VMRDH-Jobs

Document-ID: b5aab98

2025-09-15

Job index

VMRDH 3.0

This pdf acts as a manual to understand the OmniTrans jobs, their purpose, inputs and outputs.It also allows you to download the jobs and input templates.

Part I

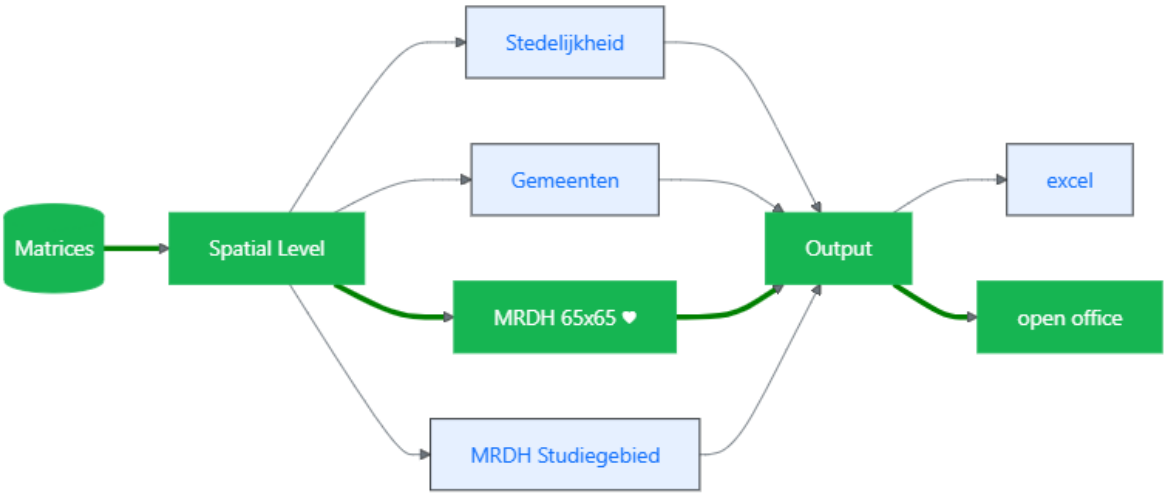
Standard Uitvoer

1 Matrix Compressies

1.1 Purpose

There are 4 types of matrix compression jobs. Each job has a different spatial aggregation level. The four aggregation levels are :

- Stedelijkheid
- Gemeenten
- MRDH groot / MRDH groot etm
- MRDH Studiegebied



1.2 Inputs

The inputs for the job are matrices listed under `$matrices`. Different jobs handle the different level of aggregation for you, so you do not have to change anything else in the job (see outputs

if you want to change output formats). The input `$matrices`takes a list, each item in the list takes the form `["Output_Sheet_name", [P,M,T,U]],`.

> **!** Important
>
> Each spatial level is a different job. If you have changed only the list of matrices in the job, you can use it without caution. But if you have changed the `# definieer Gebieden` part of the code, that is, if you have changed the definition of each gebied, you have to be careful that each *Centroid Number* is exclusively in ONLY ONE *gebied*. If not, you will get an error.

1.3 Outputs

You also have to control the output format. The output can be in two formats: excel or openoffice. If you are working on the MRDH servers, you must open/ uncomment the `Naar Open Office` and the the two lines below it. If you want to get an excel format output, you would comment the `Naar Open Office` and the the two lines below it and uncomment `Naar Excel` and the two lines below it.

1.4 Code

Download the code.matrixcompress.rb

2 Voertuigprestaties

2.1 Purpose

The voertuigprestaties (or vehicle-km, vehicle-hours) is a performance indicator for the whole network (or selected-part of a network). This indicator shows how many km were travelled by all the vehicles collectively in the network or how many hours were spent by all the vehicles collectively in the network. More time spent by vehicles in the network could indicate congestion. Similarly more vehicle-km driven by vehicles indicate higher pollution/ fuel-usage levels for example.

2.2 Inputs

> **!** Important
>
> Be careful! Each line of this job is an input parameter. Read carefully and select the pmturi numbers very carefully.

- `vgtm.load`: In this parameter, you create a list []. Each item in the list is a pmturi and enclosed inside []. Each item is separated by a comma.
- `vgtm.netwerk` : In this parameter, you create a list []. Each item in the list is a p and m combination refereing to a network. The number of items in this list should be same as the number of items in `vgtm.load`.
- `vgtm.loadNaam` : In this parameter you create a list []. Each item in this list is a string that defines the name of the load defined under `vgtm.load`. The number of items in this list should be same as the number of items in `vgtm.load`.
- `vtgkm.variant`: This parameter is also a list [] and contains items that are names of the variants in your model. It is not necessary that the number of items in this list is same as number of items in the `vgtm.load`.
- `vtgkm.selectie` : If you want to calculate these performance indictors only for a small part of the network, you must first define a selection in omnitrans, give it a name. In

this job, you refer to that name in this parameter. Again, this parameters is a list and can take multiple `selection-names`.

- `vtgkm.wegtype` : You have this optional parameter to calculate this indicator only for certain wegtypes. This parameter is again a list of items indicating the wegtype.
- `vtgkm.filterWegtype`: You have this optional parameter that a list of wegtypes. For example you want to calculate the indicator for all links but not connectors. Then you must exclude the connector wegtype in this list.

```
## pmturi load
vtgkm.load          = [ [1,2,1,103,11,20],[1,2,3,103,11,20]]# verplicht!

## opties (pmturi afhankelijk)

# default = Dagdeel factor (1.0)
#~ vtgkm.factoren      = [ 1.0                    1.0    1.0    1.0        ]

vtgkm.netwerk       = [ [2,1],                [2,3]]
vtgkm.loadNaam      = [ "Auto_os",            "Auto_as"]

## opties voor categorieen:
vtgkm.variant = ["2016","2020","2023","2030Laag","2030Hoog","2040Hoog"]
# default = current variant

vtgkm.selectie = ["VTGP_2016","VTGP_2020","VTGP_2023","VTGP_2030",
"VTGP_2030","VTGP_2040"]
# default = hele netwerk


vtgkm.wegtype = 1        # default = none
vtgkm.filterWegtype = [14,15,16,17,18,19,20,21,22,51,99]
```

2.3 Outputs

You also have to control the output format. The output can be in two formats: excel or openoffice. If you are working on the MRDH servers, you must open/ uncomment the `## extra opties voor excel` and the the lines below it. On MRDH severs, you can set `vtgkm.openoffice = true`

2.4 Code

Download the code.matrixcompress.rb

3 Skim Matrix Exports

3.1 Purpose

Some text explaining what the code does.

3.2 Inputs

Following are the inputs to this job.

3.3 Outputs

Following are the outputs to this job.

3.4 Code

Download the code.matrixcompress.rb

4 Bereikbaarheid

4.1 Purpose

Some text explaining what the code does. And how

4.2 Inputs

Following are the inputs to this job.

4.3 Outputs

Following are the outputs to this job.

4.4 Code

Download the code.matrixcompress.rb

5 Selected Link Compress

5.1 Purpose

Some text explaining what the code does.

5.2 Inputs

Following are the inputs to this job.

5.3 Outputs

Following are the outputs to this job.

5.4 Code

Download the code.matrixcompress.rb

6 INEXDO

6.1 Purpose

INEXDO is voor al het inkomend, uitgaand en doorgaand verkeer door een of meerdere zones.

6.2 Inputs

- `Zone number(s)` : the zones you want to use
- `Matrix location`

6.3 Outputs

Following are the outputs to this job.

6.4 Code

```
Zone = [1,2,3,4]+[5,6,7,8]
```

7 Uitsnednetwork

This job allows you to cut a cordon from the larger network and create an OD matrix for this cordon. This is also known as `sub-area analysis`.

7.0.1 Purpose

Look inside each tab to understand what you will get from this job.

7.0.2 Inputs

Following are the inputs to this job.

```
fratarTest.source_cube = '2020_KAL' # Geef MatrixCube op (hier: 2016_SMC)
fratarTest.matrix = [1,2,1,103]     # Geef Matrix (1 PER AANROEP!) (Hier Auto OS)
```

7.0.3 Outputs

Following are the outputs to this job.

```
fratarTest.destination_cube = 'FratarDemo' # Resultaatcube
```

7.0.4 Code

Download the code.matrixcompress.rb

8 Milieu

8.1 Purpose

Some text explaining what the code does.

8.2 Inputs

Following are the inputs to this job.

8.3 Outputs

Following are the outputs to this job.

8.4 Code

Download the code.matrixcompress.rb

Part II

Custom Jobs

9 Trip Length Distribution

9.1 Purpose

This job can create trip length distribution for a normal matrix or for a select link matrix or any matrix. One of these matrices is then combined with a skim matrix of choice

9.2 Inputs

This job can be run in two ways.The first method uses regular ranges for the x-axis and the second method uses irregular ranges.The regular ranges are specified using a min, max and interval. The irregular ranges are specified using an array of lower limits and an array of upper limits.

9.2.1 Method 1 - Regular Ranges

Following are the inputs to this job. You will also need a encrypted file tld.rc in your job folder.

The following parameters are used to select the matrices and create a table.

- The parameter `mode_matrix_number`: is the matrix number of the trip matrix.
- The parameter `skim_matrix_number`: is the matrix number of the skim matrix.
- The parameters used for the chart are also used for the table.

The following parameters are used for plotting a chart. These 3 values will come based on the skim matrix.

- The parameter `x_axis_max`: is the maximum distance you want to show on the x-axis.
- The parameter `x_axis_min`: is the minimum distance you want to show on the x-axis.
- The parameter `x_axis_interval`: is the interval on the x-axis.

> **!** Important
>
> To specify the x-axis min max, open your skim matrix in Omnitrans and check the min max values. Be sure to check that the *Total trips in the matrix* is same as *Total trips in the frequency table*. Both these values are shown in the output of this job. If they are not the same, your classes in the frequency table do not cover the entire range of distances in the skim matrix.

```
$mode_matrix_number = [1,11,10,1] # trip matrix
$skim_matrix_number = [1,11,10,1,13,1]  # skim matrix

$x_axis_max = 11 # max value on x-axis
$x_axis_min = 0 # min value on x-axis
$x_axis_interval =  1 # interval on x-axis
```

9.2.2 Method 2 - Irregular Ranges

Following are the inputs to this job. You will also need a encrypted file tld.rc in your job folder.

The following parameters are used to select the matrices and create a table.

- The parameter `mode_matrix_number`: is the matrix number of the trip matrix.
- The parameter `skim_matrix_number`: is the matrix number of the skim matrix.
- ~~The parameters used for the chart are also used for the table.~~

The following parameters are used for a generating a frequency table. These 2 values will come based on the skim matrix.

- The parameter `x_axis_min`: is an array of lower limits of the class on x-axis.
- The parameter `x_axis_max`: is an array of upper limits of the class on x-axis.
- The parameter `x_axis_interval`: is always set to zero.

> **!** Important
>
> To specify the x-axis min max, open your skim matrix in Omnitrans and check the min max values. Be sure to check that the *Total trips in the matrix* is same as *Total trips in the frequency table*. Both these values are shown in the output of this job. If they are not the same, your classes in the frequency table do not cover the entire range of distances in the skim matrix.

```
$mode_matrix_number = [1,11,10,1] # trip matrix
$skim_matrix_number = [1,11,10,1,13,1]  # skim matrix

$x_axis_min = [0,10,20,40] # lower limits
$x_axis_max = [10,20,40,100] # upper limits
$x_axis_interval =  0 # interval on x-axis
```

9.3 Outputs

Following are the outputs to this job:

- A tabular format that you can copy paste into excel.
- A chart that you can save as an image
- No chart is created for irregular ranges (Method 2).

9.4 Code

Download the encrypted file tld.rc

```
# OmniTRANS Job for 'Delft Tutorial Static'
# Created 2-9-2025 13:17:16
# Author 'Srirama'

=begin
This script creates a trip length distribution chart
based on trip and distance matrices. It uses the OtChart library
to visualize the distribution of trips by distance.
=end

require "OtChart"



# INPUTS

$mode_matrix_number = [1,11,10,1] # trip matrix
$skim_matrix_number = [1,11,10,1,13,1]  # skim matrix
```

```
$x_axis_min = 0
$x_axis_max = 11
$x_axis_interval =  1

# Uncomment the following lines for irregular ranges
# $x_axis_min = [0,10,20,40] # lower limits
# $x_axis_max = [10,20,40,100] # upper limits
# $x_axis_interval =  0 # interval on x-axis


requireCrypted($Ot.dirJob+"tld.rc")
```

Part III

Others

10 Weekdagmodule

In the weekdagmodule, there are options to generate shapefiles in GEOMILIEU and CIMLK formats. In these shapefiles, there are several fields. The definition of these fields are as follows:

10.1 Fieldnames in Geomilieu Export

ANODE	A-knoop		
BNODE	B-knoop		
LINKNR	Linknummer		
STAGPCT	Percentage Stagnerend verkeer		
	Wettelijke snelheden		
Motoren dag	V_MCDAY		
Personenauto dag	V_LVDAY		
MiddelZware vracht dag	V_LTDAY		
Zware vracht dag	V_HTDAY		
Motoren avond	V_MCEVE		
Personenauto avond	V_LVEVE		
MiddelZware vracht avond	V_LTEVE		
Zware vracht avond	V_HTEVE		
Motoren nacht	V_MCNI		
Personenauto nacht	V_LVNI		
MiddelZware vracht nacht	V_LTNI		
Zware vracht nacht	V_HTNI		
	Intensiteiten		
	richting A> B	**richting B > A**	**doorsnede**
MVT etmaal	LOADAB	LOADBA	TOTINTENS
MVT dag	-	-	-
MVT avond	-	-	-
MVT nacht	-	-	-
Motoren dag	INTMCDAYAB	INTMCDAYBA	FLOWMCDAY
Motoren avond	INTMCEVEAB	INTMCEVEBA	FLOWMCEVE
Motoren nacht	INTMCNIAB	INTMCNIBA	FLOWMCNI
Personenauto dag	INTLVDAYAB	INTLVDAYBA	FLOWLVDAY
Personenauto avond	INTLVEVEAB	INTLVEVEBA	FLOWLVEVE
Personenauto nacht	INTLVNIAB	INTLVNIBA	FLOWLVNI
MiddelZware vracht dag	INTLTDAYAB	INTLTDAYBA	FLOWLTDAY
MiddelZware vracht avond	INTLTEVEAB	INTLTEVEBA	FLOWLTEVE
MiddelZware vracht nacht	INTLTNIAB	INTLTNIBA	FLOWLTNI
Zware vracht dag	INTHTDAYAB	INTHTDAYBA	FLOWHTDAY
Zware vracht avond	INTHTEVEAB	INTHTEVEBA	FLOWHTEVE
Zware vracht nacht	INTHTNIAB	INTHTNIBA	FLOWHTNI
	percentages per uur		
	richting A> B	**richting B > A**	**doorsnede**
MVT etmaal	-	-	-
MVT dag	GPCTDAYAB	GPCTDAYBA	PFLOWDAY
MVT avond	GPCTEVEAB	GPCTEVEBA	PFLOWEVE
MVT nacht	GPCTNIAB	GPCTNIBA	PFLOWNI
Motoren dag	PCTMCDAYAB	PCTMCDAYAB	PFLOWMCDAY
Motoren avond	PCTMCEVEAB	PCTMCEVEAB	PFLOWMCEVE
Motoren nacht	PCTMCNIAB	PCTMCNIAB	PFLOWMCNI
Personenauto dag	PCTLVDAYAB	PCTLVDAYBA	PFLOWLVDAY
Personenauto avond	PCTLVEVEAB	PCTLVEVEBA	PFLOWLVEVE
Personenauto nacht	PCTLVNIAB	PCTLVNIBA	PFLOWLVNI
MiddelZware vracht dag	PCTLTDAYAB	PCTLTDAYBA	PFLOWLTDAY
MiddelZware vracht avond	PCTLTEVEAB	PCTLTEVEBA	PFLOWLTEVE
MiddelZware vracht nacht	PCTLTNIAB	PCTLTNIBA	PFLOWLTNI
Zware vracht dag	PCTHTDAYAB	PCTHTDAYBA	PFLOWHTDAY
Zware vracht avond	PCTHTEVEAB	PCTHTEVEBA	PFLOWHTEVE
Zware vracht nacht	PCTHTNIAB	PCTHTNIBA	PFLOWHTNI

10.2 Dagdeel Calculation Periods

```
DAY => dag = 12 uur
EVE => avond = 4 uur
NI => nacht = 8 uur

Rekenvoorbeeld
Dag LV * 12 + Avond LV * 4 + Nacht LV * 8 => LV Etmaal
```

Part IV

Prototype4

Why?

This model takes a shift from trip-based model to a tour based model.

Process-Flowchart

11 Modules

11.1 CARMOD Module

11.1.1 Purpose

Its primary function is to ensure that the car ownership (autobezit) within the Model is consistent with the car ownership totals provided by the DYNAMO model. Additionally, CARMOD is responsible for spatially distributing this car ownership.

11.1.2 Inputs

Following are the inputs to this job.

```
fratarTest.source_cube = '2020_KAL' # Geef MatrixCube op (hier: 2016_SMC)
fratarTest.matrix = [1,2,1,103]     # Geef Matrix (1 PER AANROEP!) (Hier Auto OS)
```

11.1.3 .coeff File

This file contains the updated Alternative Specific Constants (ASCs) and other coefficients for the autobezit model, which are used by the SES program

See Online Version for a sample .coeff file.

11.1.4 .sum File

Download the code.matrixcompress.rb

11.1.5 .log File

11.2 QUAD

11.2.1 Purpose

Some text explaining what the code does.

11.2.2 Inputs

Following are the inputs to this job.

11.2.3 Outputs

Following are the outputs to this job.

11.2.4 Code

Download the code.matrixcompress.rb

11.3 IntraLOS

11.3.1 Purpose

Some text explaining what the code does.

11.3.2 Inputs

Following are the inputs to this job.

11.3.3 Outputs

Following are the outputs to this job.

11.3.4 Code

Download the code.matrixcompress.rb