



ITA_User instruction Manual

Menu creation function

—Version 1.10 —

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※「Exastro IT Automation」 is written as 「ITA」 in this document.

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Introduction

This document describes the functions and operation methods of the ITA menu creation function (hereafter referred to as menu creation) system.

1 Menu creation function overview.

The menu creation functions is for creating menus that can be operated on ITA.

The number of items, format, size and input restrictions of menus (parameter sheets/data sheets) can be freely designed with the menu creation function.

You can freely design the number, format, size, and input limit of menu (parameter sheet/data sheet) items.

The menu types users can create include parameter sheets and data sheets.

1. Parameter Sheet

➤ Manage IaC variable values

- ❖ This menu can be set with the function 「Substitution value auto registration setting」 of each driver.
- ❖ "Menu creation" menu group > "Create/define menu" menu> "Menu creation information" tab> "Basic information" frame> In the "Creation target" item, the menu created by selecting "Parameter sheet (with operation)" and "Parameter sheet (with host/operation)" is called a parameter sheet.
- ❖ By setting the target parameter sheet and IaC variable in the "Substitution value automatic registration setting" menu of each driver, it is possible to automatically substitute the value entered in the "Parameter" field of the parameter sheet to the IaC variable.

➤ With operation

Parameter sheets are created in "Operation" units.

➤ With host/operation

Parameter sheets are created in "host/Operation" units.

➤ Create as host group menu

It is possible to manage IaC values for host groups by linking with "Host Group Function".

➤ Using vertical menus

When configuring parameters that repeats the same item, users can use a vertical menu for better visibility.

2. Data Sheet

➤ Data management within ITA

- ❖ It is possible to create a data sheet where users can freely create items. Data sheets cannot be used in the "Substitution value automatic registration setting" menus.
- ❖ It can be used as a CMDB (Configuration Management Database) to manage the information on the ITA.
- ❖ By using it as a reference for items that can be selected in pull-down from other menus, it is possible to avoid wording inconsistencies.

Example) Parameter sheet (with host/operation)

The screenshot shows the Exastro IT Automation interface with a "Parameter sheet" tab selected. On the left, a sidebar lists "Main menu", "Test Parameter", and "Test Menu 1". A red box highlights "Test Parameter" with the annotation: "Menus(Parameter sheets/ Data sheets) created with the ‘Menu creation’ function." In the main area, there are two tabs: "Substitution value" and "Input". The "Input" tab is active, showing a table with columns: No, Host name/Host group name, ID, Operation, Operation name, Reference date, Last update date/time, and Last updated by. A red box highlights the "Operation" column with the annotation: "Items created with the Menu creation function". Below the table, there is a "Parameter" section with "Item 1" and "Item 2" fields, both set to "Setting".

Figure 1-1 parameter sheet

Example) Data sheet

The screenshot shows the Exastro IT Automation interface with a "Data sheet" tab selected. On the left, a sidebar lists "Main menu", "Timezone list", "Data sheet menu", "With operation", "Operation", "Host operation menu", and "Host group with operation". A red box highlights "Host group with operation" with the annotation: "Menus created with the menu creation function. (Parameter sheet/data sheet)". In the main area, there are two tabs: "Input" and "Output". The "Input" tab is active, showing a table with columns: No, Item test, Access permission, Remarks, Last update date/time, and Last updated by. A red box highlights the "Item test" column with the annotation: "Items created by the menu creation function.". Below the table, there is a "Parameter" section with "Item test" set to "Setting".

Figure 1-2 data sheet

Example) How to use a datasheet as a "Reference pulldown"

By selecting the input value in pull-down format, it is possible to prevent wording inconsistencies from manual input.

- Create a datasheet as a "Reference pulldown".

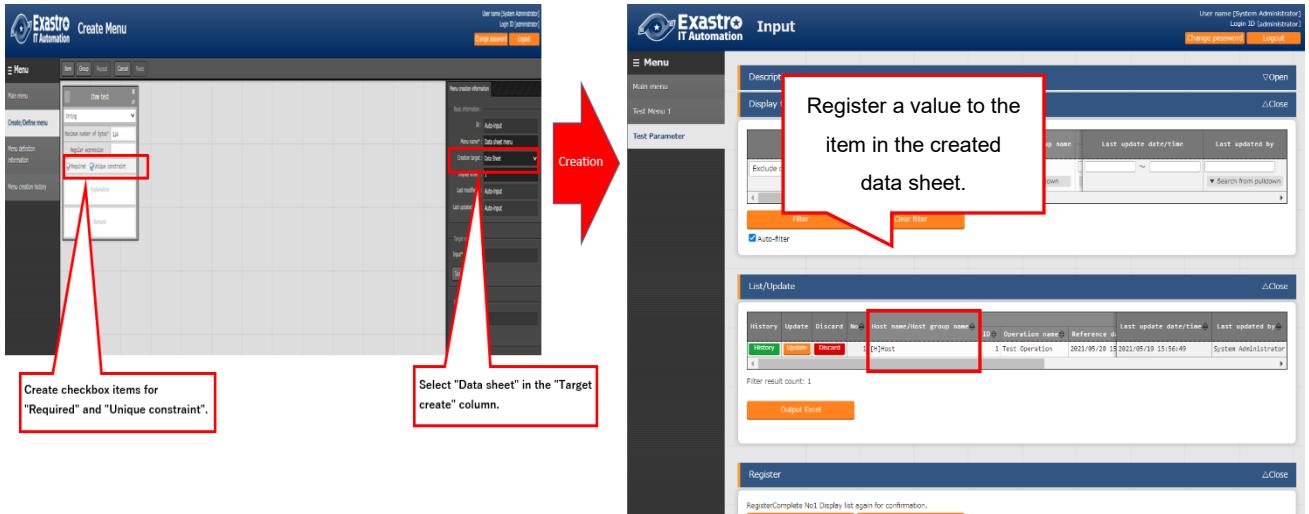


Figure 1-3 Data sheet as reference

- Specify "Pull-down selection" as the input method and create a menu (parameter sheet/data sheet).

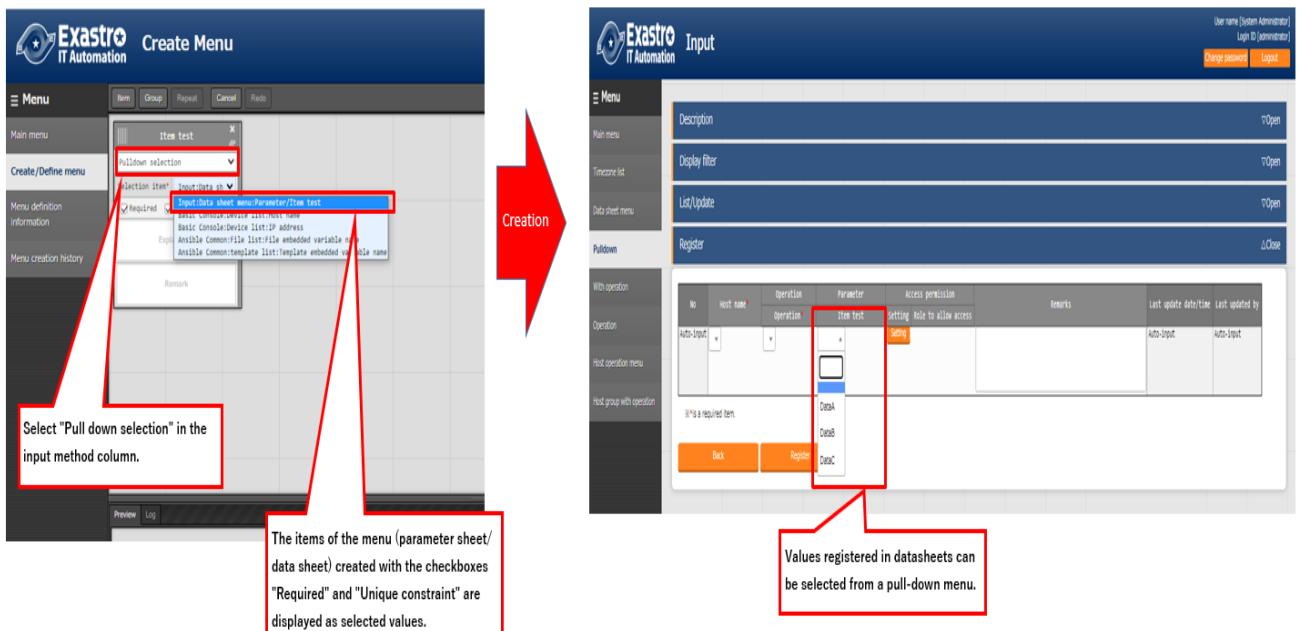


Figure 1-4 Parameter sheet referring to the registration value of the data sheet in the pull-down menu

2 Main functions of menu creation function

The main functions of the parameter sheet creation function are classified into the following categories.

- **Web**

Web contents. A screen that allows users to use the function of creating a parameter sheet provided in the browser.

- **BackYard**

A resident process that runs on a server independently from Web content.

3 Menu group of menu creation function

The menu group of the menu creation function and the menu that belongs to it are as follows.

- When menu (parameter sheet / data sheet) is created in the "Menu Definition/Create" menu, data is automatically registered in each menu of "Menu definition list", "Column group management", "Menu item creation information" and "Menu (vertical) creation information", so there is no need to create data within each menu.
In addition, since the menu (parameter sheet/data sheet) is created automatically, so there is no need to create and execute it in the "Menu creation execution" menu.
- If you want to use a hidden menu, please revive the target menu in "Role/menu link list".
(Please, refer to the "Exastro-ITA_User_Manual_Management Console" for revival/abolition instructions.)

Table 3-1 Menus that belongs to the "Create menu" menu group

Menu group	Menu	Section	Description
Create menu	Create/Define menu	5.1~5.4	Create/update parameter sheet or datasheet
	Menu definition information	5.5	The menu names of the parameter sheet or datasheet to be created can be maintained (View/Update/Discard/Restore).
	Menu creation history	5.6	Users can check the status of menu creation
	Column Group list	6.1	The column groups of the parameter sheet or datasheet to be created can be maintained (View/Update/Discard/Restore). ※This menu is hidden after installation.
	Menu item creation information	6.2	The items of the parameter sheet or datasheet to be created can be maintained (View/Update/Discard/Restore) ※This menu is hidden after installation.
	Vertical Menu creation information	6.3	Select the menu name and start item name of the parameter sheet or data sheet to be created, and specify the number of items in vertical management display and number of repetitions. ※This menu is hidden after installation.
	Create menu	6.4	Create the menu of the parameter sheet or data sheet in the menugroup that is specified in 「Menu creation information」 menu. ※This menu is hidden after installation.
	Menu / table link list	8.2	Displays the link between the created menu and the DB table ※This menu is hidden after installation.
	Other menu link	8.3	Displays the link / association between menu group, menu, item, and DB table of created menu ※This menu is hidden after installation.
	Menu conversion information	8.4	Displays the link of the menu that is horizontal from vertical menu. ※This menu is hidden after installation.

	Selection 1	8.5	Manages items that are selectable from pulldown selections.(For item 1) ※This menu is hidden after installation.
	Selection 2	8.6	Manages items that are selectable from pulldown selections.(For item 2) ※This menu is hidden after installation.
	Reference item info	8.9	Displays the items that can be used as ※This menu is hidden after installation.

※In the "Create/Definition menu" menu, it is possible to maintain menus (parameter sheets/data sheets) one at a time. However, if you want to maintain multiple menus (Parameter sheets/Data sheets) at the same time, you have to do so from Excel.

4 Menu (Parameter sheet/Data sheet) Description

■ Types of sheets can be created.

When initiation a creation of a menu where "Parameter sheet" ("Menu creation" menu group-> "Menu definition/creation" Menu-> "Menu creation information" tab->"Creation Target" field") is selected, a menu (Parameter sheet) that allows users to set items in the " Substitution value automatic registration setting" menu of each driver will be created.

If 「Data Sheet」 is selected as the creation target and menu creation is executed, a **Data Sheet** that is not available in 「Substitute value auto registration setting」will be created.

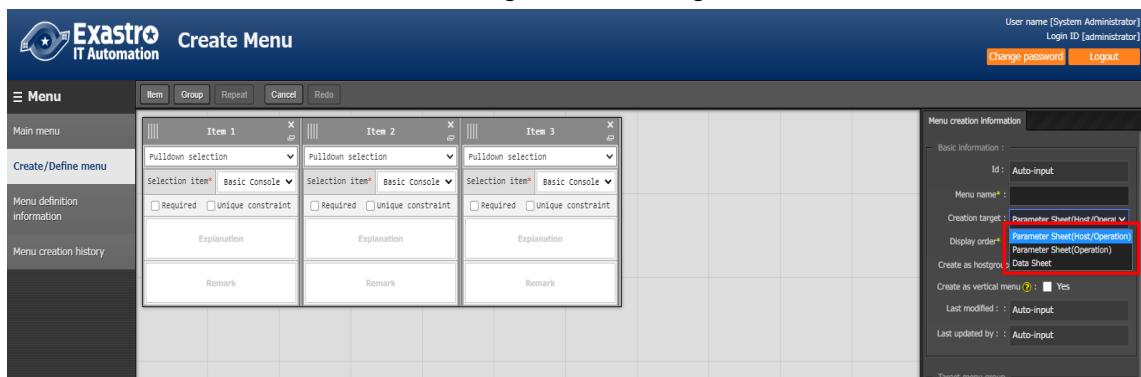


Figure 4-1 "Target create" column

The screenshot shows the 'Input' interface. On the left, there's a sidebar with 'Main menu', 'Test Menu 1', 'Directirt Creation', and 'Test Parameter'. The main area has 'Filter' and 'Clear filter' buttons, and an 'Auto-filter' checkbox. Below is a 'List/Update' table with columns: History, Update, Discard, No, Host name, ID, Operation name, Reference date, Scheduled date for execution, Last execution date, Item 1, Item 2, Item 3, and Last update date/time. A red box highlights the 'Parameter' column. Another red box highlights the 'Operation' column. The table shows one row with values: Host, 1, Test Operation, 2021/05/20 15:23, 2021/05/20 15:23, Test 1, Test 2, Test 3, and 2021/05/19 17:09:03.

Figure 4-2 Menu created with "Parameter sheet" (In the target column (Parameter sheet)) selected.

The screenshot shows the 'Input' interface. On the left, there's a sidebar with 'Main menu', 'Test Menu 1', 'Directirt Creation', 'Registration Management', and 'Test Parameter'. The main area has 'History', 'Update', 'Discard', and 'No' buttons. Below is a 'List/Update' table with columns: History, Update, Discard, No, Username, UserID, UserMailAddress, Access permission, Remarks, Last update date/time, and Last updated by. A red box highlights the 'UserMailAddress' column. The table shows one row with values: 1, Test1, Test2, and System Administrator.

Figure 4-3 Menu created with "Data sheet" (In the target column (Data sheet)) selected.

Comparison between parameter sheets and data sheets.

Selected value of Creation target	Substitute value auto registration setting	Menu items	Relationship with host/operation
Parameter Sheet (With Host/Operation)	Configurable	“Host” and “Operation” items are automatically added. Other items can be created freely.	Associated with specific host/operation.
Parameter sheet (With Operation)	Configurable	“Operation” is automatically added. Other items can be created freely.	Associated with specific host/operation.
Data Sheet	Not configurable	All items can be created freely.	Not associated with specific host/operation

Table 4-1 Comparison of menus (parameter sheet/data sheet)

※The Data Sheet is intended to be used as a source of reference for items selected by pulldown from other menus, and to be used as a CMDB(Configuration Management Database) for centralized management of data on ITA.

■ Menu creation pattern

The five menu creation patterns that can be created with the menu creation function are shown below.

- ① Parameter sheet selection & with "host group" & With "vertical menu"
- ② Parameter sheet selection & with "host group"
- ③ Parameter sheet selection & with "vertical menu"
- ④ Parameter sheet selection
- ⑤ Data sheet selection

If Parameter sheet is selected, a menu (Parameter sheet) will be created for the 3 menu groups.

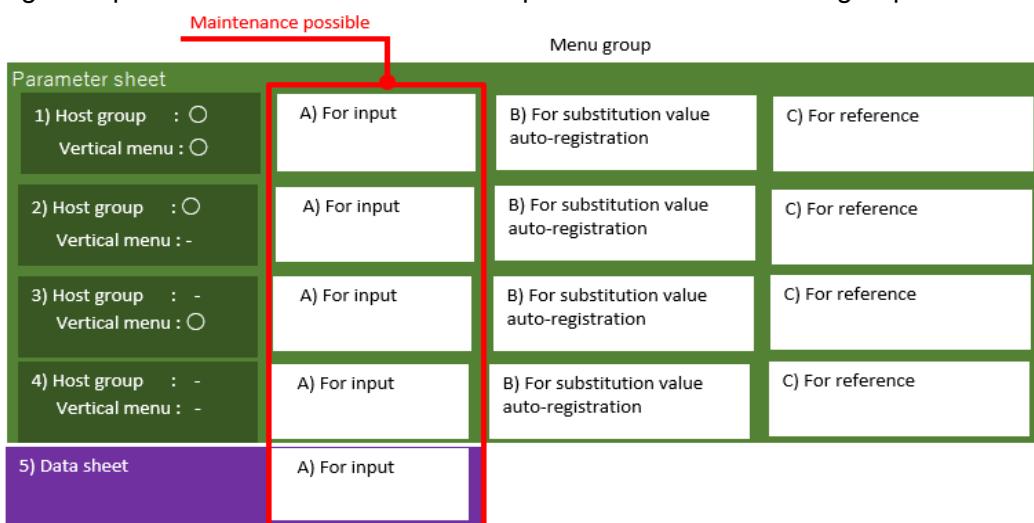
- A) For input
- B) For substitution value automatic registration
- C) For reference

If Data sheet is selected, a menu (Data sheet) will be created for the 1 menu groups.

- A) For input

Menu (Parameter sheet/Data sheet) maintenance (register/update/abolition/revival) operations can only be performed on the "A) For input" menu group.

Register/update/abolition/revival cannot be performed in other menu groups.



Parameter sheet			
1) Host group : <input type="radio"/>	A) For input	B) For substitution value auto-registration	C) For reference
Vertical menu : <input type="radio"/>			
2) Host group : <input type="radio"/>	A) For input	B) For substitution value auto-registration	C) For reference
Vertical menu : -			
3) Host group : -	A) For input	B) For substitution value auto-registration	C) For reference
Vertical menu : <input type="radio"/>			
4) Host group : -	A) For input	B) For substitution value auto-registration	C) For reference
Vertical menu : -			
5) Data sheet	A) For input		

Figure 4-4 menu creation pattern

• Create as host group menu

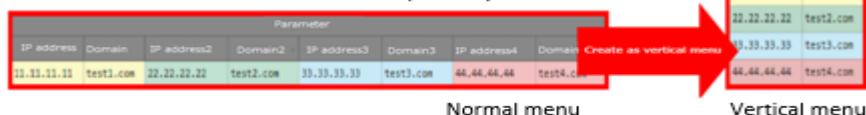
When grouping the target hosts by using the host group function, it is recommended to use the host group.

Please refer to 「User instruction Manual_Host Group Function」 for the Host group function.

• Create as host group menu

For example, when define the same item repeatedly, such as "IP address" + "domain" in the hosts file, we recommend using the vertical menu for better visibility. If you do not need to enumerate a fixed number of items repeatedly like the kernel parameters, we recommend that you do not use the 「Vertical menu」 and use the normal menu.

Ex) When parameter sheet of "IP address" + "Domain" is created for "Normal menu" and "Vertical menu" respectively.



Parameter	
IP address	Domain
11.11.11.11	test1.com
22.22.22.22	test2.com
33.33.33.33	test3.com
44.44.44.44	test4.com

IP address	Domain
11.11.11.11	test1.com
22.22.22.22	test2.com
33.33.33.33	test3.com
44.44.44.44	test4.com

Figure 4-5 Comparison of "Normal menu" and "Vertical menu"

5 Operation description of (Define/Create Menu) menu

Menu creation and parameter sheet/data sheet definition are performed in “Define/Create Menu” screen.

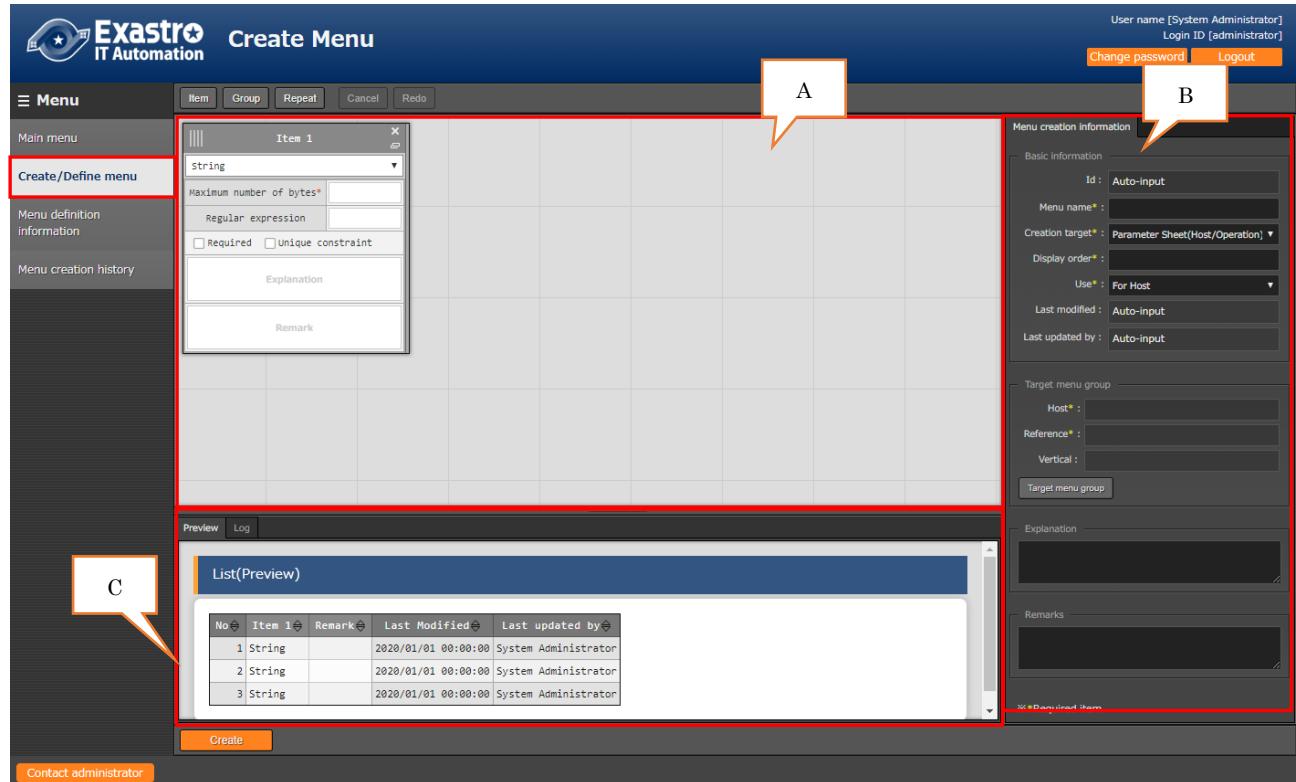


Figure 5.1 “Create/define menu” menu

5.1 (A) Setting of Item/Group/Repeat

Set the items for menu (parameter sheet/data sheet)

- Item button

Click “Item” button to add new item and set it.

It is possible to add it as an item to the menu (parameter sheet/data sheet) by selecting the input method from the pull-down menu and entering the required items.

Figure 5.1-1 Item creation

Table 5.1-1 setting item value

Item name	Description
Item name (Item 1 is set on default)	<p>Enter the name of the item.</p> <p>.※ Do not use 「/」 in the item names. When 「/」 is used, the 「Substitute value auto registration setting」 for the different drivers may not work properly.</p>
Required	Select if you want the item to be a required item.
Unique restraint	Select if you want the item to be a unique restrained item.
Pulldown menu (Input method)	<p>Users can choose the type of input method they want to have in their item from the pulldown menu. Select from "String", "Multi string", "Integer", "Decimal number", "Date", "Date/time", or "Pull down selection"</p> <p>When "String" is selected, the item is a text box with single line input.</p> <p>When "Multi string" is selected, the item is a text box with multiple line input.</p> <p>When "Integer" is selected, the item is a text box that only integer can be entered.</p> <p>When "Decimal number" is selected, the item is a text box that integer/decimal number can be entered.</p> <p>When "Date" and "Date/time" is selected, the item is entered by calendar selection.</p> <p>When "Pulldown selection" is selected, the item is a pulldown menu item. Registered data will have its value turned into a link that users can use to access menus where the source data was registered.</p> <p>Users are able to use the search function in the display filter menu to search. Note that the search filter can only handle characters within 1024 bytes.</p> <p>The behavior of links in pulldown selection changes if the source item is a "Multi string" item.</p> <p>For more information, please see Chapter 8.13.</p> <p>If "Password" is selected, the item will be a text box where any text typed in the box will be hidden with "●"(The text will only be displayed if the eye icon inside the frame is pressed)</p> <p>When "File upload" is selected, the item will contain 2 buttons. One where users can browse and select files, and one called "Pre-upload".</p> <p>When "Link" is selected, the entered URL will be a text box item that will be displayed as a link.</p> <p>If "Parameter sheet reference" is selected, the item will reference records that corresponds to their operations.</p> <p>Parameter sheet reference cannot be used in Data sheets.</p> <p>For more information, please see chapter 8.11</p> <p>※For more information regarding the trace history of the menu created with 「Pulldown selection」,please see「8.5 エラー! 参照元が見つかりません。」.</p> <p>※The association target item in "Substitution value automatic registration setting" are "String", "Multi string", "Integer", and "Decimal number". "Date/time", and "Date" can't be associated. "Pulldown selection" can't be associated if the item of pulldown selection are "Multi string", "Date/time", and "Date".</p>
String	<p>Maximum number of bytes</p> <p>Enter the maximum number of bytes.</p> <p>The maximum size is 8192 bytes.</p> <p>The byte count of half-width alphanumeric characters are equivalent to the number of characters.</p>

Item name	Description	
		For full-width characters, the number of characters x 3 + 2 bytes is required. Required if "Input Method" is "String". Can't be entered if "Input method" is "Multi string", "Integer", "Decimal number", "Date/time", "Date", and "Pulldown selection".
	Regular expression	If you want to check input values with regular expression, enter the regular expression. Example: For half-width numeric items of 0 bytes or more: /^[0-9]*\$/ For half-width alphanumeric characters of 1 byte or more: /^[a-zA-Z0-9]+\$/ Can't be entered if "Input method" is "Multi string", "Integer", "Decimal number", "Date/time", "Date", and "Pulldown selection".
	Default value	Input the default value of data that will be used when data is registered. Make sure to not input a value that exceeds the set maximum byte size or a value that does not match a regular expression. When the menu's data is output as an Excel file, the default value will be set by default.
Multi string	Maximum number of bytes	Enter the maximum number of bytes. The maximum size is 8192 bytes. The byte count of half-width alphanumeric characters are equivalent to the number of characters. For full-width characters, the number of characters x 3 + 2 bytes is required. Required if "Input Method" is "Multi String". Can't be entered if "Input method" is "String", "Integer", "Decimal number", "Date/time", "Date", and "Pulldown selection".
	Regular expression	If you want to check input values with regular expression, enter the regular expression. Example: For half-width numeric items of 0 bytes or more: /^[0-9]*\$/ For half-width alphanumeric characters of 1 byte or more: /^[a-zA-Z0-9]+\$/ Can't be entered if "Input method" is "String", "Integer", "Decimal number", "Date/time", "Date", and "Pulldown selection".
	Default value	Input the default value of data that will be used when data is registered. Make sure to not input a value that exceeds the set maximum byte size or a value that does not match a regular expression. When the menu's data is output as an Excel file, the default value will be set by default.
Integer	Minimum value	Enter the minimum value of the column. Integer value from -2147483648 to 2147483647 can be entered. The value will be -2147483648 if not entered. Please enter value smaller than the maximum value. Can't be entered if "Input method" is "String", "Multi string", "Decimal number", "Date/time", "Date", and "Pulldown selection".
	Maximum value	Enter the maximum value of the column. Integer value from -2147483648 to 2147483647 can be entered. The value will be 2147483647 if not entered. Please enter value larger than the minimum value. Can't be entered if "Input method" is "String", "Multi string", "Decimal number", "Date/time", "Date", and "Pulldown selection".
	Default value	Input the default value of data that will be used when data is registered. Make sure to not input a value that is within the set maximum and minimum byte size. When the menu's data is output as an Excel file, the default value will be set by default.

Item name		Description
Decimal number	Minimum value	<p>Enter the minimum value of the column.</p> <p>Integer value from -9999999999999 to 9999999999999 with total digit for whole number + fraction part less than 14 digits can be entered.</p> <p>The value will be -9999999999999 if not entered.</p> <p>Please enter value smaller than the maximum value.</p> <p>Can't be entered if "Input method" is "String", "Multi string", "Integer", "Date/time", "Date", and "Pulldown selection".</p>
	Maximum value	<p>Enter the maximum value of the column.</p> <p>Integer value from -9999999999999 to 9999999999999 with total digit for whole number + fraction part less than 14 digits can be entered.</p> <p>The value will be 9999999999999 if not entered.</p> <p>Please enter value larger than the minimum value.</p> <p>Can't be entered if "Input method" is "String", "Multi string", "Integer", "Date/time", "Date", and "Pulldown selection".</p>
	Digits	<p>Enter the upper limit of the total digit for whole number + fraction part.</p> <p>Example: 0.123 has 4 digits (whole number 1 digit, fraction part 3 digits) 11.1111 has 6 digits (whole number 2 digit2, fraction part 3 digits)</p> <p>Integer value from 1 to 14 can be entered.</p> <p>Can't be entered if "Input method" is "String", "Multi string", "Integer", "Date/time", "Date", and "Pulldown selection".</p>
	Default value	<p>Input the default value of data that will be used when data is registered.</p> <p>Make sure to not input a value that is within the set maximum and minimum byte size.</p> <p>When the menu's data is output as an Excel file, the default value will be set by default.</p>
Pulldown selection	Select item	<p>Select the target to be referenced from the created menu (parameter sheet / data sheet) from the pull-down.</p> <p>The string in the "Select item" column is configured of "Menu group: Menu item".</p> <p>Input required if "Input method" is "Pulldown selection".</p> <p>※Items that satisfy the following conditions are displayed in the pull-down menu .</p> <ul style="list-style-type: none"> · "Host name" and "IP address" item of "Basic console" menu group "Device list" menu · If Ansible driver is installed, the "File Embedded Variable Name" item in the "File list" menu of the "Ansible Common" menu group and "Template Embedded Variable Name" item on the "Template list" menu. · Items in which the input method of the menu (parameter sheet /data sheet) created by the function of the "Menu Creation" menu group is "string (single line)" , "string (multiple line)" , "integer" , "multiple line" , "integer," "number" , "date and time" , "date" , "link" or "required" and "unique constraint."
	Reference item	<p>Use this item to select an item as an "Select item" to display a different item that exist in the same menu.</p> <p>Clicking the "Select reference item" button will display a list of items that can be displayed horizontally,</p> <p>Users can specify the target by checking the checkbox and clicking the "OK" button.</p> <p>For more information on how to use it, please see chapter 8.8</p> <p>※There might be cases where values are enclosed in brackets in the pulldown search bar in the display filter .</p> <p>For more information, please see chapter 8.12</p>

Item name		Description
	Default value	Select the data value that will be used by default when data is registered. Data registered to the set "Select item" will be selectable from the pulldown selection. When the menu's data is output as an Excel file, the default value will be set by default.
Password	Maximum number of bytes	Enter the maximum number of bytes. The maximum size is 8192 bytes. The byte count of half-width alphanumeric characters are equivalent to the number of characters. For full-width characters, the number of characters x 3 + 2 bytes is required. Required if "Input Method" is "Password".
Upload file	Maximum number of bytes in the file	Enter the maximum number of bytes of the file to upload. The maximum size is 4294967296 bytes. Required if "Input Method" is "File upload".
	Default value	Input the default value of data that will be used when data is registered. Make sure to not input a value that is within the set maximum and minimum byte size. When the menu's data is output as an Excel file, the default value will be set by default.
Link	Maximum bytes	Enter the maximum number of bytes. The maximum size is 8192 bytes. The byte count of half-width alphanumeric characters are equivalent to the number of characters. For full-width characters, the number of characters x 3 + 2 bytes is required. Required if "Input Method" is "Link".
	Default value	Input the default value of data that will be used when data is registered. Make sure to not input a value that exceeds the set maximum byte size. When the menu's data is output as an Excel file, the default value will be set by default.
Parameter sheet reference	Menu	Select a "Parameter sheet (With operation)" from the pulldown selection.
	Item	Select the reference item from the selected menu. Items with the following input methods can be selected: "String", "Multistring", "Integer", "Decimal number", "Time", "Date", "Password", "File upload", and "Link". ※Menus that uses "Parameter reference" might have their value displayed in brackets when searching for them with the display filter. For more information, please see chapter 8.12.
Explanation		Enter the description that will be displayed when users hover mouse cursor over the item name.
Remarks		Enter the remarks column.

- Group button

Click the “Group” button to add a column group.

Drag and drop items into the body area of column group to add items into column group. Column groups can also be added into column groups. Multiple items can be set into single column group.



Figure 5.1-2 column group creation

- Repeat button

Click the “Repeat” button to set repeat items.

Repeat items and repeat count will automatically applied to vertical menu.

If you check the checkbox "Use" in the "Use vertical menu" column, the "Repeat" button will be enabled.

Users can set it by dragging and dropping items into the displayed REPEAT area.

(※)Vertical function is not applicable for data sheet.

Multiple items can be set in repeat column but only one repeat column can be set in a parameter sheet.

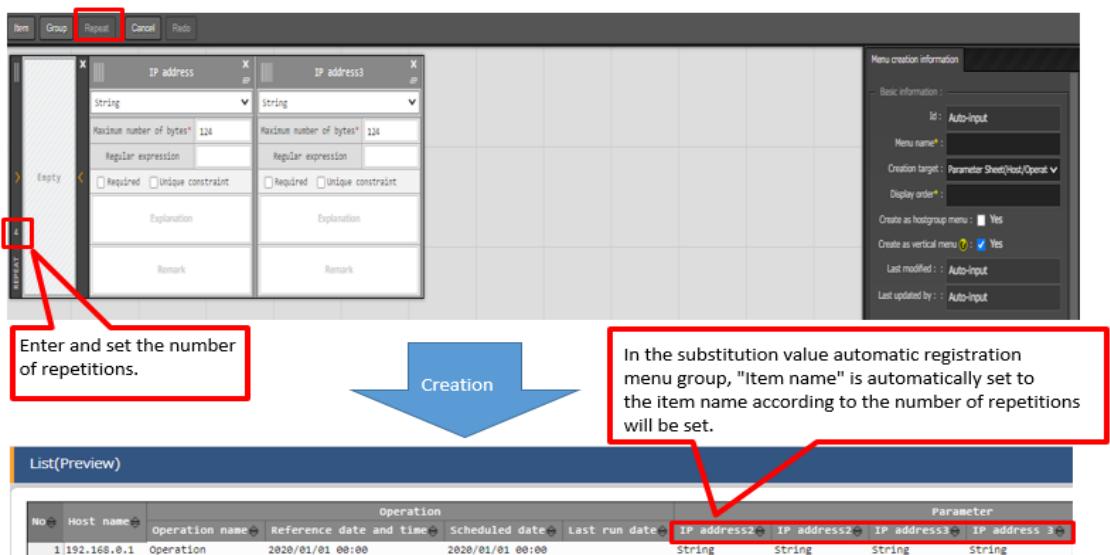


Figure 5.1-3 create as vertical menu

- Cancel button

Undo the previous modification.

- Redo button

Redo the cancelled modification.

5.2 (B) Menu creation information tab

Enter required information for menu creation.

➤ Basic information

Table 5.2-1 "Basic Information" Setting Value

Item name	Description	Selected value of creation target	
		Parameter Sheet	Data Sheet
Id	“Auto-input” is set on default when creating new menu. The ID of menu will be displayed when editing existing menu.	Displayed	Displayed
Menu name	Enter the menu name of the menu to be created. The menu name “Main menu” cannot be used.	Displayed	Displayed
Creation target	Select 「Parameter Sheet (Host / Operation)」 or 「Data Sheet (master available)」 from the pull-down menu. If “Data Sheet” is selected, the “Input” field will be displayed in the “Target Menu Group” frame. If “Parameter sheet (With Operation” is selected, the “Create as Vertical Menu” checkbox will appear in the “Basic Information” frame. Likewise, the “Input”, “For Substitution value automatic registration” and “For reference” column will be displayed in the “Target menu group” frame. If “Parameter sheet (With Host/Operation” is selected, the “Create as Vertical Menu” checkbox will appear in the “Basic Information” frame. Likewise, the “Input”, “For Substitution value automatic registration” and “For reference” column will be displayed in the “Target menu group” frame. The default value is “Parameter sheet (with host/operation)”	Displayed	Displayed
Display order	Enter the display order in the menu group. They are displayed in ascending order.	Displayed	Displayed
Create as host group menu	When the “Use” check box is checked, “Host name/Host group name” parameter sheet in units is created in the “Input” menu group. When the “Use” is checkbox not checked, “Host name” parameter sheet will be created. ※When “Parameter sheet (with host/operation)” is selected in the “Target to create” column, the “Host group use” column will be displayed.		Hidden
Create as vertical menu	When “Parameter sheet” is selected in the “Creation target” column, the “Vertical menu use” column will be displayed. When the “Use” checkbox is checked, a parameter sheet corresponding to the vertical menu will be created.		Hidden
Last modified	“Auto-input” is set on default when creating new menu. The time of last modification will be displayed in view/edit mode.	Displayed	Displayed

Item name	Description	Selected value of creation target	
		Parameter Sheet	Data Sheet
Last updated by	"Auto-input" is set on default when creating new menu. The name of the user who last modified the menu will be displayed in view/edit mode.	Displayed	Displayed

➤ Target menu group

The menu groups that the menu to be created belongs to is displayed.

Click the "Target menu group" button to display the "Target menu group" modal to select the menu group for the menu to be created.

Table 5.2-2 Target menu group frame setting value

Item name	Description	Selected value of creation target	
		Parameter Sheet	Data Sheet
For input	The initial value is the "For input" menu group. The menu group name selected in the "For input" column on the "Menu Group Selection" screen will be displayed. ※Selection required item.	Displayed	Displayed
For substitution value automatic registration	The initial value is the "substitution value automatic registration" menu group. If the "Creation target" column is "Parameter sheet", the menu group name selected in the "For automatic registration substitution value" column on the "Menu group selection" screen will be displayed. ※If the "Target menu group selection" frame is displayed, it is a selection required item.	Displayed	Hidden
For reference	The initial value is the "For reference" menu group. If the "Creation target" column is "Parameter sheet", the menu group name selected in the "For reference" column on the "Menu group selection" screen will be displayed. ※If "Target menu group selection" frame is displayed, It is a selection required item.	Displayed	Hidden

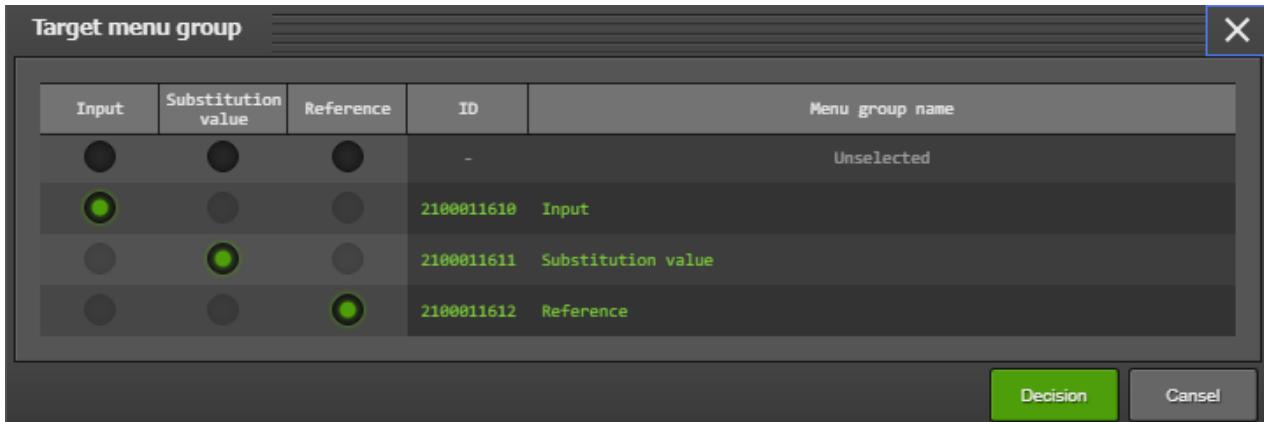


Figure 5.2-1 Target menu group screen

※This picture shows when "Parameter sheet" is selected in the "Creation target column".

- "Target menu group" screen
 - ❖ Select the menu group where you want to create the menu (Parameter sheet/Data sheet)
 - ❖ "For input", "For Substitution value automatic registration" and "For reference" menu groups are selected by default
 - ❖ Select the menu group you want to use and press the "Decision" button.
 - ❖ If you press the "Decision" button with the default settings~ will automatically be created. (When "Datasheet" is selected in the "Creation target" field, only the "For input" menu group will be created.)
 - ❖ If the default menu group is not going to be used, please create the menus in the "Management console" menu group in advance. (For information about creation, please refer to the "ITA-User_Instruction_Manual_Management Console".)
 - ❖ To return to the "Definition/list menu" menu, press the "Cancel" button.
- “Unique constraint (multiple items)” screen.
This function allows users to restrict and control registration of records when the contents of specified item combinations already exists.



figure 5.2-2 “Unique constraint(multiple items)” function

Press the "Unique constraint(multiple items)" button to open up the "Unique constraint(multiple items)" window. Here users can configure the different item combinations they want to apply unique constriction to.

- “Unique constraint(multiple items)” settings screen
 - ❖ Press the “Add a pattern” button to add a new pattern. Press the button again to add multiple patterns.
 - ❖ Existing patterns will all be displayed. Users can press the items to choose what item combinations they want to apply unique constriction to.
 - ❖ Press the “Delete” button on the right of the button in order to delete the pattern.
 - ❖ Press the “Cancel” button to cancel the process.
 - ❖ Press the “Decision” button in order to save the patterns. The configured patterns will then be displayed in the Create menu screen.

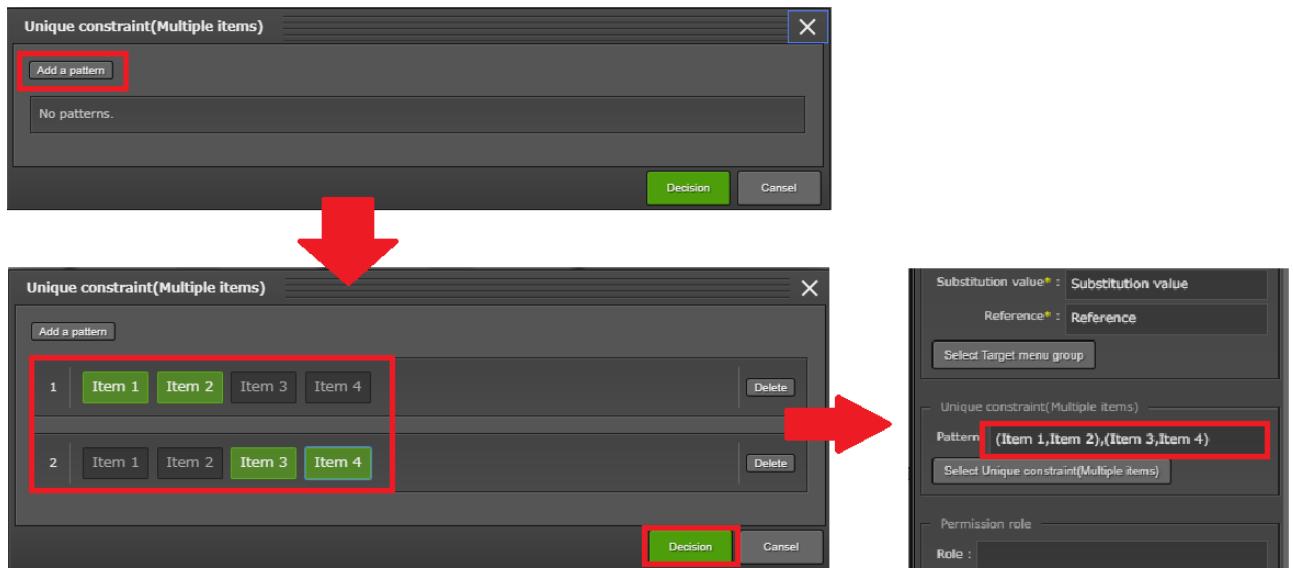


Figure 5.2-3 “Unique constraint(multiple items)” settings screen.

- ❖ The following patterns will lead to validation errors.
 - ① Patterns with only 1 item selected.
 - ② Patterns with the same combination as already existing patterns.



Figure 5.2-4 “Unique constraint(multiple items)” Validation error patterns

- "Permission role" frame
 - If permission role is selected
 - ✧ Menu definition (each menu under the "Create menu" menu group) can only be accessed from selected roles.
 - ✧ Created menus (parameter sheet/data sheet) can only be accessed by the selected roles set in the "Role/menu link list" menu.
 - If no role is selected
 - ✧ Menu definition (each menu under the "Create menu" menu group) is accessible by all roles.
 - ✧ Created menus (parameter sheet/data sheet) can only be accessed by "System Administrator" roles and the role group of the user who created the menu.

5.3 (C) Menu creation

- “Preview” Tab
The items to be created is displayed in table format.
- “Log” Tab
The result of menu creation after clicking the create button will be displayed.
- Create button (When creating new menu)
Menu (parameter sheet/data sheet) creation will be performed when clicking “Create” button after entering all required item.
The following dialog will be displayed after clicking “OK” button of confirmation dialog.

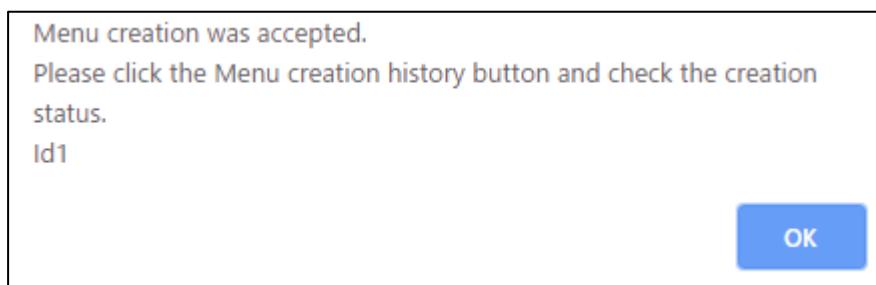


Figure 5.3-1 Menu confirmation dialog

Please move the “Menu creation history” menu to check if the menu is created normally after the creation is performed.



Figure 5.3-2 View screen “Menu creation history” button

When creating menus in “Define/Create menu (parameter sheet/data sheet)” screen, the information of the created menu will be automatically registered to “Menu definition information”, “Column group list”, “Menu item creation information”, “Vertical menu creation information”

5.4 Using 「Define/Create Menu」 after menu has been created

Users can edit created menu or use created menu as template to create new menu (parameter sheet/data sheet) after creating menu in “Define/Create Menu”.

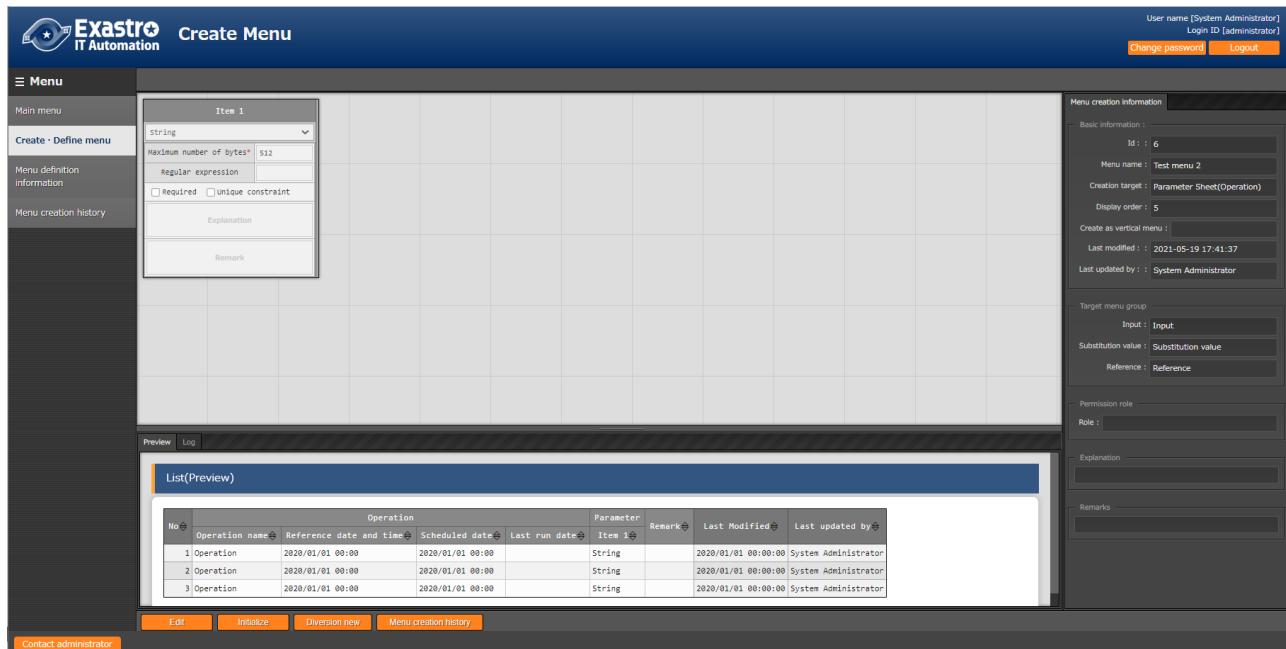


Figure 5.4-1 View mode screen

After creating new menu, the screen above will be displayed.

It is not possible to create or edit menus (Parameter sheets/data sheets) on the view screen.

Users can edit and create by pressing the "Edit", "Initialize", "Diversion new" and "Menu creation history" buttons displayed on the screen.

If the "Edit" or "Initialize" button is not displayed but the "Create" button is, the "Menu create" function's BackYard process has most likely not finished.

If this is the case, please refresh the browser after creating the menu. This should display the "Edit" and "Initialize" button. The Menu creation status can be seen in the "Menu creation history". Users can access this menu by pressing the "Menu creation history" button.



Figure 5.4-2 Button arrangement when the Backyard process is not finished

- “Edit” button

Pressing the "Edit" button will move the user from the View screen to the Edit screen. Editing any value and pressing the "Create" button will re-create the menu (Parameter sheet/Data sheet) of the value.

- “Initialize” button
Pressing the "Initialize button" will move the user from the view screen to the initial screen. Editing any values in the initial screen and then pressing the "Create (Initialize) button will recreate the menu (Parameter sheet/Data sheet).
When recreated, the data registered in the "Input" Menu group will be deleted.
 - “Diversion new” button
“Clicking the "Diversion new" button will take the user to a screen where they can create a new menu template from the menu currently displayed on the screen.
Please enter new menu name and display order for the new menu.
Make sure the new name is different from any existing menu name.
 - “Menu creation history” button
Moves the user to the "Menu creation history" menu of the menus being displayed in the view screen.
- “Edit mode” screen

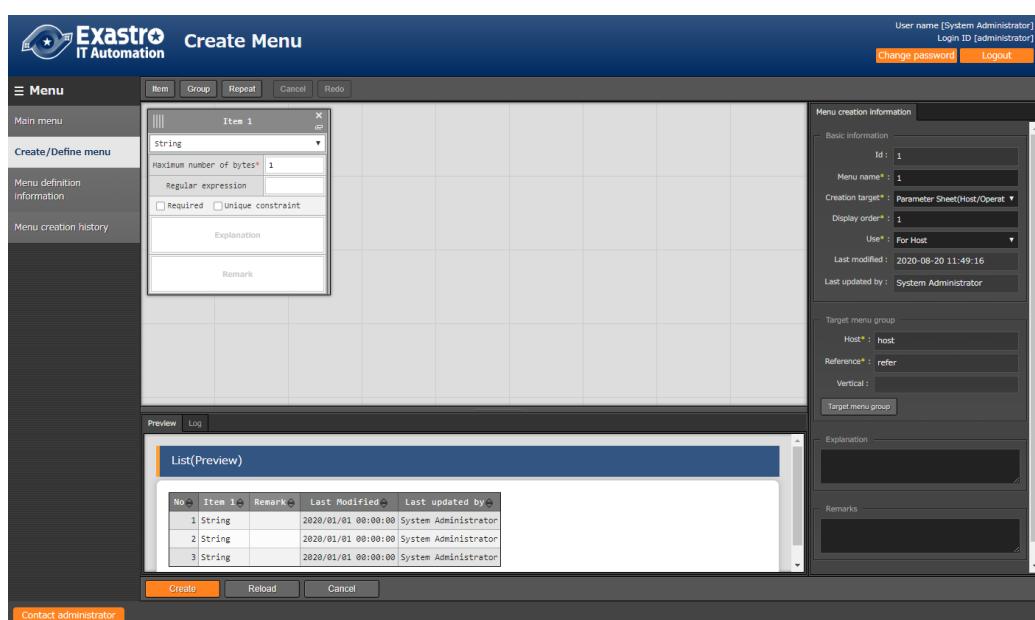


Figure 5.4-2 Edit screen

In the edit screen, users can edit menus displayed on the screen. Already existing items can only have their "Item name" "Description" and "Remarks" values changed. If you deleted one of the existing items, the data input into that item will also be deleted.

If you added a new item, an item will be added with its record blank. As the records will be blank even if you've checked the "Required" and/or "Unique constraint", inconsistencies may occur in the registration data.

It is not possible to change the "Basic Information", "Creation Target", "For Hostgroup", and

the "Create as vertical menu" values.

➤ Creation button

Menus (parameter sheet/data sheet) displayed on the edit screen will be re-created.

※ When editing existing menu, since exchanging the name of items among the items is invalid, error may occur when changing the name of items.

➤ Reload button

Discard the edited content then return to the status of the original menu.

➤ Cancel button

Return to the state before clicking the edit button.

- Initialize screen

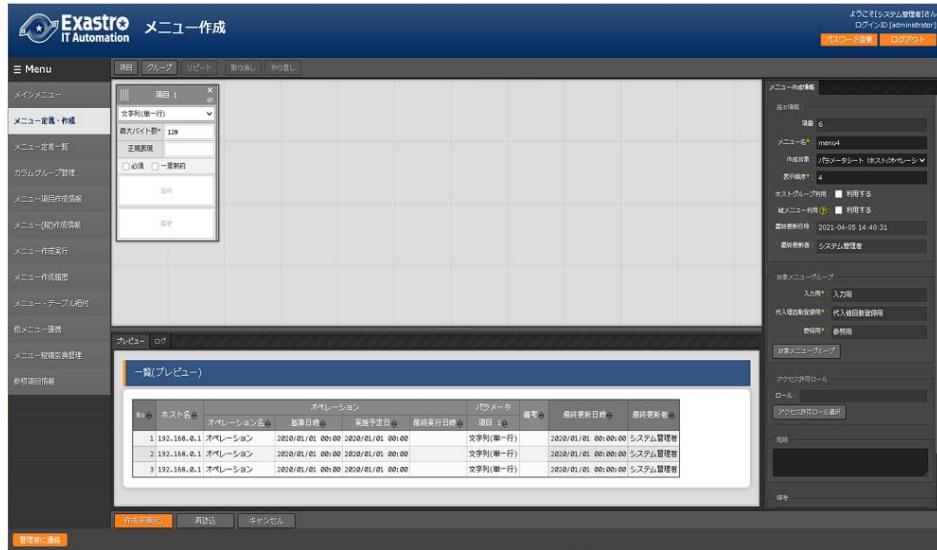


Figure 5.4-4 Initialize screen

In the Initialize screen, users can edit the displayed menus.

There are constraints regarding editing. However, the data registered in the "Input" Menu group will be deleted.

- Create(Initialize)" button

The menus (Parameter sheet/Datasheet) displayed in the Edit screen gets recreated.

※If you want to edit already existing menus (Parameter sheet/Data sheet), keep in mind that as it is not possible to exchange item names between items, an error might occur when pressing this button if you've changed the item name.

- “Reload” button.

Discards the edited content then return to the status of the original menu.

- “Cancel” button.

Return to the state before clicking the edit button.

5.5 Check created menu in 「Menu definition information」

In the "Menu definition list" menu, users can check and operate the following.

- A list of created menus (parameter sheets/data sheets).
- Maintenance (view/update/abolition/restore) of created menus (parameter sheets/data sheets)
- Create menus (parameter sheet/datasheet) that do not use the "Define/create menu".

Menus (parameter sheet /data sheet) maintenance (view/update/abolition/restore) is possible.

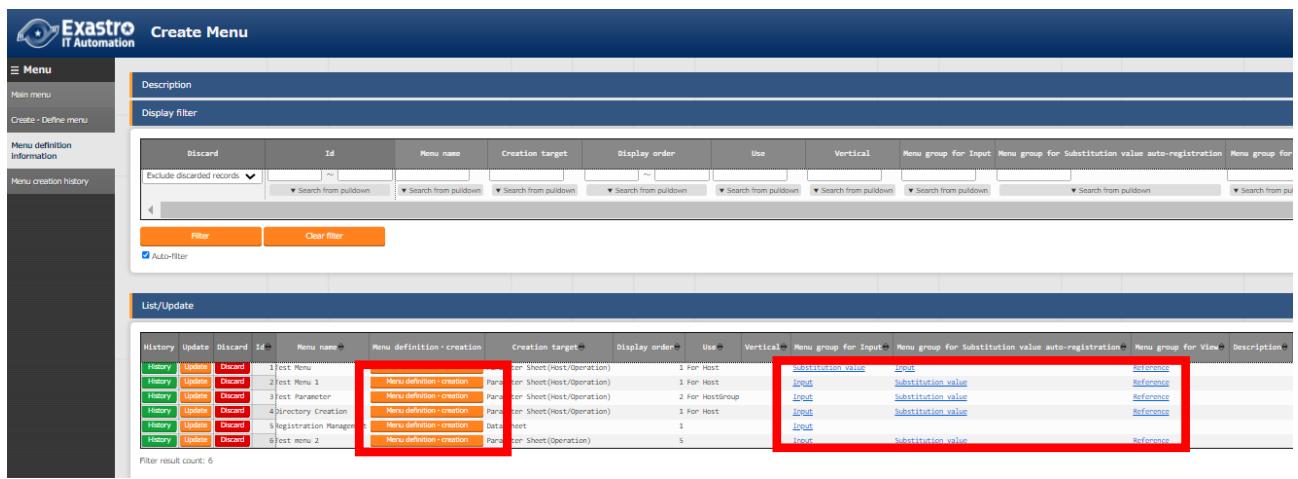


Figure 5.5-1 Menu definition list menu

Created menus (parameter sheet/data sheet) is displayed in “Menu definition list” > “List/Update”. Click “Filter” button in display filter to show all menus.

Clicking the “Menu definition/creation” button will move the user to the “Create/Define menu” menu in view mode.

Pressing the “Input”, “Substitution value automatic registration” or the “Reference” URL will move the user to that menu group list.

※The following are the steps to create menu in “Menu definition information” menu. These steps are not needed to create menu in “Create/Define menu” menu.

Table 5.5-1 Menu definition list menu setting value

Item name	Description	Selected value of creation target	
		Parameter Sheet	Data Sheet
Menu name	Enter the menu name of the menu to be created. The menu name “Main menu” cannot be used.	Displayed	Displayed
Creation target	Selecting 「Parameter Sheet (Host / Operation)」 or 「Data Sheet (master available)」 from the pull-down menu, the color of the	Displayed	Displayed

Item name	Description	Selected value of creation target	
		Parameter Sheet	Data Sheet
	<p>header will change in the "List/Update" Submenu and the "Registration" submenu.</p> <p>If "Parameter sheet (with host/operation)" is selected , "Display order" column, "Use" column, "Vertical menu use" column, "Input menu group" column, "Menu group for substitution value automatic registration", "Menu group for reference", "Description" column, "Access permission" column, and "Remarks" column will be displayed as setting points.</p> <p>If "Parameter sheet (with operation)" is selected, "Display order" column, "Vertical menu use" column, "Menu group for input", "Menu group for substitution value" automatic registration, "Menu group for reference", "Description" column, "Access permission" column, and "Remarks" column will be displayed as setting points.</p> <p>If "Data Sheet" is selected, the "Display order" column, the "Input menu group" column, the "Description" column, the "Access permission" column, and the "Remarks" column will be displayed as setting points.</p> <p>The initial value is "Parameter sheet (with host/operation)".</p>		
Display order	Enter the display order in the menu group. They are displayed in ascending order.	Displayed	Displayed
Use	<p>If "Parameter sheet (with host/operation)" is selected in the "Creation target" column, the "Use" column will be displayed.</p> <p>If "Host" is selected, a parameter sheet will be created in "Host name" unit.</p> <p>When "For host groups" is selected, a parameter sheet is created in "Host name/Host group name" units in the "Input" menu group.</p>	Displayed	Hidden
Create as vertical menu	<p>If "Parameter Sheet" is selected in the "Creation target" column, the "Vertical menu use" column will be displayed.</p> <p>If "●" is selected from the pull-down, a parameter sheet corresponding to the vertical menu will be created.</p>	Hidden	Displayed
Menu group for input	<p>If the "Creation target" field is "Parameter sheet" and "Data sheet", the "Menu group for input" column will be displayed.</p> <p>Select the menu group where you want to create Parameter and Data sheets from the pull-down menu.</p>	Displayed	Displayed
Menu group for substitute value automatic registration	<p>If the "Create target" column is "Parameter sheet", the "Menu group for substitution value automatic registration" column will be displayed.</p> <p>Select the Menu group for substitution value automatic registration where you want to create Parameter sheet from the pull-down menu.</p>	Displayed	Hidden
Menu group for reference※	<p>If the "Creation target" column is "Parameter sheet", the "Menu group for reference" column will be displayed.</p> <p>If the default menu group is not going to be used, please create the menus in the "Management console" menu group in advance.</p>	Displayed	Hidden

Item name	Description	Selected value of creation target	
		Parameter Sheet	Data Sheet
Menu creation status	<p>Displays the status of the Menu creation (if the menu has been created or not).</p> <p>If it has been created before, the status will display "Created". If not, it will display "Not created".</p> <p>If the status displays "Created", the menu name cannot be changed.</p>	Displayed	Displayed
Description	Enter the content to be displayed in the description column of the menu screen.	Displayed	Displayed
Remarks	Free description field	Displayed	Displayed

(※) Please create the menu group using 「Management Console:Menu Group Management」 in advance. Please refer to 「User Instruction Manual_Management Console」 for how to create a menu.

5.6 Check the status of creation using 「Menu creation history」

Check the status of menu creation list on the parameter sheet or data sheet.

The screenshot shows the 'Create Menu' interface with a sidebar on the left containing links like 'Main menu', 'Menu creation information', 'Vertical Menu creation information', 'Create Menu', and 'Menu creation list'. The 'Menu creation list' link is highlighted with a red box. The main area displays a table titled 'List' with columns: Id, Menu name, Status, Menu file, Created menu, Remarks, Last update date/time, and Last updated by. Two entries are shown: '1 new-cloud' with 'Completed' status and '000000001.zip' as the menu file, and '2 linuxtest' with 'Completed' status and '000000004.zip' as the menu file. Below the table, there are buttons for 'Output Excel', 'Download all', and 'Trace history'.

Figure 5.6-1 "Menu creation history" menu

BackYard monitors the status「unexecuted」, and creates a menu screen setting file based on the unexecuted data, which executes SQL Commands to create a table and registers the menu screen program. After several tens of seconds, when the status changes to「Completed」, the menu will be created.

Table 5.6-1 "Menu creation history" menu items

Item name	Description
Menu name	Name of the menu to be created
Status	Menu creation status. Unexecuted: status before menu creation Executing: BackYard is executing the menu creation process Completed: Menu creation completed successfully Completed (error): When creating the menu ended with an error
Menu file	The PHP file and SQL file used in the menu. If BackYard is separated from the web server, this file is required to be placed on the web server. Refer to「8.1 Placing PHP files」
Menu create type	Type of Menu creation (Parameter sheet/ Data sheet) Create New : When the menu is new. Initialized: When the menu is initialized Edit: When the menu is edited.
Created menu	If the status is "Completed", pressing the "Created Menu" button will open the created menu (parameter sheet/data sheet) screen in a different tab. Moves the user to the menu (parameter sheet/data sheet) of the menu group set in the menu group for input.

Remarks	Free description field
---------	------------------------

5.7 Check the created menu

"Menu Creation" menu group > "Menu definition/creation" menu > "Menu creation information" tab > "Basic information" frame.

This section explains the menus (parameter sheets/data sheets) in pattern 1~5 below. They are created according to the values selected in the "Basic Information" frame.

(1) Data sheet

- Menu group for input

(2) Parameter sheet (with operation)

- Menu group for input
- Menu group for substitution value automatic registration
- Menu group for reference

(3) Parameter sheet (with host/operation)

- Menu group for input
- Menu group for substitution value automatic registration
- Menu group for reference

(4) Parameter sheet (with host/operation) & Create as host group menu

- Menu group for input
- Menu group for substitution value automatic registration
- Menu group for reference

(5) Parameter sheet & Create as vertical menu

- Menu group for input
- Menu group for substitution value automatic registration
- Menu group for reference

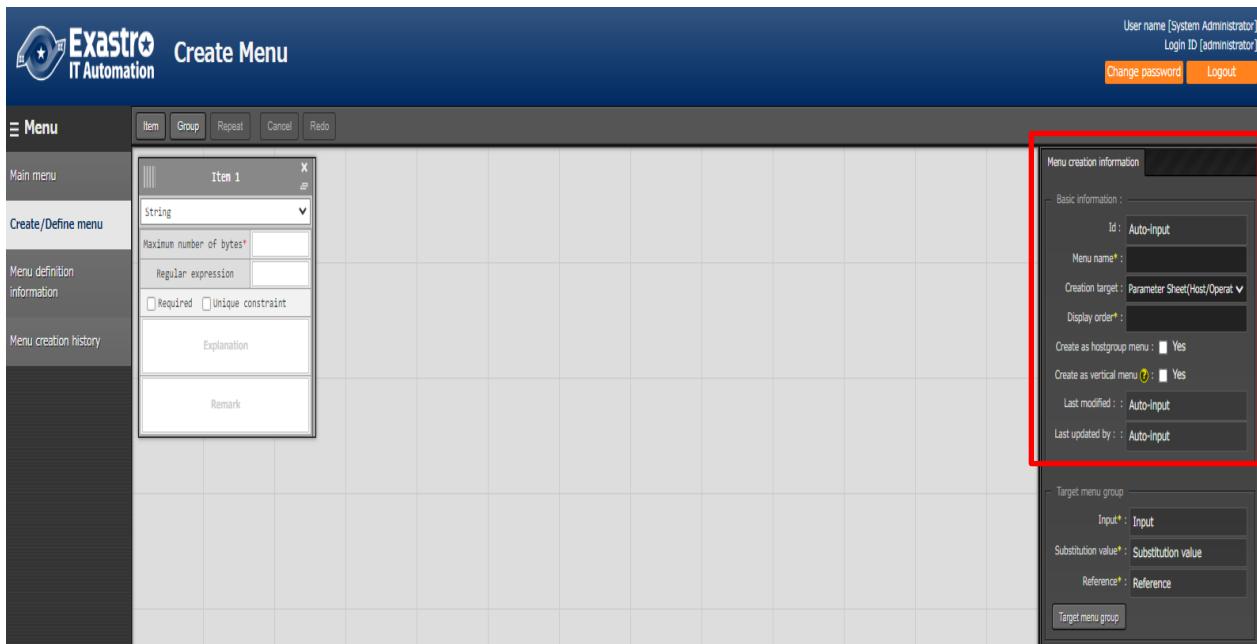


Figure 5.7-1 Selection of "Basic Information" frame

- (1) If "Data sheet" is selected in the "Creation target" column
If "Data sheet" is selected in the "Creation target" column of the "Menu definition/create menu" (or Menu definition list" menu) when the user is creating a menu, a data sheet will also be created.

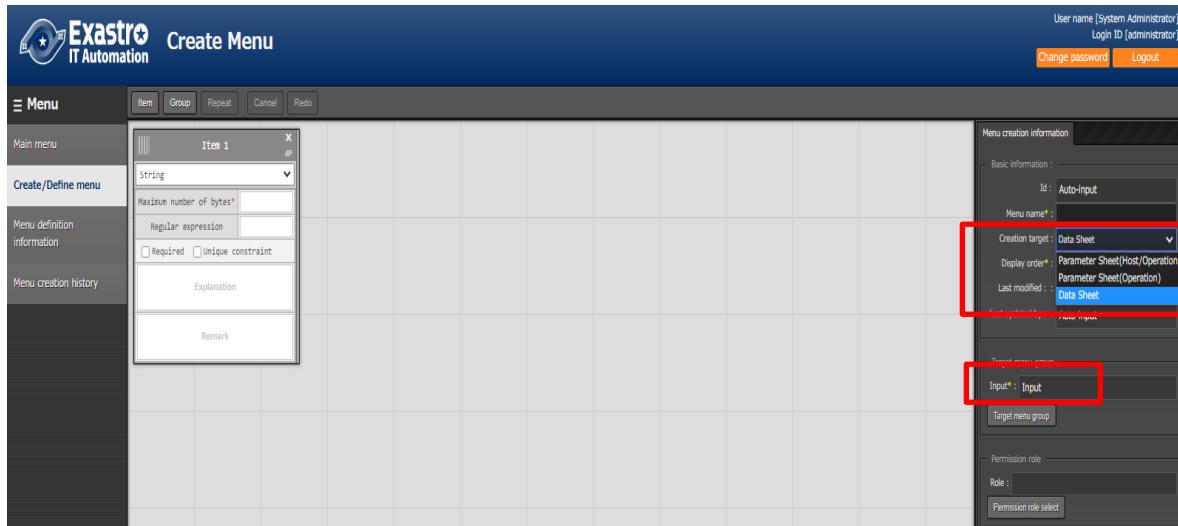


Figure 5.7-2 Data sheet creation

Check that a datasheet has been added to the menu group specified in the "Input (menu group)" field.

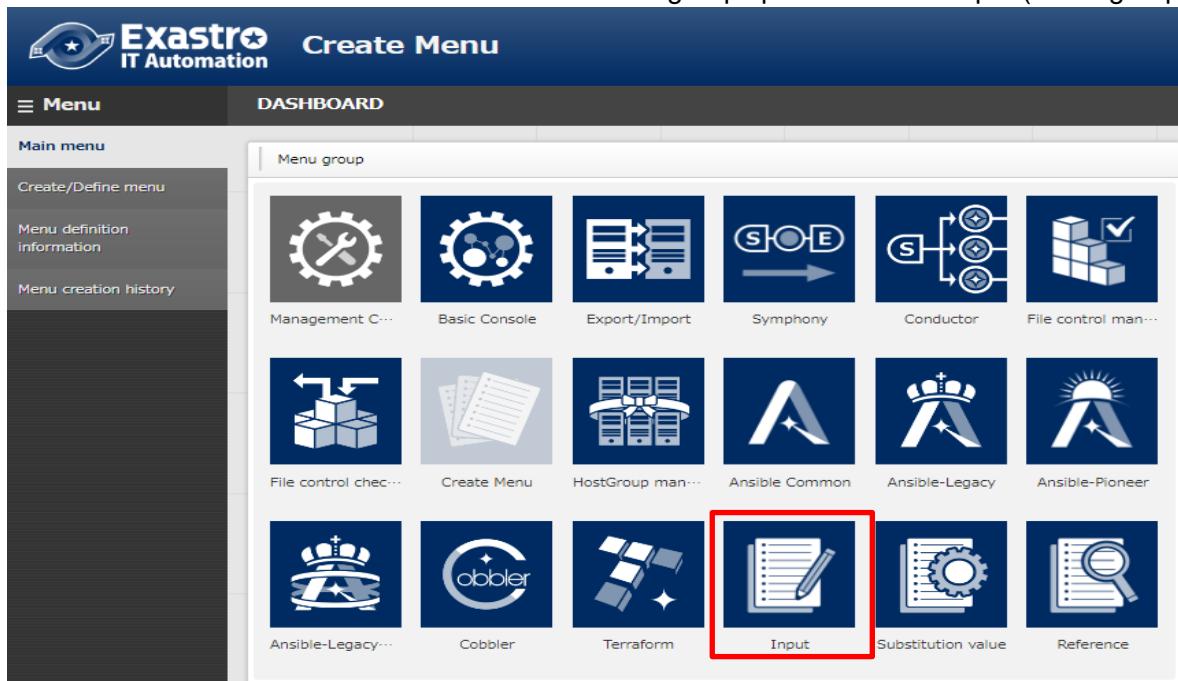


Figure 5.7-3 Menu group for input

A) Menu group for input

A data sheet that can be maintained (register/update/abolition/restore) will be created.



Figure 5.7-4 Data sheet created under menu group for input

※The datasheet is not linked to a specific host/operation, so host/operation items will not be displayed.

※Data sheets will not be created for the "For substitution value automatic registration" and "For reference" menu groups.

- (2) If "Parameter sheet(with operation)" is selected in the "Creation target" column

When creating a menu (parameter sheet/ datasheet), if "Parameter sheet (with operation)" is selected in the "Creation target" column of the "Menu definition/create" menu (or "Menu definition list" menu), a parameter sheet for each operation will be created.

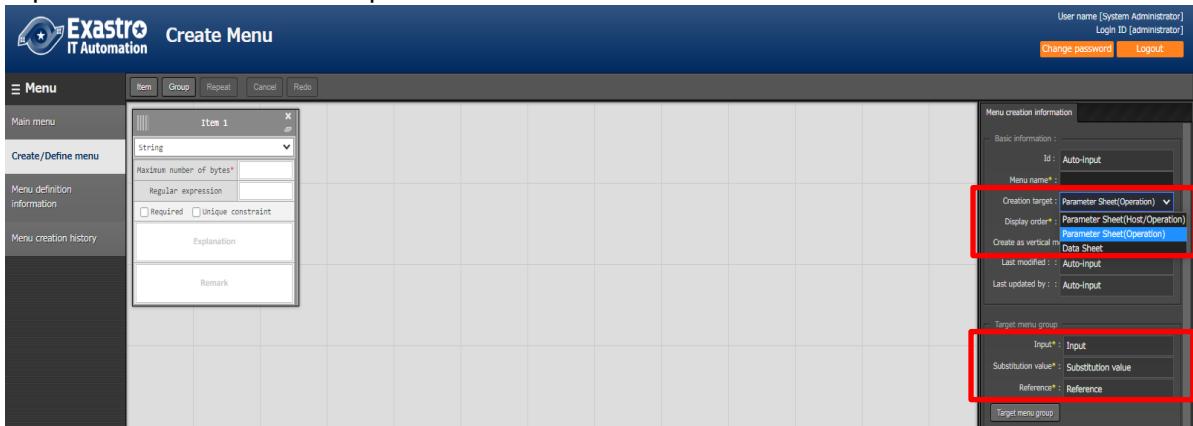


Figure 5.5-7 Parameter sheet (with operation) creation

Check that a parameter sheet has been added to the menu group specified in the "Input (menu group)" column, "Substitution value auto list (menu group)" column and "Reference (menu group)" column.

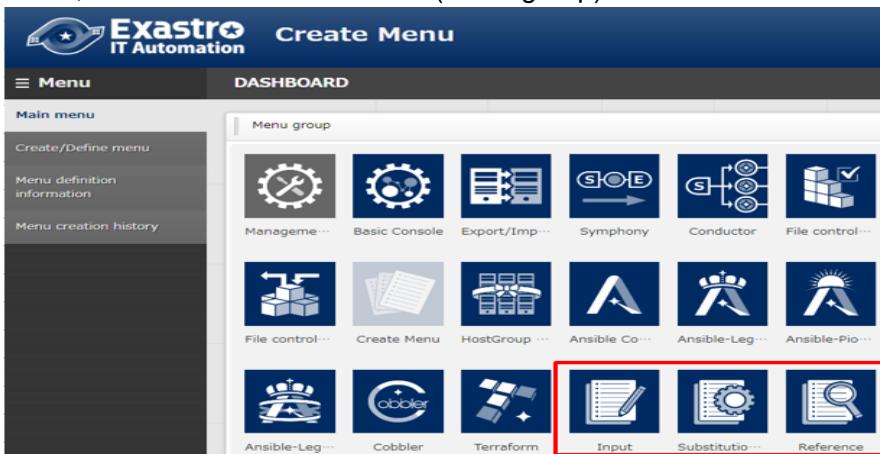


Figure 5.7-6 Menu group for "Input", "Substitution value automatic registration", "Reference"

A) Menu group for input

A parameter sheet that can be maintained (register/update/abolition/restore) will be created.

The screenshot shows the 'Input' menu group under 'With operation'. A red box highlights the 'Operation' section in the main content area. Below it is a table with columns: No, Operation, Parameter, Access permission, Remarks, Last update date/time, and Last updated by. The 'Operation' column contains 'Operation' and 'Auto-Input'. The 'Parameter' column contains 'Item 1' and 'Setting'. The 'Access permission' column contains 'Setting'. The 'Remarks' column is empty. The 'Last update date/time' and 'Last updated by' columns both show 'Auto-Input'. At the bottom, there are 'Back' and 'Register' buttons.

Figure 5.7-7 Parameter sheet created under menu group for input

B) Menu group for substitution value automatic registration

This is a menu for viewing only. The contents registered in the menu group for input will be displayed in the "list" submenu in operation units.

The screenshot shows the 'Substitution value' menu group under 'Operation'. A red box highlights the 'Operation' section in the main content area. Below it is a table with columns: Discard, No, ID, Operation name, Reference date, Operation, Last update date/time, and Last updated by. The 'Operation' column contains 'Operation' and 'Only discarded records'. The 'Last updated by' column shows 'Search from pulldown'. At the bottom, there are 'Filter', 'Clear filter', and 'Auto-filter' buttons. Below this is a 'List' section with a red box highlighting the 'Operation' table. The table has columns: No, ID, Operation, Parameter, Remarks, Last Modified, and Last updated by. It lists three entries: ID 1 (Operation, String, 2020/01/01 00:00, 2020/01/01 00:00:00, System Administrator), ID 2 (Operation, String, 2020/01/01 00:00, 2020/01/01 00:00:00, System Administrator), and ID 3 (Operation, String, 2020/01/01 00:00, 2020/01/01 00:00:00, System Administrator). At the bottom, there are 'Contact administrator' and a grid icon.

Figure 5.7-8 Parameter sheet created under menu group for substitution value automatic registration

C) Menu group for reference

This is a menu for viewing only. The settings enabled at the time of the specified date and time in the "Operation: Reference date and time" column of the "Display Filter" sub menu will be displayed in the "List" sub menu.

No.	ID	Operation	Parameter	Remark	Last Modified	Last updated by
1	1	Operation	String		2020/01/01 00:00:00	System Administrator

Figure 5.7-9 Parameter sheet created under menu group for reference.

※If the filter button is clicked when the "Operation: Reference date" field in the "Display filter" submenu is blank, only the latest data in the "Reference Date" field for each operation will be displayed in the "list" submenu.

(3) If "Parameter sheet(with host/operation)" is selected in the "Creation target" column

When creating a menu (parameter sheet/datasheet), if "Parameter sheet (with host/operation)" is selected in the "Creation target" column of the "Menu definition/create" menu (or "Menu definition list" menu), a parameter sheet will be created per host name.

Figure 5.7-10 Parameter sheet (with host/operation) creation

Check that a parameter sheet has been added to the menu group specified in the "Input (menu group)" column, "Substitution value automatic list (menu group)" column, and "Reference (menu group)" column.



Figure 5.7-11 Menu group for "Input", "Substitution value automatic registration", "Reference"

A) Host group for input

A parameter sheet that can be maintained (register/update/abolition/restore) will be created.

No	Host name*	Operation*	Parameter	Access permission	Setting	Remarks	Last update date/time	Last updated by
Auto-input			Item 1	Setting			Auto-input	Auto-input

Figure 5.7-12 Parameter sheet created under menu group for input.

B) Menu group for substitution value automatic registration

This is a menu for viewing only. The contents registered in the menu group for input will be displayed in the "list" submenu in operation units.

No	Host name	Operation	Parameter	Remark	Last Modified	Last updated by
1	host01	Operation	String		2020/01/01 00:00:00	System Administrator
2	host02	Operation	String		2020/01/01 00:00:00	System Administrator
3	host03	Operation	String		2020/01/01 00:00:00	System Administrator

Figure 5.7-13 Parameter sheet created under menu group for substitution value automatic registration

C) Menu group for reference

This is a menu for viewing only. The settings enabled at the time of the specified date and time in the "Operation: Reference date and time" column of the "Display Filter" sub menu will be displayed in the "List" sub menu.

No	Host name	Operation	Parameter	Remark	Last Modified	Last updated by
1	host01	Operation	String		2020/01/01 00:00:00	System Administrator
2	host02	Operation	String		2020/01/01 00:00:00	System Administrator
3	host03	Operation	String		2020/01/01 00:00:00	System Administrator

Figure 5.7-14 Parameter sheet created under menu group for reference

※ If the filter button is clicked when the "Operation: Reference date" field in the "Display filter" submenu is blank, only the latest data in the "Reference Date" field for each operation will be displayed in the "list" submenu.

- (4) Select "Parameter sheet (with host/operation)" in the "Create target" column

If "Create as host group menu" is checked in the checkbox.

When creating a menu (parameter sheet/datasheet), "Parameter sheet (with host/operation)" in the "Creation target" column of the "Menu definition/create" menu (or "Definition menu list" menu).

If the "Use" checkbox in the "Create as host group menu" column is checked, a parameter sheet will be created for each host name/host group name.

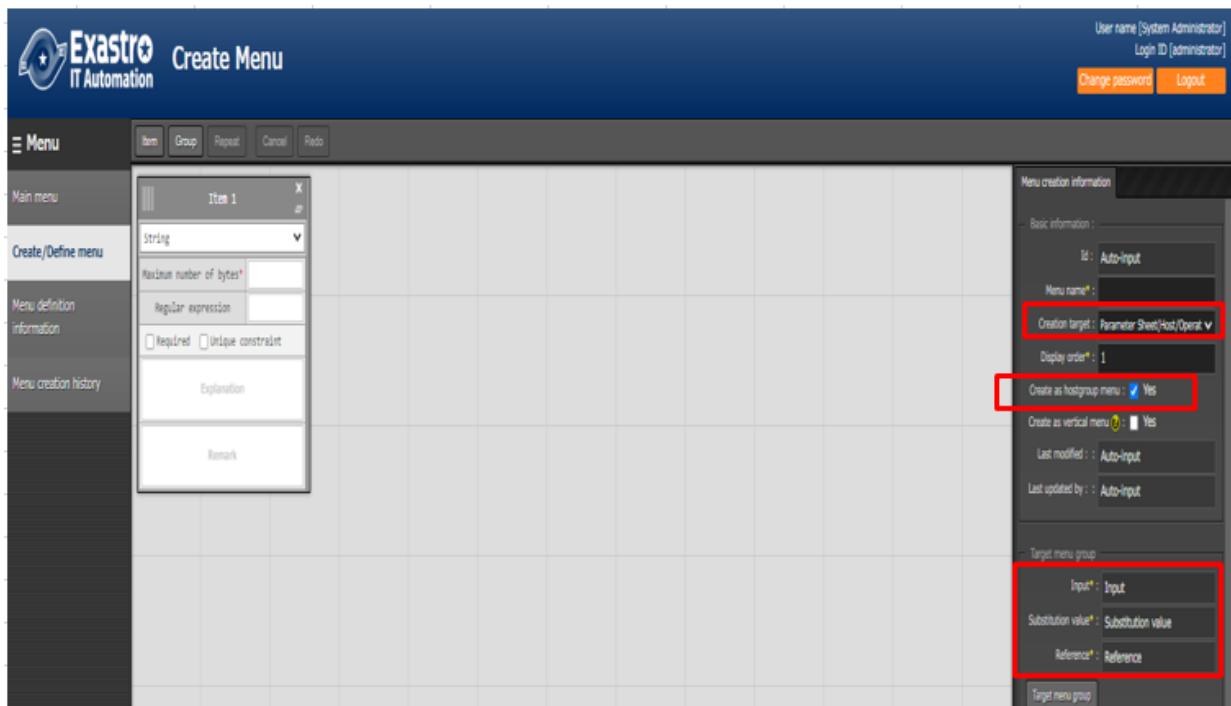


Figure 5.7-15 parameter sheet (create as host group menu) creation

Check that a parameter sheet has been added to the menu group specified in the "Input (menu group)" column, "Substitution value automatic list (menu group)" column, and "Reference (menu group)" column.

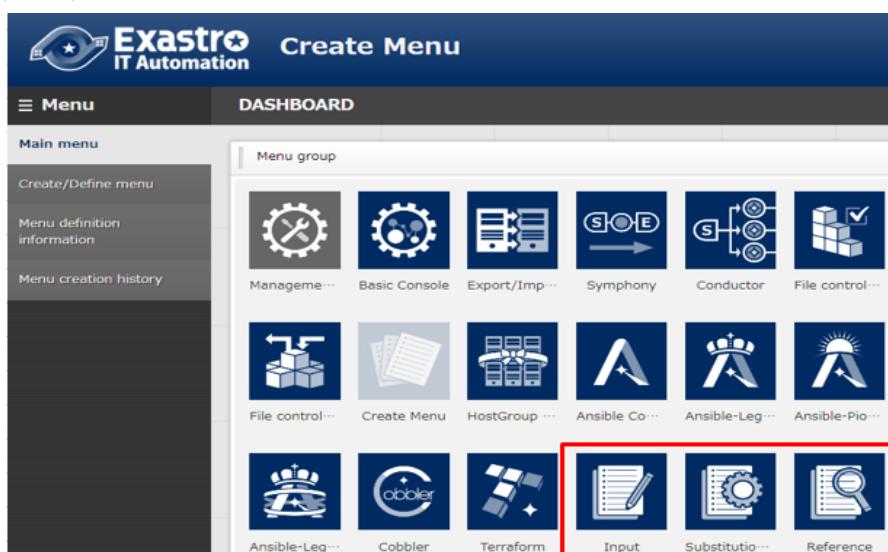


Figure 5.7-16 Menu group for "Input", "Substitution value automatic registration", and "reference" Menu group
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A) Menu group for input

A parameter sheet that can be maintained (register/update/abolition/restore) will be created.

No	Host name/Host group name*	Operation	Reference date/time	Scheduled date/time	Last modified	Last updated by
1	[HG]groupA	1 operation01	2020/11/01 12:00	2020/11/01 12:00	2020/12/04 18:55:07	System administrator
2	[HG]groupB	2 operation02	2020/12/02 12:00	2020/12/02 12:00	2020/12/04 18:55:22	System administrator
3	[HG]groupC	3 operation03	2021/01/03 12:00	2021/01/03 12:00	2020/12/04 18:55:32	System administrator

Figure 5.7-17 Parameter sheet created under menu group for input

In the "Host name/host group name" column of the "Registration" sub menu, the host group name will be displayed as [HG] at the beginning of the name. The host name will be displayed as [H] at the first of the name.

No	Host name/Host group name*	Operation*
Auto-input	<input type="text"/> [HG]groupA	<input type="text"/> Operation*
	<input type="text"/> [HG]groupB	
	<input type="text"/> [HG]groupC	
	<input type="text"/> [H]host01	
	<input type="text"/> [H]host02	
	<input type="text"/> [H]host03	

※*is a required item.

Back **Register**

Figure 5.7-18 "Host name/host group name" column

B) Menu group for substitution value automatic registration

This is a menu for viewing only. The contents registered in the menu group for input will be displayed in the "list" submenu in operation units.

The screenshot shows the Exastro IT Automation interface with the title 'Exastro IT Automation Substitution value'. The left sidebar has sections for 'Main menu', 'Timezone list', 'Host/Operation menu', and 'Operation'. The main area has tabs for 'Description' and 'Display filter'. Under 'Display filter', there is a table with columns 'Host name' and 'Operation'. The 'List' sub-menu below shows a table with columns: No., Host name, Operation name, Reference date and time, Scheduled date, Last run date, Parameter, Remark, Last Modified, and Last updated by. The rows for host01, host02, and host03 are highlighted with a red border.

No.	Host name	Operation name	Reference date and time	Scheduled date	Last run date	Parameter	Remark	Last Modified	Last updated by
1	host01	Operation	2020/01/01 00:00	2020/01/01 00:00		String		2020/01/01 00:00:00	System Administrator
2	host02	Operation	2020/01/01 00:00	2020/01/01 00:00		String		2020/01/01 00:00:00	System Administrator
3	host03	Operation	2020/01/01 00:00	2020/01/01 00:00		String		2020/01/01 00:00:00	System Administrator

Figure 5.7-19 Parameter sheet created under menu group for substitution value automatic registration.

C) Menu group for reference

This is a menu for viewing only. The settings enabled at the time of the specified date and time in the "Operation: Reference date and time" column of the "Display Filter" sub menu will be displayed in the "List" sub menu.

The screenshot shows the Exastro IT Automation interface with the title 'Exastro IT Automation Reference'. The left sidebar has sections for 'Main menu', 'Timezone list', 'With operation', 'Operation', and 'Host operation menu'. The main area has tabs for 'Description' and 'Display filter'. Under 'Display filter', there is a table with columns 'Host name' and 'Operation'. The 'List' sub-menu below shows a table with columns: No., Host name, Operation name, Reference date and time, Scheduled date, Last run date, Parameter, Remark, Last Modified, and Last updated by. The rows for host01, host02, and host03 are highlighted with a red border.

No.	Host name	Operation name	Reference date and time	Scheduled date	Last run date	Parameter	Remark	Last Modified	Last updated by
1	host01	Operation	2020/01/01 00:00	2020/01/01 00:00		String		2020/01/01 00:00:00	System Administrator
2	host02	Operation	2020/01/01 00:00	2020/01/01 00:00		String		2020/01/01 00:00:00	System Administrator
3	host03	Operation	2020/01/01 00:00	2020/01/01 00:00		String		2020/01/01 00:00:00	System Administrator

Figure 5.7-20 Parameter sheet created under menu group for reference

※ If the filter button is clicked when the "Operation: Reference date" field in the "Display filter" submenu is blank, only the latest data in the "Reference Date" field for each operation will be displayed in the "list" submenu.

(5) Select "Parameter sheet" in the "Creation target" column

If "Create as vertical menu" is checked in the checkbox.

When (parameter sheet/datasheet) menu is creating, select "Parameter sheet (with operation)" and "Parameter sheet (with host/operation)" in the "Creation target" column of the "Menu definition/create" menu (or "Menu definition list" menu). If "Use" of "Create as vertical menu" column is checked in the checkbox, a vertical parameter sheet is created where the created item is according to the number of REPEAT.

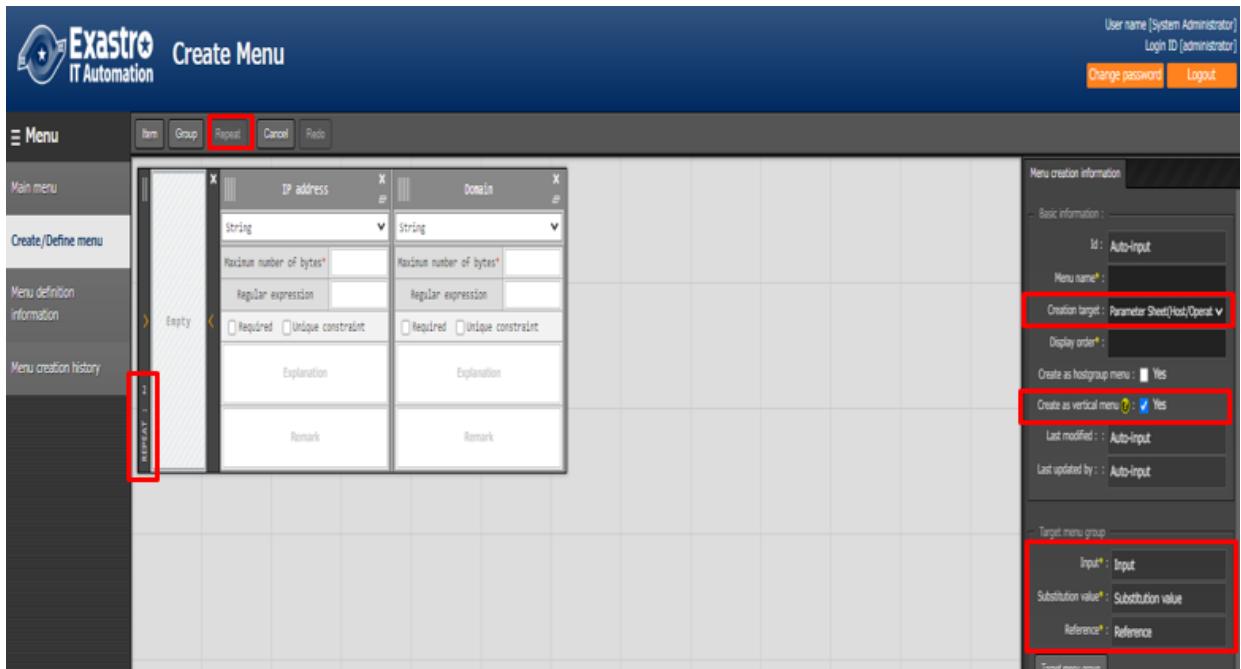


Figure 5.7-21 parameter sheet (Create as vertical menu) creation

Ex) Parameter list included in hosts file

As shown in the hosts file below, it is possible to use the parameter sheet to register the "IP Address and "Domain" four times repeatedly.

```

hosts
1 11.11.11.11 test1.com
2 22.22.22.22 test2.com
3 33.33.33.33 test3.com
4 44.44.44.44 test4.com[EOF]

```

Figure 5.7-22 hosts file

Check that a parameter sheet has been added to the menu group specified in the "Input (menu group)" column, "Substitution value automatic list (menu group)" column, and "Reference (menu group)" column.

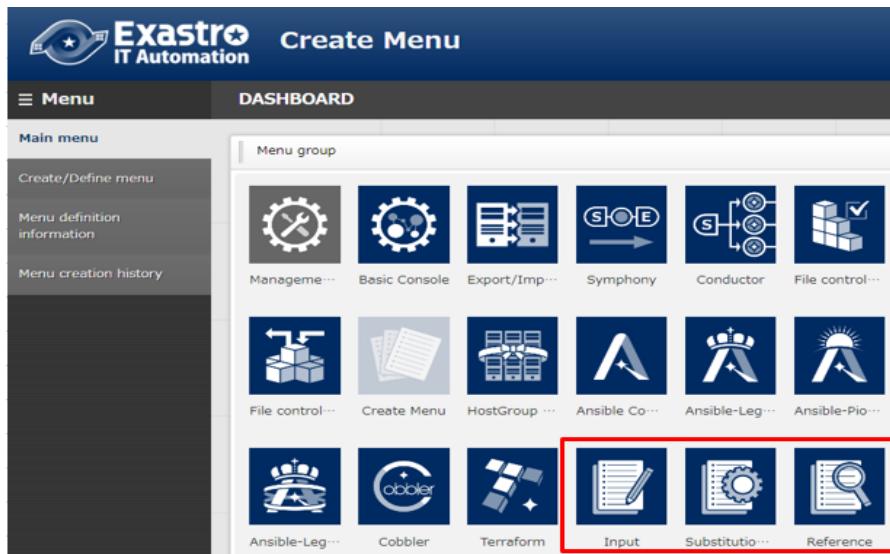


Figure 5.7-23 Menu group for "Input", "Substitution value automatic registration", "Reference"

A) Menu group for input

A parameter sheet will be created that can be maintained (register/update/abolition/restore) on host name unit. (If the host group user checkbox is checked, maintenance can be performed for each host group name unit.)

For registered "host name" and "operation" combinations, it is possible to set multiple parameters by entering the "Substitution order" column.

Metadata element	No.	Host name	ID	Operation name	Operation	Reference date	Scheduled date for execution	Parameter
Auto-Input	1	host01	1	operation01	operation	2020/11/01 12:00	2020/11/01 12:00	1: 11.11.11.11 test1.com 2020/12/08 15:06:54 Remote Administration
Auto-Input	2	host01	2	operation01	operation	2020/11/01 12:00	2020/11/01 12:00	2: 22.22.22.22 test2.com 2020/12/08 15:07:15 System Administration
Auto-Input	3	host01	3	operation01	operation	2020/11/01 12:00	2020/11/01 12:00	3: 33.33.33.33 test3.com 2020/12/08 15:07:36 System Administration
Auto-Input	4	host01	4	operation01	operation	2020/11/01 12:00	2020/11/01 12:00	4: 44.44.44.44 test4.com 2020/12/08 15:07:53 System Administration

Figure 5.7-24 Parameter sheet created under menu group for input.

※Users can only register substitute orders between 1~4 for the “4:REPEAT” settings.

Ex) If the user attempt the registration above without using the vertical menu (1)
Users cannot set more than one parameter for a registered host name and operation combination.

The screenshot displays the Exastro IT Automation Input interface. At the top, there is a navigation bar with the Exastro logo, the word "Input", and user information (User name: System Administrator, Login ID: administrator). Below the navigation bar is a vertical menu on the left side with options: Main menu, Timeline list, With operation, Operation, and Without vertical menu. The main area contains two tables. The top table, titled "List/Update", shows a list of registered items with columns for Host name, operation name, Reference date, Scheduled date for execution, IP address, and Domain. The first item, "host01" with "operation01", has a red box around it. The bottom table, titled "Register", is a form for adding new entries. It has columns for Host name, operation name, IP address, and Domain. The "Host name" field is highlighted with a red box and contains "host01". The "operation name" field contains "2020/11/01 12_00_1:operation01". The "IP address" field contains "22.22.22.22" and the "Domain" field contains "test2.com". A note below the form states "※* is a required item." At the bottom of the screen are "Back" and "Register" buttons.

Figure 5.7-25 Parameter sheet created under menu group for input

※When "11.11.11.11" and "test1.com" are already set for the combination "host01" and "operation01", if you try to set "22.22.22.22" and "test2.com" in the same way, an error will occur.

Ex) If the user attempt the registration above without using the vertical menu (2)

If the user wants to set multiple parameters for a registered combination of "host name" and "Operation", it can be done by increasing the number of items. However, the parameter sheet will be displayed horizontally and the visibility will be poor.

The screenshot shows the 'Create Menu' interface with a 'Main menu' selected in the left sidebar. A red box highlights a horizontal table with five columns, each representing a parameter item. The columns are labeled 'IPAddress_1', 'Domain_1', 'IPAddress_2', 'Domain_2', and 'IPAddress_3'. Each column contains a dropdown menu, a text input field, and some checkboxes. To the right of this table is a 'Menu creation information' panel with various configuration options like 'Id', 'Menu name', 'Creation target', and 'Display order'.

	IPAddress_1	Domain_1	IPAddress_2	Domain_2	IPAddress_3
Type	String	String	String	String	String
Maximum number of bytes*	124	124	124	124	124
Regular expression					
<input checked="" type="checkbox"/> Required <input type="checkbox"/> Unique constraint	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Unique constraint	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Unique constraint	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Unique constraint	<input checked="" type="checkbox"/> Required <input type="checkbox"/> Unique constraint	
Explanation	Explanation	Explanation	Explanation	Explanation	
Remark	Remark	Remark	Remark	Remark	

Figure 5.7-26 “Menu definition/creation” menu

※It is possible to set parameters > created items in the "Menu definition/creation" menu in the "Create menu" menu group.

The screenshot shows the 'Input' interface with a 'Main menu' selected in the left sidebar. A red box highlights a horizontal table with five columns, each representing a parameter item. The columns are labeled 'IPAddress_1', 'Domain_1', 'IPAddress_2', 'Domain_2', and 'IPAddress_3'. Each column contains a dropdown menu, a text input field, and some checkboxes. To the right of this table is a 'Parameter' section with a table showing the registered data.

ID	Operation name	Reference date	Scheduled date/time	Parameter
1	operation01	2020/11/01 12:00	2020/11/01 12:00	IPAddress_1: 1.1.1.1, Domain_1: test1.com, IPAddress_2: 2.2.2.2, Domain_2: test2.com, IPAddress_3: 3.3.3.3

Figure 5.7-27 Parameter sheet created under menu group for input.

※For the case above, Items up to "IP Adress_4" and "Domain_4" are created. Items after that are not created.

Also, because there are no items, users cannot register content ("55.55.55.55", "test5.com") that corresponds to "IP address_5" or "domain_5" for the same combination of "host name" and "operation".

If you want to create a parameter sheet that repeats the same item, as in the hosts file, we recommend that you use the vertical menu. (Vertical menus cannot be used for data sheets.)

B) Menu group for substitution value automatic registration

This is a menu for viewing only. The contents registered in the input menu group are displayed in the "List" sub menu in a format that is automatically converted from the vertical menu to the normal menu (horizontal display).

No.	IP address	Domain	IP address2	Domain2	IP address3	Domain3	IP address4	Domain4	Last updated date/time
1	11.11.11.11	test1.com	22.22.22.22	test2.com	33.33.33.33	test3.com	44.44.44.44	test4.com	2020/12/08 15:07:57

Figure 5.7-28 Parameter sheet created under menu group for substitution value automatic registration.

For each combination of "host name" and "operation", the registration contents will be displayed in one line.

"Item name [Repeat number]" will be displayed in the parameters.

C) Menu group for reference

This is a menu for viewing only. The settings enabled at the time of the specified date and time in the "Operation: Base date and time" column of the "Display Filter" sub menu will be displayed in the "List" sub menu in combination of "Host Name" and "Operation".

No.	Host name	Operation	Reference date and time	Scheduled date	Last run date	Parameter Item	Remark	Last Modified	Last updated by
1	host01	Operation	2020/01/01 00:00	2020/01/01 00:00		String		2020/01/01 00:00:00	System Administrator
2	host02	Operation	2020/01/01 00:00	2020/01/01 00:00		String		2020/01/01 00:00:00	System Administrator
3	host03	Operation	2020/01/01 00:00	2020/01/01 00:00		String		2020/01/01 00:00:00	System Administrator

Figure 5.7-29 Parameter sheet created under menu group for reference

※If the filter button is clicked when the "Operation: Reference date" field in the "Display filter" submenu is blank, only the latest data in the "Reference Date" field for each operation will be displayed in the "list" submenu.

6 "Create Menu" menu group hidden menus

6.1 Register a column group using 「Column group list」

During installation, the Column group list menu will not be displayed.
The column groups of sheets that belong to the menu to be created can be maintained
(View/Update/Discard/restore).

The screenshot shows the 'Create Menu' interface with the 'Column group list' option selected in the left sidebar. The main area displays a table titled 'List/Update' containing five entries for column groups. The columns are: Upd, Disc, No., Column group, Permission, Remark, Last updated date, and Last updated by. The entries are:

Upd	Disc	No.	Column group	Permission	Remark	Last updated date	Last updated by
Upd	Disc	2	group 1			2020/12/09 11:14:48	
Upd	Disc	3	group 2			2020/12/09 11:14:48	
Upd	Disc	4	group1/group2			2020/12/09 11:19:43	
Upd	Disc	5	group 3			2020/12/09 11:19:43	

Below the table is an 'Excel output' button. A second tab, 'Register', is open, showing a form with fields for 'No.', 'Column group n.', 'Permission', 'Remarks', 'Last updated', and 'Updated by'. The 'Column group n.' field has a dropdown menu with 'Auto input' selected. The 'Permission' field has a 'Setting' button. The 'Last updated' and 'Updated by' fields both show 'Auto input'.

Figure 6.1-1 "Column group list" menu

A column group is a group that displays the heading portion of a menu item. The menu creation function allows users to create a column groups of items that they want to create. The red marked frame in the following example is the column group that can be created by the menu creation function

The screenshot shows the 'Input' menu group creation interface. The left sidebar lists options: Main menu, Timezone list, With operation, Operation, Host operation menu, and 'Column group creation' which is currently selected. The main area displays a table titled 'Parameter' with columns: No., Operation, Group1, Item 1, Group2, Item 2, Item 3, Group3, Item 4, Last modified, and Last update. The 'Operation' column has a dropdown menu with 'Auto input' selected. The 'Group2' column is highlighted with a red box. Below the table is a note: '※ is a required item.' At the bottom are 'Back' and 'Register' buttons.

Figure 6.1-2 Parameter sheet created under menu group for input

Table 6.1-1 "Column group list" menu configuration value

Item name	Description
Column group	The name of the parent column group and the column group will be displayed as a 「/」 connection. ※Displayed in the "List/Update" sub-menu. ※With "Update" and "abolition/restore" button.
New column group	Select the parent column group from the pull-down. ※Displayed in the "Update" button and "Register" sub menu of the "List /Update" sub menu
Column group name	Enter the column group name ※Displayed in the "Update" button and "Register" sub menu of the "List /Update" sub menu
Remarks	Free description field

The following checks are performed at the time of updating/discard.

- ① The data itself cannot be selected as a parent column group.
- ② If it is specified in the parent group of other data, it cannot be discarded.
- ③ A parent-child relationship that results in a loop relationship cannot be set. (If the parent-child relationship is A⇒B⇒C, C cannot be specified as the parent of A.).

6.2 Register items to be set using 「Menu item creation information」

During installation, the Column group list menu will not be displayed.

The items managed in the parameter sheet or data sheet menu to be created can be maintained (View/Update/Discard/restore).

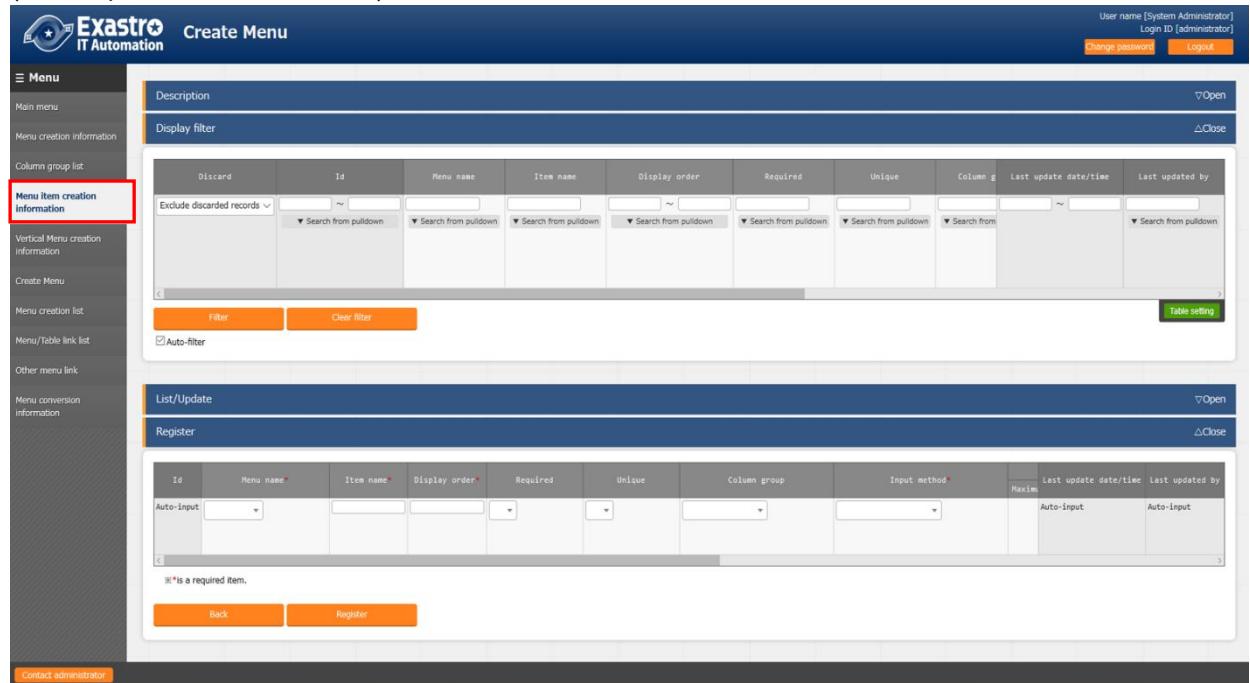


Figure 6.2-1 "Menu item creation information" menu

Table 6.2-1 "Menu item creation information" menu configuration value

Settings	Description
Menu name	Select the menu (parameter sheet/ data sheet) to link items from the pull-down.
Item name	Enter the item name to be displayed on the menu ※ Do not use 「/」 in the item names. When 「/」 is used, the 「Substitute value auto registration setting」 in each driver may not work properly.
Display order	Enter the order of the columns displayed in the menu. They are displayed in ascending order from the left.
Required	To make it a required item, select 「●」 from the pull-down menu.
Unique	To make it a unique item, select 「●」 from the pull-down menu.
Column group	Select the column group to which it belongs from the pull-down menu.
Input method	Select "String", "Multi string", "Integer", "Decimal number", "Date", "Date/time", "Pull down selection" from the pulldown menu. When "String" is selected, the item is a text box with single line input. When "Multi string" is selected, the item is a text box with multiple line input. When "Integer" is selected, the item is a text box that only integer can be entered. When "Decimal number" is selected, the item is a text box that integer/decimal number can be entered. When "Date" and "Date/time" is selected, the item is entered by calendar selection. When "Pulldown selection" is selected, the item is a pulldown menu item.

Settings		Description
		<p>If "Password" is selected, the item will be a text box where any text typed in the box will be hidden with "●" (The text will only be displayed if the eye icon inside the frame is pressed).</p> <p>When "File upload" is selected, the item will contain 2 buttons. One where users can browse and select files, and one called "Pre-upload".</p> <p>When "Link" is selected, the entered URL will be a text box item that will be displayed as a link.</p> <p>※ About the trace history of the menu created with 「Pulldown selection」 is selected, the supplement is described in 「8.5 エラー! 参照元が見つかりません。」.</p> <p style="color: red;">※The association target item in "Substitution value automatic registration setting" are "String", "Multi string", "Integer", and "Decimal number". "Date/time", and "Date" can't be associated. "Pulldown selection" can't be associated if the item of pulldown selection are "Multi string", "Date/time", and "Date".</p>
String	Maximum number of bytes	<p>Enter the maximum number of bytes.</p> <p>The maximum size is 8192 bytes.</p> <p>The byte count of half-width alphanumeric characters are equivalent to the number of characters.</p> <p>For full-width characters, the number of characters x 3 + 2 bytes is required.</p> <p>Required if "Input Method" is "String".</p> <p>Can't be entered if "Input method" is "Multi string", "Integer", "Decimal number", "Date/time", "Date", and "Pulldown selection".</p>
	Regular expression	<p>If you want to check input values with regular expression, enter the regular expression.</p> <p>Example: For half-width numeric items of 0 bytes or more: /^[0-9]*\$/</p> <p>For half-width alphanumeric characters of 1 byte or more: /^[a-zA-Z0-9]+\$/</p> <p>Can't be entered if "Input method" is "Multi string", "Integer", "Decimal number", "Date/time", "Date", and "Pulldown selection".</p>
	Default value	<p>Input the default value of data that will be used when data is registered.</p> <p>Make sure to not input a value that exceeds the set maximum byte size or a value that does not match a regular expression.</p> <p>When the menu's data is output as an Excel file, the default value will be set by default.</p>
Multi string	Maximum number of bytes	<p>Enter the maximum number of bytes.</p> <p>The maximum size is 8192 bytes.</p> <p>The byte count of half-width alphanumeric characters are equivalent to the number of characters.</p> <p>For full-width characters, the number of characters x 3 + 2 bytes is required.</p> <p>Required if "Input Method" is "Multi String".</p> <p>Can't be entered if "Input method" is "String", "Integer", "Decimal number", "Date/time", "Date", and "Pulldown selection".</p>
	Regular expression	<p>If you want to check input values with regular expression, enter the regular expression.</p> <p>Example: For half-width numeric items of 0 bytes or more: /^[0-9]*\$/</p> <p>For half-width alphanumeric characters of 1 byte or more: /^[a-zA-Z0-9]+\$/</p> <p>Can't be entered if "Input method" is "String", "Integer", "Decimal number", "Date/time", "Date", and "Pulldown selection".</p>
	Default value	<p>Input the default value of data that will be used when data is registered.</p> <p>Make sure to not input a value that exceeds the set maximum byte size or a value that does not match a regular expression.</p>

Settings		Description
		When the menu's data is output as an Excel file, the default value will be set by default.
Integer	Minimum value	<p>Enter the minimum value of the column.</p> <p>Integer value from -2147483648 to 2147483647 can be entered.</p> <p>The value will be -2147483648 if not entered.</p> <p>Please enter value smaller than the maximum value.</p> <p>Can't be entered if "Input method" is "String", "Multi string", "Decimal number", "Date/time", "Date", and "Pulldown selection".</p>
	Maximum value	<p>Enter the maximum value of the column.</p> <p>Integer value from -2147483648 to 2147483647 can be entered.</p> <p>The value will be 2147483647 if not entered.</p> <p>Please enter value larger than the minimum value.</p> <p>Can't be entered if "Input method" is "String", "Multi string", "Decimal number", "Date/time", "Date", and "Pulldown selection".</p>
	Default value	<p>Input the default value of data that will be used when data is registered.</p> <p>Make sure to not input a value that is within the set maximum and minimum byte size.</p> <p>When the menu's data is output as an Excel file, the default value will be set by default.</p>
Decimal number	Minimum value	<p>Enter the minimum value of the column.</p> <p>Integer value from -9999999999999 to 9999999999999 with total digit for whole number + fraction part less than 14 digits can be entered.</p> <p>The value will be -9999999999999 if not entered.</p> <p>Please enter value smaller than the maximum value.</p> <p>Can't be entered if "Input method" is "String", "Multi string", "Integer", "Date/time", "Date", and "Pulldown selection".</p>
	Maximum value	<p>Enter the maximum value of the column.</p> <p>Integer value from -9999999999999 to 9999999999999 with total digit for whole number + fraction part less than 14 digits can be entered.</p> <p>The value will be 9999999999999 if not entered.</p> <p>Please enter value larger than the minimum value.</p> <p>Can't be entered if "Input method" is "String", "Multi string", "Integer", "Date/time", "Date", and "Pulldown selection".</p>
	Digits	<p>Enter the upper limit of the total digit for whole number + fraction part.</p> <p>Example: 0.123 has 4 digits (whole number 1 digit, fraction part 3 digits) 11.1111 has 6 digits (whole number 2 digit2, fraction part 3 digits)</p> <p>Integer value from 1 to 14 can be entered.</p> <p>Can't be entered if "Input method" is "String", "Multi string", "Integer", "Date/time", "Date", and "Pulldown selection".</p>
	Default value	<p>Input the default value of data that will be used when data is registered.</p> <p>Make sure to not input a value that is within the set maximum and minimum byte size.</p> <p>When the menu's data is output as an Excel file, the default value will be set by default.</p>
Pulldown selection	Menu group: Menu: Item	<p>Select the target to refer to from the created menu (parameter sheet/data sheet) from the pull-down menu.</p> <p>If the "Input method" is "Pull-down selection", selection is required.</p> <p>※Items that satisfy the following conditions are displayed in the pull-down menu.</p> <ul style="list-style-type: none"> • "Host name" and "IP address" item of "Basic console" menu group "Device list" menu.

Settings		Description
		<ul style="list-style-type: none"> If Ansible driver is installed, "Ansible Common" Menu group's, File list" menu's "File embedded variable name" item and "Template list" menu's "Template embedded variable name" item. Items in which the input method of the menu (parameter sheet /data sheet) created by the function of the "Menu Creation" menu group is "string (single line)" , "string (multiple line)" , "integer" , "multiple line" , "integer," "number" , "date and time" , "date" , "link" or "required" and "unique constraint."
	Default value	Select the data value that will be used by default when data is registered. Data registered to the set "Select item" will be selectable from the pulldown selection. When the menu's data is output as an Excel file, the default value will be set by default.
Password	Maximum numbers of bytes	Enter the maximum number of bytes. The maximum is 8192 bytes. For half size alphanumeric characters, it is the number of characters. For full size characters, you will need (The number of characters) x 3 + 2bytes. If the "input method" is "password", it is required to enter it.
File upload	Maximum numbers of file	Enter the maximum number of bytes of the file to upload. The maximum is 4294967296 bytes. If the "Input method" is "File upload", it becomes an required item.
Link	Maximum numbers of bytes	Enter the maximum number of bytes. The maximum is 8192 bytes. For half size alphanumeric characters, it is the number of characters. For full size characters, you will need (The number of characters) x 3 + 2bytes. If the "input method" is "password", it is required to enter it.
	Default value	Input the default value of data that will be used when data is registered. Make sure to not input a value that is within the set maximum and minimum byte size. When the menu's data is output as an Excel file, the default value will be set by default.
Parameter sheet reference	Menu group: Menu: Item	Select the reference item from the selected menu. Items with the following input methods can be selected: "String", "Multistring", "Integer", "Decimal number", "Time", "Date", "Password", "File upload", and "Link". ※Menus that uses "Parameter reference" might have their value displayed in brackets when searching for them with the display filter. For more information, please see chapter 8.12.
Description		Enter the description that will be displayed when users hover mouse cursor over the item name.
Remarks		Free description field

※Make sure not to edit items directly from the "Menu item creation information" menu.

Doing so can create inconsistencies with the data when it is later updated through the "Menu definition/ creation" menu.

6.3 Vertical registration using 「Vertical menu creation information」

Users can select the menu and start item name of the parameter sheet to be created, and specify the number of items and the number of repetitions for vertical management display.
(※) Vertical menus cannot be used for data sheets.

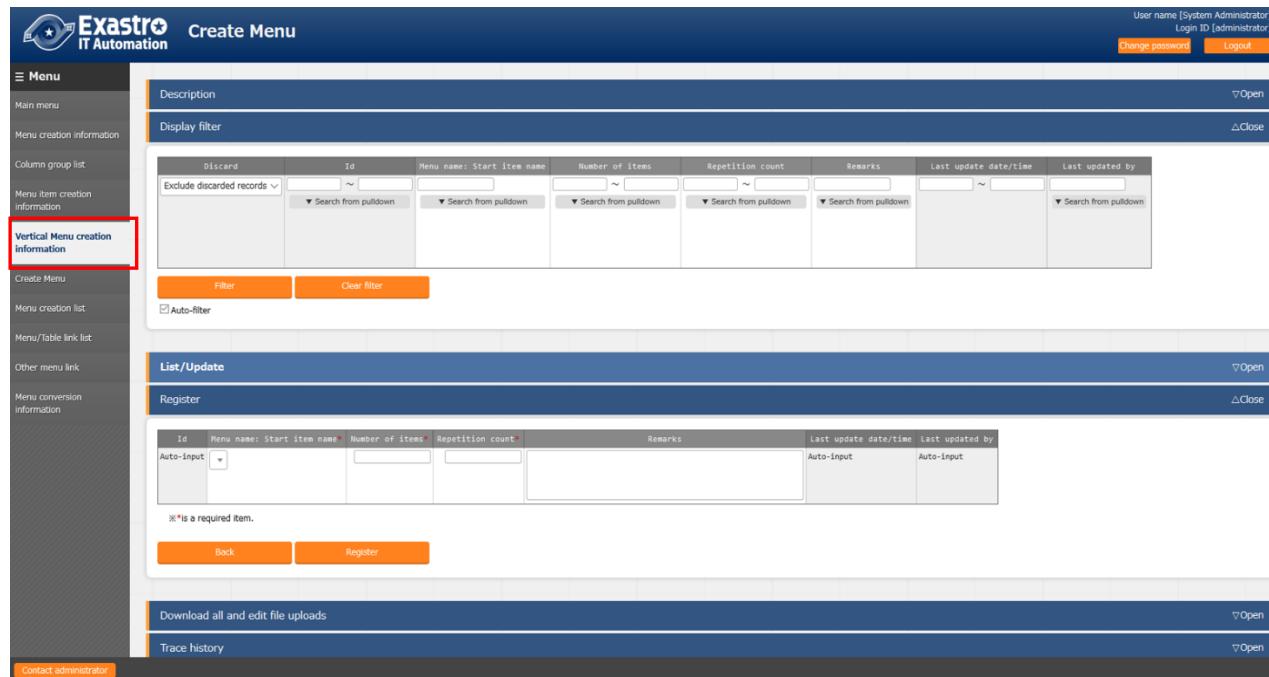


Figure 6.3-1 "Menu (vertical) creation Information" menu

Table 6.3-1 "Menu (vertical) creation Information" menu setting value

Item name	Description
Menu name: Start item name	Select menu and start item name of the parameter sheet from pull-down menu.
Number of items	Enter the number of items from the start item.
Repetition count	Enter the number of repetition count in the vertical display.
Remarks	Free description field

Example) Manage the parameters described in the hosts file.

hosts File

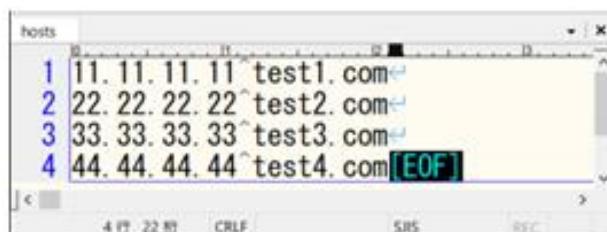


Figure 6.3-2 hosts file

When specifying IP address + domain name in set as described above , use 「Vertical menu (vertical) creation information」 and by setting the menu name: start item name to 「role: IP address」 and specify the number of items as 「2」 and repetition count as「4」, vertical display conversion is performed as below becoming more readable and management becomes easier.

Vertical menu creation information

Update	Discard	ID	Menu name: Start item name	Number of items	Repetition count	Remarks	Last update date/time	Last updated by	
Update	Discard		1 laravel:create		2	4	cACAScscs	2020/02/17 11:24:51	System Administrator

Table 6.3-3 "Menu (vertical) creation Information" menu

Horizontal display

In the example, the start item name specifies the leftmost 「IP address」 in the red frame below

Parameter								Remarks	Last update date/time	Last updated by
IP address 1	Domain 1	IP address 2	Domain 2	IP address 3	Domain 3	IP address 4	Domain 4			
11.11.11.11	test1.com	22.22.22.22	test2.com	33.33.33.33	test3.com	44.44.44.44	test5.com		2020/02/17 13:39:04	Convert Menu procedure

Figure 6.3-4 Parameter sheet created under menu group for substitution value automatic registration

Vertical display

Counting from the specified 「IP address」, the items until the second item 「domain name」 is displayed

No	Host name	Operation					Input order	Parameter		Remarks
		ID	Operation name	Reference date	Scheduled date for execution	Last execution date		IP address 1	Domain 1	
1	Cloud	2	legacy	2020/02/13 16:27	2020/02/10 14:31	2020/02/13 16:27	1	11.11.11.11	test1.com	
2	Cloud	2	legacy	2020/02/13 16:27	2020/02/10 14:31	2020/02/13 16:27	2	22.22.22.22	test2.com	
3	Cloud	2	legacy	2020/02/13 16:27	2020/02/10 14:31	2020/02/13 16:27	3	33.33.33.33	test3.com	
4	Cloud	2	legacy	2020/02/13 16:27	2020/02/10 14:31	2020/02/13 16:27	4	44.44.44.44	test5.com	

The parameter for the 2 items is displayed vertically for 4 times repeatedly.

Figure 6.3-5 Parameter sheet created under menu group for reference

6.4 Registering unique constraints in the “Unique constraint(multiple items)”Menu

This menu is hidden by default when installing ITA.

In this menu, users can administrate (See/Update/Abolish/Restore) unique constraints for user-created menus (Parameter sheets/Data sheets).



Figure 6.4-1 “Unique constraint(multiple items) creation information” menu

The unique constraint functions controls what combination of items with the same content can be registered in user-created menus.

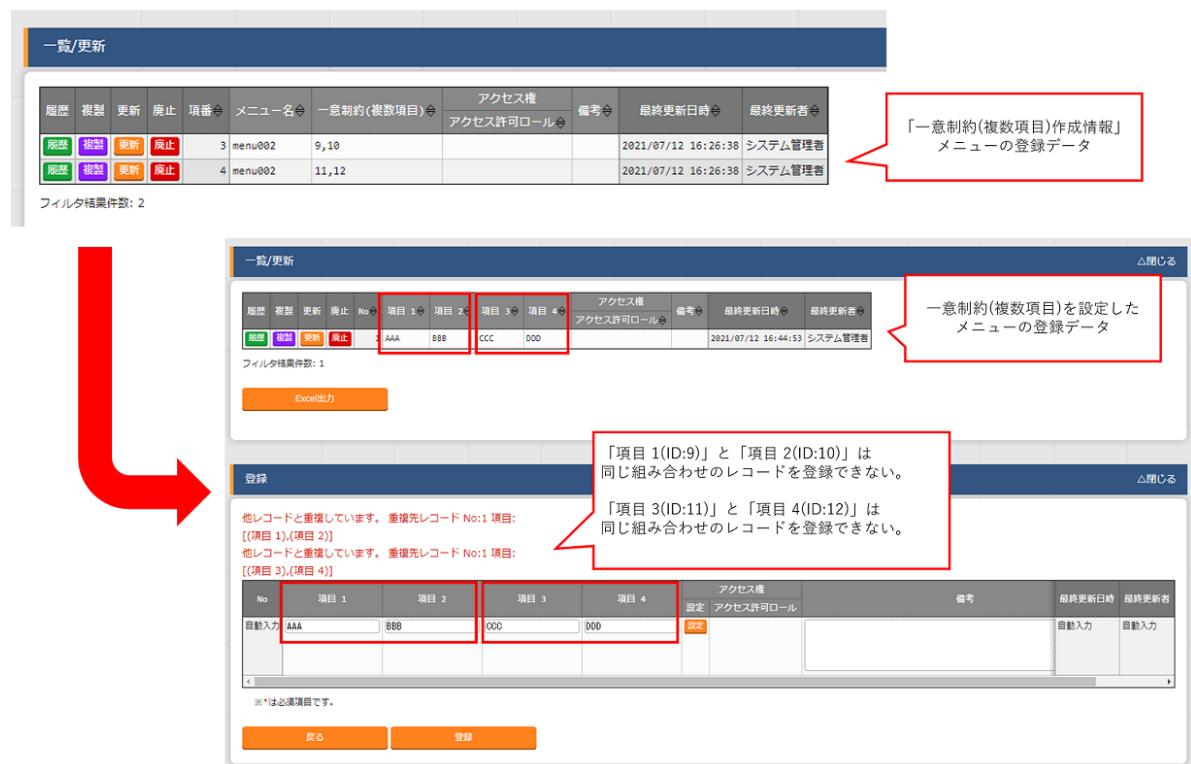


Figure 6.4-2 “Unique constraint(multiple items) creation information” menu

Table 6.4-1 “Unique constraint(multiple items) creation information” menu setting values

Setting item	Description
Menu name	Select the menu's unique constraint you want to configure by choosing from the pulldown menu.
Unique constraint(multiple items)	Input the combination of items you want for the unique constraint. Separate the item IDs by commas. The item ID corresponds to the numbers found in the “Menu item creation information” menu.

6.5 Create parameter sheet/data sheet using "Create menu"

During installation, the Column group list menu will not be displayed.

Create a menu (parameter sheet/datasheet) in the menu group specified in the "Menu Definition List" menu.

If a role is selected, the menu definition will only be accessible by the selected role. Created menus (Parameter sheets/ data sheets) can only be accessed by the selected role according to the settings in the "role/menu link list" menu.

If no role is selected, the menu definition will be accessible to all roles, and the created menu (Parameter sheets/ data sheets) will be accessible to only to the System administrator role and the role group of the user who created the menu (According to the role/menu link list" menu).

The menu (parameter sheet/ data sheet) that has been set for each item will be displayed in the "Create menu" sub menu. Check the menu you want to create and press the "Start menu creation" button.

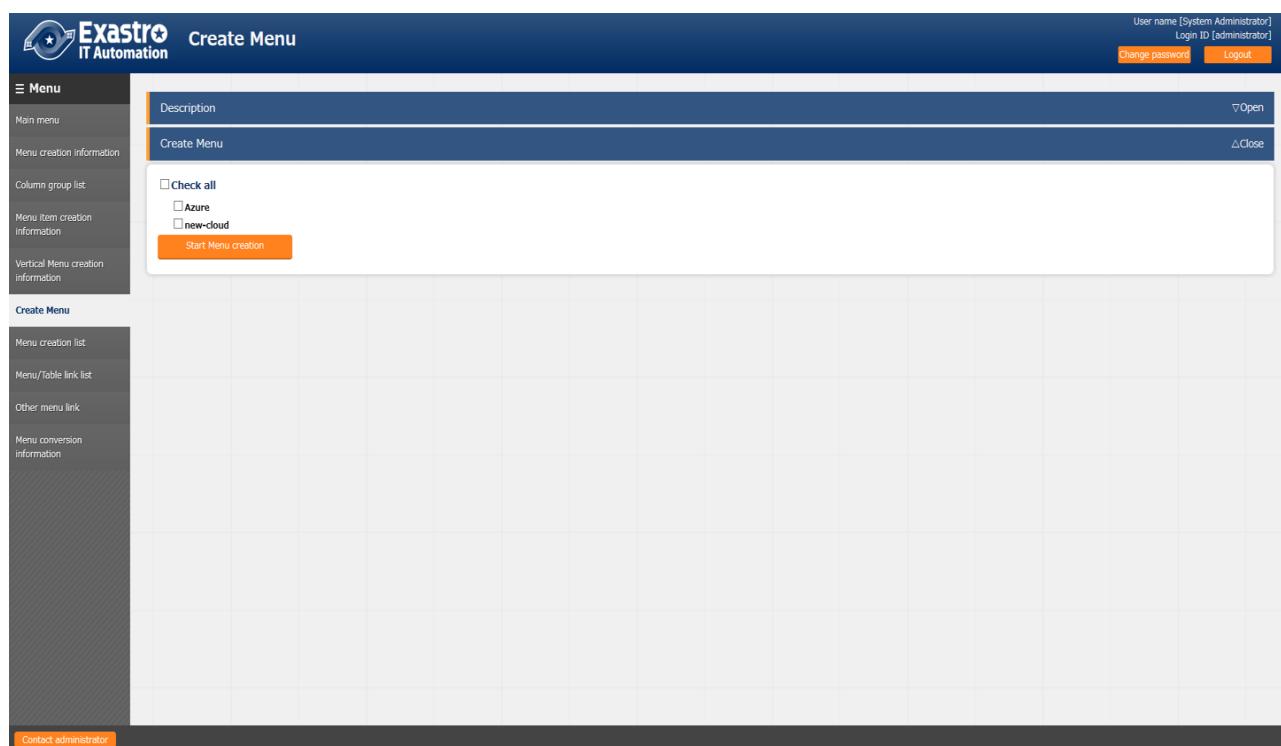


Figure 6.5-1 "Menu creation execution" menu

If a menu (parameter sheet/data sheet) with the same name has already been registered, or if a menu

with the same item number in the "Menu Definition List" menu exists, the menu will be overwritten and the entered data will be deleted.

If you need the registered data, please select 「Cancel」 and back up the data

If the 「OK」 button in the confirmation dialog is clicked, the create request will be accepted.

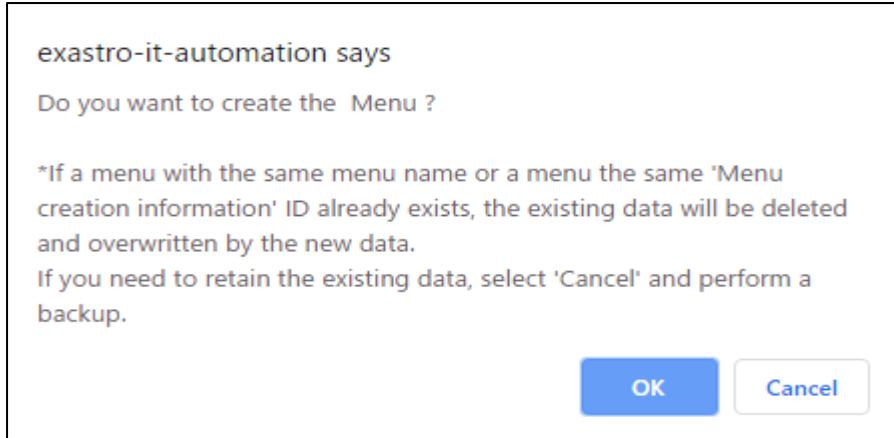


Figure 6.5-2 Menu creation check dialog

When you click the 「Menu Creation list」 button, the screen changes to 「Menu Creation list」 menu , which is displayed in a state filtered by 「ID」.

User name [System Administrator]
Login ID [administrator]
Change password Logout

Description ▾Open
Create Menu ▾Close

Menu creation was accepted.
Id:f11

Menu

Figure 6.5-3 “Menu creation history” button

7 Application operation

Operation that utilize the Menu creation function include not only user input from the browser screen of the client PC, but also system operation and maintenance. The operation and maintenance are as follows.

- Maintenance
- Change log level

7.1 Maintenance

The following files are required to Start/Stop/Restart the process of the Menu creation function.

Description	Target file name
Menu creation function .this function creates a parameter sheet menu based on the information entered in the web	ky_create_param_menu_execute.service
Menu update function for linking with other menus This is a function to create items to be displayed in the pull-down menu of 「Menu group: Menu: Item」 in the 「Menu item creation information」 menu.	ky_createOtherMenuLink.service

The target file is located in 「<installation directory>/ita-root/backyards/create_param_menu」 and a link is created in 「/usr/lib/systemd/system」. Please do not delete them.

The method of Starting/Stopping/Restarting a process is as follows. Please execute the command with root permission.

- ① Start the process

```
# systemctl start ky_create_param_menu_execute.service ←
```

- ② Stop the process

```
# systemctl stop ky_create_param_menu_execute.service ←
```

- ③ Restart the process

```
# systemctl restart ky_create_param_menu_execute.service ←
```

7.2 Change log level

① Change to NORMAL level

Rewrite 「DEBUG」 to 「NORMAL」 on the 8th line of the target file .

Local level setting file: <installation directory>/ita-root/confs/backyardconfs/ita_env

② Change to DEBUG level

Rewrite 「NORMAL」 to 「DEBUG」 on the 8th line of the target file

Local level setting file: <installation directory>/ita-root/confs/backyardconfs/ita_env

After rewriting the file, effect takes place after the process is (restart).

For restarting, refer to 「7.1 Maintenance」.

Log file output destination: < installation directory >/ita-root/logs/backyardlogs

8 Appendix

8.1 Placing PHP files

※ If the ITA web server is on the same server as BackYard, the parameter management menu will be added by the previous operation. However, if the web server is on a different server from BackYard, the created menu is not displayed because the files are not automatically arranged. PHP files must be manually placed on the web server so that they can be displayed on the web.

Status of PHP file placement



Method to place PHP file

(1) Download the zip file from 「Menu creation list」 or 「Master creation list」.

Id	Menu name	Status	Menu file	Created menu	Remarks	Last update date/time	Last updated by
1	new-cloud	Completed	000000001.zip	Created menu		2020/02/14 15:47:35	Create Menu procedure

(2) After unzipping the Zip file, place the 「XXXXXXXXXX_loadTable.php」 file in the /ita-root/webconfs/users/ on the web server with root user permission using WinSCP, etc.

※ XXXXXXXXXX: Menu ID (From left 0 is filled with 10 digits) .→10 digits with 0 filled on the left

※ If there are multiple 「XXXXXXXXXX_loadTable.php」 files, place them all.

8.2 Menu / Table link list

A menu that displays the link between the created menu and the DB table

The menu is set hidden during installation. The menu is used by BackYard so no user operation can be performed. Even if you change the link directly after creating the menu, this menu will not change.

ID	Menu group:Menu	Table name	Primary key	Table name (history)	Remarks	Last update date/time	Last updated by
1	param_test:1:new-cloud	F_KY_AUTO_TABLE_0002_H	ROW_ID	F_KY_AUTO_TABLE_0002_H_JNL		2020/02/14 15:47:35	Create Menu procedure
2	new-menu:2:new-cloud	F_KY_AUTO_TABLE_0002_H	ROW_ID	F_KY_AUTO_TABLE_0002_H_JNL		2020/02/14 15:47:35	Create Menu procedure
9	latest:4:linuxtest	F_KY_AUTO_TABLE_0003_HG	ROW_ID	F_KY_AUTO_TABLE_0003_HG_JNL		2020/02/14 16:46:31	Create Menu procedure
10	new-menu:5:linuxtest	F_KY_AUTO_TABLE_0003_H	ROW_ID	F_KY_AUTO_TABLE_0003_H_JNL		2020/02/14 16:46:32	Create Menu procedure
11	param_test:6:linuxtest	F_KY_AUTO_TABLE_0003_H	ROW_ID	F_KY_AUTO_TABLE_0003_H_JNL		2020/02/14 16:46:32	Create Menu procedure

Figure 8.2-1

Table 8.2-1

Item name	Description
Menu group: Menu name	Menu name associated with DB.
Table name	Name of the created table.
Primary key	Primary key of the created table.
Table name(history)	The name of the created history table.
Remarks	Free description field

8.3 Link with other menus

Displays the link between the created menu item name and the DB column name.

The menu is set hidden during installation. The menu is used by BackYard so no user operation can be performed. Even if you change the link directly after creating the menu, this menu will not change.

ID	Menu group:Menu	Table name	Primary key	Table name (history)	Remarks	Last update date/time	Last updated by
1	1:param_test;1:new-cloud	F_KY_AUTO_TABLE_0002_H	ROW_ID	F_KY_AUTO_TABLE_0002_H_JNL		2020/02/14 15:47:35	Create Menu procedure
2	2:new-menu;2:new-cloud	F_KY_AUTO_TABLE_0002_H	ROW_ID	F_KY_AUTO_TABLE_0002_H_JNL		2020/02/14 15:47:35	Create Menu procedure
9	3:latest;4:linuxtest	F_KY_AUTO_TABLE_0003_MS	ROW_ID	F_KY_AUTO_TABLE_0003_MS_JNL		2020/02/14 16:46:31	Create Menu procedure
10	2:new-menu;5:linuxtest	F_KY_AUTO_TABLE_0003_H	ROW_ID	F_KY_AUTO_TABLE_0003_H_JNL		2020/02/14 16:46:32	Create Menu procedure
11	1:param_test;6:linuxtest	F_KY_AUTO_TABLE_0003_H	ROW_ID	F_KY_AUTO_TABLE_0003_H_JNL		2020/02/14 16:46:32	Create Menu procedure

Figure 8.3-1

Table 8.3-1

Item name	Description
Menu group	Menu group name associated with DB.
Menu	Menu name of created parameter sheet or data sheet
Item name	The column name that is associated.
Table name	Name of the created table.
Primary key	Primary key of the created table.
Column name	The column name that is linked.
Remarks	Free description field

8.4 Menu conversion information

Displays the link of the menu that is converted to horizontal from the created vertical menu.

The menu is set hidden during installation. The menu is used by BackYard so no user operation can be performed. Even if you change the link directly after creating the menu, this menu will not change.

The screenshot shows the 'Create Menu' interface with the 'Menu creation information' tab selected. A red box highlights the 'Menu conversion information' link in the left sidebar. The main area displays a table with two rows of data, each representing a converted menu entry. The columns include Id, Conversion source menu name, Conversion destination menu name, Purpose, Repeat starting column name, Number of items, Repetition count, Column/row conversion completed, Last update date/time, and Last updated by. Buttons for 'Output Excel' and 'Download all' are visible at the bottom of the table area.

ID	Conversion source menu name	Conversion destination menu name	Purpose	Repeat starting column name	Number of items	Repetition count	Column/row conversion completed	Last update date/time	Last updated by
1	2:Host:9:laravel	3:Vertical:10:laravel	For Host	KY_AUTO_COL_0013	2	4:1		2020/02/17 13:15:47	Create Menu procedure
2	3:Vertical:1:10:laravel	2:Host:9:laravel	For Host	KY_AUTO_COL_0013	2	4:1		2020/02/17 13:15:47	Create Menu procedure

Figure 8.4-1

Table 8.4-1

Item name	Description
Conversion source menu name	The vertical menu name of the source.
Conversion destination menu name	Horizontal menu name of the destination.
Use	The purpose of the sheet menu.
Repeat start column	The name of the repeat start item of the horizontal menu
Number of items	The number of items in the horizontal menu.
Number of repetitions	The number of repetitions of the horizontal menu.
Vertical and horizontal converted flag	Specify the vertical and horizontal converted flag.
Remarks	Free description field

8.5 Selection 1

This menu administrates items that can be selected from pulldown menus (for item 1)

This menu is hidden by default and does not allow for changes by user inputs.

The screenshot shows the 'Create Menu' interface for Exastro IT Automation. The left sidebar has a tree view with nodes like 'Main menu', 'Create - Define menu', 'Menu definition information', 'Menu creation history', 'Selection 1' (which is highlighted with a red box), and 'Selection 2'. The main area has tabs for 'Description' (with a '▽Open' button) and 'Display filter' (with a '△Close' button). The 'Display filter' tab contains a table with columns: Discard, Id, *-(blank), Access permission (Role to allow access), Rem, Last update date/time, and Last updated by. A dropdown menu 'Exclude discarded records' is open. Below the table are 'Filter' and 'Clear filter' buttons, and a checked checkbox for 'Auto-filter'. At the bottom of the main area are 'List' (with a '△Close' button), 'Download all' (with a '▽Open' button), and 'Trace history' (with a '▽Open' button). The top right corner shows the user info 'User name [System Administrator] Login ID [administrator]' and buttons for 'Role', 'Change password', and 'Logout'.

Figure 8.5-1

Table 8.5-1

Item name	Description
-(blank)	This item allows us to use "" in the pulldown menu.

8.6 Selection 2

This menu administrates items that can be selected from pulldown menus (for item 1)

This menu is hidden by default and does not allow for changes by user inputs.

The screenshot shows the 'Create Menu' interface for Exastro IT Automation. On the left, there's a sidebar with options like 'Main menu', 'Create - Define menu', 'Menu definition information', 'Menu creation history', and 'Selection 1'. The 'Selection 2' option is highlighted with a red box. The main area has tabs for 'Description' (with an 'Open' button) and 'Display filter' (with a 'Close' button). Below these are several search and filter fields for 'Discard', 'Id', 'Yes-No', 'True-False', 'Access permission', 'Role to allow access', 'Last update date/time', and 'Last updated by'. There are 'Filter' and 'Clear filter' buttons, and a checked 'Auto-filter' checkbox. At the bottom, there's a 'List' tab (with a 'Close' button), a table showing two entries ('History 1' and 'History 2'), and an 'Output Excel' button. The table columns include History, Id, Yes-No, True-False, Access permission, Role to allow access, Remarks, Last update date/time, and Last updated by.

History	Id	Yes-No	True-False	Access permission	Role to allow access	Remarks	Last update date/time	Last updated by
History	1	Yes	True				2015/04/01 10:00:00	System Administrator
History	2	No	False				2015/04/01 10:00:00	System Administrator

Figure 8.6-1

Table 8.6-1

Item name	Description
Yes-No	This item allows us to use "Yes" and "No" in the pulldown menu.
True-False	This item allows us to use "True" and "False" in the pulldown menu.

8.7 "Select item" from "Pulldown selection"

The items that can be selected from pulldown selections are as following

Table 8.5-1

Menu group	Menu	Item	Remarks
Management Console	Menu list	Menu group name + Menu name	
	User list	Login ID	
Basic Console	Device list	Host name	
		IP address	
	Operation list	Operation name	
	Movement list	Movement name	
Symphony	Symphony class list	Symphony name	
Conductor	Conductor class list	Conductor name	
Ansible Common	File list	File embedded variable name	Only if the Ansible drivers are installed.
	Template list	Template embedded variable name	
Host group Management	Host group management	Host group name	Only if the host group function is installed.

In addition to the ones above, Menus (Parameter sheet/Data sheet) that are created in the Menu group function that has either "String", "Multi string", "Integer", "Decimal Number", "Date", "Date/Time" or "Link" selected for Input method, has both "Required" and "Unique constraint" checkboxes checked are also target.

8.8 “Reference items” when using “Pulldown selection”

When using "Pulldown selection" as input format for items,

You can display other items in the same menu side-by-side based on the value you select in "Pulldown Selection".

Clicking the "Select a reference item" button when "Pulldown selection" is selected for an item in the "Create menu" ->"Create·Define Menu" menu, a screen where users can select other items in the "Select items" menu will appear.

Check the items you want to display horizontally and click “Decision” to insert the values into the “Reference item”

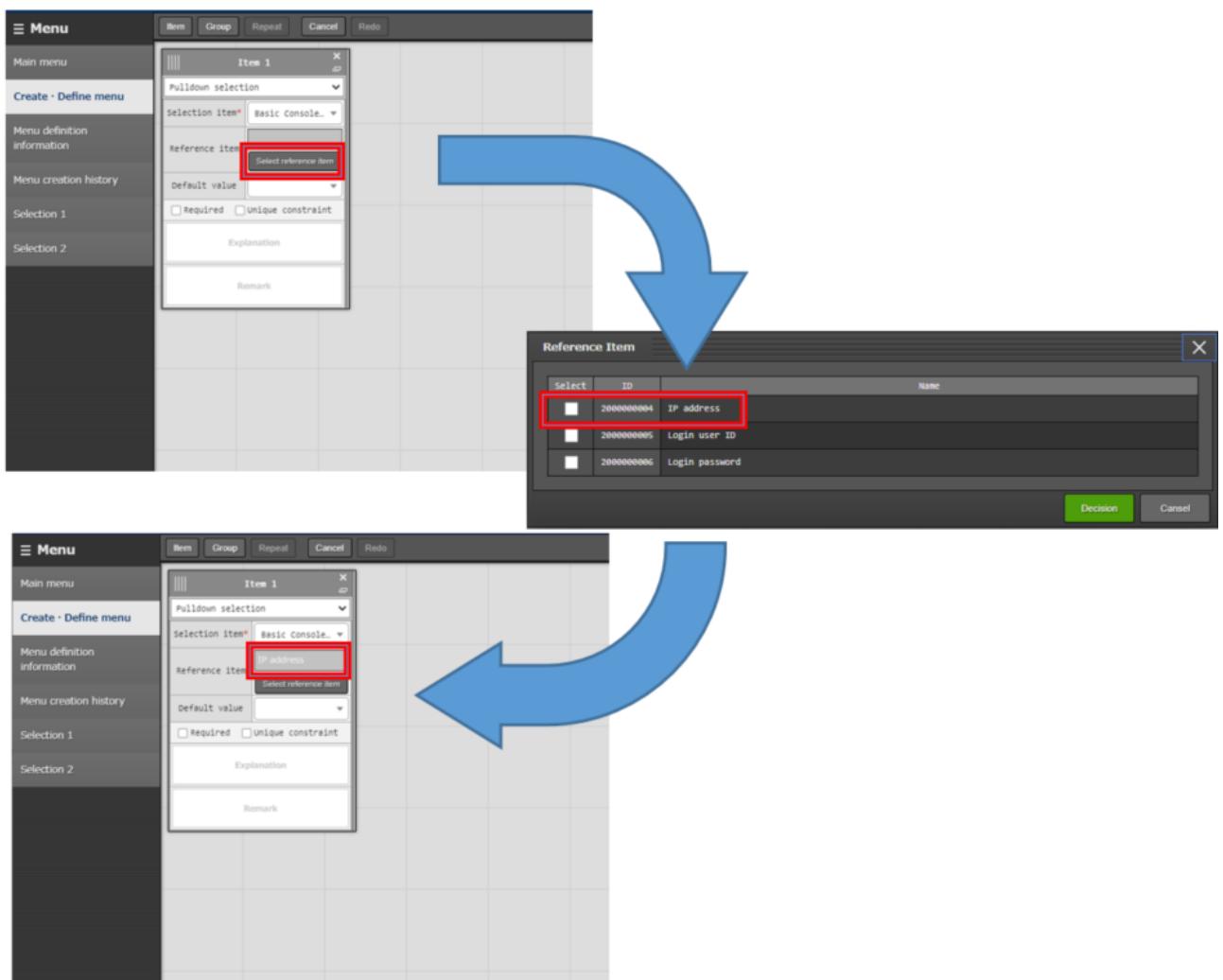


Figure 8.6-1

The items that can be selected as "Reference Item" are as follows.

Table 8.6-1

Select Item	Menu	Item	Remarks
Management console:Menu list:Menu name	Menu list	Menu ID	
Management console: User list: Login ID	User list	Mail address	

Basic console: Device list: Host name	Device list	IP Address	
		Login User ID	
		Login Password	

In addition to the ones above, when the "selected item" is a menu created with the "Create Menu" function, the other items of the menu selected in the "Selected Item" menu group with the input method "String", "Multi string", "Integer", "Decimal Number", "Date", "Date/Time", "Password", "File upload", or "Link" will also be target.

When creating a menu when a "Reference item" is set to the "Pulldown selection", The menu created in the "Input" menu group will only have the column of the "pull-down selection" item will be displayed from the "Register" menu, but in the "List/Update" menu, the records in the same row as the value set in the "pull-down selection" will be displayed side by side.

The screenshot shows two parts of the Exastro-ITA Basic console interface. The top part is the 'Register' screen, which has a table for entering data. The bottom part is the 'List/Update' screen, which displays a list of registered items. A red callout box with the text 'Only "Pulldown selection" is available when registering' points to the 'Register' screen. A red callout box with the text 'The pulldown selection and reference item will be displayed' points to the 'List/Update' screen. A large red arrow points from the 'Register' callout to the 'List/Update' callout, indicating that the pulldown selection values are displayed side-by-side in the list view.

No	Host name*	Operation	Parameter	Access permission	Last update date/time	Last updated by
Auto-input	hostA	2022/01/19 15:57_1:OP1	hostA	Setting	Auto-input	Auto-input

* is a required item.

Back Register

List/Update

History	Duplicate	Update	Discard	No	Operation	Parameter
History	Duplicate	Update	Discard	1	OP1	hostA 10.100.10.100

Filter result count: 1

Output Excel

Figure 8.6-2

When displaying the "list" for the menu created in the "Substitution value automatic registration" menu group and the "Reference" Menu group, the reference item value will be displayed side by side. Any "Reference items" displayed in the "Substitute value automatic registration" menu will have the same values as each driver's "Substitute value automatic registration settings" value.

If you put a "pulldown selection" with a "reference item" in the repeat frame when you are using "vertical menu," "reference items" will be displayed repeatedly, similarly to normal items.

8.9 Reference Item Info

Displays the information of the reference items available in the pulldown selection available in the “Create・Define Menu” function.

This menu is hidden by default after installation.

This menu is used by Backyard, and is not operated by users.

History	Id	Reference other menu ID	Display order	Table name	Primary key	Column name	Item	Column group	Description	Last update date/time	Last updated by
History	2,000,000,001	2000000005	0	D_MENU_LIST	MENU_ID	MENU_ID	Menu ID			S 2015/04/01 10:00:00	System Administrator
History	2,000,000,003	2000000006	0	A_ACCOUNT_LIST	USER_ID	MAIL_ADDRESS	Mail address			S 2015/04/01 10:00:00	System Administrator
History	2,000,000,004	2000000001	0	C_STM_LIST	SYSTEM_ID	IP_ADDRESS	IP address			S 2015/04/01 10:00:00	System Administrator
History	2,000,000,005	2000000001	1	C_STM_LIST	SYSTEM_ID	LOGIN_USER	Login user ID			S 2015/04/01 10:00:00	System Administrator
History	2,000,000,006	2000000001	2	C_STM_LIST	SYSTEM_ID	LOGIN_PW	Login password			P 2015/04/01 10:00:00	System Administrator

Filter result count: 5

[Output Excel](#)

[Download all](#)

[Trace history](#)

Figure 8.7-1

Table 8.7-1

Item name	Description
Reference other menu ID	The ID of the other menus where the reference item is linked, based on item in the “Pulldown selection”
Display order	Display order when selecting reference items. Displayed in ascending order
Table name	Name of the reference table
Primary key	Primary key to the reference table
Column name	Name of the reference column
Item	Name of the reference item
Column group	The column group where the reference item belongs to.
Description	Description of the reference item.
Input method	Input method for the reference item
Sensitive settings	Is on “ON” if the reference item is “Password”
Master column	Flag that indicates whether the reference target can be “Pulldown” selectable or not.
Remarks	Free description field

8.10 Non-repeating items when using vertical menus.

This section describes using non-repeating items when using vertical menus.

When registering data in the “input” menu group, the data with the youngest number in the assignment order is adopted as the set value in the menu group for automatic assignment value registration.

The screenshot illustrates the process of creating a vertical menu with non-repeating items. It consists of three main parts:

- Top Panel:** A configuration window titled "Item" with tabs for "Item", "Group", "Repeat", "Cancel", and "Redo". It contains three items labeled "Item 1", "Item 2", and "Item 3". Each item has fields for "String", "Maximum number of bytes*", "Regular expression", "Default value", "Required", "Unique constraint", "Explanation", and "Remark". Item 3 is highlighted with a red border and a callout box stating "Not set to 'Repeat'".
- Middle Panel:** A "List/Update" screen titled "Registering in the ‘Input’ menu". It shows a table with columns: History, Duplicate, Update, Discard, No, Operation (Reference date, Scheduled date for execution, Last execution date), Input order, and Parameter. Two rows are listed:

No	Operation	Input order	Parameter
1	1 2022/01/19 15:57 2022/01/19 15:57	1	DataA-1 DataA-2 DataA-3
2	2 2022/01/19 15:57 2022/01/19 15:57	2	DataB-1 DataB-2 DataB-3
- Bottom Panel:** A "List" screen titled "In the ‘Substitute value’ menu". It shows a table with columns: History, No, Operation, and Parameter. One row is listed:

No	Operation	Parameter
1	1 2022/01/19 15:57 2022/01/19 15:57	DataA-1 DataA-2 DataB-1 DataB-2 DataA-3

 A callout box from the bottom panel states: "Non-repeat items will only have the item with the lowest substitute order value."

figure 8.11-1

8.11 Input method (Parameter sheet reference)

The "Parameter sheet reference" input method references item records that matches the corresponding operation of the selected menu.

By using the "Parameter sheet reference" item, users can use parameters created for Terraform driver as parameters created for Ansible driver. (For parameters created using "Parameter sheet (with operation)).

The following list lists the guidelines for using the "Parameter reference" item.

- The "Parameter sheet reference" item cannot be used if the creation target is "Data sheet".
 - The following input methods can be referenced:
「String」「Multi string」「Integer」「Decimal number」「Time」「Date」「Password」「File upload」「Link」
Note that only the file name of the uploaded file will be referenced for "File upload"(The uploaded data will not be referenced).
 - The "Parameter sheet reference" item displays all referenced data as URLs. Clicking the url will take the user to the source menu's "Substitute value auto registration" menu.
 - If the specified operation does not have data from the source menu, the error message "ID Conversion failure (Operation ID)" will be displayed.
 - The referenced value can be used with Substitute value auto registration.
- The following items can be used: String」「Multi string」「Integer」「Decimal number」「Password」「File upload」「Link」
- "Unique constraint" cannot be used.

The following picture is an example of a menus using the "Parameter sheet reference" input method.

The screenshot shows two windows of the Exastro IT Automation software. The top window is titled 'List/Update' and shows a table of operations. A red arrow points from this window to a callout box containing the text: 'Create a new menu (Parameter sheet(Operation)) and register data'. The bottom window is titled 'Create Menu' and shows the 'Main menu' section with a 'Reference 1' dialog open. This dialog has 'Parameter Sheet Reference' selected under 'Menu*' and 'Parameter/Item 1' selected under 'Item*'. A red arrow points from this window to another callout box containing the steps: 'Select "Parameter sheet reference" and select the "Terraform parameter sheet" menu.' and 'Select the correct Parameter/Item.'

ID	Operation name	Reference date	Item 1	Item 2	Item 3	Role to allow access	Remarks	Last update date/time	Last updated by
1	OP1	2022/01/19 15:57	AAA	BBB	CCC			2022/01/18 18:04:02	System Administrator
2	OP2	2022/01/19 15:57	XXX	YYY	ZZZ			2022/01/18 18:04:19	System Administrator

The screenshot illustrates the process of registering new items and then referencing those items in a list view. The top part shows the 'Register' screen where a new item is being added. The bottom part shows the 'List/Update' screen displaying a list of registered items.

Register Screen:

No	Host name*	Operation	Access permission	Setting	Role to allow access	Remarks	Last update date/time	Last updated by
Auto-input	hostA	2022/01/19 15:57_1:OP1		Setting			Auto-input	Auto-input

List/Update Screen:

History	Duplicate	Update	Discard	No	Host name	ID	Operation name	Reference date	Scheduled date for execution	Last execution date	Reference	Last update date/time	Last updated by
History	Duplicate	Update	Discard	1	hostA	1	OP1	2022/01/19 15:57	2022/01/19 15:57		AAA	2022/01/18 18:16:02	System Administrator
History	Duplicate	Update	Discard	2	hostA	2	OP2	2022/01/19 15:57	2022/01/19 15:57		XXX	2022/01/18 18:16:11	System Administrator

A red box highlights the 'Register' button on the Register screen, and another red box highlights the 'Output Excel' button on the List/Update screen. A large red arrow points from the Register screen down to the List/Update screen, indicating the flow of data from registration to listing. A callout box on the Register screen states 'Open the menu and register new items'. A callout box on the List/Update screen states 'The values from the first parameter sheet are referenced.'

Figure 8.11-1

8.12 Searching for "Reference items" and "Parameter sheet reference" menus through pulldown selections.

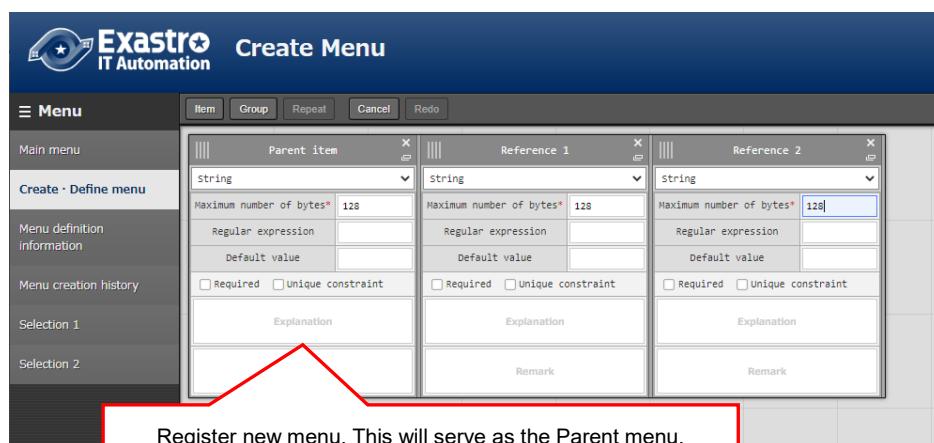
If the same value is displayed multiple times in the "Display filter", the values will have a number put in brackets behind them.

The value inside the brackets is the ID number of the source item.

Make sure to select the correct value by looking at the ID number at the end.

This happens when the referenced source value has different multiple item numbers in the source menu.

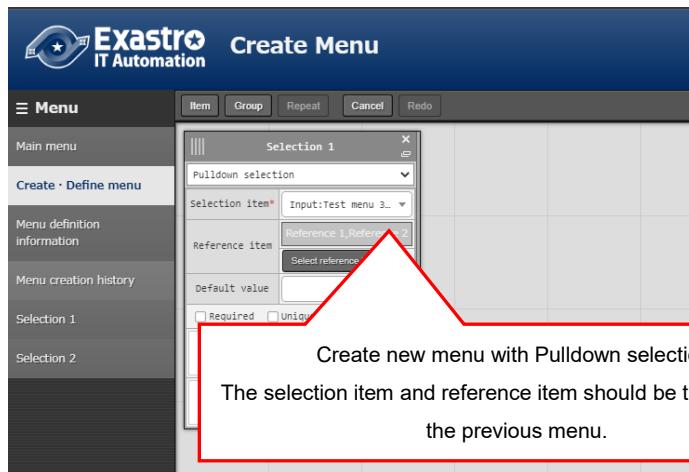
The following picture uses a "Parent menu (Source menu)" and a "Child menu (menu that uses reference item" to illustrate an example.



The screenshot shows the 'List/Update' screen with a table of data. The columns are: History, Duplicate, Update, Discard, No, Parent item, Reference 1, Reference 2, Access permission, Remarks, Last update date/time, and Last updated by.

History	Duplicate	Update	Discard	No	Parent item	Reference 1	Reference 2	Access permission	Remarks	Last update date/time	Last updated by
History	Duplicate	Update	Discard	1	Master1	AAA	BBB			2022/01/18 18:22:55	System Administrator
History	Duplicate	Update	Discard	2	Master2	AAA	CCC			2022/01/18 18:23:09	System Administrator

A red box highlights the second record with the text: 'Register two records with the value "AAA"'. A large red arrow points down to the bottom of the page.



Display filter

Discard	No	Execution date	Selection 1	Parameter	Access	Last update date/time
Exclude discarded records	<input type="text"/> ~ <input type="text"/>	<input type="text"/> ~ <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="Filter"/> <input type="button" value="Filter"/> <input type="button" value="Filter"/> <input type="button" value="Search from pulldown"/> <input type="button" value="Search from pulldown"/> <input type="button" value="Search"/>						
<input type="button" value="AAA(1)"/> <input type="button" value="AAA(2)"/>						
<input type="checkbox"/> Auto-filter						

List/Update

History	Duplicate	Update	Discard	No	Execution date for execution	Last execution date	Selection 1	Parameter	Access permission	Role to allow access	Remark
History	Duplicate	Update	Discard	1	15:57		Master1	AAA	BBB		
History	Duplicate	Update	Discard	2	15:57		Master2	AAA	CCC		

Filter result count: 2

Register 2 new items and check the Display filter. AAA(1) and AAA(2) should be displayed/



Display filter

Discard	No	Execution date	Selection 1	Parameter	Access	Last update date/time
Exclude discarded records	<input type="text"/> ~ <input type="text"/>	<input type="text"/> ~ <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="Filter"/> <input type="button" value="Filter"/> <input type="button" value="Filter"/> <input type="button" value="Search from pulldown"/> <input type="button" value="Search from pulldown"/> <input type="button" value="Search"/>						
<input type="button" value="AAA(1)"/>						
<input type="checkbox"/> Auto-filter						

List/Update

History	Duplicate	Update	Discard	No	Execution date for execution	Last execution date	Selection 1	Parameter	Access permission	Role to allow access	Remark
History	Duplicate	Update	Discard	1			Master1	AAA	BBB		

Filter result count: 1

Select AAA(1), and the first (the one with lowest substitute order) will be displayed.

Figure 8.12-1

8.13 Pulldown selection links for "Multistring" items.

Data registered to a pulldown selection item will have their value turned into a link that users can use to access the source menu where the data was registered.

The registered value will be input in the search bar and filtered so users can see it.

If said item has "Multistring" as input method, the display filter search box will only have the first line of characters input.

List/Update

History	Duplicate	Update	Discard	No	Parameter	Access permission	Remarks	Last update date/time	Last updated by
				Item 1	Role to allow access				
History	Duplicate	Update	Discard	1	AAA BBB CCC			2022/01/18 19:18:51	System Administrator

Display filter

Discard	No	Multistring Pulldown	Access permission	Remarks	Last update date/time	Last updated by
		Role to allow access				
Exclude discarded records		AAA				
		▼ Search from pulldown	▼ Search from pulldown	▼ Search from pulldown	▼ Search from pulldown	▼ Search from pulldown
<input type="button" value="Filter"/>		<input type="button" value="Clear filter"/>				
<input checked="" type="checkbox"/> Auto-filter						

List/Update

History	Duplicate	Update	Discard	No	Multistring Pulldown	Access permission	Remarks	Last update date/time	Last updated by
				Item 1	Role to allow access				
History	Duplicate	Update	Discard	1	AAA BBB CCC			2022/01/18 19:16:26	System Administrator

Filter result count: 1

Pulldown items will have the data turned into an URL that leads to the source menu where the original data was registered.

After being moved to the original menu through the link, the Display filter will have the first line of text input in the search field.

Figure 8.13-1

8.14 Creating menus using the Excel File upload function

The following section explains the process of creating menus using the Excel file upload function

- Configurations before creating menus.
 - Follow the table below and register the following records in the “Management console” > “Role/Menu link list” menu.
 - Some of the records are abolished, so make sure to restore them and update them according to the table below.

Table 8.14-1 Role/Menu link list

Menu group		Menu		Associate
ID	Name	ID	Name	
2,100,011,601	Menu create	2,100,160,001	Menu definition information	Can maintain
2,100,011,601	Menu create	2,100,160,008	Column group list	Can maintain
2,100,011,601	Menu create	2,100,160,002	Menu item creation information	Can maintain
2,100,011,601	Menu create	2,100,160,009	Menu(Vertical) create information	Can maintain
2,100,011,601	Menu create	2,100,160,018	Unique restriction (Multiple items) create information.	Can maintain
2,100,011,601	Menu create	2,100,160,003	Menu create execute	View only

- Menu creation process.
 - (1) Upload excel files to each of the menus in the table below.
(For more information regarding Excel file uploads, please see the Exastro-ITA_user_instruction_manual_Management_console".)

Table 8.14-2 Menu creation procedure

Order	Menu group	Menu	Required	Remarks
1	Menu create	Menu definition information	<input type="radio"/>	Need to create Menu group
2	Menu create	Column group list	<input checked="" type="checkbox"/>	Needed when using the column group.
3	Menu create	Menu item create information	<input type="radio"/>	
4	Menu create	Menu(Vertical) create information	<input checked="" type="checkbox"/>	Needed when using vertical menus
5	Menu create	Unique restriction (Multiple items) create information.	<input checked="" type="checkbox"/>	Needed when using Unique restrictions (multiple items)

- (2) In the "Create Menu" menu group > "Create Menu" menu, select the target menu registered in the "Menu Definition List" menu in step (1) and click "Start Menu Creation".
- (3) Check the menu you have created in the "Menu Create" menu group > "Menu Creation History" menu.

➤ Menu creation example

The following is an example of creating menus using Excel file uploads.

- ✧ The menu that will be created

Table 8.14-3 Created menu

Menu name	Creation target	Column group	Vertical menu	Unique restrictions(multiple items)
sampleA	Parameter sheet (With host/operation)	use	use	use

※ If the menu would be created using the “Menu define/create” menu, it would look like the figure below

No.	Host name	Operation name	Reference date and time	Scheduled date	Last run date	dataA	Item 1	Item 2	Item 3	Item 4	dataA	Item 1(2)	Item 2(2)	Item 3(2)	Item 4(2)	Remark	Last Modified	Last updated by
1		Operation	2020/01/01 00:00		2020/01/01 00:00		String	String	String	String	String	String	String	String	String		2020/01/01 00:00:00	System Administrator
2		Operation	2020/01/01 00:00		2020/01/01 00:00		String	String	String	String	String	String	String	String	String		2020/01/01 00:00:00	System Administrator
3		Operation	2020/01/01 00:00		2020/01/01 00:00		String	String	String	String	String	String	String	String	String		2020/01/01 00:00:00	System Administrator

Figure 8.14-1

- ✧ Excel files needed to create menus.

- ① Menu definition list Excel file
- ② Column group list Excel file
- ③ Menu item create information Excel file
- ④ Menu(Vertical) create information Excel file
- ⑤ Unique restriction (Multiple items) create information. Excel file
- ⑥ Menu create execute Excel file

- ✧ Menu creation operation flow

- ① Input/edit the following in the “Menu definition list” excel file and upload it.

"Menu definition" Excel file

Notes	Execution process type	Discard	Id	Menu name	Creation target	Display order	Use	Vertical	Menu group for Input	Menu group for Substitution value auto-registration	Menu group for View	M
● : Required	Register	x	x	*	*	*	c	c	*	c	c	
○ : Optional	Update	x	x	*	*	*	c	c	*	○	○	
x : Cannot edit	Discard	x	x	x	x	x	x	x	x	x	x	
	Restore	x	x	x	x	x	x	x	x	x	x	
OK : Line break OK/ NG : No line break				NG	NG	NG	NG	NG	NG	NG	NG	
Other notes	Select processing type.	Discard flag	C	Enter the name of "Parameter Sheet".	If you select "Parameter Sheet", the menu will create a parameter sheet menu that is set in the substitution value automatic registration setting.	Enter the display order of the menu group. It is displayed in ascending order.	Enter when creating a vertical menu.	Enter the menu group on which to create the input menu.	Enter the menu group on which to create the substitution value auto-registration menu.	Enter the menu group on which to create the view menu.	If the creat "Not have will b "Crea chan	
		Execution process type	Discard	Menu name	Creation target	Display order	Vertical	Menu group for Input	Menu group for Substitution value auto-registration	Menu group for View		
		Register		sampleA	Parameter Sheet(Host)	1	For	Input	Substitution value	Reference		

Execution process type	Menu name	Creation Target	Display Order	Use
Register	sampleA	Parameter Sheet(Host/Operation)	1	For Host

Vertical Menu	Menu group for Input	Menu group for substitute value auto-registration	Menu group for Viewing
●	Input	Substitution value	Reference

Figure 8.14-2

- ② Input/Edit the following in the "Column group list" excel file and upload it.

"Column group list" Excel file

Notes	Execution process type	Discard	Id	Parent column group	Column group Name
● : Required	Register	x	x	○	●
○ : Optional	Update	x	x	○	●
x : Cannot edit	Discard	x	x	x	x
	Restore	x	x	x	x
OK : Line break OK/ NG : No line break		NG	NG	NG	NG
Other notes	Select processing type.	Discard flag.	C	Select the parent column group from the pulldown menu.	Enter the column group name.
		Cannot do operation other than restore.	do not edit		
		Execution process type	Discard	Parent column group	Column group Name
		Register			dataA

Execution process type	Column group Name
Register	dataA

Figure 8.14-3

- ③ Input/Edit the following in the “Menu item create information” excel file and upload it.

Notes		Execution process type	Discard	Id	Menu name	Item name	Display order	Required	Unique	Column group	Input method	Maximum number of bytes
• : Required		Register	x	x	*	*	*	o	o	o	*	o
o : Optional		Upadate	x	x	*	*	*	o	o	o	*	o
x : Cannot edit		Discard	x	x	x	x	x	x	x	x	x	x
OK : Line break OK,/ NG : No line break		Restore	x	x	x	x	x	x	x	x	x	x
NG		Other notes	Select processing type.	Discard flag. Cannot do operation other than restore.	C Select the menu to link the parameter ot from the pulldown menu.	Enter the item name you want to display on the menu.	Enter the order of the columns to be displayed in the menu. Columns will be displayed in ascending order from left to right.	For required items, set "•".	For unique items, set "•".	Select the column group to belong to.	Select between "String", "Multi string", "Integer", "Decimal number", "Dateime", "Date", "Pulldown selection".	Enter the maximum number of bytes.
Execution process type		Discard	Menu name	Item name	Display order	Required	Unique	Column group	Input method	Maximum number of bytes		
Register			sampleA	Item1	0			dataA	String	32		
Register			sampleA	Item2	1			dataA	String	32		
Register			sampleA	Item3	2			dataA	String	32		
Register			sampleA	Item4	3			dataA	String	32		
Register			sampleA	Item1[2]	4			dataA	String	32		
Register			sampleA	Item2[2]	5			dataA	String	32		
Register			sampleA	Item3[2]	6			dataA	String	32		
Register			sampleA	Item4[2]	7			dataA	String	32		

Execution process type	Menu name	Item name	Display Order	Column Group	Input Method	Maximum number of bytes
Register	sampleA	Item1	0	dataA	String	32
Register	sampleA	Item2	1	dataA	String	32
Register	sampleA	Item3	2		String	32
Register	sampleA	Item4	3		String	32
Register	sampleA	Item1[2]	4	dataA	String	32
Register	sampleA	Item2[2]	5	dataA	String	32
Register	sampleA	Item3[2]	6		String	32
Register	sampleA	Item4[2]	7		String	32

Figure 8.14-4

- ④ Input/Edit the following in the “Menu (Vertical) create information” excel file and upload it.

Notes		Execution process type	Discard	Id	Menu name: Start item name		Number of items	Repetition count
• : Required		Register	x	x	*	*	*	*
o : Optional		Upadate	x	x	*	*	*	*
x : Cannot edit		Discard	x	x	x	x	x	x
OK : Line break OK,/ NG : No line break		Restore	x	x	x	x	x	x
NG		Other notes	Select processing type.	Discard flag. Cannot do operation other than restore.	C Specify the menu that will be the basis of the vertical menu to be created, and the item name of the start of the repeat item.	Enter the number of items.	Enter the repetition count.	
Execution process type		Discard	Menu name: Start item name	Number of item	Repetition count			
Register			sampleA:dataA/Item1	4	2			
Execution process type		Menu name:Start item name	Number of items	Repetition count				
Register		sampleA:dataA/Item1	4	2				

Figure 8.14-5

- ⑤ Input/Edit the following in the “Unique restriction (Multiple items) create information” excel file and upload it.

“Unique restriction” excel file

	Execution process type	Discard	Id	Menu name	Unique constraint(Multiple items)
Register		x	x	●	●
Update		x	x	●	●
Discard		x	x	x	x
Restore		x	x	x	x
NG : No line break		NG	NG		NG
Other notes	Select processing type.	Discard	C	Select the a menu to link the parameter from the menu. t	Patterns for Unique constraint(Multiple items) Enter the ID of the target item, separated by commas.
	Execution process type	Discard	Menu name	Unique constraint(Multiple items)	
	Register		sampleA	1,2	
	Register		sampleA	3,4	

History	Duplicate	Update	Discard	Id	Menu name	Item name	Display order	Required	Unique	Column group	Input method	Ma
History	Duplicate	Update	Discard	1	sampleA	Item1	0			dataA	String	
History	Duplicate	Update	Discard	2	sampleA	Item2	1			dataA	String	
History	Duplicate	Update	Discard	3	sampleA	Item3	2			dataA	String	
History	Duplicate	Update	Discard	4	sampleA	Item4	3			dataA	String	
History	Duplicate	Update	Discard	5	sampleA	Item[2]	4			dataA	String	
History	Duplicate	Update	Discard	6	sampleA	Item2[2]	5			dataA	String	
History	Duplicate	Update	Discard	7	sampleA	Item3[2]	6			dataA	String	
History	Duplicate	Update	Discard	8	sampleA	Item4[2]	7			dataA	String	

When inputting the target item IDs for "Unique restriction (Multiple items)", divide them by using commas.
The Item IDs can be seen by looking at the "item number" in the "Menu create" > "Menu item create information" menu.

Displayed in the "Menu create" > "Menu item create information" menu.

Figure 8.14-6

- ⑥ In the "Menu create" > "Create menu", select "SampleA" and press the "Start Menu Creation".
- ⑦ Doing so will cause an dialog window to appear. Press "OK", and the Menu will be created.

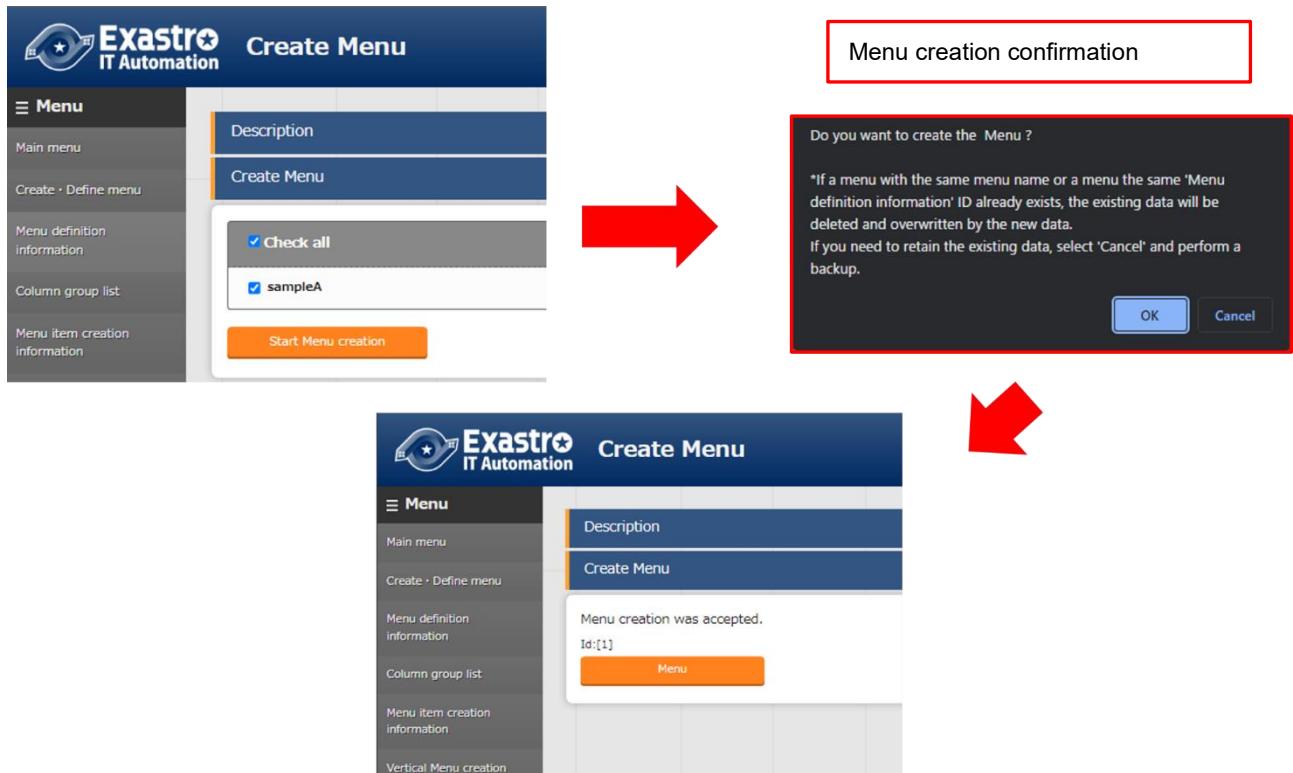


Figure 8.14-7

Pressing the "Created menu" button in the "Menu create" > "Menu creation history" will move the user to the "Input" menu group where the user can see that "SampleA" has been created.

The screenshot shows the Exastro IT Automation interface with the following details:

- Create Menu** screen:
 - Left sidebar: Main menu, Create - Define menu, Menu definition information, Column group list, Menu item creation information.
 - Right pane: Description, Display filter, List. A table shows a single entry for 'sampleA' with status 'Completed' and a 'Created menu' button highlighted.
- Input** screen:
 - Left sidebar: Main menu, sampleA (highlighted).
 - Right pane: Description, Display filter, List/Update, Register. A table shows 'Input' registrations with columns Host name, Operation, Input order, Parameter, Access permission, Last update date/time, Last updated by.
- List/Update** screen:
 - Left sidebar: History, Duplicate, Update, Discard.
 - Right pane: Operation table with rows for hostA, hostB, hostC, hostD, hostAA, hostBB, hostCC, hostDD.
 - A detailed view of the 'Parameter' section for 'dataA' is shown, mapping Item1 to hostA, Item2 to hostB, Item3 to hostC, Item4 to hostD, and so on for hostAA through hostDD.

Annotations with red boxes and arrows indicate the flow from the 'Created menu' button to the 'Input' registration table, and from the 'Input' registration table to the 'Parameter' mapping table.

Figure 8.14-8