



Basics Manual

NTT ADVANCED TECHNOLOGY CORPORATION

What is WinActor?

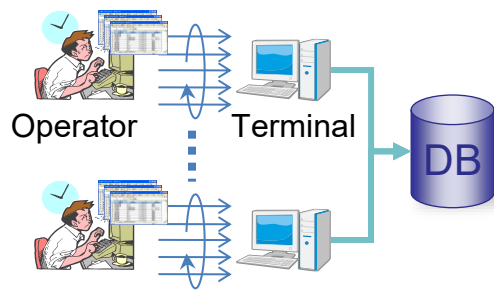
WinActor records terminal operations as scenarios.

WinActor becomes a virtual operator and automatically operates terminals according to scenarios.

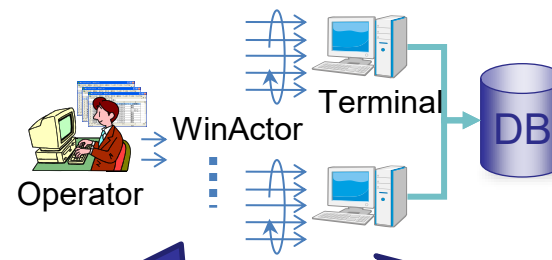
By using WinActor, human errors can be prevented and operational efficiency can be improved.

[Before using WinActor]

[After using WinActor]



Manual operations involving a huge amount of work



Work efficiency improvement by using WinActor

A number of operations are automated by WinActor

A wide variety of operations can be improved without changing existing systems.

Main functions (1/2)

WinActor has three main functions: Record, Edit, and Run.

WinActor

- Record ... Function to record user operations and automatically generate scenarios
- Edit ... Function to edit scenarios, such as setting decision, loop conditions and changing operation procedures
- Run ... Function to run scenarios created by recording/editing

Main functions (2/2)

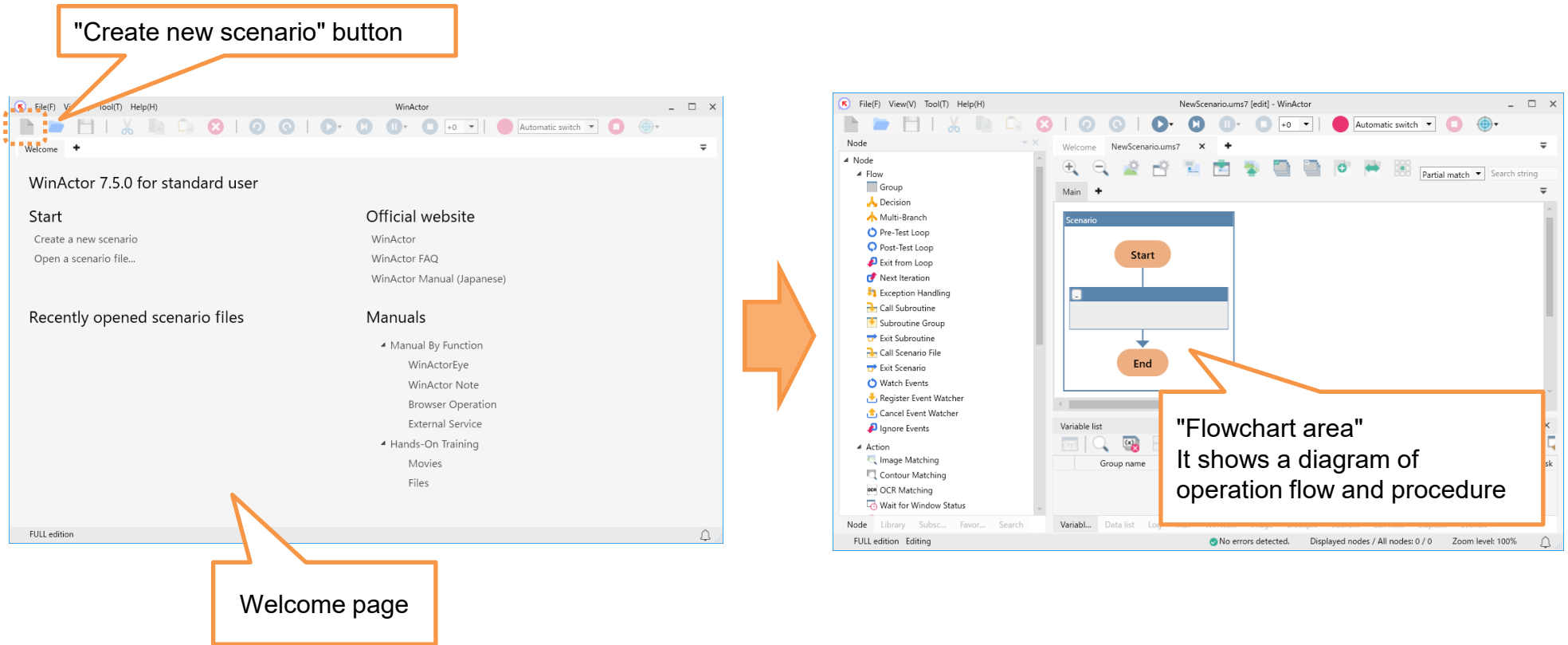
There are 8 recording modes: Event, Emulation, IE, Chrome, Firefox, Edge, UI Automation, and Image matching. 'Automatic switch' automatically switches 8 recording modes while recording.

WinActor

Record

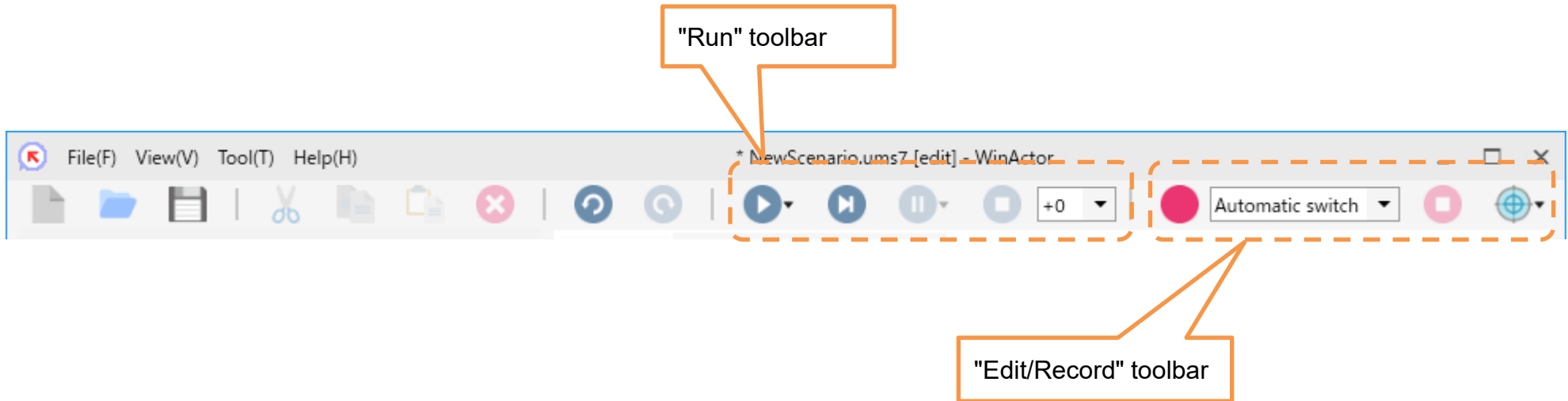
- Event · · · Recording mode for Windows applications
- Emulation · · · Recording mode for mouse/keyboard operations
(Used when other modes are not available)
- IE · · · Recording mode for Internet Explorer
- Chrome · · · Recording mode for Google Chrome
- Firefox · · · Recording mode for Mozilla Firefox
- Edge · · · Recording mode for Microsoft Edge(Chromium)
- UI Automation · · · Recording mode for GUI elements in Windows applications
- Image matching · · Recording mode for mouse movements
(Image matching node is created in response to mouse operations)
- Automatic switch · · Recording mode is switched automatically among 8 modes above.

WinActor window



- After launching WinActor, Welcome page appears.
- Click the "Create new scenario" button to display "Flowchart area."

Toolbar



- You can create a scenario using the "Edit/Record" toolbar.
(Available only in the WinActor FULL edition.)
- You can run a scenario using the "Run" toolbar.

Operation recording (overview)

Create

"Select window for recording" button
After clicking this button, click an application window for recording with the mouse.



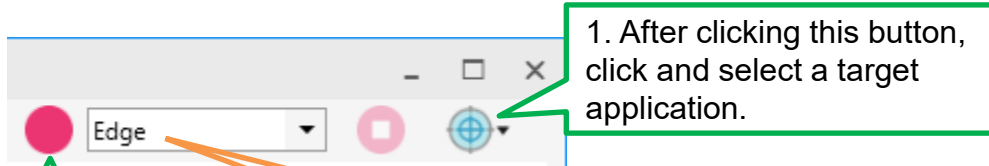
- The function that automatically detects and records user operations is called "recording function."
- Before start recording, specify a window for which you want to record operations with a mouse click.
- There are 8 modes in the recording function: Event, Emulation, IE, Chrome, Firefox, Edge, UI Automation, and Image matching. 'Automatic switch' automatically switches among 8 recording modes while recording.

An appropriate mode for the specified window will be automatically selected.

"IE" mode supports IE mode in Edge.

Operation recording(IE/Event/Chrome/Firefox/Edge/UI Automation/Image matching)

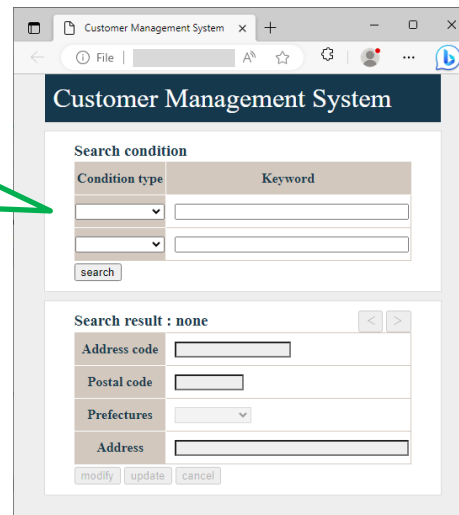
Create



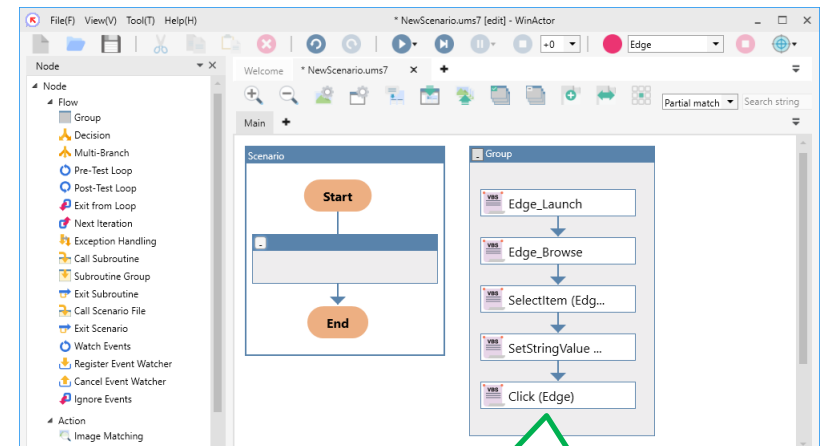
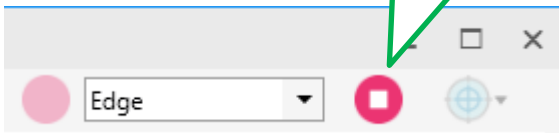
2. Start recording.

'Edge' is selected as a recording mode

3. Operate Edge.
Example: Enter an address code and click the search button.



5. Stop recording.



4. The operations are recorded and a scenario is automatically generated.

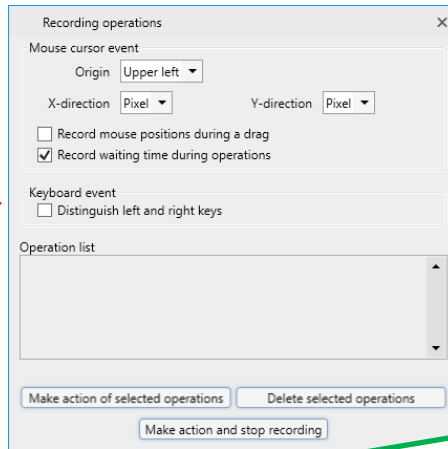
- When you select a window you want to record (Customer Management System in the above example), an appropriate recording mode for the window is automatically selected, and then you can start recording.

Operation recording (Emulation mode)

Create

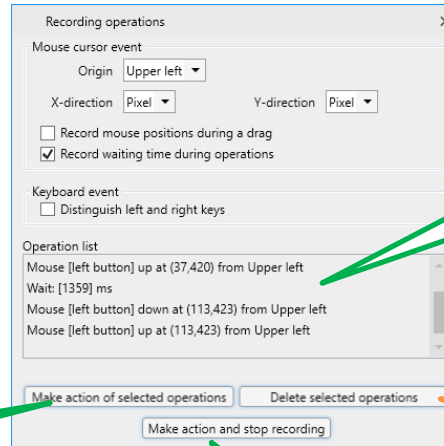
1. Once you select a recording target, "Emulation" will be selected as the recording mode.

2. Click the "Start recording" button to open the Recording operations dialog box.



The dialog box is titled "Recording operations". It has two main sections: "Mouse cursor event" and "Keyboard event". Under "Mouse cursor event", there are dropdowns for "Origin" (set to "Upper left"), "X-direction" (set to "Pixel"), and "Y-direction" (set to "Pixel"). There are two checkboxes: "Record mouse positions during a drag" (unchecked) and "Record waiting time during operations" (checked). Under "Keyboard event", there is a checkbox "Distinguish left and right keys" (unchecked). At the bottom, there is an empty "Operation list" and three buttons: "Make action of selected operations", "Delete selected operations", and "Make action and stop recording".

3. When operations are performed on the target window, the operation details of the mouse and keyboard are displayed in the operation list.

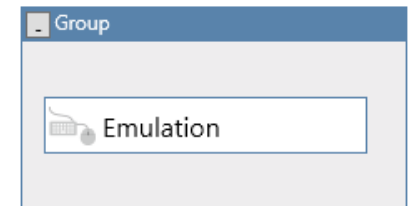


This dialog box is identical to the previous one, but the "Operation list" now contains three entries: "Mouse [left button] up at (37,420) from Upper left", "Wait: [1359] ms", and "Mouse [left button] down at (113,423) from Upper left". The "Make action and stop recording" button is highlighted with a green box.

4. Click the "Make action of selected operations" button to make actions of the displayed mouse/keyboard operations. The emulation actions will be added to the flowchart area.

5. At the end of recording, click the "Make action and stop recording" button.

Unnecessary operations can be deleted by selecting the corresponding operations in the list and clicking "Delete selected operations."



A window titled "Group" containing a sub-window labeled "Emulation" with a mouse cursor icon next to it.

- "Emulation" mode is a mode that records and reproduces mouse and keyboard operations as they are.
- In "Emulation" mode, you can also specify "Screen (Desktop)" as an operation target in addition to windows.

Image matching (1/2)

Create

The screenshot displays the WinActor 'Image Matching' configuration window. It is divided into several sections: 'Scenario' (top left), 'Property' (top right), 'Reference image' (middle), and 'Settings' (bottom). The 'Scenario' pane shows a flow from 'Start' to 'Image Matching' to 'End'. The 'Property' pane shows the 'Name' as 'Image Matching'. The 'Reference image' pane shows a browser window titled 'Tutorial' with a red dashed box around the 'PC' input field. The 'Settings' pane shows 'WinID name' as 'Tutorial-Profile1-MicrosoftEdge_1', 'Action' as 'Matching only', and 'Matching result output' as 'Select variable'. The 'Coordinates' field shows '-67,57'. The 'Update' button is highlighted.

1. You can add the node by dragging and dropping from the Node pane.

2. Click the button and then click a target window. The window capture of the target window will be displayed.
*Place a target window so that it fits in the display area.

3. Set a match range with a red frame.

4. Specify a location for a mouse click. It is the relative position to the match range.

5. The click operation can be made at a location where the match range is found.

6. Specify a variable name to store whether the image was found or not. If you do not use a result, leave it blank.

7. Click the 'Update' button.

- This function is used when a window you want to operate can be recognized only as an image, such as a remote desktop.
- It can also be used to determine whether or not specific information is displayed on a window, or to wait for the automatic operations of WinActor if it takes time to display the contents of a window.
- When the image matching of a specified window and a specified image is performed and the matching is established, mouse operations such as clicking become possible.

Image matching (2/2)

Create

The screenshot shows the 'Image matching' property window. It includes a 'Name' field set to 'Image Matching', a 'Comment' field, and tabs for 'Reference image' and 'Mouse position'. The 'Reference image' tab displays a browser window titled 'Tutorial' with a form containing a 'Category' dropdown (set to 'PC') and a 'Product' text input (containing 'PC'). A red dashed box highlights the 'Product' input field. Below the form is a 'submit' button. The 'Mouse position' tab shows a 'WinID name' dropdown (set to 'Tutorial-Profile1-MicrosoftEdge_1'), an 'Action' dropdown (set to 'Matching only'), a 'Matching result output' dropdown (set to 'Select variabl'), and a 'Coordinates' field (set to '-67,57'). There are 'Update' and 'Restore' buttons at the bottom. Callouts point to various features: 'Reference image can be specified.' points to the 'Reference image' tab; 'You can narrow down a search range.' points to the search range icon; 'You can set a position of mouse operation anywhere.' points to the mouse position icon; 'A part that has a security issue can be masked. The inside of the selected part will be blacked out.' points to the mask icon; 'A part that has a security issue can be masked. The outside of the selected part will be blacked out.' points to the mask icon; and 'You can set images for matching from files.' points to the file selection icon.

Reference image can be specified.

You can narrow down a search range.

You can set a position of mouse operation anywhere.

A part that has a security issue can be masked. The inside of the selected part will be blacked out.

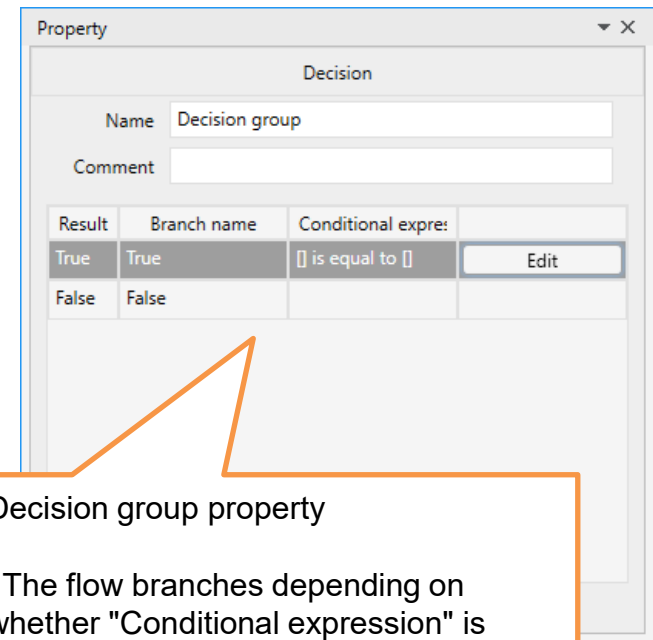
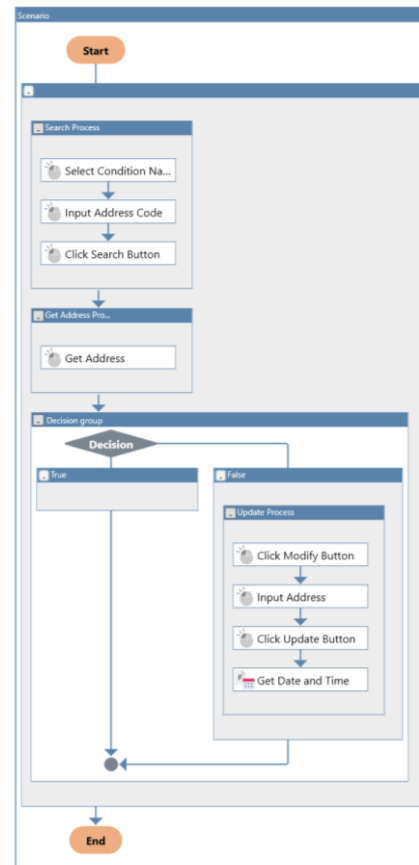
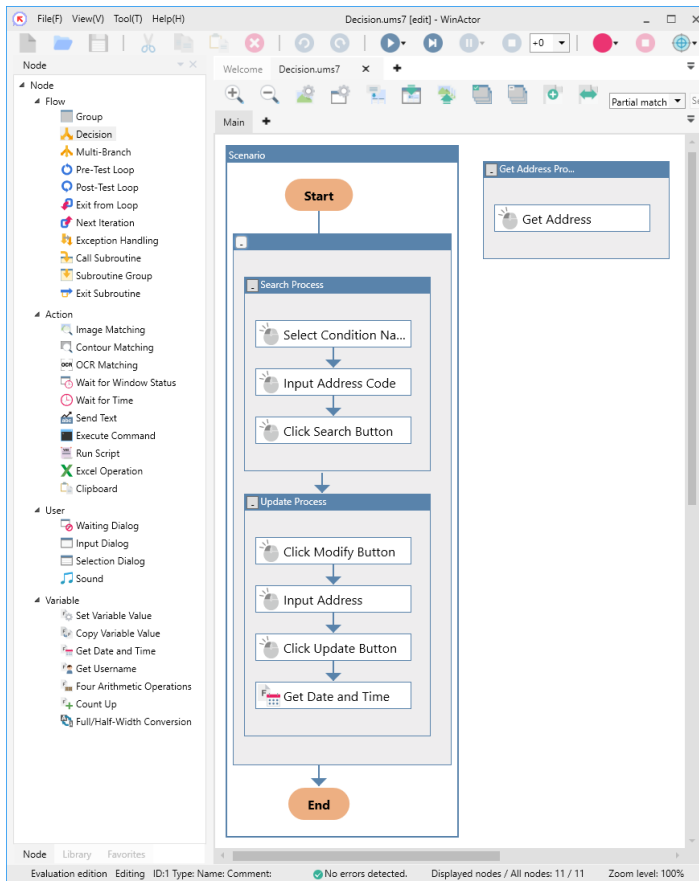
A part that has a security issue can be masked. The outside of the selected part will be blacked out.

You can set images for matching from files.

- You can narrow down a search range for a reference image as well as fill an image using the mask function.
- A position of mouse operations such as clicking is not limited in the reference image. The user can specify any position.

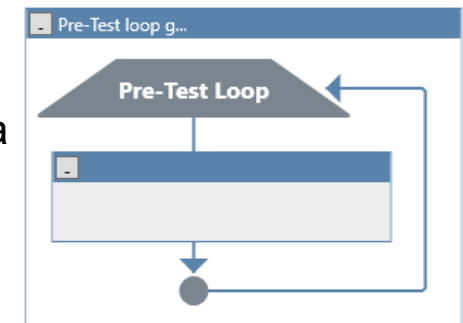
Decision and loop

Create



Decision group property

- The flow branches depending on whether "Conditional expression" is satisfied or not.
(See the next page for "Conditional expression" settings.)



- "Decision" is a control node that branches into two flows according to a condition.
- You can make a repetition action according to a condition using "Pre-Test Loop" or "Post-Test Loop."
- You can add these nodes by dragging and dropping from the Node tab.

Conditional expression

Create

1. Click "Edit."

2. Set the contents of the conditional expression to be added.

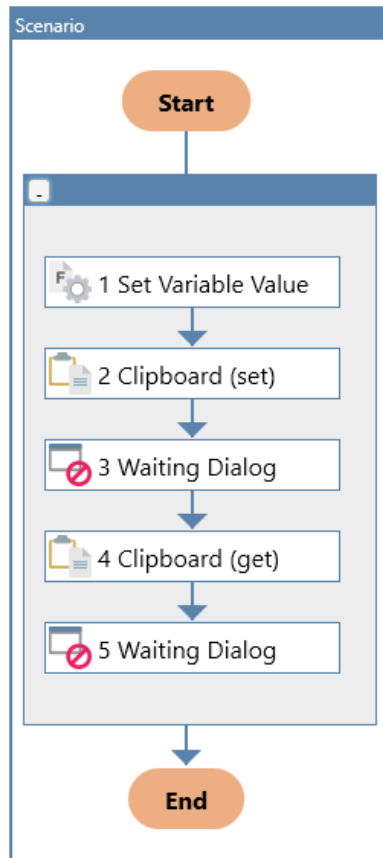
"is equal to" and "is not equal to" are used for string comparison, and equal/inequality signs are used for numerical comparison.

The diagram illustrates the process of setting a conditional expression for a Decision node. It shows three stages: 1. The initial state where the 'Edit' button is clicked. 2. The 'Conditional expression' dialog box where the user selects 'Address' from the 'Condition' dropdown, chooses 'is equal to' as the operator, and enters 'Acquired_Address' in the value field. 3. The final state where the 'Update' button is clicked, and the conditional expression is applied to the Decision node.

- For nodes such as Decision, Pre-Test Loop, and Post-Test Loop, you need to set a conditional expression.
- You can set a conditional expression from the property of those nodes.
- If you try to run those nodes without setting a conditional expression, a warning will be displayed.
- Comparison operators support regular expressions and fuzzy matches (not sensitive to half/full-width, upper/lower-case).

Clipboard

Create



Property

Clipboard

Name: 2 Clipboard (set)

Comment:

☒ Set value to clipboard

Value: Variable

☐ Get value from clipboard

Output variable: Select variable name

Update Restore

The value specified here will be set to the clipboard.

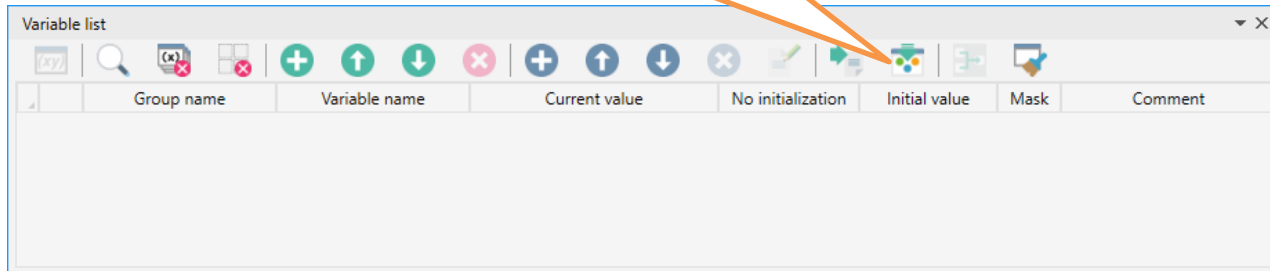
The variable specified here will receive the value from the clipboard when this node runs. (Text format only)

- You can set a value to the clipboard (temporary storage area to keep cut or copied data), or you can get a value from the clipboard and store it to a variable.
- A value you can get from the clipboard is up to 1,024 characters in text format only. Empty string will be stored for non-text format values.

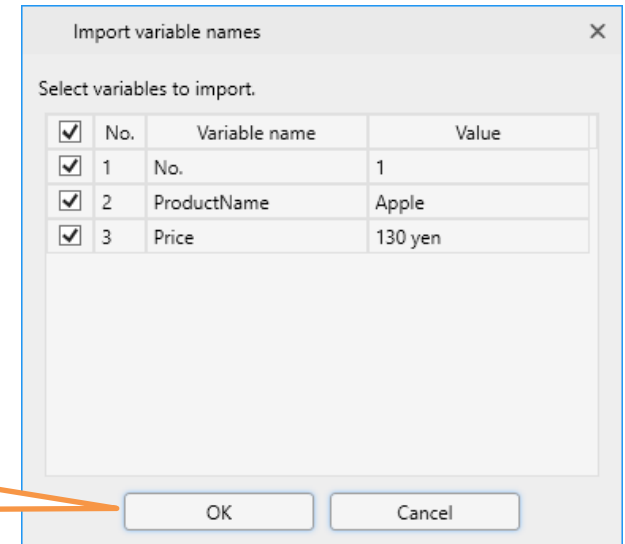
Variables

Create

Select an Excel or a CSV file by clicking the "Import variable names" button.



After values in the first row of the Excel or CSV file are imported as "Variable name," click the 'OK' button.



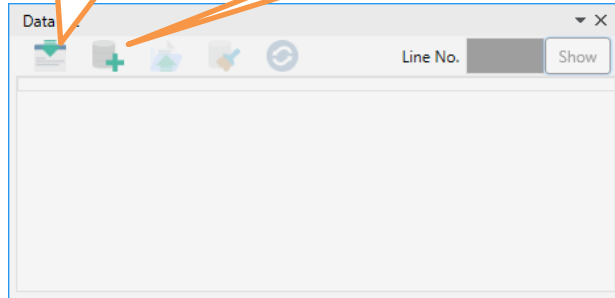
- You can use "variables" in a scenario. Data used for running a scenario is usually different every time, and you can create a scenario by treating such data as "variables."
- It can be used for various purposes such as to "get a date," "get a string," or to "get values in a table."
- When you want to link with an Excel or a CSV file, click the "Import variable names" button in the Variable list pane to import the first row of the Excel or CSV file (assuming that data item names are written in the first row) as the "variable names." The above figure is an example of use in that case.

Variables (linkage with Excel, CSV, database)

Create

Data can be imported from an Excel file or CSV file.

Data can be imported from a database.



The item name in the first row becomes the variable name, and the second and subsequent rows will be imported as data.

A screenshot of an Excel spreadsheet titled 'address_update_data.xlsx - Excel'. The spreadsheet has columns A through G. The first row (row 1) has headers: 'AddressCode', 'PostalCode', 'Prefecture', and 'Address'. The subsequent rows (rows 2-8) contain data. The first row is highlighted with a red box, and the first column is highlighted with a green box. An orange arrow points from the first row of the Excel spreadsheet to the first row of the Data list pane.

AddressCode	PostalCode	Prefecture	Address
27201339000	587-0062	Osaka	Oi, Mihara-ku, Sakai-shi
27201337000	587-0041	Osaka	Sugao, Mihara-ku, Sakai-shi
27201340000	587-0001	Osaka	Oho, Mihara-ku, Sakai-shi
27201345000	587-0064	Osaka	Bodai, Mihara-ku, Sakai-shi
27201326000	587-0066	Osaka	Ishihara, Mihara-ku, Sakai-shi
27201328000	587-0063	Osaka	Owai, Mihara-ku, Sakai-shi
27201325000	0003	Osaka	Ami, Mihara-ku, Sakai-shi

A screenshot of the 'Data' list pane. It has a title bar with 'Data' and a close button. Below the title bar are icons for importing from Excel, CSV, and a database. There is a 'Line No.' field and a 'Show' button. The first row is highlighted with a red box, and the first column is highlighted with a green box. An orange arrow points from the first row of the Excel spreadsheet to the first row of the Data list pane.

Line No.	AddressCode	PostalCode	Prefecture	Address
1	27201339000	587-0062	Osaka	Oi, Mihara-ku, Sakai-shi
2	27201337000	587-0041	Osaka	Sugao, Mihara-ku, Sakai-shi
3	27201340000	587-0001	Osaka	Oho, Mihara-ku, Sakai-shi
4	27201345000	587-0064	Osaka	Bodai, Mihara-ku, Sakai-shi
5	27201326000	587-0066	Osaka	Ishihara, Mihara-ku, Sakai-shi
6	27201328000	587-0063	Osaka	Owai, Mihara-ku, Sakai-shi
7	27201325000	0003	Osaka	Ami, Mihara-ku, Sakai-shi

The scenario will be repeated for each checked row. Rows that have already been run become unchecked.

- When Excel or CSV is loaded in the Data list pane, the item name in the first row of the Excel/CSV file will be associated with the variable name.
When linking with a database, the column name will be associated with the variable name.
- A scenario will run repeatedly for the number of rows of data.
- If the variable value is updated or a new value is set to the variable as a result of running a scenario, the result will be applied as it is in the original Excel/CSV file or database.

Getting a value

Create

The screenshot shows the WinActor software interface. On the left, the 'Library' tab is expanded, showing a list of actions under '23_Browser'. The 'Browser_GetValue' action is highlighted. In the center, a flowchart is visible with a 'Start' node, a 'Browser_GetValue' action node, and an 'End' node. On the right, the 'Property' window for the 'Browser_GetValue' action is open, showing various settings like 'WinID name', 'Path type', 'Element path', 'Frame selection mode', 'Frame path', 'Variable to store the value', and 'Timeout setting'. The 'Select' button in the 'Element path' field is highlighted.

1. Choose the Library tab and expand "23_Browser."

2. Drag and drop "Browser_GetValue" into the Flowchart area.

3. Double-click this to display the Property window.

4. As with "Operation recording," click this button and select a browser window.

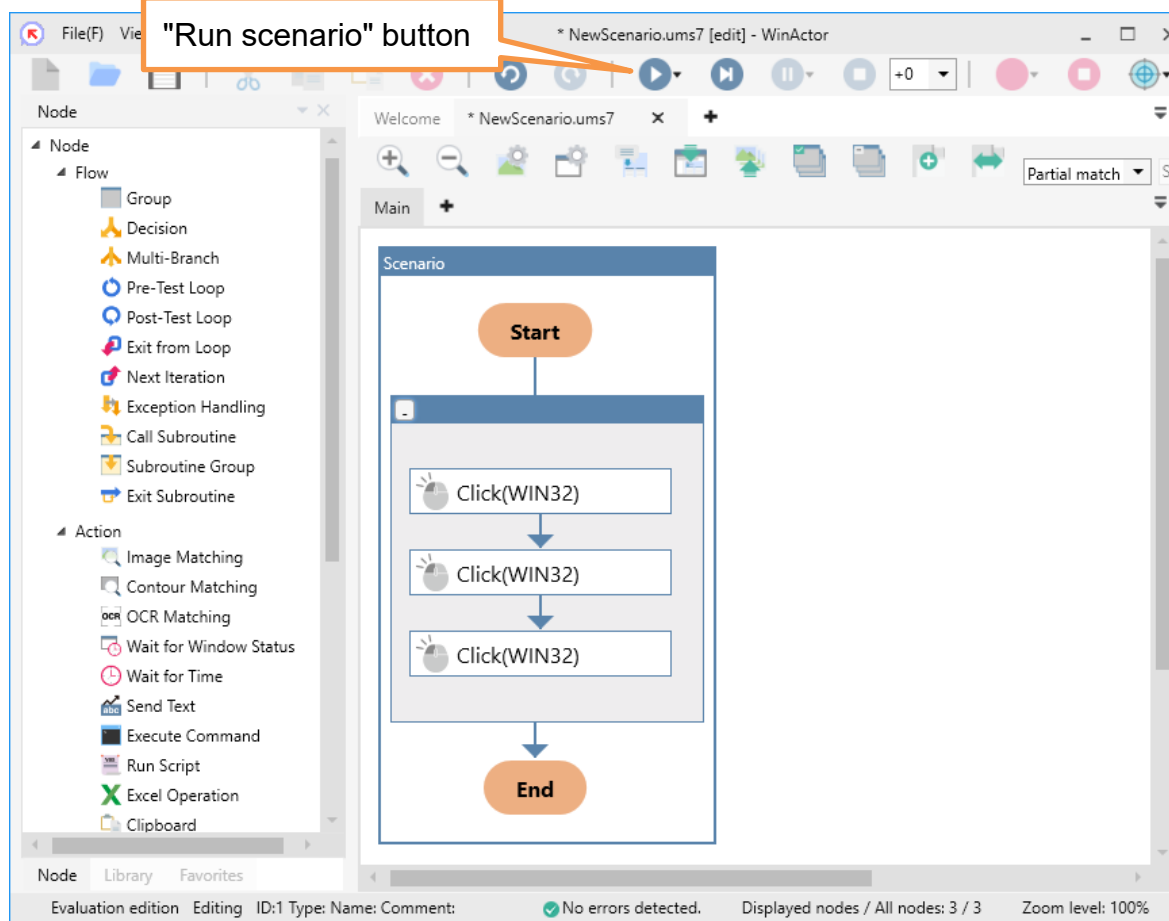
5. When clicking the "Select" button and moving a mouse cursor over the text box for which you want to get the value, the color of the box changes. Then, click the box.

6. Specify a variable name to store the acquired string. If not listed, write a new variable name.

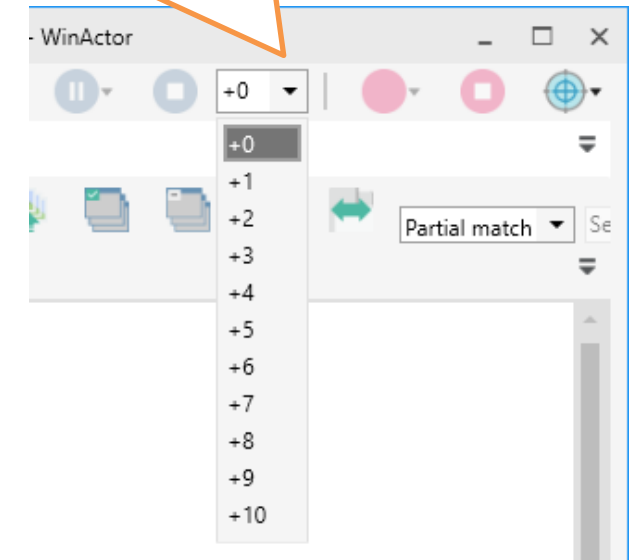
- Using browser extension of WinActor, actions such as "Browser_GetValue" and the like are available.
- For example, you can use such actions to import a search result in Edge.
- For the installation procedure of browser extension of WinActor, refer to "WinActor Chrome Agent Installation Manual" or "WinActor Firefox Agent Installation manual."

Running a scenario

Run



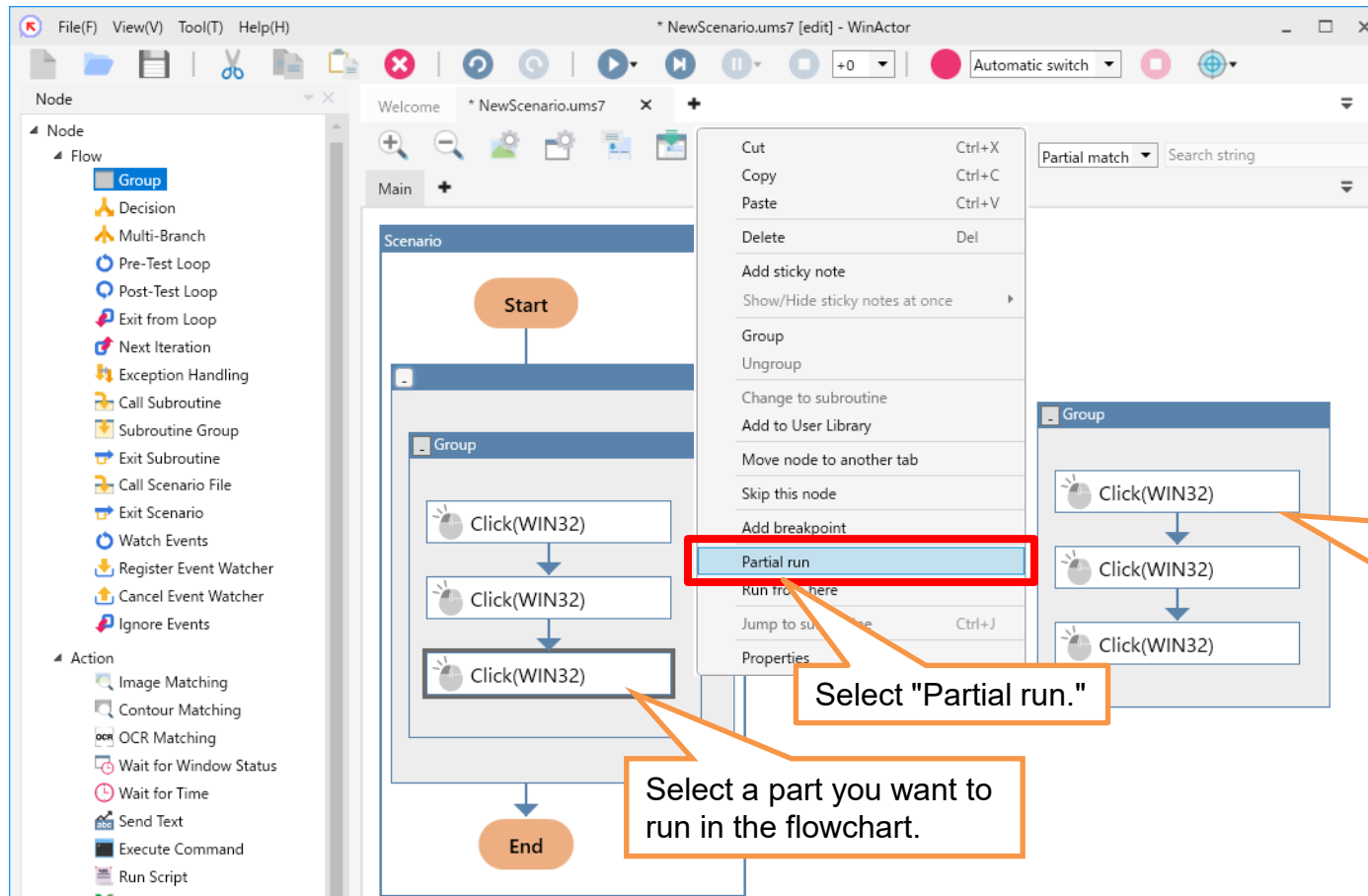
The combo box on the Run toolbar allows a scenario to run slowly (the larger the value, the slower the running speed)



- You can open a WinActor file (a scenario file) from "File -> Open" on the menu bar.
- Click the "Run scenario" button to run the scenario. You can also click this button to resume the stopped or paused scenario.

Running a scenario (Partial run)

Run



"Partial run" is also available outside the flow between "Start" and "End."

- Select a part you want to run in the flowchart, right-click the selected node, and select "Partial run" from the pop-up menu.
- With "Partial run," you can check the behavior of each part of the created scenario.

Running a scenario (Run from here)

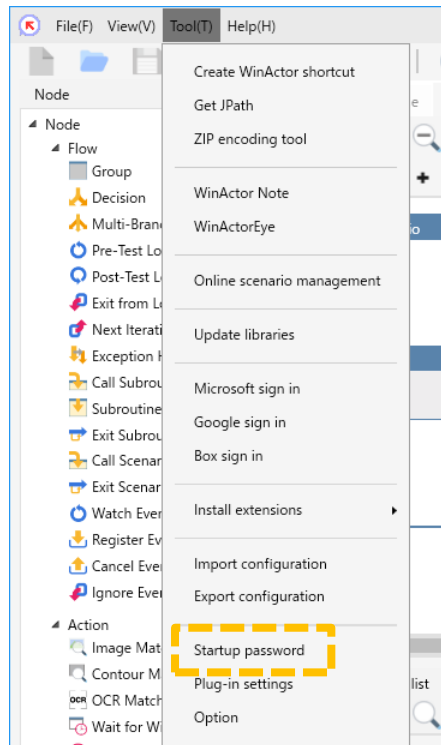
Run

The screenshot displays the WinActor interface with a flowchart titled 'NewScenario.ums7'. The flowchart starts with a 'Start' node, followed by a 'Group' containing three 'Click(WIN32)' actions, and ends with an 'End' node. A right-click context menu is open over the middle 'Click(WIN32)' node, with the 'Run from here' option highlighted in blue. An orange callout box points to this option with the text: 'Select "Run from here"'. Another orange callout box points to the 'Click(WIN32)' node with the text: 'Select a part you want to start the run in the flowchart.' A third orange callout box points to the 'Run from here' option in the menu with the text: '"Run from here" is also available outside the flow between "Start" and "End."'.

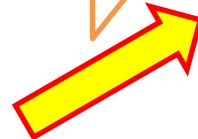
- Select a part you want to start the run in the flowchart, right-click the selected node, and select "Run from here" from the pop-up menu.
- With "Run from here," you can check the behavior of parts in the created scenario.

Startup password

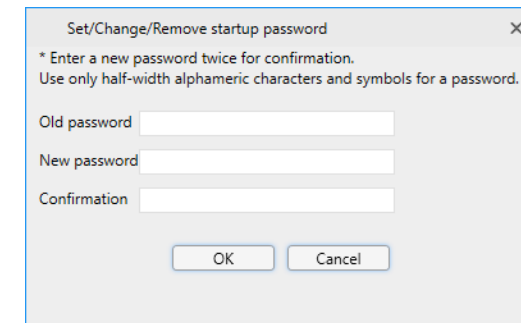
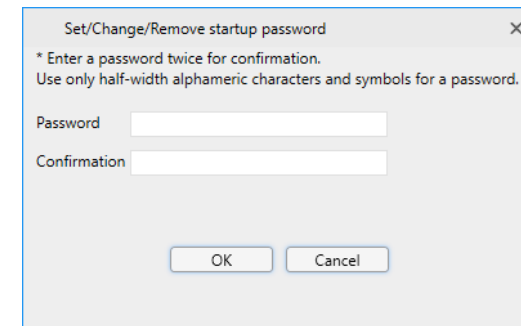
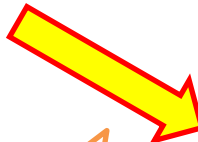
Other



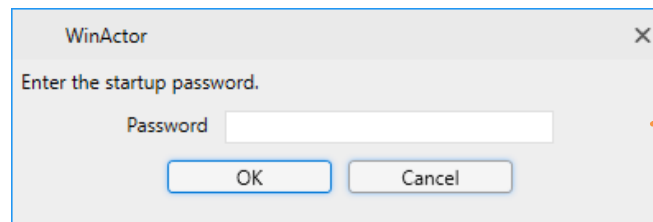
Set a password



Change/Remove a password



- You can set, change, or remove the password to launch WinActor.



Dialog box to enter a startup password

- If you set a password, you will be prompted to enter a password when you launch WinActor.

Startup options

Run

#	Option	Command	Description
①	-f	-f <i>filename.ums7</i>	Opens a specified scenario file at startup.
②	-s	-s <i>scenariopassword</i>	Opens a scenario file with a scenario password. The security mode is decided by the password.
③	-r	-r	Runs a scenario after startup.
④	-d	-d <i>datafilepath</i>	Opens a specified data list file at startup.
⑤	-w	-w <i>delay</i>	Waits for a specified time (in milliseconds).
⑥	-x	-x <i>exportfilepath</i> -x	Saves a data list file to <i>exportfilepath</i> after a scenario is completed. If <i>exportfilepath</i> is omitted, the data list file will be overwritten and saved. *If an uncaught exception occurs while running a scenario, the data list file will not be saved.
⑦	-e	-e	Closes WinActor after a scenario is completed. *If an uncaught exception occurs while running a scenario, WinActor will not be closed.
⑧	-ec	-ec	Closes WinActor and returns the exit status after a scenario is completed. If an error occurred, 1 is returned. Otherwise, 0 is returned as the status. *When receiving the status from the command prompt, Input “start /wait WinActor7.exe –ec ...” and wait for WinActor to quit.
⑨	-t	-t	Launches WinActor in the task tray (minimized state) without displaying its main window.
⑩	-p	-p <i>password</i>	Specifies a startup password. *Available for WinActor FULL edition only. *Valid only when a startup password is set. *If you use this option for a scenario with no startup password, WinActor will start after a warning dialog is displayed.
⑪	-od	-od <i>datasource</i>	Specifies a data source name of a database in the Data list pane.
⑫	-ou	-ou <i>user</i>	Specifies a username of a database in the Data list pane.
⑬	-op	-op <i>password</i>	Specifies a password for a database in the Data list pane.
⑭	-ot	-ot <i>table</i>	Specifies a table name of a database in the Data list pane.
⑮	-sl	-sl	Suppresses displaying dialogs when launching WinActor or running a scenario. *Dialogs included in a scenario (such as ‘Waiting Dialog,’ ‘Input Dialog,’ and ‘Selection Dialog’) are displayed even if this option is set.
⑯	-sa	-sa <i>filename.ums7</i>	Closes WinActor saving the scenario into the file specified as <i>filename.ums7</i> .

- You can launch WinActor from the command line.
- When launching from the command line, you can use the options shown in the table above.

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 - *2 The official name of VBScript is Microsoft Visual Basic Scripting Edition.
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- The descriptions in this manual assume that users understand Windows operations and functions. For information that is not described in this manual, see the documents provided by Microsoft.

Precautions for use

Note the following points when using WinActor.

- WinActor has functions of recording and saving user's operations by its nature. Therefore, it is possible to record and save personal information.
- WinActor has functions to perform operations automatically. Do not use it for any act that is contrary to public order or morality such as automatic operations to annoy others.
- If WinActor behaves differently from the recorded operation during its automatic execution, suspend WinActor immediately.
 - * In case of operating an application containing a tab or an application with its controls dynamically changed, WinActor may not work properly.
- If you operate a keyboard or a mouse during the automatic execution, the system shall process both automatic and manual operations simultaneously. It may cause unexpected behavior or result.
- WinActor may input or output data at a higher speed than normal manual-operation. In such a case, the target system may have a heavy load. Consider to run a scenario at a proper speed depending on the network and hardware.



WinActor[®] Basics Manual

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