VISTRO 1.0 Release Notes

PTV GROUP

the mind of movement

Last modified: 2013-02-07

1.00-13 [76802]   2013-02-06

✅ **Fixed Bugs**

File import / export:

✅ Save: Networks could not be saved after an intersection with detectors was deleted. This issue was fixed. **(873)**

Graphical editors:

✅ 'Add leg', deleting intersections: These operations could only be executed a limited number of times before they did not work anymore. This issue was fixed. This also affected the creation of mitigation options. **(865)**

✅ Connecting intersections: When a leg was connected with another intersection (not another leg connector) the orientations of the approaches on the target intersection were not updated properly. This caused problems in follow-up operations, for example when mitigation options were created. This issue was fixed. **(869)**

✅ Deleting intersections: Vistro could crash if an intersection was deleted and a neighbor intersection was selected. This happened if the neighbor intersection was semi- or fully actuated. This issue was fixed. **(864)**

✅ Link polygons: It is now possible to define a link polygon by selecting a link and starting to drag. **(810)**

✅ Turning directions: When intersections were connected the turning directions were sometimes not updated correctly. This issue was fixed. **(882)**

Mitigation:

✅ Creating mitigation options: Creating mitigation options only worked a limited number of times. After that a technical error message ('Unhandled exception...') was shown and partial intersections were visible in the network window. Now it is possible to create an arbitrary number of mitigation options for the whole network and all the other issues are fixed. **(866)**

✅ Creating options: When the orientations of the approaches on the original intersections were not up-to-date, creating mitigation options did not work properly. This issue was fixed. **(868)**

✅ Report: Some issues in the report were fixed. **(881)**

Reporting:

✅ Memory: Reports now have a much lower memory consumption. It is also possible to print several reports without getting error messages concerning memory. **(829)**

Traffic control tab:

✅ Roundabouts, HCM: The calculations for bypass volumes are now displayed in a separate column, even if the bypass turn starts at a shared lane. In the delay and queue calculations of adjacent shared lanes the bypass volume is no longer taken into account. **(860)**

1.00-12 [76545]   2013-01-29

➕ **New Features and Changes**

Dialogs:

➕ Global Settings: The direction of traffic now can only be changed if there are no intersections in the network. **(821)**

➕ Global settings: Units were added to several data rows. **(447)**

File import / export:

- ⊕ OTISS: Vistro now supports a file-based OTISS interface to export and import data to and from OTISS. **(288)**

✔ Fixed Bugs

Dialogs:
- ✔ Global Settings: When the direction of traffic is changed, Vistro no longer posts a confusing message about geometries being deleted. **(827)**

File import / export:
- ✔ ANM export: When the network contained intersections with signal groups with split 0 (or smaller than minimum green time), it was possible that the ANM file generated for this network could not be read in Vissim. The error message in Vissim referred to a wrong cycle time. This issue was fixed. **(849)**
- ✔ ANM, Synchro: In ANM and Synchro imports signal group data was not imported correctly into the network. The timing diagram was correct after a file import, but when the network was saved and the network file reopened, the timing data was lost. This issue was fixed. **(841)**

Graphical editors:
- ✔ 'Add Leg': When a leg is added to an intersection with the 'Add Leg' functionality, Vistro now creates movements from this leg to all other legs on the intersection, unless they are inbound one-way streets. Furthermore, several default values are now set correctly on the new leg, for example lane width, median length and width, growth rate and peak hour factor. **(832)**
- ✔ Moving poly points: Vistro no longer crashes when a poly point on a link that is cut off from the network is moved. **(846)**
- ✔ Show entire network: The 'Show entire network' button now also works correctly when there are only zones and gates, and no intersections in the network. **(857)**

Main window:
- ✔ High resolution: When the screen was set to high resolution (HiRes), texts where sometimes unreadable, and buttons and checkboxes could sometimes not be used. This issue was fixed. **(826)**
- ✔ Undo: Clicking 'Undo' after changing global settings no longer results in a technical error message. **(851)**

Non-graphical editors:
- ✔ Mouse wheel: The mouse wheel no longer changes values in the grid cells. **(599)**
- ✔ Units: Units were added to several data rows. **(715)**

Optimization:
- ✔ Local optimization: After optimizing cycle times intersections could be in an invalid state, where the cycle time shown for the controller (in the Intersection Settings sub-table of the traffic control tab) would be different from the cycle time (shown in the Lane Group Calculations sub-table) used to calculate capacities and delays. This issue was fixed. **(761)**

Reporting:
- ✔ Turning movement volumes: In the Turning Movement Volume report tables (both summary and detail), the table could get too wide under certain circumstances (for example 4-leg intersections where two legs have 3, the other two legs 4 turns, i.e. inlcuding U-turns). In this case, parts of the table were shown on the next page. This issue was fixed. **(848)**
- ✔ Two-way stop intersections: No report could be generated if the network contained a two-way stop intersection with no minor approach. This issue was fixed. **(847)**

Traffic control tab:
- ✔ Signalized intersections, HCM 2010: In configurations with an exclusive left-turn and a shared left-turn (for example L-LTR or L-LR) no volume was assingned to the L lane group. This issue was fixed. **(850)**
- ✔ Signalized, HCM 2010: Due to an instability it was possible that there were minor differences in calculation results (usually about 0.01 to 0.1 in values such as delay and queue length). This only affects intersections with through lane groups that have no left turn (right turn in left-hand traffic). This issue was fixed. **(834)**

Trip assignment tab:

- ✅ Add missing paths: The button no longer has to be hit twice. **(791)**

- ✅ Add missing paths: When paths are automatically generated ('Add Missing Paths'), Vistro now takes into account when streets and movements are closed. **(800)**

Trip distribution tab:

- ✅ Delete zone: When the trip distribution tab was active and a zone was deleted, the zone was still shown in the trip distribution tab and in the network window. Using Vistro afterwards could lead to crashes or error messages. This issue was fixed. **(855)**

1.00-11   [75998]   2013-01-10

➕ New Features and Changes

Traffic control tab:

- ➕ User defined saturation flow rate: It is now possible to override the calculated saturation flow rate on signalized intersections with analysis type HCM 2000 and HCM 2010 with a user-defined saturation flow rate. **(419)**

✅ Fixed Bugs

File import / export:

- ✅ ANM export: When the export is executed without RBC, .rbc files are no longer generated. **(780)**

- ✅ Opening .vistro files: When a .vistro file was opened with a double-click or 'Open with...' in the Windows Explorer, Vistro made certain undesired changes to the data (for example setting the 'Median' flag). This means that opening a network file with a double-click lead to a different result than opening the same file using the entry 'File->Open Network...' entry in the menu bar. This issue was fixed. **(814)**

Non-graphical editors:

- ✅ Lane configuration: In some cases, saving a lane file, closing, and re-opening resulted in a different lane configuration than what was saved. This issue was fixed. **(825)**

- ✅ No. of lanes in pocket: With certain lane configurations, the No. of Lanes in Pocket could not be edited properly (error message: "Crossing lane turns"). This issue was fixed. **(824)**

1.00-10   [75798]   2013-01-04

➕ New Features and Changes

Data model:

- ➕ Left-hand traffic: Vistro now supports left-hand traffic. **(178)**

✅ Fixed Bugs

Data model:

- ✅ Detector data: When detector data on an intersection was edited, and the structure of the intersection was changed later on, it was possible that Vistro crashed when trying to save the data. This issue was fixed. **(811)**

File import / export:

- ✅ ANM export: It was possible that ANM files could not be read in Vissim. This happened when there was a one-legged intersection that was connected to its neighbor intersection with a link that was closed in both directions. This issue was fixed. **(804)**

Intersection setup tab:

- ✅ Row 'Number of lanes in pocket': The editability of cells has been wrong sometimes. This was fixed. **(779)**

Main window:

- ✅ Save: After a file import the 'Save...' button now opens a file browser. It is no longer necessary to select 'Save As...'. **(801)**

Non-graphical editors:

- Lane configuration: In certain situations Vistro could crash if all turns where removed from an approach. This issue was fixed. **(794)**

Scenario management:
- Duplicate: In some situations clicking the 'Duplicate' arrow caused Vistro to be unresponsive afterwards. This issue was fixed. **(802)**

Traffic control tab:
- Fully actuated controllers: It was possible that lane group capacities where negative if the signal timing was not set up properly (missing barrier). The capacity is now cut off at 0 in these cases. **(808)**
- Signalized, volumes: The volume distribution on approaches that have both a left turn lane and a left-through turn lane was improved. **(812)**

1.00-09 [75676] 2012-12-20

✓ Fixed Bugs

Dialogs:
- 'File has changed': When the 'File has changed' dialog was left with 'Yes', the following dialog showed the wrong file type (.ver instead of .vistro). This issue was fixed. **(798)**

1.00-08 [75545] 2012-12-17

⊕ New Features and Changes

File import / export:
- Synchro / ANM Import: Loss Time is imported now. **(565)**
- Synchro / ANM: Now information about peak hour factors is imported **(678)**
- Synchro / ANM: Now information about whether an intersection is in the CBD is imported. **(679)**
- Synchro / ANM: Now information about whether lead / lag optimization should be allowed is imported. **(564)**

Traffic control tab:
- Analyis Methods: Circular 212 Operations has been replaced with Circular 212 Planning **(783)**

✓ Fixed Bugs

Optimization:
- Hill Climbing Algorithm: In some cases, the hill climbing algorithm did not find any result. **(777)**

Reporting:
- Intersection Analysis Summary table: Due to some circumstances the method column was not visible, this is fixed. **(784)**
- Scenario names: Now the correct scenario name is written in the report. Previously the name of the base scenario was always used. **(778)**

Scenario management:
- Creating scenarios: Scenario management did sometimes not work because the installation was incomplete. This issue was fixed. **(793)**
- Save: Sometimes Vistro asked whether data should be saved even if the file was unchanged. This issue was fixed. **(781)**

1.00-07 [75373] 2012-12-11

✓ Fixed Bugs

Dialogs:
- Global settings: After File->New the default for the network now is 'imperial', not 'metric'. **(762)**

Mitigation:

- Editability: The editability of cells in the mitigation tab now is the same as in the traffic control tab. **(772)**
- Reporting: The report in some cases was incomplete, the intersection geometry data was not shown. This issue was fixed. **(774)**

Non-graphical editors:

- Circular 212 Operations: This analysis method was removed. **(722)**

Optimization:

- Cycle time update: In certain situations the cycle time optimization did not produce correct results. This issue was fixed. **(753)**
- Empty barriers: A problem in optimization in connection to empty barriers was fixed. **(754)**
- Weights of routes: The weights of routes are now taken into account correctly in the network optimization. **(775)**

Reporting:

- Approach names: The names of the approaches in the report are correct now. **(766)**
- ICU, Circular 212: Adjustments were made concerning the number of decimal places of several data rows. **(767)**

Scenario management:

- Save: The user is now only asked whether he wants to save a scenario when the scenario was changed. **(747)**

Simulation:

- Preview: Preview starts in 2D now. **(621)**

Traffic control tab:

- HCM 2010: An additional row 'Calculated Final Saturation Flow Rate' was added to the 'Saturation Flow' sub-table. **(699)**
- Two-way stop: There was an issue with delay calculation of turns, when the turn is on a shared lane and capacity is 0. This issue was fixed. **(765)**

1.00-06 [75194]   2012-12-05

⊕ New Features and Changes

Graphical editors:

- ⊕ Show traffic conditions: The expression 'Average Delay' was replaced with 'Delay'. **(748)**

Traffic control tab:

- ⊕ ICU / Circular 212: Several improvements were made in the calculation and the table layout of these analysis types. **(738)**

⊘ Fixed Bugs

File import / export:

- ANM without RBC: Files can now be read again in Vissim, cycle time was missing. **(729)**

Intersection setup tab:

- Lane configuration: The data shown in the lane configuration was not adjusted when the orientation / polygons of the links in the graphical editor was changed. This issue was fixed. **(750)**

Main window:

- Crash: When a new network was loaded, Vistro would crash if the volume tab was selected without first selecting an intersection.. **(755)**

Mitigation:

- ✅ Tab changes: When the lane configuration in a mitigation option is changed, the view no longer automatically switches to the base configuration. **(746)**

1.00-05   [75098]   2012-12-02

➕ **New Features and Changes**

File import / export:
- ➕ Synchro / ANM import: Vistro now can import Synchro and ANM files. **(716)**

Intersection setup tab:
- ➕ Control type 'Unknown': The table now contains a row to edit crosswalks. **(505)**

Optimization:
- ➕ Local and Network Optimization: The defaults for upper limits of cycle times were set to 240 seconds. **(510)**

Traffic control tab:
- ➕ Roundabout, HCM 2010: The table now contains a data row for the heavy vehicle adjustment factor. **(668)**

✅ **Fixed Bugs**

Dialogs:
- ✅ Global settings: It is now verified that the values of the global parameters are valid, i.e. they lie in the specified range. **(712)**
- ✅ Global settings: Tabbing now works in the correct order. **(594)**

File import / export:
- ✅ ANM export: Sometimes ANM files could not be imported in Vissim because of invalid detector data (duplicate keys). This issue was fixed. **(721)**
- ✅ ANM export: When the network contained intersections where the cycle time of a controller was smaller than the largest green time end of a phase / signal group, the ANM file could not be imported in Vissim. This issue was fixed. **(720)**

Graphical editors:
- ✅ Isolated intersections: Vistro no longer crashes when an isolated intersection (intersection with no leg handles) is selected. **(197)**
- ✅ Vistro no longer changes the zoom level when the network is saved. **(477)**

Simulation:
- ✅ Actuated controllers: The actuation in the simulation did not work correctly because detectors did not have the correct channel number. This issue was fixed. **(735)**
- ✅ Signal groups: Signalized intersections did sometimes not work correctly in the simulation, because wrong signal group numbers were used. This issue was fixed. **(730)**

Traffic control tab:
- ✅ All-way stop: In certain cases (when there exists an approach with three lanes or more) the geometry group was determined wrongly. This issue was fixed. **(731)**
- ✅ All-way stop: Queue lengths are calculated now. **(733)**
- ✅ Roundabout, HCM 2010: In certain cases the distribution of volume to lanes was incorrect. This issue was fixed. **(742)**
- ✅ Roundabouts, HCM 2010: Now the bypass data is correctly taken into account in the calculations. **(741)**
- ✅ Signalized, HCM 2010: In certain cases the calculated uniform delay was too high. This issue was fixed. **(728)**
- ✅ Signalized: The input factors 'Parkink Adjustment' and 'Bus Blocking Adjustment' now have three digits. **(479)**

- Two-way stop: The data row "d_I, Intersection Delay" now shows the average delay, not the maximum delay. **(662)**

1.00-04 [74931]   2012-11-27

⊕ New Features and Changes

Volumes tab:

- Peak hour factor: The peak hour factor is now restricted to the range 0.25 to 1.00. **(604)**

⊘ Fixed Bugs

Data model:

- Pedestrian signal groups: Pedestrian signal group now is created immediately after the vehicle signal group is defined. Previously it was possible to create a vehicle signal group with a walk time that had no corresponding pedestrian signal group. **(694)**

File import / export:

- ANM: Coordination flag of signal groups now is consistent in Vistro and Vissim. **(677)**
- ANM: Detector call and extend data is now consistent in Vistro and Vissim. **(676)**
- Open network: When a new network file was loaded, editing data in the volumes tab could lead to a crash. This issue was fixed. **(700)**
- Synchro / ANM import: Heavy vehicle percentages are now set after the import. **(681)**
- Synchro / ANM: The value 'right turn on red' now is taken into account correctly. **(680)**
- Visum: An issue was fixed where Vistro could crash when a Visum network (.net) file was imported that contained RBC data. **(685)**

Intersection setup tab:

- Pocket length: Vistro now uses a default pocket length of 100 ft. **(692)**

Network optimization tab:

- Name: The names of the routes are visible now. **(693)**

Traffic control tab:

- Actuated controllers, HCM 2010: The delay calculation for actuated controllers was corrected. This also affects other values that are connected to delay. **(675)**
- All-way stop: The calculation was corrected. **(666)**
- Bus blocking adjustment, HCM 2000: The bus blocking adjustment factor is now only used on the outermost lane group. **(672)**
- f_{Rpb}, HCM 2000: In the calculation of the right turn pedestrian blockage factor the clearance time now is taken into account. **(673)**
- Left turn adjustment: The left turn adjustment factor f_{LT} is now always calculated. **(674)**
- Parking adjustment, HCM 2000: The parking adjustment factor is now only applied to outermost lane groups (and innermost on one-way-streets). **(671)**
- Timing diagram: The timing diagram now takes into account the lead / lag flag. **(650)**

Volumes tab:

- Base volume: In certain situations base volume was not editable when it should have been editable. This issue was fixed. **(696)**

1.00-03 [74711]   2012-11-19

⊕ New Features and Changes

Data model:

- Units: Added support for metric system. **(350)**

Dialogs:

➕ About Dialog: Added Bing Maps Expiration date to the about dialog. **(557)**

➕ Network Optimization: Added a button that allows to just save the settings without optimizing the network. **(514)**

File import / export:

➕ Synchro import: Actuation type is imported correctly now. **(559)**

Graphical editors:

➕ Outbound Lanes: There are no pockets anymore for streets that are at the end of the network. **(378)**

➕ Renaming: Renamed Corridor to Route. This means that corridors saved with older versions are not loaded anymore! **(596)**

Main window:

➕ Vissim Simulation: Vissim Preview is now accessible in a new menu called 'Simulation'. **(633)**

Mitigation:

➕ Rename: "Critical Movement" -> "Critical Lane groups" **(603)**

Optimization:

➕ Error Messages: Errors that occur during the optimization are displayed now. **(463)**

Reporting:

➕ Headers/Footers: There is an option for the Vistro filename as header / footer now. **(639)**

➕ Map Background: The map type can be defined now. Option for street names / no street names is added. **(627)**

Traffic control tab:

➕ Total Saturation Flow Adjustment: Row 'Total Saturation Flow Adjustment' has been removed for HCM 2010. **(531)**

✔ Fixed Bugs

Bubbles:

✔ If control type is 'unknown' graphical reports are drawn correctly now. **(682)**

Data model:

✔ Outbound lanes: Fixed an issue with outbound lanes for intersections at the edge of the network. **(476)**

✔ Storing Data: In certain circumstances the signal group data was not stored when saving the network. This is fixed. **(588)**

Dialogs:

✔ About dialog: The contact information in the about dialog is correct now. **(632)**

✔ Global settings: Entry crosswalk width was removed. **(651)**

File import / export:

✔ ANM export: Active pattern in RBC export is now set based on Signal Control coordination type **(540)**

✔ ANM export: Fixed an issue relating to detectors. **(539)**

✔ Synchro import: Import of protected / permissive turns was corrected. **(561)**

✔ Visum .net import: Fixed the import of files from a scenario causing Vistro to crash. **(640)**

✔ Visum .net import: Sometimes the import of RBC files has lost signal group data. **(649)**

✔ Visum export: Detector information is now exported to RBC files. **(659)**

Intersection setup tab:

✔ Negative values: Fixed an issue with entering negative values. **(481)**

Main window:

- ✅ Dialogs: Dialogs are not showing a taskbar icon anymore. **(656)**

Mitigation:
- ✅ Intersection name: The intersection name is no longer editable in the mitigation tab. **(625)**
- ✅ Splits: If using signalised as a mitigation option the splits are no longer zero. **(580)**

Non-graphical editors:
- ✅ Priority scheme for two-way stop intersections: Improved the toggling of the free / stop designation. **(623)**
- ✅ Tabbing: The tabbing behavior was improved. **(550)**

Reporting:
- ✅ Intersection Header: "Critical Vol / Capacity (X):" -> "Volume to Capacity (v/c):" **(635)**
- ✅ Table headers: Header order has changed. **(636)**
- ✅ Table headers: The v/c label is no longer displayed if there is no v/c for the current intersection. **(634)**
- ✅ Title: 'Basic' has been removed from header. **(637)**
- ✅ Volume Details: Fixed formatting errors in the tabular output. **(581)**

Scenario management:
- ✅ Save dialog: Improved stability. **(660)**
- ✅ Scenario creation: Removed the save file dialog that comes up if the network has already been saved. **(624)**

Traffic control tab:
- ✅ Back of Queue: Changed '% Back of Queue' to '95th %ile Back of Queue' **(643)**
- ✅ Calculations: Fixed an issue in combination with overlaps and protected/permissive. **(628)**
- ✅ Coordination type 'free': Data entries not relevant for Coordination Type = 'Free' are marked as irrelevant now. **(652)**
- ✅ Irrelevant values: The Saturation flow sub-table now is empty if there are no signal groups defined. **(622)**
- ✅ Two-way stop control, HCM 2010, U-turns on major flow: Calculation of capacity is now correct. **(667)**

❗ Breaking Changes

Graphical editors:
- ❗ Corridors / routes saved with files that were saved with previous versions are not loaded anymore! **(596)**

1.00-02 [74457]   2012-11-12

➕ New Features and Changes

Dialogs:
- ➕ Esc key: All dialogs can now be exited with the Esc key. **(567)**

Main window:
- ➕ Vissim button: The 'VISSIM' button was removed from the toolbar and moved to a new menu called 'Simulation'. **(382)**

Network optimization tab:
- ➕ Editability: The editability was improved. Offsets can now be set by dragging with the left mouse button. **(280)**

✅ Fixed Bugs

File import / export:
- ✅ Synchro: Uncontrolled intersections will no longer be imported as all-way stops. **(464)**

Graphical editors:
- Panning: It is no longer possible to pan by using the left mouse button. **(582)**
- Show traffic conditions: Vistro sometimes crashed when the 'show traffic conditions' button was active, especially when the view was zoomed or panned. This issue was fixed. **(577)**

Network optimization tab:
- X-scale: The X-scale of the diagram is now saved and will be restored when the tab is entered a second time. **(349)**

Non-graphical editors:
- ICU and Circular: The data tables for these analysis methods were adjusted. **(609)**
- Signalized intersections: Vistro crashed when an actuated controller was selected that had a ring / barrier pair with more than two elements. This issue was fixed. **(610)**

Optimization, Traffic control tab:
- Signalized intersections: Calculations for controllers with control type 'free' are now based on the maximum green times, not the splits. **(585)**

Optimization:
- Local optimization: In certain cases intermediate configurations in the optimization process have a calculated saturation flow rate of 0 for certain lane groups. The optimization now works correctly in these cases. **(575)**
- Local optimization: Results were sometimes not optimal, because calculated splits differed from optimal splits by 1 second. This issue was fixed. **(584)**
- Signalized intersections: Split phasing for exclusive and shared inner lane groups is now taken into account in the calculation of maximum allowable headways. This changes the results of delay calculations. **(611)**
- Signalized intersections: The delay calculation is now based on lanes, not on lane groups. As a consequence a lot of values that are based on delays are calculated correctly now. **(614)**

Scenario management:
- Overlaps: Vistro could crash if a scenario was selected where an overlap in the original network was removed in the scenario. This issue was fixed. **(425)**
- Pattern times and sequence: Scenarios that contain differences in pattern times or sequences compared to the base scenario no longer cause Vistro to crash. **(615)**

Traffic control tab:
- Control type 'Free': Since it is not possible to optimize free running controllers, a hint is now shown when the user tries to optimize such a controller. **(488)**
- Walk: In a multi-edit operation for the value 'Walk' values for inactive cells are no longer changed. **(548)**

Breaking Changes

Optimization:
- Signalized intersections: The delay calculation is now based on lanes, not on lane groups. As a consequence a lot of values that are based on delays are calculated correctly now. **(614)**

1.00-01 [74290]   2012-11-07

New Features and Changes

Main window:
- Menu: The menu entries 'ANM' and 'ANM (without RBC)' were renamed. The names now contain 'Vissim'. **(569)**

Trip distribution tab:
- Editing names of gates: The names of gates and zones can now be edited in the tab. **(503)**

Fixed Bugs

File import / export:

- ✅ Synchro import: Import of links with polygons was improved. **(465)**

Intersection setup tab:

- ✅ Number: When the user changes the number of the intersection, the tab no longer is cleared. **(568)**

Mitigation:

- ✅ Analysis Method: When the Analysis Method was changed in the traffic control tab, this value was not updated in the mitigation tab. The mitigation tab still showed the previous value. This issue was fixed. **(357)**

Non-graphical editors:

- ✅ Add Missing Paths: The Add Missing Paths button now also creates paths from gates to zones. **(572)**

Optimization:

- ✅ Hill Climbing: When splits were optimized, it was possible that the final split was 1 second different from the actual optimal split. This issue was fixed. **(573)**

- ✅ Message and Log file: After the optimization the message and log files are now always complete. **(381)**

- ✅ Split optimization: The value for 'Allowed reduction from optimum Split' now is taken into account correctly. Additionally, the performance in the case '0.00%' was increased considerably. **(571)**

- ✅ Starting solution: In some cases Vistro now uses a better starting solution for the network optimization. Previously it was possible in rare solutions that the final solution was worse than the original state in the network. This issue was fixed. **(574)**