

PTV Vissim & Viswalk 2024

Release Notes

Last modified: 2024-02-27

<https://www.ptvgroup.com/en/support-vissim>
<https://www.ptvgroup.com/en/support-viswalk>

2024.00-05 [275319]

2024-02-26

+ New Features and Changes

Graphics

- + Offset of the background map in relation to the network in some projections: When using certain projections for the network, there was an offset between the network and the background map displayed. This phenomenon is known for the British National Grid, EPSG:5514 (Czech Republic), and MGI (Austria) projections. This error has been fixed. **(213282)**

Installation

- + Python update: The included Python installation has been updated from version 3.11.4 to 3.11.8. The Python package certifi has also been updated to version 2024.2.2. **(201599)**
- + Update of various components: Several third party components have been updated to eliminate some known vulnerabilities. **(201768)**

Viswalk

- + The message text for checking pedestrian routes at simulation start was improved by adding the levels of the route locations. This helps to identify incorrectly placed route locations on elevator waiting areas. In order to enforce elevator usage, the route location must be placed on the waiting area of the entry level and not on the exit level. **(212428)**

✓ Fixed Bugs

Graphics

- ✓ Network objects are now always displayed according to the value of the display type attribute 'DrawOrder3D'. **(213014)**

Installation

- ✓ Startup accelerated: The program startup has been accelerated slightly. **(215337)**

Network Editor

- ✓ 3D mode: When editing the visibility of buildings, the outlines of hovered or selected buildings will now be visible regardless of the size of the network editor window. **(214741)**
- ✓ Duplicating a multi selection containing signal heads no longer causes unhandled exceptions or crashes. **(216253)**
- ✓ During the context menu action "Check and fix all routes", any incomplete route will again be highlighted and focused in the network editor window if the dialog "Complete routes" appears. **(200838)**
- ✓ Vehicles and pedestrians are again correctly displayed on semi-transparent background maps. **(217439)**

Signal Control

- ✓ RBC: When importing old *.rbc files, the unsupported 'OffsetReference' mode 'LagCoordGreen' is now correctly changed to the default mode 'LeadingStartOfGreen'. In addition, this is now also done for *.prbc files still containing the unsupported mode 'LagCoordGreen'. **(209436 !)**

Vehicle Simulation

- ✓ Connectors on oncoming links will no longer prevent vehicles from overtaking on the overtaking lane in specific situations without any oncoming vehicles. **(208265 !)**

- ✓ Vehicles no longer stop needlessly at pedestrian conflict areas with pedestrians having right-of-way, if the pedestrians are waiting at a red signal. **(217447 ⚠)**
- ✓ Vehicles now better judge if another vehicle will come to a stop in order to avoid having to stop inside crossing conflict areas where blocking should be avoided. **(211015 ⚠)**
- ✓ Vehicles trying to overtake on the same lane now also consider the lateral position of their leading vehicle's rear end to avoid crashes. **(215463 ⚠)**
- ✓ Vissim no longer crashes when a vehicle drives over a short connector with the same from-link and to-link, and then onto another link in the same time step. **(214806)**

Viswalk

- ✓ A route location on an elevator waiting area followed by a route location on a ramp or stair no longer causes an internal error at simulation start. **(216561)**
- ✓ The duration for starting a simulation in networks with many routes or route locations was reduced significantly. **(212997)**

Workspace

- ✓ Vissim no longer crashes when opening the list of user defined attributes, in case a network comparison was done previously. **(211162)**

⚠ Breaking Changes

Signal Control

- ⚠ In rare situations, the behavior of RBC signal controllers with a *.prbc file containing 'OffsetReference' mode 'LagCoordGreen' can differ from previous versions. **(209436 ✓)**

Vehicle Simulation

- ⚠ In all networks the vehicle behavior at crossing conflict areas may change, resulting in different simulation results when compared to previous versions. **(211015 ✓)**
- ⚠ In networks containing signalized pedestrian crosswalks, where pedestrians have right-of-way at the conflict areas, simulation results may differ to those of previous versions. **(217447 ✓)**
- ⚠ In networks where overtaking on the same lane is enabled, simulation results can differ to those of previous versions. **(215463 ✓)**
- ⚠ In networks with overtaking lanes, vehicles may now make more use of the overtaking lanes in situations where there is no oncoming traffic. This may cause simulation results to differ from those of previous versions. **(208265 ✓)**

2024.00-04 [272727]

2024-01-11

✓ Fixed Bugs

Data Model

- ✓ Conflict areas between parallel links are now created correctly. **(200575 ⚠)**

Viswalk

- ✓ Pedestrians no longer ignore priority rules in certain situations. **(211257 ⚠)**

Workspace

- ✓ Vissim no longer freezes when a background map is displayed in the network editor window or the smart map. **(210901)**

⚠ Breaking Changes

Data Model

- ❗ Due to the slightly changed geometry of conflict areas, simulation results can differ to those of previous versions. However, the differences are typically very small and within the numerical precision of the calculation. **(200575)** ✅

Viswalk

- ❗ In networks containing priority rules and conflict markers on links that are pedestrian areas, simulation results can differ to those of previous versions. **(211257)** ✅

2024.00-03 [271760]

2023-12-15

+ New Features and Changes

Data Model

- + The value of 'Pause at' in the network editor toolbar or the attribute 'Break at' of the simulation parameters is now a floating point type, enabling to break any time step. If the value of 'Break at' does not match that of a time step, the simulation or animation will be paused at the first time step with a simulation time larger than the value of 'Break at'. **(200907)**

Vissim Kernel

- + The DriverModel interface is now available for the Vissim Kernel on Linux operating systems. **(194797)**

✅ Fixed Bugs

Data Model

- ✅ The attribute 'Cost per km' of links now has a maximum value of one million to avoid numerical issues doing shortest path computation. **(202315)**

Evaluations

- ✅ 'Area measurements (raw data)' now correctly handles the following cases: Pedestrians enter or leave an area measurement while the evaluation is not yet active. Pedestrians remain inside the area measurement while the evaluation becomes inactive. Pedestrians are inside an area measurement while the evaluation stops. **(158851)** ❗

Graphics

- ✅ The inside of 3D models (*.fbx) is now rendered correctly. **(189883)**

Miscellaneous

- ✅ Https communication via proxy failed: In some cases, network access via https failed with the message 'Nschannel: next InitializeSecurityContext failed: Unknown error (0x80092012) - The revocation function was unable to check revocation for the certificate', mostly in connection with the use of a proxy. This error has been fixed. **(198743)**

Network Editor

- ✅ Labels of a network object are no longer displayed twice in the network editor when the network object with the label is selected. **(199944)**
- ✅ Vissim no longer crashes when trying to change the size of a background image from a PDF file in the network editor. **(203215)**

Vehicle Simulation

- ✅ The interaction of vehicles at merging conflicts was improved to avoid vehicles crashing into each other in a rare scenario. **(207833)** ❗
- ✅ The visualization of train and tram segments was improved. They no longer jitter while driving through reasonably sized curves or when the train is far away from the map's reference point. Also, the position of the front joints is now computed correctly and no longer forced to the center between tracks. **(204486)** ❗
- ✅ Train or tram segments no longer jitter or jerk in curves, especially when the front joint and front axle of a segment are not located at the same position along the 2D/3D model segment. **(158001)** ❗

Viswalk

- ✔ Vissim no longer crashes when pedestrians approaching a pt vehicle for boarding enter an elevator cabin while the pt vehicle departs. **(206552 🚫)**

Workspace

- ✔ Test runs or the replay of animations can again be stopped by pressing the ESC key while being paused. **(204159)**

🚫 Breaking Changes

Evaluations

- 🚫 The results of 'Area measurements (raw data)' may differ to those of previous versions. **(158851 ✔)**

Vehicle Simulation

- 🚫 In networks with vehicles with 2D/3D models containing multiple segments, and where vehicles consider adjacent lanes or that contain pedestrians at PT stops, simulation results can differ to those of previous versions. **(204486 ✔)**
- 🚫 Simulation results may differ to those of previous versions in specific cases due to changed vehicle behavior at merging conflict areas. **(207833 ✔)**
- 🚫 Simulation results with trains and trams might differ from those of previous versions due to the improved method for calculating the positions of the train segments. This might affect other vehicles if observe adjacent lanes is enabled in the driving behavior. Moreover, the door locations might change slightly, causing boarding and alighting pedestrians to move differently. **(158001 ✔)**

Viswalk

- 🚫 In networks where pedestrian can approach pt vehicles via an elevator, simulation results can differ to those of previous versions. **(206552 ✔)**

2024.00-02 [269248]

2023-10-25

+ New Features and Changes

Vissim Kernel

- + The number of simulations runs in the simulation settings of the network can now be overridden with the command line parameter '--numRuns'. **(195639)**

✔ Fixed Bugs

Dialogs

- ✔ The option 'Advanced merging' in the lane change tab of the driving behavior dialog has been removed, because this option is always enabled since Vissim 2024 and cannot be disabled anymore. **(200759)**

Evaluations

- ✔ Queue length visualization now shows the full queue length, even in case the lane the queue end is upstream of the beginning of the queue counter's lane. **(192744)**

Network Editor

- ✔ Multiresolution seamless image databases (MrSID, *.sid files) containing transparency information can now be displayed as background images. **(192820)**
- ✔ Vissim no longer crashes when copying selections containing links and conflict areas while 'Conflict Areas' is selected in the network objects sidebar. **(192103)**

OpenDRIVE Import

- ✔ The generated link geometry for OpenDRIVE roads with geometry elements of type 'poly3' and 'paramPoly3' has been improved in certain cases. **(182445)**

Viswalk

- ✓ Pedestrians no longer ignore signal heads or priority rules on pedestrian links that are cut by obstacles into multiple pieces. Signal heads or priority rules must not be covered completely by obstacles. In case signal heads or priority rules on pedestrian links are cut by obstacles into multiple pieces themselves, all pieces must be located on the same connected region of walkable ground. **(157058 🚫)**
- ✓ Pedestrians yielding at conflict areas with avoid blocking the major flow enabled now use the attribute 'Minimum gap blocking (default)' instead of 'Rear gap (default)' to determine if they may enter a conflict area before an approaching vehicle. In addition, the attribute 'Rear gap (default)' now defines the minimum time gap in seconds between a yielding pedestrian leaving the conflict area and the front end of a vehicle entering the conflict area. **(157529 🚫)**
- ✓ The movement of pedestrians at certain rare time points in the simulation is no longer executed twice or skipped, causing crashes or incorrect evaluations. **(196708 🚫)**
- ✓ The route choice of pedestrians between different elevators and ramps has been improved in case areas with non-zero z offsets are involved. **(195581 🚫)**

Workspace

- ✓ There is a confirmation dialog now for canceling a simulation run when pressing the ESC key while a simulation is running to prevent accidentally cancelling the simulation. The confirmation dialog can be disabled in the user preferences. **(194546)**

🚫 Breaking Changes

Viswalk

- 🚫 In networks containing areas with non-zero z-offsets, the route choice of pedestrians can differ from those of previous versions. **(195581 ✓)**
- 🚫 In networks containing conflict areas with yielding pedestrians that are allowed to block the major flow, simulation results can differ to those of previous versions. The old behavior may be restored by setting the value of 'Minimum gap blocking (default)' to the value of 'Rear gap (default)' and then setting the latter to zero seconds. **(157529 ✓)**
- 🚫 In networks containing pedestrian links with signal heads or priority rules that are cut by obstacles, simulation results can differ to those of previous versions. **(157058 ✓)**
- 🚫 Simulation results of all networks can differ to those of previous versions. **(196708 ✓)**

2024.00-01 [267606]

2023-09-21

+ New Features and Changes

3D Vehicle Models

- + Over 40 new vehicle models of various types (including car, SUV, van, bus, HGV, motorbike, scooter) of recent model years and various world regions were added to the library of Vissim models, including vehicles with hybrid and electric propulsion. Also the standard vehicle models used in 'defaultx.inpx' were updated. **(159125 | 17933)**

Data Model

- + The new data type 'Color' is available for user defined attributes. Editing the attribute opens the color dialog known from the graphics parameters. In addition to the ARGB values of the color, a box filled with the color will be shown in lists. See the document "Vissim 2024 - What's new.pdf" for details. **(158317 | 15458)**

DriverModel.DLL Interface

- + The Visul Studio solution for the DriverModel API example in the Vissim installation has been updated. **(188058)**

Formulas

- + A new function 'Color(a, r, g, b)' has been introduced to determine the color value from separate values for alpha, red, green, and blue. The separate values are expected to be integers in the range from 0 to 255. **(168018)**

Graphics

- + Vissim can now use 3D models from SketchUp files (*.skp) with SketchUp version 2023. **(183413)**

Vehicle Simulation

- The simulation runtime was reduced significantly for a wide range of networks, and the usage of multiple CPU cores has been improved. See the document "Vissim 2024 - What's new.pdf" for details. **(158947 | 17651 🚫)**
- Vehicles are now able to perform zipper merging in merge or lane end situations. This behavior is enabled by default in newly created networks. For already existing networks, it can be configured in the driving behavior dialog in the lane change tab. See the document "Vissim 2024 - What's new.pdf" for details. **(166678)**

Vissim Kernel

- Networks with signal controllers of type "Fixed Time" can now be simulated using Vissim Kernel running on Linux operating system. See the document "Vissim 2024 - What's new.pdf" for details. **(168286)**

✓ Fixed Bugs

Dialogs

- ✓ The dialogs "Link" and "Generate Spline" are now properly displayed on high resolution displays with a large scaling factor. **(179578)**
- ✓ The layout of the pedestrian route location dialog does not become unusable if the route location's area is on a level with a very long name. **(187549)**

DriverModel.DLL Interface

- ✓ The value for DRIVER_DATA_ROUTE_SIGNAL_SWITCH transmitted from Vissim was corrected for specific signal group sequences. **(187597)**

Driving Simulator Interface

- ✓ The motion state of pedestrians, that are controlled via the driving simulator interface, is now correctly determined while crossing ramps. **(186520)**

File Handling

- ✓ Vissim is again able to import matrices exported by Visum. **(187291)**

Meso Simulation

- ✓ The attribute 'Meso critical gap' of conflict areas is now shown as not relevant if the conflict area has the status 'undetermined', since the value of the attribute is not used in the simulation in that case. **(192368)**
- ✓ Vehicles entering a micro section perform an improved lane choice to avoid congestion. **(189204 🚫)**
- ✓ Vehicles transitioning from a meso to a micro region now correctly interact with protruding rear edges of micro vehicles that left the link with the transition via a connector. **(193534 🚫)**

Network Editor

- ✓ Motorcycles now use their indicators when changing lanes or taking turns. **(193568)**

Scenario Management

- ✓ Upon loading a scenario or loading modifications into a network, conflict areas are now properly updated. Simulating a scenario and simulating an exported scenario yield the same results now. **(188284 🚫)**

Signal Control

- ✓ Controllers of type 'Fixed time (simple)' now correctly report the cycle second instead of the simulation second in the signal changes record. **(187616)**
- ✓ Controllers of types '2-Stage Controller', 'Pedestrian Crossing' and 'Railway Crossing' no longer incorrectly report a cycle time, since they have none. **(187800)**
- ✓ Fixed Time: The cycle second is now also reported correctly while no signal program is active in the daily signal program list. **(184121)**
- ✓ Fixed Time: There are no spurious signal changes in the first time step of a simulation anymore. **(187452)**
- ✓ Fixed Time: the initial cycle second is now computed correctly in case the simulation start time of the simulation is not midnight and daily signal program lists are used. **(184115 🚫)**
- ✓ RBC: The signal sequence generated by RBC is no longer validated by Vissim since not all checks applied to RBC. This avoids incorrect warnings at simulation start. **(187916)**

- ✔ The value of the attribute 'tSigState' of signal groups is now computed consistently for all signal controller types and also updated each simulation time step, and not only each signal controller time step. **(187798)**

Vehicle Simulation

- ✔ In specific cases, vehicles at a crossing conflict incorrectly treated the conflict as a branching or merging conflict. This has been fixed. **(188281 🚫)**

Viswalk

- ✔ An intermediate route location on an area that is used as a waiting area for an elevator group now always enforces immediate usage of an elevator of that group to reach the next route location. **(158708 | 16809 🚫)**
- ✔ The path choice of pedestrians now yields better results when choosing between elevators and ramps, especially if there are large areas in front of the elevator doors and the elevator is not located in the center of these areas. **(158709 | 16811 🚫)**

Workspace

- ✔ A progress dialog is now displayed when reading evaluation data, as this operation might take several minutes, depending on the amount of collected evaluation data. **(185863)**
- ✔ Vissim no longer crashes if the connection to the license is lost for more than five seconds. **(188638)**
- ✔ Vissim no longer hangs at startup and shutdown if the Bing Maps server is not reachable. **(189381)**

🚫 Breaking Changes

Meso Simulation

- 🚫 Simulation results of meso simulations with micro sections can be different compared to previous versions. **(193534 ✔)**
- 🚫 Simulation results of meso simulations with micro sections can be different when compared to previous versions. **(189204 ✔)**

Scenario Management

- 🚫 The now correctly updated conflict areas after loading a scenario may cause simulation results of scenarios to differ to those of previous versions. **(188284 ✔)**

Signal Control

- 🚫 Fixed Time: In networks containing fixed time signal controllers with daily signal program lists, and if the start time of the simulation is not midnight, simulation results may differ to those of previous versions. **(184115 ✔)**

Vehicle Simulation

- 🚫 Due to the possibly changed behavior of vehicles at specific conflict areas, simulations results can differ to those of previous versions. **(188281 ✔)**
- 🚫 The simulation results of all vehicle simulations can differ to those of previous versions. **(158947 | 17651 ➕)**

Viswalk

- 🚫 In networks containing pedestrian route locations on areas that are used as waiting areas for elevator groups, the path choice of pedestrians between two route locations can differ to those of previous versions. **(158708 | 16809 ✔)**
- 🚫 In networks in which pedestrians can choose between elevators and ramps, the path choice of pedestrians between two consecutive route locations may change. **(158709 | 16811 ✔)**

2024.00-00 [264195]

2023-07-31

➕ New Features and Changes

COM Interface

- ➕ A few parameters in the COM interface did not follow the "Camel Case" naming convention. This is now fixed. **(159016 | 17806 🚫)**

COM-API

- + Reset Python import path (sys.path) before script execution: The Python import path is now set to the following paths before each script execution: the paths defined by the user (if any), the Add-in paths, the paths specified by Python. **(164956 | 164956)**

Cloud

- + Opening calculation results from the MRU list: When opening a cloud model from the MRU list that has a corresponding calculation result, there is now an option to also open the calculation result. **(183172)**

Data Model

- + All network objects now have a relation to the network, and the network has relations to all network objects. This enables aggregations over all network objects of an arbitrary type to be used in formulas. See the document "Vissim 2024 - What's new.pdf" for details. **(156720 | 9241)**

File Handling

- + When trying to save a network that was created with an older Vissim version, the user must now confirm to overwrite the network file (*.inpx). Overwriting the file will update the file version, which would prevent older Vissim versions from opening the file. This confirmation can be disabled in the user preferences. **(131569 | 16892)**

Formulas

- + The syntax of the following functions was renamed to improve readability of formulas: 'IDIV' to 'DIV', 'STRTONUM' to 'TEXTTONUM' and 'NUMTOSTR' to 'NUMTOTEXT'. For backwards compatibility, all existing formulas stay valid and will automatically be redirected to the renamed functions when the formula is evaluated. **(132171 | 17756)**

Graphics

- + It is now possible to create pavement markings with user defined images. These will be displayed in 2D and 3D mode. See the document "Vissim 2024 - What's new.pdf" for details. **(156374 | 5707)**
- + Several pavement marking images (*.PNG) were added to the texture library in Vissim. These were prepared to be used with the new functionality "pavement markings with user-defined images" and are available at \Textures\Pavement Markings (the default directory for such pavement markings). **(187310)**
- + The library of traffic sign images (*.PNG) was updated and enhanced. They can be used for example on traffic signs mounted to 3D traffic signals. They are available at \Textures\Signs. **(187311)**
- + Updated library for coordinate transformations: The library used for coordinate transformations has been updated. **(185280)**

Network Editor

- + It is now possible to configure and display labels in the network editor for the following network objects: pedestrian and vehicle routes, pedestrian route locations, lanes, conflict markers and elevator doors. See the document "Vissim 2024 - What's new.pdf" for details. **(156517 | 7918)**
- + The action 'Recalculate Spline' in the context menu of links now yields better results for z-offset of the link points. **(157781 | 13468)**
- + The lines connecting the route locations of pedestrian routes now show the direction of the route via small arrows. See the document "Vissim 2024 - What's new.pdf" for details. **(158158 | 14739)**
- + The user experience of editing the status of conflict areas in the network editor has been improved. The two links of a conflict are now labelled 'A' and 'B' instead of '1' and '2' to not confuse these numbers with the link attribute 'Number'. The labels for the links are now shown in the network editor when selecting a conflict area. In addition, the link direction is now depicted for each lane conflict of a selected conflict area. See the document "Vissim 2024 - What's new.pdf" for details. **(158727 | 16859)**
- + When adding and dragging intermediate points of vehicle routes, now all selected routes crossing the intermediate point will be edited simultaneously. See the document "Vissim 2024 - What's new.pdf" for details. **(156852 | 9984)**

OpenDRIVE Import

- + Vissim is now able to import more projections from the 'geoReference' entry in an OpenDRIVE file (.xodr) successfully. **(171621)**

Scenario Management

- + When saving the base network or a scenario, a backup of the ".vissimpdb" file will be created in the "Backups" subfolder carrying the file extension ".SQLITE_backup". (158780 | 17021)

Vehicle Simulation

- + The computation time for simulation could be improved by up to 20% in general. For networks with many reverse parking lots or mesoscopic simulation, the computation time was reduced by 50%. (159035 | 17831 ⚠)
- + The driving behavior attribute 'Advanced merging' is now always active and cannot be deactivated anymore. (158502 | 16095 ⚠)
- + Vehicles approaching conflict areas with 'Avoid Blocking' enabled now better assess if their front vehicle will have to stop inside or after the conflict area. This prevents needless stops in front of the conflict area. (159134 | 17943 ⚠)

Viswalk

- + Labels for pedestrians can now be setup in the graphics parameters for 'Pedestrians In Network'. See the document "Vissim 2024 - What's new.pdf" for details. (157748 | 13393)
- + Pedestrians at conflict areas will now anticipate routes of approaching vehicles if the value of the corresponding attribute is set to 100%. Otherwise, all pedestrians will not anticipate routes of approaching vehicles. The anticipation of routes cannot be enabled for individual pedestrians. (166572 ⚠)
- + Pedestrians at the head of a central service point selection queue now interpret the time distribution of the partial routing decision area as a reaction time to notice a free desk. This means that the pedestrians will not immediately proceed to a free service point immediately, but instead, will dwell for an additional duration at the queue head and then continue to proceed to the free desk. (177916 ⚠)
- + Pedestrians inserted into the network will respect waiting time distributions on their input area, causing them to dwell before walking to their first route location. (156781 | 9638 ⚠)
- + The default placement of labels of various network objects like pedestrian inputs, pedestrian routing decisions or pedestrian attribute decisions, has been improved to prevent the labels from blocking the selection of those network objects in the network editor window. (176511)

Workspace

- + Vissim now has an automatic backup feature that can be activated and configured in the user settings. When activated, Vissim saves the network and layout at regular time intervals if any changes were made. See the document "Vissim 2024 - What's new.pdf" for details. (156017 | 350)

⚠ Breaking Changes

COM Interface

- ⚠ The COM function 'RemovePedestrian' now only marks pedestrians for removal instead of removing them immediately. (159101 | 17908)
- ⚠ When using the COM interface with named parameters, e.g., in Python, some Parameter names in user scripts will have to be adjusted accordingly. (159016 | 17806 +)

Vehicle Simulation

- ⚠ In all networks, simulation results can differ to those of previous versions. (159035 | 17831 +)
- ⚠ In networks containing conflict areas with 'Avoid Blocking' enabled, simulation results can differ to those of previous versions. (159134 | 17943 +)
- ⚠ In networks containing driving behaviors that have 'advanced merging' disabled, vehicle behavior and simulation results will differ to those of previous versions. (158502 | 16095 +)

Viswalk

- ⚠ In networks containing pedestrian vehicle conflict areas with the attribute 'Anticipate routes' set to a value of 100%, the behavior of pedestrians at that conflict area and the simulation results will change. (166572 ⚠)
- ⚠ In networks containing service point selections with central queues, the behavior of pedestrians and the simulations results will differ to those of previous versions. (177916 +)
- ⚠ In networks with time distribution on areas that also have a pedestrian input, the behavior of pedestrians and the simulation results will differ to those of previous versions. (156781 | 9638 +)

COM-API

❗ Reset Python import path (sys.path) before script execution: The Python import path is now set to the following paths before each script execution: the paths defined by the user (if any), the Add-in paths, the paths specified by Python. Because resetting the Python import path was not done consistently so far, the behavior may change in models where the Python import path has been manipulated. **(164956)** ➕