > Route Edit

Route Edit Cancel

* Zone From Gateway From

* Zone To Gateway To

* Cost

1. In the Zone From field, use the list of values to select the Zone - start point of a route.
2. In the Gateway From field, use the list of values to select the Gateway - start point of a route.
3. In the Zone To field, use the list of values to select the Zone - end point of a route.
4. In the Gateway To field, use the list of values to select the Gateway - end point of a route.
5. In the Cost field enter the cost of a route. At creation of the general route the route with smaller cost will be chosen.

4.1.3.2 How to Set Up Gateways

Navigate to the Gateways Window to define Gateway.

Gateways

Q- Go Actions Create +

WVC Class = 544

Edit	Zone Name	Name	Address	Final Repack	Automatic	WVC Class	Hold Code	Created	Created By	Updated	Updated By	Sor
<input type="checkbox"/>	Zone 01	GTW 01 OUT 0P	GTW01OUT0P	N	N	544	-	7 months ago	SIS	8 days ago	LLS_WMS	Y
<input type="checkbox"/>	Zone 0P	GTW 0P IN	GTW0PIN	N	N	544	-	7 months ago	SIS	7 months ago	SPEPELOV	N

Edit Gateway Cancel Create

Zone Zone 00

* Name

* Address

* WVC Class GTW 0P

* Final Repack No

* Automatic No

* Sorter No

Hold Code Id

1. In the Zone field, use the list of values to select the Zone.
2. In the Name field enter the name of Gateway.
3. In the Address field enter the address of Gateway.
4. In the WVC Class field, use the list of values to select the WDC Class.
5. In the Final Repack field use the list of values Yes or No to set flag: repacking.
6. In the Automatic field use the list of values Yes or No to set flag: automatically.
7. In the Sorting Controller field use the list of values Yes or No to set flag: sorting controller. If it is chosen yes, there will be an additional field in which it will be necessary to choose sorting controller.
8. In the Sorting Controller field, use the list of values to select the sorting controller (reference book «Sortng Controller»).
9. In the Hold Code field, use the list of values to select the hold code (reference book «User Codes»).

4.1.3.3 How to Set Up Sorting Controller

Navigate to the Sorting Controller Window to defind Controller.

Home > Administration and Settings > Sorting Controllers

Search: Go Actions ▼ Create + See also: [Sorting Controllers](#) [Sorting Location Ranges](#)

	Code	Active Mode	Hash Mode	Hash Func	Range Func	Auto Release	Created	Created By	Updated	Updated By	Description
	SC06	Y	Destination Zone	-	-	Y	03-NOV-2016 15:55:03	SIS	16-DEC-2016 15:48	SIS	The sorter for a zone of RETURNS
	SC01	Y	Destination Zone	-	-	Y	16-MAR-2016 21:22:11	SPEPELOV	16-DEC-2016 15:48	SIS	The sorter on consolidation pallets in an INBOUND BUFFER zone
	SC02	N	Destination Zone	-	-	Y	12-MAY-2016 07:37:09	SIS	16-DEC-2016 15:47	SIS	The sorter in an STORAGE zone on pallets
	SC04	Y	Destination Zone	-	-	Y	18-JUL-2016 10:45:48	SIS	16-DEC-2016 11:43	SIS	The sorter in QUARANTINE (defect) zone
	SC03	Y	Destination Zone	-	-	Y	18-JUL-2016 10:22:49	SIS	16-DEC-2016 15:47	SIS	The sorter in OUTLET zone

Home > Administration and Settings > Sorting Controllers > Edit Sorting Controller

Edit Sorting Controller Cancel Create

Code

Description

* Active Mode No ▼

Auto Release Yes ▼

1. In the Code field enter the name of Sorting Controller.
2. In the Description field enter the short description of Sorting Controller.
3. In the Active Mode field use the list of values Yes or No to set flag: automatic mode. If it is chosen yes, there will be an additional field in which it will be necessary to choose hash mode.
4. In the Hash Mode field, use the list of values to select the mode.
 - Destination Zone,
 - Order,
 - Custom Hash Function.
5. In the Auto Release field use the list of values Yes or No to set flag.

If hash mode is destination zone, then necessary specify sorting location ranges.

4.1.3.4 Example of Set Up Route

In warehouse exist inbound buffer zone 01 and storage zone 0P. Necessary set route from 01 to 0P and set up it that a pallet could put on any empty location at the choice of the operator.

Home
Administration and Settings
Routes
Edit Route

Edit Route

* Zone From	Zone 01	Gateway From	Sort 01 OUT 0P
* Zone To	Zone 0P	Gateway To	GTW 0P IN
* Cost	90		

Home
Administration and Settings
Gateways
Edit Gateway

Edit Gateway

Zone	Zone 01		
* Name	Sort 01 OUT 0P		
* Address	SORT01OUT0P		
* WVC Class	GTW 0P		
* Final Repack	No		
* Automatic	No		
* Sorter	Yes	* Sorter Controller	SC02
Hold Code Id			

Home > Administration and Settings > Sorting Controllers > Edit Sorting Controller

Edit Sorting Controller

Code:

Description:

* Active Mode:

Auto Release:

Sorting Location Ranges

Order No	Addr From	Addr To	Created	Created By	Updated	Updated By
0	0P	0P	11-DEC-2016 13:46:25	LLS_WMS	11-DEC-2016 13:46:25	LLS_WMS

1 - 1

4.1.4 How to Set Up Flows

There are three types of flows:

- Pick;
- Replenishment;
- Consolidation.

4.1.4.1 Pick Flows

Navigate to the Pick Flows Window to define a Pick Flow.

Home > Administration and Settings > Pick Flows

1 - 1 of 1

	Name	Exit Location	Control Location	Problem Location	Passthrough Location	Pick TU Type	Transport Type	Allowed TU Types	Confirm SKU
<input type="checkbox"/>	PF 1	-	-	-	-	-	-	-	N

1 - 1 of 1

[User Document Types](#) [User Codes Catalog](#) [Location Use Types](#) [Transport Types](#) [Transport Unit Types](#) [Weight and Volume Classes](#) [Time Windows](#) [Gateways](#) [Routes](#)
[Min/Max Rules](#) [Pick Flows](#) [Replenishment Flows](#) [Control Rules](#) [Consolidation Flows](#)

Home > Administration and Settings > Pick Flows > Edit Pick Flow

Edit Pick Flow Cancel Create

* Name

Exit Location

Control Location

Problem Location

Passthrough Location

Pick TU Type

Transport Type

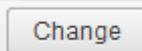
* Confirm SKU

Allowed TU Types Change

no data found

1. In the Name field enter the Name of flow.
2. In the Exit Location field, use the list of values to select the Exit location for flow.
3. In the Control Location field, use the list of values to select the Control location for flow.
4. In the Problem Location field, use the list of values to select the location of problem items for flow.
5. In the Passthrough Location field, use the list of values to select a transit location for flow.
6. In the Pick TU Type field, use the list of values to select the type of TU for flow.
7. In the Transport Type field, use the list of values to select the Type of transport for flow.
8. In the Confirm SKU field use the list of values Yes or No to set flag: confirm SKU.

To enter the list allowed TU types, it is necessary to click the button



and to fill the list.

Kompatybilnosc Typow TU

Green QC Bin Type
MP
Pallet
Plastic tote big
QC tote
Red QC Bin Type
RETURN tote
SH-BOX
Tray
Virtual Tote for Conveyor

Trolley

Anuluj Zatwierdz zmiany

4.1.4.2 Replenishment Flows

Navigate to the Replenishment Flows Window to define a Replenishment Flow.

Home > Administration and Settings > Replenishment Flows

Q- Go Actions Create +

1 - 1 of 1

	Name	Pick TU Type	Transport Type	Allowed TU Types	Confirm SKU	Updated	Updated By
	RF 1	-	-	-	N	6 weeks ago	SPEPELOV

1 - 1 of 1

[User Document Types](#) [User Codes Catalog](#) [Location Use Types](#) [Transport Types](#) [Transport Unit Types](#) [Weight and Volume Classes](#) [Time Windows](#) [Gateways](#) [Routes](#) [Min/Max Rules](#) [Pick Flows](#) **Replenishment Flows** [Control Rules](#) [Consolidation Flows](#)

Home > Administration and Settings > Replenishment Flows > Edit Replenishment Flow

Edit Pick Flow Cancel Create

* Name

Pick TU Type

Transport Type

* Confirm SKU No

Allowed TU Types

no data found

1. In the Name field enter the Name of flow.
2. In the Pick TU Type field, use the list of values to select the type of TU for flow.
3. In the Transport Type field, use the list of values to select the Type of transport for flow.
4. In the Confirm SKU field use the list of values Yes or No to set flag: confirm SKU.

To enter the list allowed TU types, it is necessary to click the button



and to fill the list.

Kompatybilnosc Typow TU

Green QC Bin Type	Trolley
MP	
Pallet	
Plastic tote big	
QC tote	
Red QC Bin Type	
RETURN tote	
SH-BOX	
Tray	
Virtual Tote for Conveyor	

Anuluj Zatwierdz zmiany

4.1.4.3 Consolidation Flows

Navigate to the Consolidation Flows Window to define a Consolidation Flow.

Home > Administration and Settings > Consolidation Flows

Search: Go Actions

	Id	Name	Pick Flows	Cons Use Type	Recons Use Type	Created	Created By	Updated	Updated By	Pick Flows List
	1	Standard	22	Consolidation	Consolidation	01.10.2014 16:33:45.788762	LLS_WMS	26.01.2016 22:14:14.043273	BERNAKEVICH	-

1 - 1

Home > Administration and Settings > Consolidation Flows > Consolidation Flow Edit

Consolidation Flow Edit

* Name

* Consolidation Use Type

Re-consolidation Use Type

* Pick Flows

PF 1	
------	--

1. In the Name field enter the Name of flow.
2. In the Consolidation Use Type field, use the list of values to select the type of consolidation locations use for flow.
3. In the Re-consolidation Use Type field, use the list of values to select the type of re-consolidation locations use for flow.
4. In the Pick Flows field use the list of values to set for what pick flows the consolidation flow will be used.

4.2 Engine of Flexfields

The Engine of flexfields provides planning, setup and reference information for the N.E.W.S.-WMS implementation team, as well as for users responsible for the ongoing maintenance of N.E.W.S.-WMS Applications. Descriptive flexfields enable you to configure objects attribute flexfields so that you capture only those object attributes that you need to maintain.

4.2.1 Flexfields

The list of objects for which it is possible to configure flexfields.

Reserved word	Description
ADDR_BOOK_A1, ADDR_BOOK_A2, ADDR_BOOK_A3,	Counterparty analytics A1, Counterparty analytics A2, Counterparty analytics A3,

Reserved word	Description
ADDR_BOOK_A4, ADDR_BOOK_A5	Counterparty analytics A4, Counterparty analytics A5
ADDR_BOOK_CAT	Address book category
GTWY_HOLD_CODES	Gateway hold codes
LOCATION_A1, LOCATION_A2, LOCATION_A3, LOCATION_A4, LOCATION_A5	Location analytics A1, Location analytics A2, Location analytics A3, Location analytics A4, Location analytics A5
LOCATION_HOLD_CODES	Location hold codes
LOT_HOLD_CODES	Lot hold codes
SKU_A1, SKU_A2, SKU_A3, SKU_A4, SKU_A5	Analytics SKU A1, Analytics SKU A2, Analytics SKU A3, Analytics SKU A4, Analytics SKU A5
SKU_CROSS_CODES	Cross codes
SKU_HOLD_CODES	SKU hold codes
SKU_QUALITY	SKU quality codes
SKU_UOM	UOM of SKU
USER_ERRORS	Errors of employee

4.2.2 Setting Up of Flexfields

Navigate to the User Codes - Categories Window to edit the Categories.

Home > Administration and Settings > User Codes - Categories

User Codes - Categories

Q- Go Actions Add New +

1 - 15 of 25

Edit	Name	Short Name	Code	Updated	Updated By	Warehouse	View/Edit Codes
<input type="checkbox"/>	Address Book Category	AB	ADDR_BOOK_CAT	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (4)
<input type="checkbox"/>	Location Hold	LOCN_HOLD	LOCATION_HOLD_CODES	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (3)
<input type="checkbox"/>	TYPE	TYPE	LOCATION_A1	12 days ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (3)
<input type="checkbox"/>	LOCN5	LOCN_A5	LOCATION_A5	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input type="checkbox"/>	LOCN2	LOCN_A2	LOCATION_A2	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input type="checkbox"/>	LOCN3	LOCN_A3	LOCATION_A3	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input type="checkbox"/>	LOCN4	LOCN_A4	LOCATION_A4	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input type="checkbox"/>	SKU Unit of Measure	UOM	SKU_UOM	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input type="checkbox"/>	SKU Type	SKU_TYPE	SKU_A1	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (4)
<input type="checkbox"/>	Heavy	Heavy	SKU_A2	12 days ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (3)

To edit Category, click on button



User Codes - Edit Categoria

* Name

* Short Name

Cancel Delete **Apply Changes**

User Codes - Edit Categoria

* Name

* Short Name

Cancel Delete **Apply Changes**

In this window, it is possible to change the standard name of category on the name bearing semantic loading to the customer. For example, the names 'SKU1' and 'SKU A1' change on 'SKU Type' and SKU_TYPE or the names 'LOCN_A1' and 'LOCN1' change on 'Type', 'Type'.

To add, edit or delete the value set of categories click on button

View/Edit Codes (1)

Home > Administration and Settings > User Codes - Categories > User Codes - Edit Codes

Edit Codes: Heavy Cancel Delete Submit

<input type="checkbox"/>	Id	Name	Short Name	Text1	Num1	Date1	Updated	Update
<input type="checkbox"/>	54	N A	NA				7 weeks ago	BERNA
<input type="checkbox"/>	203	Heavy	Heavy				12 days ago	BERNA
<input type="checkbox"/>	204	Not Heavy	NOT				12 days ago	BERNA

Add Row +

To add the value, click on button

Add Row +

Home > Administration and Settings > User Codes - Categories > User Codes - Edit Codes

Edit Codes: Employee Errors Cancel Delete Submit

<input type="checkbox"/>	Id	Name	Short Name	Text1	Num1	Date1	Updated	Update
<input type="checkbox"/>	188	Bad Quality	BAD		5		7 weeks ago	BERNA
<input type="checkbox"/>	185	Overage	OVR		2		7 weeks ago	BERNA
<input type="checkbox"/>	184	Shortage	SHORT		1		7 weeks ago	BERNA
<input type="checkbox"/>	186	Mix	MIX		3		7 weeks ago	BERNA
<input type="checkbox"/>	187	Count Error	CNT		4		7 weeks ago	BERNA

Add Row +

1. In the Name field enter the Name of value.
2. In the Short Name field enter the short name of value.
3. In the Text1 field enter the text value.

4. In the Num1 field enter the numerical value.
5. In the Date1 field enter the date value.

4.3 Rules Engine

4.3.1 Overview of the N.E.W.S.-WMS Rules Engine

The N.E.W.S.-WMS rules engine provides a repository for restrictions and business policies related to warehouse. You define and implement rules, directly from UI forms, without having to write custom code. Instead, you can compose rules, by selecting various elements from lists of values. Rules is based on attributes in the database, including user-defined flexfields.

There are the following rules types:

- Placement;
- Picking;
- Replenishment;
- Min/Max Rules;
- Control Rules.

4.3.1.1 Placement Rules

Placement rules directs operators to put newly received item into the most appropriate location. Based on virtually any business process, the rules engine provides intelligent suggestions for placement locations of new item.

Some typical processes that placement rules are capable of modeling include the following:

- Minimizing item fragmentation by directing an item to be placement in the same location where some of that item is already stored.
- Prohibiting commingling of different items or different lots of the same item in a single location.
- Avoiding lot commingling in a location.
- Basing the placement location on inspection results, the type of purchase order, or item category.

4.3.1.2 Picking Rules

Picking makes item allocations and directs operators to pick items from specific locations. You can also set up the rules engine to meet customer requirements, such as stock condition or quality.

4.3.1.3 Replenishment Rules

Every item has a pick location assigned. This is done automatically during the first placement process for this item.

Rules of placement, replenishment and picking are united by one general name PRP Rules.

4.3.1.4 Min/Max Rules

This rule is used to create a replenishment trigger and to calculate replenishment quantity for picking locations. When quantity in picking locations falls below a Min quantity, replenishment should be triggered and the quantity to replenish corresponds to Max.

4.3.1.5 Control Rules

Rules of control allow the operator to define whether it is necessary to verify the document and collected items and as far as check has to be careful.

4.3.1.6 Time Windows

For PRP Rules it is possible set up 'the time of life' – time when this rule is actual.

4.3.2 How to Set Up Rules

You use a series of WMS rules to set up the various rules for your warehouse. In addition to providing rules setup windows, WMS provides the following inquiry windows where you can query on a variety of rules-related information.

You use the following windows to set up rules.

4.3.2.1 How to Set Up Placement Rules

Navigate to the PRP Rules Window and click on tab Placement Rules to define a Placement Rule.

Home > Administration and Settings > PRP Rules > Rule Edit

Rule Edit Cancel Clone Create

Main	SKU
Rule Type: Putaway Description: <input type="text"/> * Cost: <input type="text" value="0"/> Doc Type: <input type="text"/> Doc Sub Type: <input type="text"/> TU Code: <input type="text"/> Whole Pallet: <input type="text"/> * Enabled: No Time Window: <input type="text"/>	SKU ID: <input type="text"/> SKU Type: <input type="text"/> Heavy: <input type="text"/> SKU3: <input type="text"/> SKU4: <input type="text"/> SKU5: <input type="text"/> Serial No: <input type="text"/> Quality: <input type="text"/> ABC: <input type="text"/> SKU UOM: <input type="text"/>
Source	Target
* From Use Type: Buffer TYPE: <input type="text"/> LOCN2: <input type="text"/> LOCN3: <input type="text"/> LOCN4: <input type="text"/> LOCN5: <input type="text"/> Range From: <input type="text"/> Range To: <input type="text"/> WWC Class: <input type="text"/> Full TU: No Full TU Types: Change	* To Use Type: Buffer TYPE: <input type="text"/> LOCN2: <input type="text"/> LOCN3: <input type="text"/> LOCN4: <input type="text"/> LOCN5: <input type="text"/> Range From: <input type="text"/> Range To: <input type="text"/> WWC Class: <input type="text"/> ADS Capacity: <input type="text"/> ADS Force: No

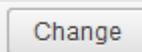
- Block Main

- In the Rule Type field is a type of rule.
- In the Description field enter description.
- In the Cost field enter the cost.
- In the Doc Type field, use the list of values to select the type of document.
- In the Doc Sub Type field, use the list of values to select the type of sub document.
- In the TU Code field enter the Address of TU.
- In the Whole Pallet field use the list of values Yes or No to set flag: to use a pallet completely.
- In the Enabled field use the list of values Yes or No to set flag: = «Y» – enable, otherwise = «N».
- In the Time Window field, use the list of values to select the time window.

- Block SKU
 1. In the SKU ID field enter ID of SKU.
 2. In the SKU1 – SKU5 fields is an analytics codes of SKU, use the list of values to select they from reference book „Users Codes“.
 3. In the Serial No field enter Series Number.
 4. In the Quality field use the list of values SKU quality codes from reference book „Users Codes“.
 5. In the ABC field, use the list of values to select the ABC category.
 6. In the SKU UOM field, use the list of values to select the UOM of SKU.

- Block Source
 1. In the From Use Type field, use the list of values to select the location use type, source location.
 2. In the LOCN1 – LOCN5 fields is an analytics codes of source location, use the list of values to select they from reference book „Users Codes “.
 3. In the Range From field enter the range of locations (source) from.
 4. In the Range To field enter the range of locations (source) to.
 5. In the WVC Class field, use the list of values to select the WDC Class for source locations.
 6. In the Full TU field, use the list of values Yes or No to set flag: to use a full TU only.
 7. In the Full TU Types field is contain the allowed TU types.

To enter the list allowed TU types, it is necessary to click the button



and to fill the list.

Kompatybilnosc Typow TU

<ul style="list-style-type: none"> Green QC Bin Type MP Pallet Plastic tote big QC tote Red QC Bin Type RETURN tote SH-BOX Tray Virtual Tote for Conveyor 		<ul style="list-style-type: none"> Trolley
---	---	---

- Block Target
 1. In the To Use Type field, use the list of values to select the location use type, target location.
 2. In the LOCN1 – LOCN5 fields is an analytics codes of source location, use the list of values to select they from reference book „Users Codes “.
 3. In the Range From field enter the range of locations (target) from.
 4. In the Range To field enter the range of locations (target) to.
 5. In the WVC Class field, use the list of values to select the WDC Class for target locations.

6. In the ADS Capacity field enter the multiplicity of average daily sales.
7. In the ADS Force field, use the list of values Yes or No to set flag: only in average daily sales.

4.3.2.2 How to Set Up Picking Rules

Navigate to the PRP Rules Window and click on tab Picking Rules to define a Picking Rule. Set up Picking Rules like set up of Placement Rules.

4.3.2.3 How to Set Up Replenishment Rules

Navigate to the PRP Rules Window and click on tab Replenishment Rules to define a Replenishment Rule. Set up Replenishment Rules like set up of Placement Rules.

4.3.2.4 How to Set Up Min/Max Rules

Navigate to the Min/Max Rules Window to define a Min/Max Rules.

Home > Administration and Settings > Min/Max Rules

Min/Max Rules
Cancel
Submit

Location Use Type Buffer

Cat	Min Val	Max Val	Max Lctn Cnt
AX	<input type="text"/>	<input type="text"/>	<input type="text"/>
AY	<input type="text"/>	<input type="text"/>	<input type="text"/>
AZ	<input type="text"/>	<input type="text"/>	<input type="text"/>
BX	<input type="text"/>	<input type="text"/>	<input type="text"/>
BY	<input type="text"/>	<input type="text"/>	<input type="text"/>
BZ	<input type="text"/>	<input type="text"/>	<input type="text"/>
CX	<input type="text"/>	<input type="text"/>	<input type="text"/>
CY	<input type="text"/>	<input type="text"/>	<input type="text"/>
CZ	<input type="text"/>	<input type="text"/>	<input type="text"/>

1 - 9

1. In the Location Use Type field, use the list of values to select the location use type.
In the field to Cat the list ABC categories is displayed.
2. For each category, it is possible to set minimum quantity, maximum quantity and maximum quantity of the occupied locations in a zone.

4.3.2.5 How to Set Up Control Rules

Navigate to the Control Rules Window to define a Control Rules.

Home > Administration and Settings > Control Rules

Q- Go Actions Create +

Edit Control Rule Cancel Create

Pick Flow PF 1

* Ctrl On Shortage Y N

* Ctrl Always Y N

* Exclude Counterparty Y N

Volume Threshold

Counterparty Add Remove Selected

no data found

1. In the Pick Flow field, use the list of values to select the pick flow.
2. Ctrl On Shortage is flag: «Y» – to check of shortage, otherwise «N».
3. Ctrl Always is flag: «Y» – to check always, otherwise «N».
4. Exclude Counterparty is flag: «Y» - means that the counterparty is excluded from check.
5. In the Volume Threshold field enter threshold value of volume.

4.4 Items Setup

The reference book of SKUs contains information about an items, its properties necessary for automation of maintenance of warehouse. Filling of reference book of SKU is possible, both by synchronization with the corresponding tables of HS and by an input via WMS UI.

4.4.1 Set Up Item Attributes

Setup of items begins with setup of its flexfields. List of flexfields for SKUs is

1. SKU_A1, SKU_A2, SKU_A3, SKU_A4, SKU_A5 – attributes defined by Customer;
2. SKU_CROSS_CODES - cross codes attributes;
3. SKU_HOLD_CODES – SKU hold attributes;
4. SKU_QUALITY – SKU quality attributes;
5. SKU_UOM – unit of measure.

Example of the settings for SKUs. Flexfields SKU_A3, SKU_A4, SKU_A5 is not used.

User Codes - Categories

Row text contains 'sku'

1 - 9 of 9

Edit	Name	Short Name	Code	Updated	Updated By	Warehouse	View/Edit Codes
<input checked="" type="checkbox"/>	SKU Type	SKU_TYPE	SKU_A1	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (4)
<input checked="" type="checkbox"/>	Heavy	Heavy	SKU_A2	13 days ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (3)
<input checked="" type="checkbox"/>	SKU3	SKU_A3	SKU_A3	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input checked="" type="checkbox"/>	SKU4	SKU_A4	SKU_A4	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input checked="" type="checkbox"/>	SKU5	SKU_A5	SKU_A5	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input checked="" type="checkbox"/>	External SKU Codes	EXT_CODE	SKU_CROSS_CODES	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input checked="" type="checkbox"/>	SKU Hold Codes	SKU_HOLD	SKU_HOLD_CODES	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)
<input checked="" type="checkbox"/>	Quality	QUAL	SKU_QUALITY	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (4)
<input checked="" type="checkbox"/>	SKU Unit of Measure	UOM	SKU_UOM	7 weeks ago	BERNAKEVICH	Dev. WMS	View/Edit Codes (1)

Edit Codes: SKU Type

<input type="checkbox"/>	<u>Id</u>	<u>Name</u>	Short Name	Text1	Num1	Date1
<input type="checkbox"/>	50	N A	NA			
<input type="checkbox"/>	51	Shoes	SHOES			
<input type="checkbox"/>	52	Bags	BAGS			
<input type="checkbox"/>	74	Accessories	ACCESSO			

Edit Codes: Heavy

<input type="checkbox"/>	<u>Id</u>	<u>Name</u>	Short Name	Text1	Num1	Date1
<input type="checkbox"/>	54	N A	NA			
<input type="checkbox"/>	203	Heavy	Heavy			
<input type="checkbox"/>	204	Not Heavy	NOT			

Edit Codes: External SKU Codes

<input type="checkbox"/>	<u>Id</u>	<u>Name</u>	Short Name	Text1	Num1	Date1
<input type="checkbox"/>	60	Barcode	BC			

Edit Codes: SKU Hold Codes

<input type="checkbox"/>	Id	Name	Short Name	Text1	Num1	Date1
<input type="checkbox"/>	175	Blocked	BLCK			

Edit Codes: Quality

<input type="checkbox"/>	Id	Name	Short Name	Text1	Num1	Date1
<input type="checkbox"/>	65	1 Quality OK	O.OK		0	
<input type="checkbox"/>	207	0 Quality Check	Q.CHK			
<input type="checkbox"/>	208	2 Outlet quality	OUTLET			
<input type="checkbox"/>	209	3 Defect	DEFECT			

Edit Codes: SKU Unit of Measure

<input type="checkbox"/>	Id	Name	Short Name	Text1	Num1	Date1
<input type="checkbox"/>	106	EA	EACH			

4.4.2 How to Set Up Item

Navigate to the Create/Edit SKU Window to define a SKU.

Home > Administration and Settings > SKU List

Q- Go Actions Create +

1 - 1 of 1

	SKU ID	Name	Serial Check	Lot Check	Manufacturer	Hold Code	Main UOM	Abc Cat	A1	A2	A3	A4	A5	Weight	Length	Width	Height	Updated	Updated
	168508	Return	N	N	-	-	EACH	-	NA	Heavy	NA	NA	Heop.	-	-	-	-	5 days ago	SPEPELO

Home Administration and Settings SKU List Create/Edit SKU

Create/Edit SKU Cancel Create

Main	Analytics
<p>* Name <input type="text"/></p> <p>Model <input type="text"/></p> <p>Manufacturer <input type="text"/></p> <p>Host Code <input type="text"/></p> <p>* Main UOM <input type="text"/></p> <p>Serial Check <input type="radio"/> Y <input type="radio"/> N</p> <p>Lot Check <input type="radio"/> Y <input type="radio"/> N</p> <p>Avg. Daily Sales <input type="text"/></p> <p>Zone.Row.Section.Level.Location</p> <p>* Default Location <input type="text"/></p>	<p>Hold Code <input type="text"/></p> <p>A1 SKU Type <input type="text"/></p> <p>A2 Heavy <input type="text"/></p> <p>A3 SKU3 <input type="text"/></p> <p>A4 SKU4 <input type="text"/></p> <p>A5 SKU5 <input type="text"/></p> <p>ABC Cat <input type="text"/></p> <p>Pick Flow <input type="text"/></p>

Weight and Volume

Weight (kg)

Length (mm)

Width (mm)

Height (mm)

Main:

1. In the Name field enter the name of SKU.
2. In the Model field enter the model of SKU.
3. In the Manufacturer field enter the manufacturer of SKU.
4. In the Host Code field enter the external code - code from the HS if imported.
5. In the Main UOM field, use the list of values to select the unit of measure.
6. Serial Check is flag: «Y» – to check of series is needed, otherwise «N».
7. Lot Check is flag: «Y» – to check of lot is needed, otherwise «N».
8. In the Default Location field enter the address of location for SKU.

Analytics:

1. In the Hold Code field, use the list of values to select the code of blocking of SKU.
2. In the A1 field, use the list of values to select the flexfield associated with A1 attribute of SKU.
3. In the A2 field, use the list of values to select the flexfield associated with A2 attribute of SKU.
4. In the A3 field, use the list of values to select the flexfield associated with A3 attribute of SKU.
5. In the A4 field, use the list of values to select the flexfield associated with A4 attribute of SKU.
6. In the A5 field, use the list of values to select the flexfield associated with A5 attribute of SKU.
7. In the ABC Cat field, use the list of values to select ABC category.

8. In the Pick Flow field, use the list of values to select pick flow.

Physical Attributes:

1. In the Weight (kg) field enter weight.
2. In the Length (mm) field enter length.
3. In the Width (mm) field enter width.
4. In the Height (mm) field enter height.

4.5 Address Book

Address book will allow to store basic information for all contacts. This could be Users, Ship to Addresses, Couriers, Suppliers, etc. Address book records can be created by import from the HS or entered via WMS UI. To set up navigate to the Address Book window.

Enter attributes of Contractor:

1. Name;
2. Address;
3. Categories.

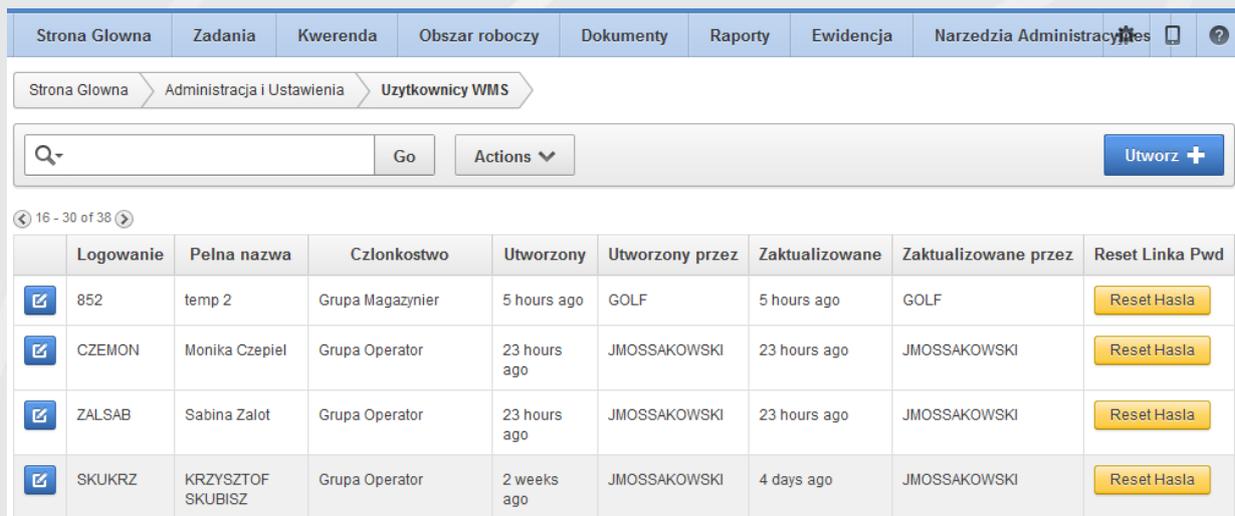
Remaining fields are optional.

4.6 Employee Resource (Security)

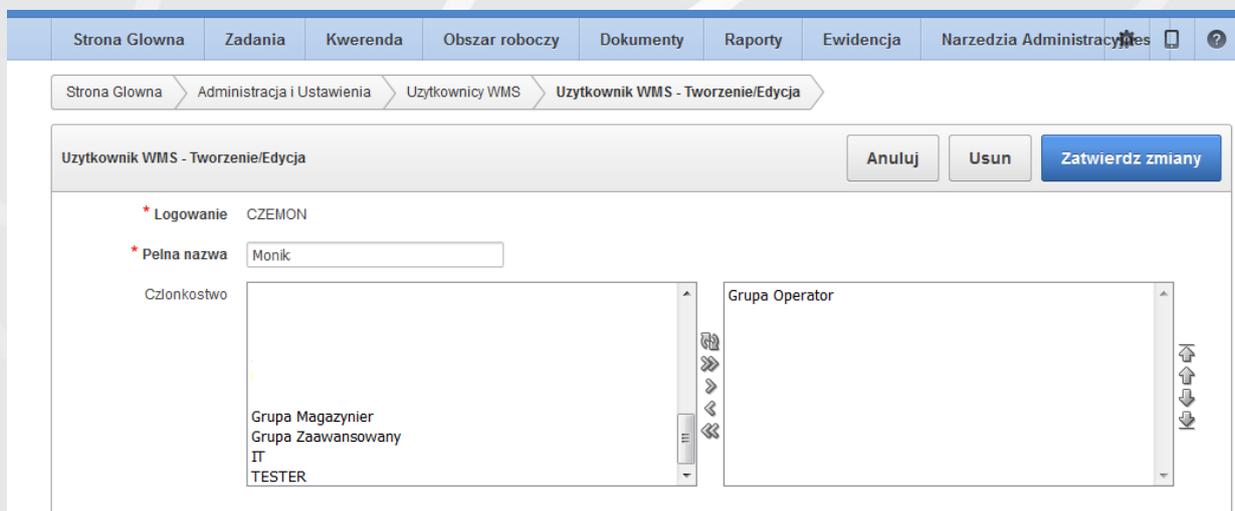
The account is necessary for operation with WMS. The account is characterized by the user and access rights (privileges) assigned to the user. Access rights provide the security level for concealment of data and processes from persons who shan't own them.

4.6.1 Users

To creating users and set up password navigate to the WMS Users window.



	Logowanie	Pełna nazwa	Członkostwo	Utworzony	Utworzony przez	Zaktualizowane	Zaktualizowane przez	Reset Linka Pwd
	852	temp 2	Grupa Magazynier	5 hours ago	GOLF	5 hours ago	GOLF	Reset Hasła
	CZEMON	Monika Czepiel	Grupa Operator	23 hours ago	JMOSSAKOWSKI	23 hours ago	JMOSSAKOWSKI	Reset Hasła
	ZALSAB	Sabina Zalot	Grupa Operator	23 hours ago	JMOSSAKOWSKI	23 hours ago	JMOSSAKOWSKI	Reset Hasła
	SKUKRZ	KRZYSZTOF SKUBISZ	Grupa Operator	2 weeks ago	JMOSSAKOWSKI	4 days ago	JMOSSAKOWSKI	Reset Hasła



Uzytkownik WMS - Tworzenie/Edycja

Anuluj Usun **Zatwierdz zmiany**

* Logowanie CZEMON

* Pełna nazwa

Członkostwo

Grupa Magazynier

Grupa Zaawansowany

IT

TESTER

Grupa Operator

4.6.2 User Groups

Not to assign the similar right to each user, the concept of user group is entered. Group - a set of users which are given joint privileges. The user can be included into one or several groups. To creating User Groups, navigate to the User Groups window.

Strona Główna | Zadania | Kwerenda | Obszar roboczy | Dokumenty | Raporty | Ewidencja | Narzędzia Administracyjne

Strona Główna > Administracja i Ustawienia > Grupy użytkowników

🔍 Go Actions Utworz +

26 - 28 of 28

	Nazwa	Członkostwo	Utworzony	Utworzony przez	Zaktualizowane	Zaktualizowane przez
	Grupa Magazynier	Członkowie	2 weeks ago	GOLF	2 weeks ago	GOLF
	Grupa Operator	Członkowie	2 weeks ago	GOLF	2 weeks ago	GOLF
	Grupa Zaawansowany	Członkowie	2 weeks ago	GOLF	2 weeks ago	GOLF

26 - 28 of 28

Zarządzaj Trybami Aplikacji | Zarządzaj Użytkownikami | **Zarządzanie Grupami Użytkownikow** | Zarządzaj Rolami | Zarządzanie Magazynami

Grupy użytkowników - Tworzenie/Edycja Anuluj Utworz

* Nazwa

Przypnane Role

- Administrator
- Grupa Magazynier
- Grupa Operator
- Grupa Zaawansowany

4.6.3 Roles

To control access to individual components of WMS is introduced the concept of roles. The role is a named set of accesses. To set up Roles navigate to the Users Roles window.

Strona Główna > Administracja i Ustawienia > Role użytkownika

🔍 Go Actions Utworz +

1 - 5 of 31

	Nazwa	Utworzony	Utworzony przez	Zaktualizowane	Zaktualizowane przez
	Grupa Zaawansowany	2 weeks ago	GOLF	2 days ago	GOLF
	Grupa Magazynier	2 weeks ago	GOLF	2 days ago	GOLF
	Grupa Operator	2 weeks ago	GOLF	2 weeks ago	GOLF
	Administrator	3 weeks ago	GOLF	2 days ago	GOLF
	TESTER	8 weeks ago	GOLF	30 hours ago	GOLF

4.6.4 Application Mode

To set up Application Mode navigate to the Access Control window.

Home > Administration and Settings > Access Control

Application Administration Set Application Mode

Application Mode

- Full access to all, access control list not used.
- Restricted access. Only users defined in the access control list are allowed.
- Public read only. Edit and administrative privileges controlled by access control list. ?
- Administrative access only.

Access Control List Delete Apply Changes

Identify usernames which correspond to this application's authentication scheme.

Find Go

<input type="checkbox"/>	Username ▲	Privilege	Last Changed By	Date
<input type="checkbox"/>	zinchenko	Administrator ▼	spepelov	1.3 years ago

Previous row(s) 21 - 21 of 21

Add User

5 WMS Inbound Logistics

5.1 Inbound Logistics Overview

N.E.W.S.-WMS inbound logistics refers to receiving, inspection, and placement processes within the warehouse.

The major inbound features of N.E.W.S.-WMS include the following:

1. Support for handling Advanced Shipment Notices (ASNs)
2. Functionality to receive SKU by barcode
3. Features that enable you to specify and capture lot and serial information at receipt
4. Functionality to automate the matching of items received to expected items
5. System suggested placement locations
6. Cross Docking

5.1.1 Supporting ASNs

The N.E.W.S.-WMS system supports HS sending ASNs that might include item, quantity, lot, and serial information as well as the TU into which the items is packed.

5.1.2 Receiving SKU

All items received through N.E.W.S.-WMS in each moment is associated with a unique TU. This enables items to be easily tracked and transacted throughout the warehouse.

5.1.3 Specifying and Capturing Lot and Serial Attributes at Receipt

With N.E.W.S.-WMS you can enter lot and serial numbers immediately, at the time of receipt. You can also enter related SKU statuses or attributes that might apply to the lot or to the serial just received.

5.1.4 Automatically Matching Items Received to Expected Items

N.E.W.S.-WMS matches the item and quantity received to the document that the items was received against. This means that the receiver does not need to manually select lines or shipments individually. However, N.E.W.S.-WMS does not show the expected quantity to be received, rather, the system requires the receiver to enter the actual quantity received, and then through a background process, the system matches the actual quantity against the expected quantity. Instead of having to spend time reviewing the related purchasing documentation, the time of receipt, automatically matching the received items also enables operators to efficiently process inbound items.

5.2 WMS Inbound Features

1. Optional inbound items inspections: The system supports an inbound inspection flow that includes a receipt step, an inspection step, and a placement step. The system does not increment on-hand balances until the inspection and placement is complete.

- System suggested placement locations: Using the N.E.W.S.-WMS Rules Engine, the system will suggest an optimal placement location for inbound items.

5.2.1 Inbound receipt

N.E.W.S.-WMS will receive from the HS an ASN, which provides information about the expected incoming shipment. If getting the ASN from HS for some reason impossible or isn't necessary, then it can be entered using the UI.

5.2.1.1 How to Input ASN

For input of ASN navigate to the Documents window.

	Id	Doc No	Doc Date	Status	Pick TU	Location	Updated	Updated By	Comments	Doc Sub Type	Host Guid	Counterparty
	21	12345	18.04.2016	Ready	-	-	2 hours ago	SIS	test1	Поставка	-	1785

Click on button



- In the No field enter the number of document.
- In the Doc Date field enter the date of document.
- In the Sub Type field, use the list of values to select the sub type of document.
- In the Comments field enter the any text.
- In the Quality field use the list of values to select quality category.
- In the Counterparty field use the list of to select counterparty.
- In the Status field use the list of to select status of document, value by default "New".
- In the Priority field enter the priority of document.
- In the Host Code field enter the host code of document.

Home Documents

ASN Receipt Orders Pick Lists Transfers Putaway Replenishments

Q- Go Actions Create

Doc Date is in the last 2 weeks

	Id	Doc No	Doc Date	Status	Pick TU	Location	Updated	Updated By	Comments	Doc Sub Type	Host Guid	Counterparty	Wave Id	Route	Stop	Address	Pick Flow	Control Required	Priority	Con
	22	222	11.04.2016	New	-	-	89 seconds ago	SIS	test2	Поставка	s0002	1785	-	-	-	-	-	N	1	
	21	12345	18.04.2016	Ready	-	-	2 hours ago	SIS	test1	Поставка	-	1785	-	-	-	-	-	N	1	

After the document header was created, for add its lines, click on button  and then in the form "Document View Edit", click on button  Select SKU.

Home Documents Document View/Edit Select SKU

Select SKU Enter Specification

Q- Go Actions

Row text contains 'bras'

Name	Manufacturer	Barcodes	Hold Code	Main UOM	A1	A2	A3	A4	A5	Updated	Updated By	Select
women_shoes (BS2484)	Braska	-	-	EACH	SHOES	NOT	NA	NA	Heonp.	3 hours ago	LLS_WMS	
women_shoes (BS2411) size 36	Braska	-	-	EACH	SHOES	NOT	NA	NA	Heonp.	3 hours ago	LLS_WMS	
women_shoes (BS2411) size 39	Braska	-	-	EACH	SHOES	NOT	NA	NA	Heonp.	3 hours ago	LLS_WMS	
women_shoes (BS2411) size 37	Braska	-	-	EACH	SHOES	NOT	NA	NA	Heonp.	3 hours ago	LLS_WMS	
women_shoes (BS2411) size 38	Braska	-	-	EACH	SHOES	NOT	NA	NA	Heonp.	3 hours ago	LLS_WMS	

Enter specification.

Home Documents Document View/Edit Quantity Edit

Select SKU Enter Specification

Quantity Cancel Previous Create

SKU Name: women shoes (BS2411) size 37

Manufacturer: Braska

Serial No:

Expired Date:

Quality:

* Qty:

UOM:

5.2.1.2 Describing Inbound Receipt Methods

N.E.W.S.-WMS will receive from the HS an ASN, which provides information about the expected incoming shipment.

All items will receive a lot number corresponding to the Receipt Document, and a lot QC Status Code.

N.E.W.S.-WMS supports following modes of receiving: Manual, Conveyor and Cross Dock.

5.2.1.2.1 Manual Mode

A Receipt Manager starts a new Receipt Document for the ASN. Receiving will not be performed without an active Receipt Document.

Manual mode includes the following steps:

1. Operator must choose Receipt document.
2. All items are offloaded on the desk from the carton.
3. The operator scans the TU to be received.
4. The operator may to choose the quality of item (optionally).
5. The operator scans the item and quantity or, items one by one.
6. Counted items are loaded to the TU.
7. The scanned information automatically is saved into the Receipt Document.

5.2.1.2.2 Cross Dock Mode

Cross docking mode suggests directly a placement location for incoming products whole TU. The contents of TUs will not be known in WMS, but it will be known in HS. For support of a community, as contents the certain universal SKU, will be specified. Item placed in a Receipt TU and having a lot of receiving document to identify it. Thereby avoids unnecessary products handling and eliminates the extra steps of having to store the products in a storage area, before moving it to the outbound staging area or special storage area.

5.2.1.2.3 Conveyor Mode

This mode is split in two separate WMS processes, which are: "Receiving with conveyor by sorting" and "Packing on a Sorting Station".

Conveyor mode allows multiple operators to work with their own documents simultaneously. The document corresponds to an ASN received by the WMS from the host system.

Process "Receiving with conveyor by sorting" includes the following steps:

1. Operator must scan a barcode of the ASN document.
2. Receipt document created automatically.
3. The operator scans the item.
4. The operator may to choose the quality of item (optionally).
5. Scans TU in which lay out item.
6. Scans conveyor station.
7. Products are delivered into Sorting Area where they are sorted by models using PTL system. One model is accumulated at one station of the sorting PTL system.
8. When all items are scanned, information automatically is saved into the Receipt Document.

There is a configurable parameter responsible for filling of a station in the sorting PTL system. All operators who put products on the conveyor line start receiving a warning message every time they put a product on the conveyor as one of the active stations used for receiving returns is filled according to the value set in the parameter.

To start retrieving products from channels of the PTL-PBL system which were received by sorting, it is necessary to switch the conveyor system from “Receiving” to “Packing Sorted Items” mode, so that no one is capable to send any additional products in the sorting area. Retrieving of products from channels of the PBL system is performed by means of the WMS process “Packing Returns on a Sorting Station” to pallets. A packing operator can close the pallet at any moment. As soon as the pallet is closed an operator can take another pallet or switch the packing station.

5.2.2 Placement

5.2.2.1 Describing Placement Methods

Placement includes the following steps:

1. To define according the placement rules of item picking zone.
2. If the item has a no picking location assigned to this zone, it is assigned a picking location in this zone, if a free location is available.
3. Items, which are already located (quantity not equal to zero and below Max) in pick locations, are replenish up to Max.
4. For items, which have a default pick location, but it already contains another item or with no pick location assigned, is allocate a new pick location. This location is setting up for the item as default pick location.
5. The remaining quantity, which has not been allocated to pick location, is sent to pallet storage.

5.2.3 Cross docking

If you have enabled cross docking for your warehouse, then cross docking can be adjusted by two ways.

1. Cross docking suggests directly a placement location for incoming products whole TU. Thereby avoids unnecessary products handling and eliminates the extra steps of having to store the products in a storage area, before moving it to the outbound staging area or special storage area.
2. Before suggesting a placement location, the WMS Rules Engine checks for backordered sales order lines that might be fulfilled by the incoming products. If the systems finds an eligible line, then it prompts you to place the incoming products directly to an outbound staging lane. Thus, cross docking enables backordered demand to be met immediately. If only a partial quantity of the products being placement needs to be used to fulfill a backordered sales line, then the system prompts you to place that quantity to an outbound staging area. The rules engine then determines an optimal storage location for the remaining portion of product.

6 WMS Outbound Logistic

The WMS outbound logistics process includes the following steps:

1. Receiving Shipment Orders
2. User then pick releases Shipment Orders
3. At pick release, the system determines the appropriate locations for the release orders
4. The system creates tasks to pick the SKUs and then dispatches them to the appropriate warehouse employees
5. During the picking step, users accept tasks and bring the SKUs to the outbound staging locations
6. User optionally inspects outbound TU's
7. After SKUs is placed in the outbound staging lanes, it is ready for ship confirmation.

6.1 Describing the Picking

Shipment Orders are received from the HS or entered manually. Pick release is the process of selecting shipment orders for release to the warehouse for picking and shipping.

Pick release is the process of selecting orders for release to the warehouse for picking and shipping. shipment orders, will be released for picking in batches. Such batch is called wave.

Orders are released for picking in batches. Such batch is called waves.

Order lines are split or merged, based on equipment capacity and pick methodology. N.E.W.S.-WMS uses the Rules Engine to determine the appropriate SKUs locations.

Based on SKUs, locations, TUs, reservations are created. The reservations are a task that includes the SKUs and locations from which to pick, and if applicable, the lot to be picked.

After the system performs reservations, it must determine the task type so that the task to pick the allocated SKUs can be dispatched to an appropriately trained user.

Operators can accept a picking task, or a set of tasks, directly from the mobile device. The system dispatches tasks through the mobile user interface. Through this user interface, the picker can view the item, quantity, zone, and location from which they can pick the load.

The picking tasks assigned by the system to a warwhouse employee might include any of the following:

1. Pick loose items into an TU
2. Pick whole TUs
3. Pick multiple TUs, for example, pick 5 boxes of 10 each to fulfill a task to pick 50
4. Pick from TUs, for example, pick 5 items out of a box of 10
5. Pick multiple partial TUs, full TUs, and loose picks for a single task
6. Build larger TUs

The user can confirm a pick by scanning one or more TUs to load. If the SKU in the storage location is not identified with an TU, then the user must confirm the item, quantity, and the storage zone, and location to confirm the pick.

The user can also unpack an TU to fulfill the pick. The user can also pick the items or the whole TU into another larger TU (like a pallet or carton), thus building a package that can be shipped during the picking process.

N.E.W.S.-WMS supports the following pick methodologies:

1. Cluster picking: the system dispatches tasks line by line, regardless of the picking zones, or the orders.
2. Order picking: the system assigns picks for one order at a time to a user. Thus, when a user accepts a task for the first line on a sales order, all other picking tasks associated with that order are automatically assigned to the user as well, regardless of the task type or zone.
3. Zone picking: the system assigns picks for a given order in each zone to a user. Thus, if a user accepts a task for the first line on a sales order, all other lines on that order that are sourced from that zone are assigned to the user.
4. Bulk picking: the system groups tasks to pick the same items that are sourced from the same zone and location so that the user only sees one task that might represent picks for several orders.

6.2 Describing the Packing

With container management features, the N.E.W.S.-WMS can automatically suggest packing configurations for groups of items. Optionally, cartonization may be based on the following packing requirements, N.E.W.S.-WMS cartonization routines suggest the best carton selection for a grouping of items:

1. Container weight capacity
2. Volume
3. Item and container dimensions
4. Item's packaging restrictions

The system can determine the best carton size in which to pack the material being picked for shipment. It can also suggest the packed configuration for material being manufactured on a work order.

Using cartonization eliminates suboptimal packing configurations by always suggesting the best cartons to use based on grouping rules, carton weight capacity, carton volume, and the dimensions of the items to be packed in comparison to the carton's dimensions.

6.3 Describing the Shipment

Shipping represents the point at which picked products leaves the warehouse (to fulfill an order). All products are packed into containers, that are uniquely identified by a TU that is assigned during the pick confirmation process. Shipment confirmation then confirms that all the TUs picked for a particular order or trip, are loaded onto the truck.