**TietoEVRY NIS**

**Load updating tool - External**

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Requirements specification

# General

This document describes a tool which would update the loads on service points inside plan or alternative. Co je to plan nebo alternativni?

Plan is a version and Alternative is a subversion in NIS.

# Load update tool

There would be created a tool / external app, that would add the loads from files to given plan by Plan identification or to its Alternative by additionally providing Alternative name. Must work with Finnish characters. Kam se zapisuje nejaky alternativni plan?

Not really handled in the Test app, but keep it there.

The tool must work as a console application and as well as an application with UI.

Actions would be UPDATE and CLEAR.

## Action UPDATE

For console application a parameter must define

Plan identification is mandatory, the Alternative name is optional. Jsou definovany 3 tabulky a ani jedna nema pole neco jako “plan”, k cemu pak ta idetifikace?

Already answered.

In case of the console application, parameters can be used to set the Plan identification and Alternative name.

There would be possible to drag and drop files. A validation check should be done - file is not loaded if fails the check (must contain information what failed or line number). File structure is mentioned in configuration chapter. In case of the console application, a parameter defines the folder rom which files should be taken.

For specified service points by identification the update action copies the related current load data (inside SYS\_LOAD\_INFORMATION\_evw) to plan load (inside TEE\_LOAD\_INFORMATION\_evw) and adds new defined load based on the file input.

Uplne nechapu ty tabulky, TEE je takova history tabulka a SYS jsou aktualni data? Prijdou data,prekopiruju nektere sys data do tee a updatuju data v sys ze souboru.

current load data (inside SYS\_LOAD\_INFORMATION\_evw) – Used for the calculation by default.

plan load (inside TEE\_LOAD\_INFORMATION\_evw) – If there are some data, those are being used. So to if there should be added some load, the data from the Current load table must be copied here and the new load must be added.

Additionally, it stores string "-LoadSet-" to start of CONVERSION\_INFO field of the service point (table TEE\_SERVICE\_POINT\_evw).

If the service point’s conversion info starts "-LoadSet-" and there exists curve with the same number, the customer and Energy is updated for the load record.

If the service point’s conversion info starts "-LoadSet-" and there does not exist curve with the same number, new load record is added (copy of the existing loads is not needed in this case To je to kopirovani do TEE? ).

Yes, cause if it already contains the special string, then the load was already updated by load update, so the data should be already there.

The tool must handle thousands of service points in one file, so it must be done performance wise, and the update must consider max length of SQL clause.

## Action CLEAR

Clears all the data from TEE\_LOAD\_INFORMATION\_evw table and removes the "-LoadSet-" string from CONVERSION\_INFO field of all service points.

# DB structure

Create below table structure to SQL DB:

CREATE TABLE [rat].[TEE\_SERVICE\_POINT\_evw](

[ID] [int] NOT NULL,

[IDENTIFICATION] [nvarchar](32) NULL, null? It ca be so, that it does not have it

[gid] [int] NULL,null? It ca be so, that it does not have it

[CONVERSION\_INFO] [nvarchar](600) NULL, 600? kdyz se tam zapisuje “-LoadSet-”? Sure

[LOCATION] [geometry] NULL

) ON [PRIMARY]

GO

For testing purposes create few records inside the table. Mandatory fields: ID, IDENTIFICATION (unique string), gid (unique int), location (store point geometry – get knowledge about the geometry type of SQL, use coordinate system EUREF Finland).

Once the table with records is created, create a SPATIAL index on the table.

Jen si ujasnim klice

TEE\_SERVICE\_POINT\_evw ma gid .. null nechapu

My bad, added ID

TEE\_SERVICE\_POINT\_evw.gid je cizi klic pro SYS\_LOAD\_INFORMATION\_evw.rwo\_gid

i pro TEE\_LOAD\_INFORMATION\_evw.rwo\_gid

Correct

CREATE TABLE [rat].[SYS\_LOAD\_INFORMATION\_evw](

[ID] [int] NOT NULL,

[CURVE\_NUMBER] [int] NULL,

[ENERGY\_MWH] [numeric](38, 10) NULL,

[NUMBER\_OF\_CUSTOMERS] [int] NULL,

[PEAK\_POWER] [numeric](38, 10) NULL,

[REACTIVE\_POWER] [numeric](38, 10) NULL,

[INSERTION\_TIME] [datetime2](7) NULL,

[gid] [int] NULL,

[rwo\_gid] [int] NULL,

[rwo\_code] [numeric](38, 8) NULL

) ON [PRIMARY]

GO

For testing purposes, create few records inside this table.  
Mandatory fieds: ID, CURVE\_NUMBER (value 1-20), ENERGY\_MWH (value 1-20), NUMBER\_OF\_CUSTOMERS (1-20), RWO\_GID (must be matching GID from tee\_service\_point table), RWO\_CODE (set value to 123).

There can be multiple records related to one tee\_service\_point.

CREATE TABLE [rat].[TEE\_LOAD\_INFORMATION\_evw](

[INSERTION\_TIME] [datetime2](7) NULL,

[PEAK\_POWER] [numeric](38, 8) NULL,

[NUMBER\_OF\_CUSTOMERS] [int] NULL,

[REACTIVE\_POWER] [numeric](38, 8) NULL,

[ID] [int] NOT NULL,

[CURVE\_NUMBER] [int] NULL,

[ENERGY\_MWH] [numeric](38, 8) NULL,

[POWER\_FACTOR] [numeric](38, 8) NULL,

[gid] [int] NULL,

[rwo\_gid] [int] NULL,

[rwo\_code] [numeric](38, 8) NULL

) ON [PRIMARY]

GO

Mandatory fieds: ID, CURVE\_NUMBER (value 1-20), ENERGY\_MWH (value 1-20), NUMBER\_OF\_CUSTOMERS (1-20), RWO\_GID (must be matching GID from tee\_service\_point table), RWO\_CODE (set value to 123).

# Configuration

Files for setting the loads are being done by the user.

Here is the template of .txt file:

Predpokladam ze to ma byt List a format je na me? Treba JSON?

Nebo to ma vypadat presne jak?

[“Curve”:1,

“Customers”:10,

“Energy Mwh”:”1.1”,

“Identifications”:7],

[“Curve”:2,

“Customers”:6,

“Energy Mwh”:”2.3”,

“Identifications”:8],

atd?

No, the format is given. One curve update per one file only.

Curve:*<curve number, mandatory, int, one number only>*

Customers:*<number of customers, mandatory, int, one number only>*

Energy MWh:*<energy load in MWh which would be added to the existing load, mandatory, decimal, one number only, decimal separator “,” or “.”>*

Identifications:

*<Identifications of service points which load should be updated, 0-n, int>*

# Results

Provide the create script for the tee\_service\_point\_evw table together with the spatial index.

Provide test files used. At least 3.

Provide exported data of all tables after import of the test files. Export the location in readable format.

Provide the application sources.

# Change history

| Version | Date | Author | Reviewed by | Approved by | Comment |
| --- | --- | --- | --- | --- | --- |
| 1.0 | 2021-11-24 | Jakub Horňák |  |  | Initial version |
|  |  |  |  |  |  |