



ITA_User_Instruction_Manual

Management console

— Version 1.10 —

Disclaimer

All the contents of this document are protected by copyright owned by NEC Corporation.

Unauthorized reproduction or copying of all or part of the contents of this document is prohibited.

The contents of this document are subject to change without prior notice in the future.

NEC Corporation is not responsible for any technical or editorial errors or omissions in this document.

NEC Corporation do not guarantee accuracy, usability, certainty of the content in this document.

Trademark

- Linux is registered trademark or trademark of Linus Torvalds, registered in the U.S. and other countries.
- Red Hat is registered trademark or trademark of Red Hat, Inc., registered in the U.S. and other countries.
- Apache, Apache Tomcat, Tomcat are registered trademarks or trademarks of Apache Software Foundation.
- Ansible is registered trademark or trademark of Red Hat, Inc.
- Active Directory is registered trademark or trademark of America Microsoft Corporation, registered in the U.S. and other countries.

The names of other systems, company name and products mentioned in this document are registered trademarks or trademarks of their respective companies.

The ® mark and TM mark is not specified in this document.

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

Table of Contents

Table of Contents.....	2
Introduction	4
1 ITA system Overview of management console	5
1.1 About the ITA management console.....	5
1.1.1 Screen description Login, password registration	6
(1) Login screen	6
(2) Change password.....	6
(3) Logout screen (login again).....	6
(3) "Role" button.....	7
1.1.2 Screen description main menu.....	8
(1) Screen configuration.....	8
(4) Others	17
1.1.3 Screen description Basic screen configuration	18
1.1.4 Screen description the method to operate operation section	19
(1) Register filter.....	19
(2) List/Update.....	20
(3) Duplicate	21
(4) Register	23
(5) Download all and edit file uploads.....	23
(6) Trace history	25
(7) Input items from Pulldown selections.....	29
(8) Table setting.....	29
(9) Fixed header setting	30
(10) Submenu initial state setting	31
(11) System settings	32
(12) Menu group list	36
(13) Menu list	41
(14) Role list	43
(15) User list.....	45
(16) Role/Menu link list	46
(17) Role/User link list.....	46
(18) Sequence list	48
(19) SSO basic preference	49
(20) SSO attribute preference.....	49
(21) Check ITA version.....	49
(22) IP address filter list	51
(22) Operation delete list	52
(23) File delete list.....	54
(1) Delete file/file item function. Users can update with the "Delete file" checkbox ticked in order to delete registered files. (If it is a necessary item, the checkbox will not be displayed.).....	55
(2) File item/ File download function	55
(3) Delete password/password item function.....	55
1.2 BackYard contents.....	56
1.2.1 BackYard operation list.....	57
1.2.2 Description of BackYard operation	58
(1) Send mail.....	58

(2)	Role link checking + cleaning	63
(3)	Input operation checking + cleaning.....	63
(4)	File checking + cleaning	63
(5)	ActiveDirectory information mirroring	63
1.3	Usage of ActiveDirectory association function	64
1.3.1	Getting started	65
1.3.2	Function overview	66
(1)	AD information mirroring function.....	66
(2)	AD authentication (Kerberos authentication) function	66
1.3.3	AD information mirroring function.....	67
1.3.4	AD authentication (Kerberos authentication) function	69
1.3.5	About exceptions of this function	70
(1)	Non-association target record	70
(2)	Non AD authentication target user (ITA internal authentication)	70
2	Application operation.....	72
2.1	Start of installation	72
2.2	Delete operation execution history routinely	72
2.3	Change log level	74
2.4	Maintenance	75
2.4.1	Start/Stop/Restart ITA system individual process	75
(1)	Start process.....	75
(2)	Stop process.....	75
(3)	Restart process	75
3	Appendix	76
3.1	Troubleshooting	76

Introduction

This document describes the overview and instructions of the management console in ITA system.

1 ITA system Overview of management console

This chapter explains the management console which is required for ITA operating

1.1 About the ITA management console

Register/Update/Delete of ITA user (account) or execution permission of operation menu is performed in ITA management console.

Also, excluding the default menu in ITA, when the operation department manages their own database on ITA, it's possible to make individual menus that meets their management level.

When registering/updating/deleting individual menu, please contact the product support.

Table 1.1-1 Web contents menu/screen list

No	Menu group	Menu・Screen
1	Common section	Login screen
2		Password changing screen
3		Logout screen
4		“Role” button
5	ITA management screen	Main menu
6		System settings
7		Menu group list
8		Menu list
9		Role list
10		User list
11		Role/Menu link list
12		Role/User link list
13		Sequence list
14		SSO Basic preference
15		SSO Attribute preference
16		ITA version check
17		IP address filter list (hidden on default)
18		Operation delete list (hidden on default)
19		File delete list (hidden on default)

1.1.1 Screen description Login, password registration

(1) Login screen

If the ITA system menu screen is accessed without login, "Login screen" will display.

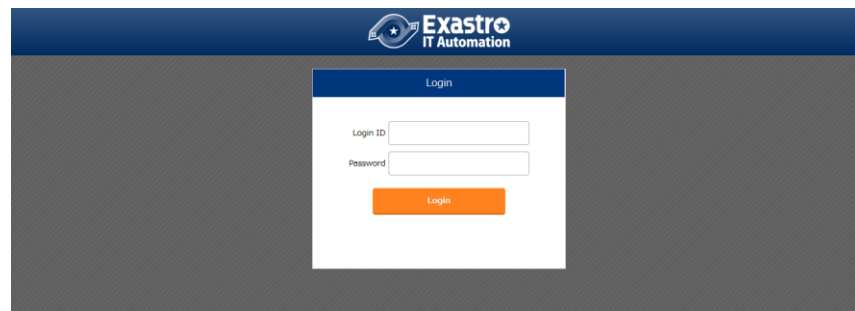


Figure 1.1-1 login screen of ITA

Please login with the following login ID and password after installing ITA system.

Login ID : administrator

Default password : password

Screen will be redirected to the "Password changing screen" when login for the first time after installation.

(2) Change password

Logged-in user can change their password at any time.

Please click the "Change password" button on the top-right of each menu screen to move to the "Change password" screen and change the password.

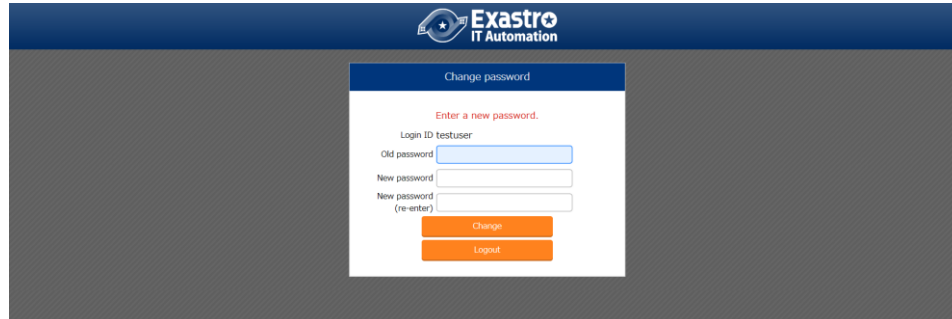


Figure 1.1-2 "Change password" screen of ITA

(3) Logout screen (login again)

Click the "Logout" button at the top-right of each menu screen to log out of the system.

Click the displayed "Login again" link to move to the login screen.



Figure 1.1-3 ITA logout screen

(3) "Role" button.

The user can press the "Role" button to see what role they belong to.

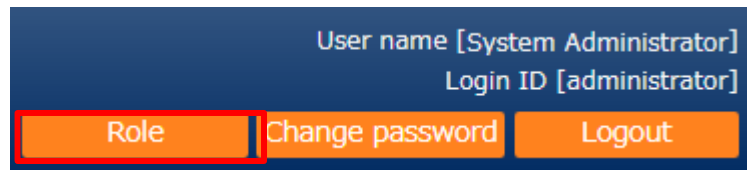


Figure 1.1- 1. "Role" button

As an example, if the role/user link list is configured as the figure below and the user is logged in as "user_A", the user will see both of the roles linked "role_A" and "role_B".

A screenshot of the Exastro Management Console. The left sidebar contains a 'Menu' with options like 'Main menu', 'System settings', 'Menu group list', 'Menu list', 'Role list', 'User list', 'Role • Menu link list', 'Role • User link list' (which is selected), 'Sequence list', 'Single-sign-on Basic Preference', and 'Single-sign-on Attribute Preference'. The main content area shows a table titled 'Role user link list' with columns for 'History', 'Duplicate', 'Update', 'Discard', 'Item No.', 'Role ID', 'Role Name', 'User ID', and 'Login ID'. The table contains five rows. The last two rows, representing 'Role_A' and 'Role_B' for user 'userA', are highlighted with a red border. Below the table, it says 'Filter result count: 5' and there is an 'Output Excel' button.

History	Duplicate	Update	Discard	Item No.	Role ID	Role Name	User ID	Login ID
History	Duplicate	Update	Discard	1	1	System Administrator	1	administ
History	Duplicate	Update	Discard	2	2	Role_A	1	administ
History	Duplicate	Update	Discard	3	3	Role_B	1	administ
History	Duplicate	Update	Discard	4	2	Role_A	2	userA
History	Duplicate	Update	Discard	5	3	Role_B	2	userA

Figure 1.1- 2. "Role user link list" menu when logged in as "administrator"

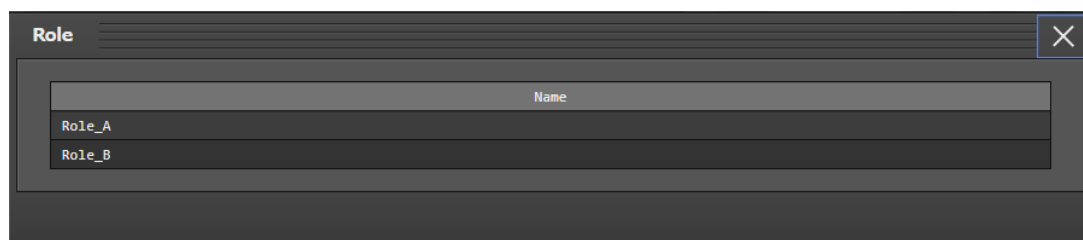


Figure 1.1- 3. "Role" window when logged in as "user_A"

- Users can check their own roles even if their user does not have permission to see the "role/user link list" menu.
- Users can change the display settings of the "Role" button from the "System settings" menu.
- Users can check their roles regardless of the role base access permission per data record.

1.1.2 Screen description main menu

Widgets are displayed in the main menu.

Users can individually customize the contents and arrangement of the Widget.

⑥ ~ ⑧ are not displayed by default.

(1) Screen configuration

Widget No. 1~5 are displayed by default. Widget No. 6~8 are hidden by default.

(They can be added by pressing the "Add Widget" button.)

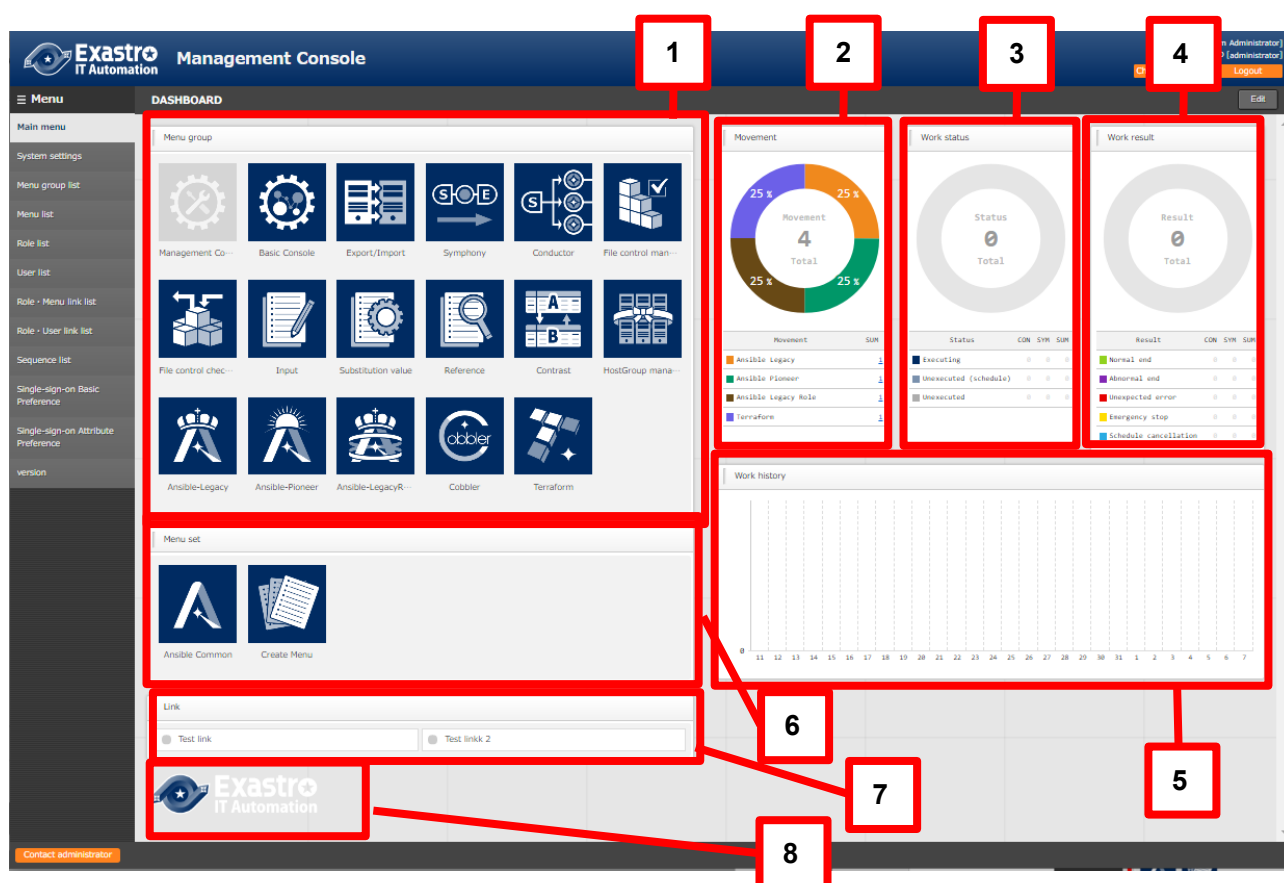


Figure 1.1-4 Widget No. 1~9

Table 1.1-2 Widget list (No. 1~9)

No.	Widget	Description	Default
1	Menu group	Each menu group's panel is displayed. Users can move to the specified menu group by clicking the menu group's respective panel. Only the	Displayed

		<p>installed drivers will be displayed.</p> <p>It is not possible to delete the main menu widget.</p>	
2	Movement	<p>Displays a graph summarizing the number of Movements registered in each Orchestration.</p> <p>Pressing the number in the “SUM” row or the graph itself will move the user to the driver’s Movement list menu.</p>	Displayed
3	Work status	<p>The work status of each Conductor and Symphony operation is displayed in a pie chart.</p> <p>Pressing a number in the “CON” row will move the user to the “Conductor” Menu group -> “Conductor list” Menu</p> <p>Pressing a number in the “SYM” row will move the user to the “Symphony” Menu group -> “Symphony list” menu.</p>	Displayed
4	Work result	<p>The work result of each Conductor and Symphony operation is displayed in a pie chart.</p> <p>Pressing a number in the “CON” row will move the user to the “Conductor” Menu group -> “Conductor list” Menu</p> <p>Pressing a number in the “SYM” row will move the user to the “Symphony” Menu group -> “Symphony list” menu.</p>	Displayed
5	Work History	<p>The work history of each Conductor and Symphony operation is displayed in a bar graph.</p> <p>Pressing the bars will display detailed information.</p> <p>Pressing a number in the “CON” row will move the user to the “Conductor” Menu group -> “Conductor list” Menu</p> <p>Pressing a number in the “SYM” row will move the user to the “Symphony” Menu group -> “Symphony list” menu.</p>	Displayed
6	Menu set	A customizable menu set.	Hidden
7	Link	A customizable link list	Hidden
8	Image	Makes it possible for users to have a picture in the dashboard.	Hidden
9	Reservation work	<p>Displays all Symphonies and Conductors that has the status “Not yet executed (Reserved).</p> <p>This widget allows users to see the instance ID, Symphony/Conductor name, Operation name, and reserved date/time as well as how much time is left until the reserved date/time. Pressing the Instance ID will move the user to the operation confirmation screen.</p>	Hidden

(2) Editing Widgets.

Pressing the “Edit” button in the upper right corner will enter Edit mode.

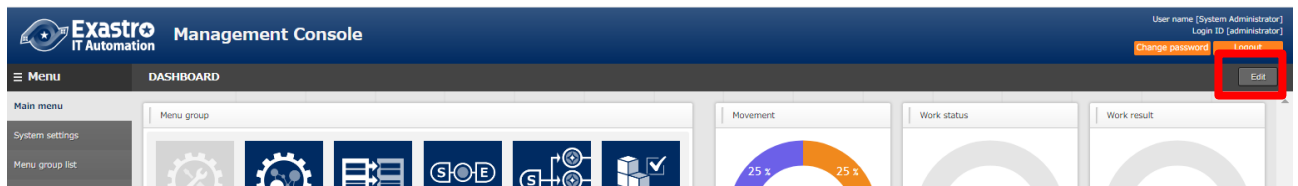


Figure 1.1-5 Main menu screen (Edit button)

➤ Adding Widgets

1. Hover the cursor over or under an already existing Widget to reveal a “+Blank” button. Press the button to add a new blank to the dashboard. You can now use that blank space to add a Widget.

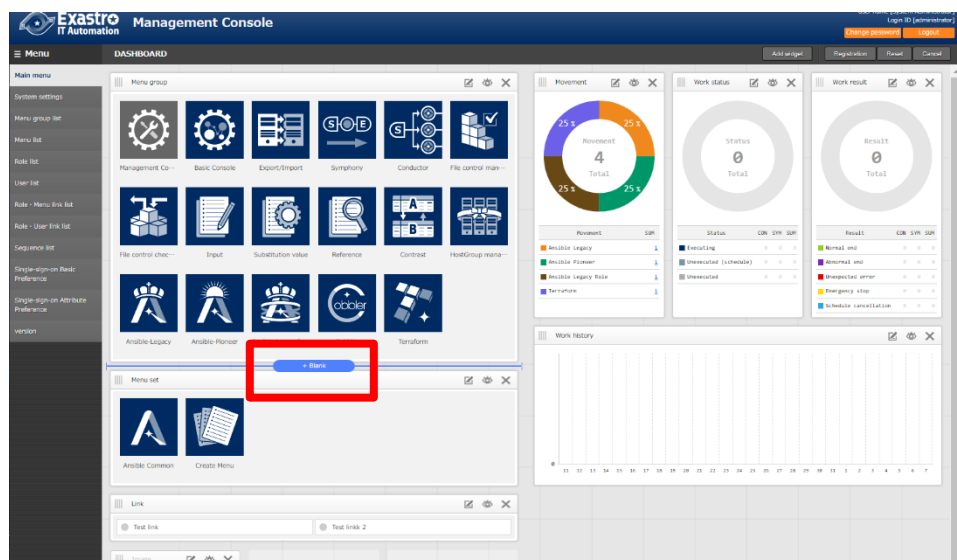


Figure 1.1-6 Main menu screen (+Blank)

2. Press the “Add Widget” button.

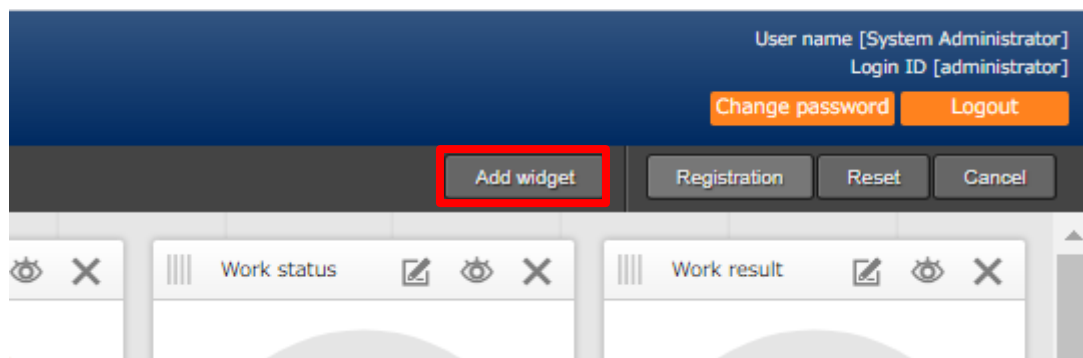


Figure 1.1-7 Main menu screen blank addition button

3. Select the desired Widget and press “Decision”

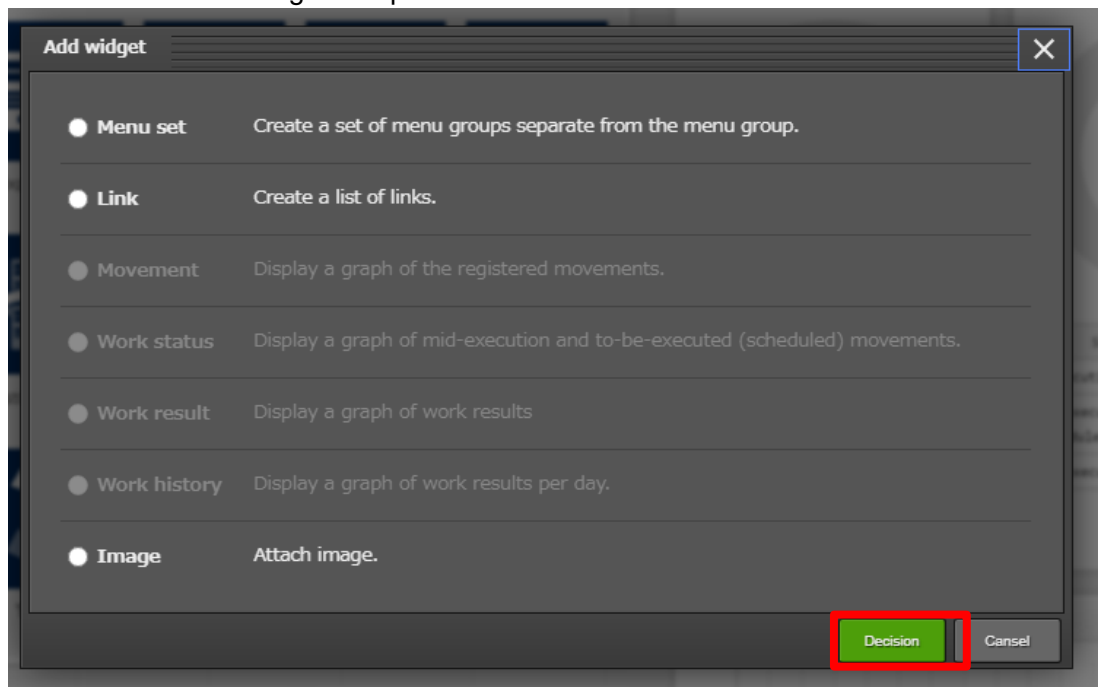


Figure 1.1-8 “Add widget” popup screen.

※ Adding to the “Menu set” Widget

Allows users to move Menus from the “Menu group” widget to the “Menu set” widget by dragging and dropping the Menu panels.

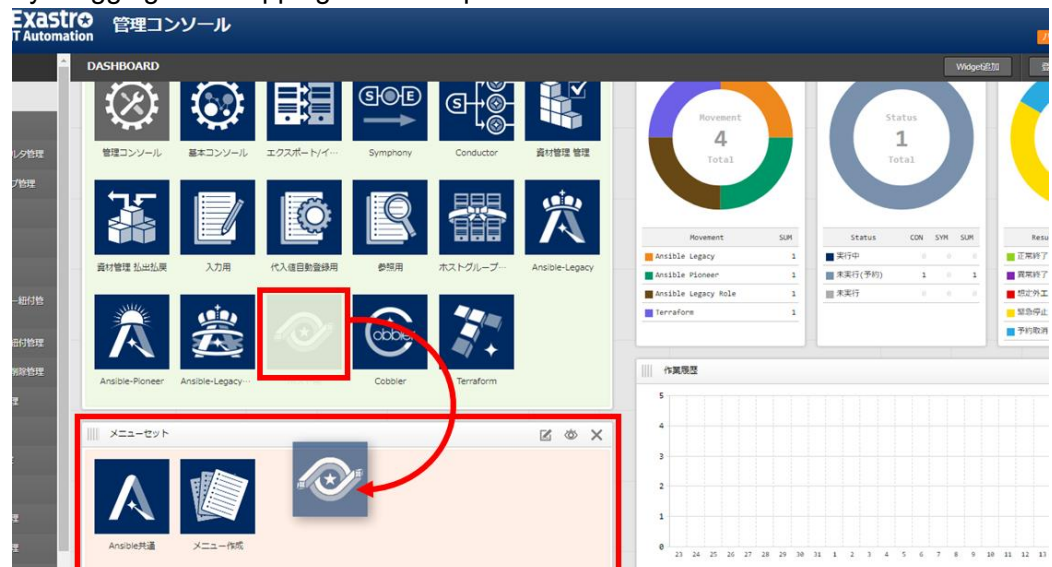


Figure 1.1- 9 “Menu set” frame

- **Editing Widgets.**
It is possible to edit the Widgets by pressing one of the buttons in the upper right corner.

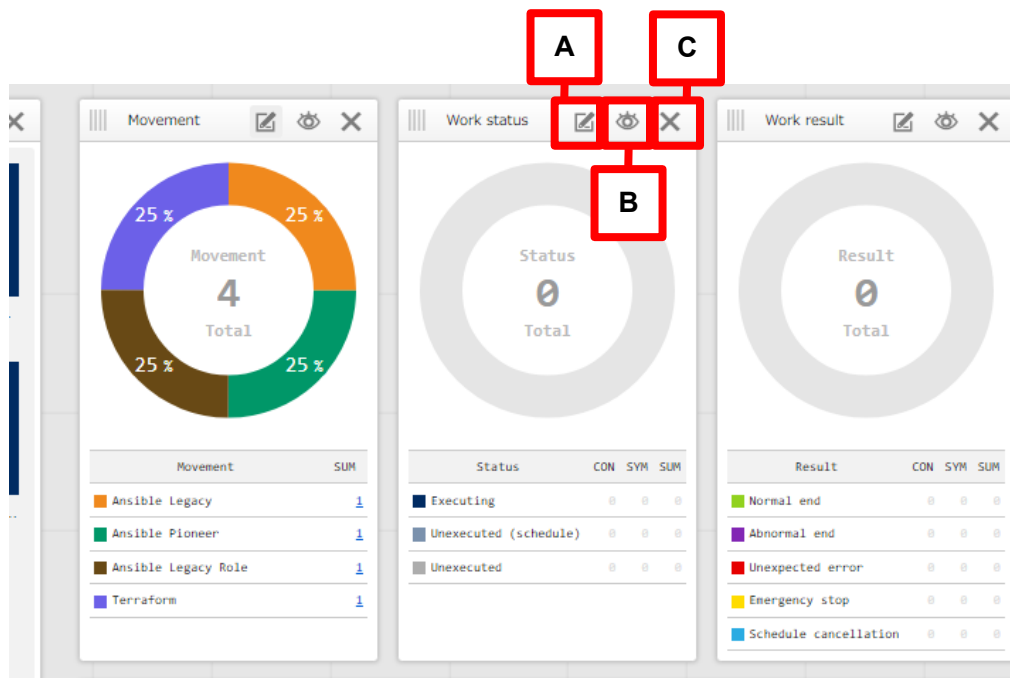


Figure 1.1-10 each buttons in Widget

- A. **Edit button**
Allows users to edit the contents of the Widget.

The 'Edit' screen contains the following settings:

- Name:** Menu group (labeled 1)
- Horizontal size:** 1, 2, 3 (labeled 2)
- Vertical size:** 1, 2, 3, 4, 5 (labeled 3)
- Title bar:** Show, Hide (labeled 4)
- Background:** Show, Hide (labeled 5)
- Items per line:** 1, 2, 4, 6, 8 (labeled 6)

At the bottom right, there are two buttons: 'Decision' and 'Cancel'.

Figure 1.1- 11 Widget "Edit" screen

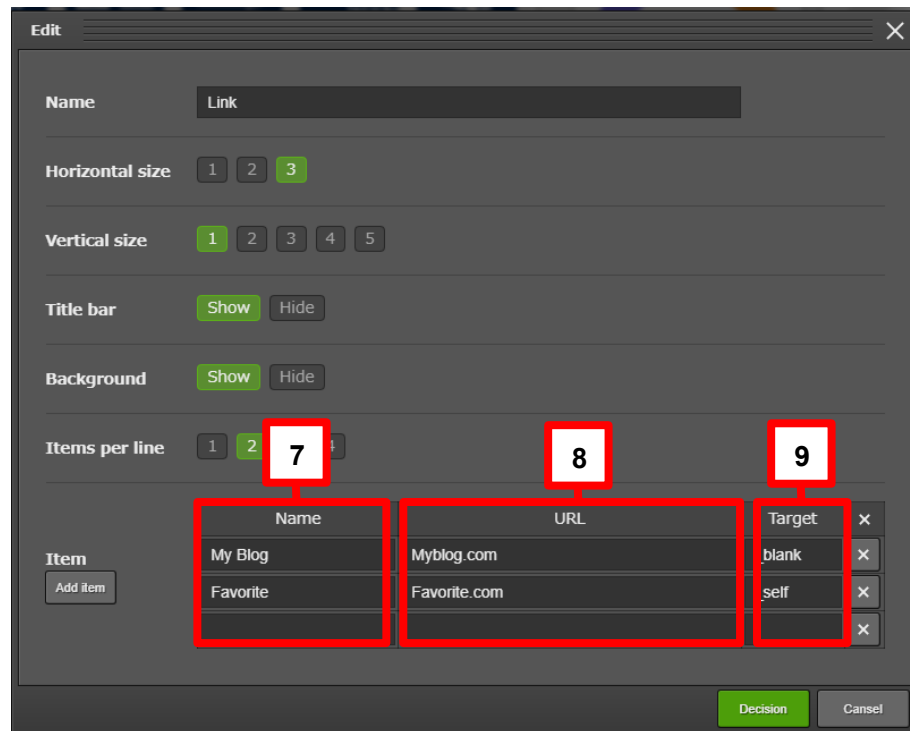


Figure 1.1- 12 “Link” Widget Edit screen.

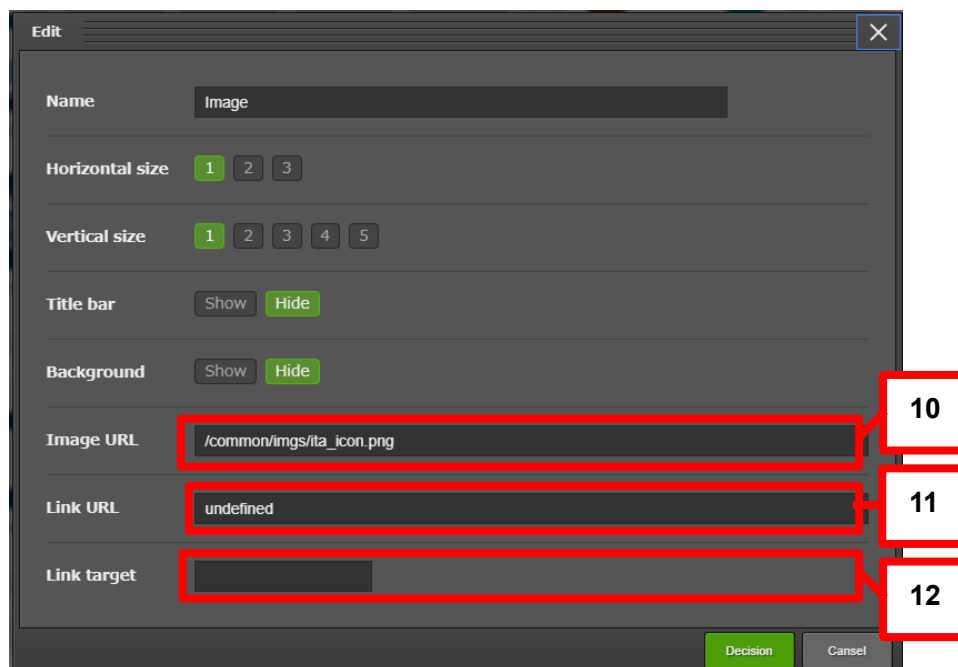


Figure 1.1- 13 Image Widget Edit screen

Figure 1.1- 14 Work History Widget Edit button

Figure 1.1-15 “Reservation work” widget Edit screen

Table 1.1- 3 Widget Edit screen Item list

No.	Item	Description	Target Widget
1	Name	Changes the name of the widget	Menu group, Movement, Work status, Work results, Work history, Menu set, Link, Image
2	Horizontal Size	Decides the Horizontal Size of the widget	
3	Vertical Size	Decides the Vertical size of the widget	
4	Title bar	Decides whether the title bar should	

		be shown or hidden.	
5	Background	Decides whether the Background should be shown or hidden.	
6	Items per line	Specifies how many items should be displayed per line.	Menu group, Menu set, Link
7	Item – Name	Name of the Link	Link
8	Item - URL	URL destination of the Link	
9	Item - Target	Specifies “a tag” targets (E.g.: _blank, _parent, etc.)	
10	Image URL	Set the Image URL	Image
11	Link URL	Set the URL that will be accessed when the Image is pressed.	
12	Link Target	Decides what happens when the image is pressed.	
13	Period	Set the period of the history of operations that will be displayed.	Work History
14	Period (days)	Let's the user control the period of the operations to display. For example, If the number of days is set to "3" and the current date/time is "January 1st 14:00", all operations with reserved date/time up to January 4th 14:00 will be displayed.	Reservation work
15	Symphony	Select "Hide" to hide all Symphonies from the widget.	
16	Conductor	Select "Hide" to hide all Conductors from the widget.	

B. Hide button

Show or Hides the Widget.

C. Delete Button

Deletes the widget.

(3) Registering Widgets

Pressing the “Registration” button in the upper right corner of the screen will save any changes done in the edit screen.

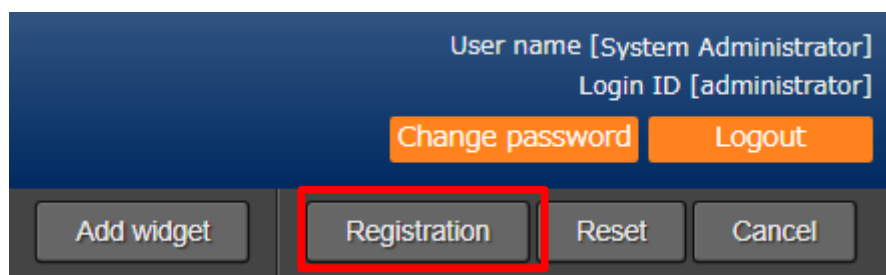


Figure 1.1- 16 Widget “Registration” button

(3)(4) Others

Users can reset the Widget screen or cancel any changes by pressing the buttons in the upper right corner of the screen.

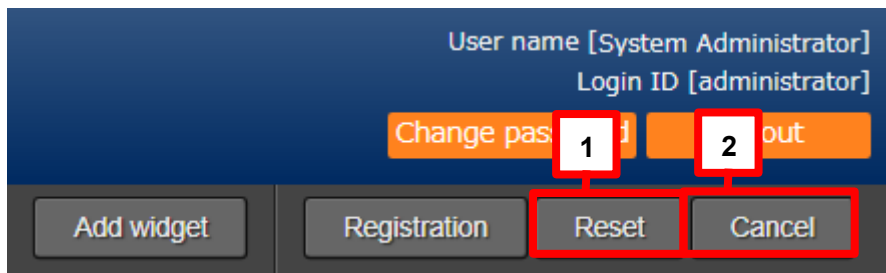


Figure 1.1- 17 Widget Reset button and Cancel button.

Table 1.1- 4 Edit screen buttons

No.	Item	Description
1	Reset button	Resets the screen to the default state.
2	Cancel button	Deletes any changes done in the Edit screen.

1.1.3 Screen description Basic screen configuration

Each menu screen provided in ITA system is basically configured with same elements.
The configuration is as below.

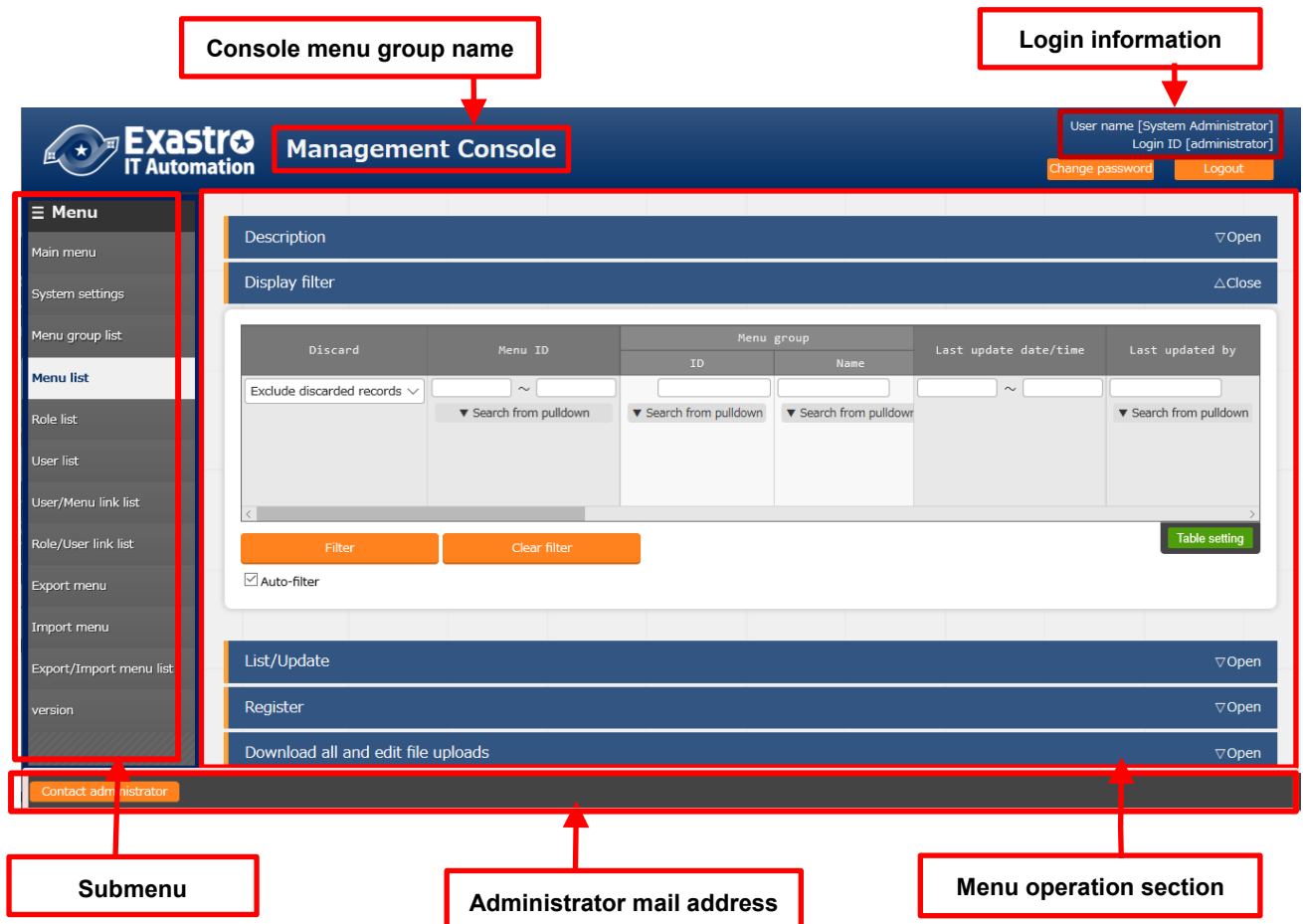


Figure 1.1-18 screen configuration

Table 1.1-5 Screen configuration list

No	Screen name	Description
1	Console menu group name	The group name which each submenu belongs to. The name of menu group displayed on the screen is displayed.
2	Submenu	The menu that can be operated/displayed in current console menu is displayed in a list.
3	Menu operation section	The section that users can perform registration and setting corresponding to each menu. ※Details are described later.
4	Login information	The account name logged in currently is displayed. Users can change their password or log out.
5	System administrator	The link of the system administrator's email address.

1.1.4 Screen description the method to operate operation section

This section describes the method to operate the elements of each menu operation section

(1) Register filter

Specify the search criteria which is for displaying the item registered in each menu.

The search criteria and items are different in each menu. Only common function is described here.

The screenshot shows the 'Display filter' interface. At the top, there are tabs for 'Description' and 'Display filter'. Below the 'Display filter' tab, a red box labeled 'E' contains a warning message: 'Multiple lines of character string are not allowed, character count is 1 to 64 characters, tab and line break cannot be entered, required item'. Below this, a table structure is shown with columns: Discard, Menu ID, Menu group (ID, Name), Menu name, Authentication require, Last update date/time, and Last updated by. Each column has a search dropdown menu. A red box labeled 'A' points to the 'Discard' column's dropdown, which is set to 'Exclude discarded records'. A red box labeled 'B' points to the 'Menu ID' column's search dropdown. A red box labeled 'C' points to the 'Authentication require' column's search dropdown. A red box labeled 'D' points to the 'Filter' button and the 'Auto-filter' checkbox. A red box labeled 'F' points to the 'Table setting' button. Below the table, there are 'Filter' and 'Clear filter' buttons. A second screenshot below shows the 'Table setting' dialog box, which has a 'Heading Fixed' section with checkboxes for 'Top Heading Fixed', 'Left Heading Fixed', and 'Right Heading Fixed', and a 'Show or Hide' section with checkboxes for 'Menu group' and 'Menu name'. There are 'Apply', 'Close', and 'Reset' buttons at the bottom of the dialog.

Figure 1.1-19 Display filter screen

A. Discard column

- "Exclude discarded records" is set on default.
- "All records", "Only discarded records" can be selected freely, specify the desired display method. **One of them must be selected.**

B. Search criteria

- Specify the search criteria.
- For items like system name and remarks that can be specified in characters, results displayed can be filtered with "ambiguous search" or "pull-down menu search".

C. Access permission

- For more information about access permission, please refer to "ITA_User_Instruction_Manual_Role-based Access Control".

D. Auto-filter

- By checking “Auto filter”, the list of result that meets the search criteria will be displayed Automatically once any of the search criteria is selected
- It is possible to set if the “Auto filter” is checked when entering the screen in “Auto filter check” of “Menu list” in the Management console.

E. Column description

- The description of the column is displayed when hovering the mouse cursor over the column.

F. Table setting

- Switching the show/hidden state of table items and set the section to be fixed when scrolling the table.
- Table setting can be performed in Display filter, List/Update, and Trace history.
- ※ The details of the function is described in “(7) Table setting”.

(2) List/Update

The list of the items that meets the search criteria is displayed.

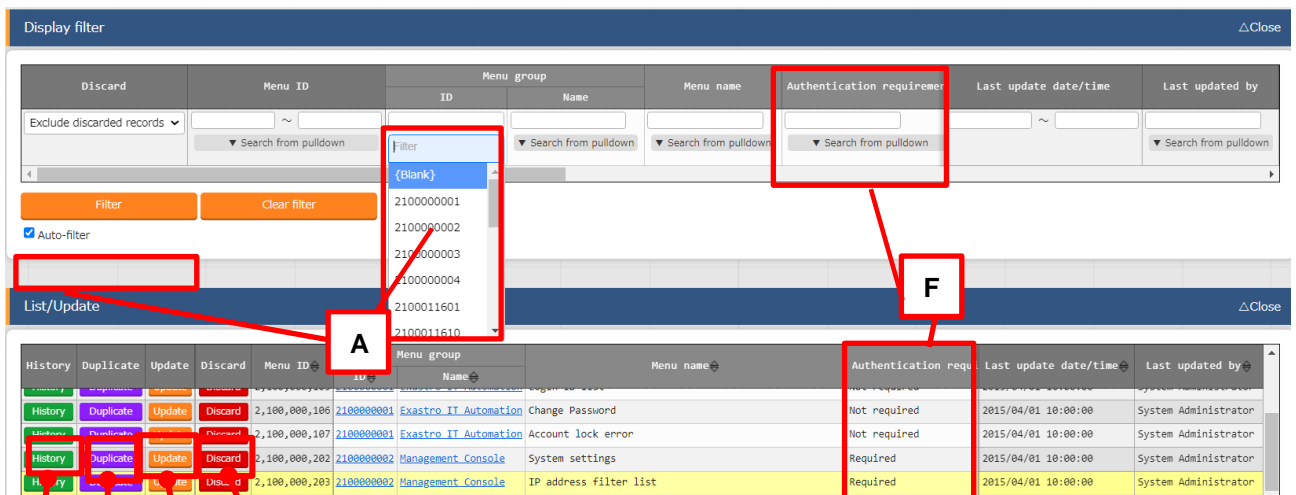


Figure 1.1-20 List/Update (List) screen

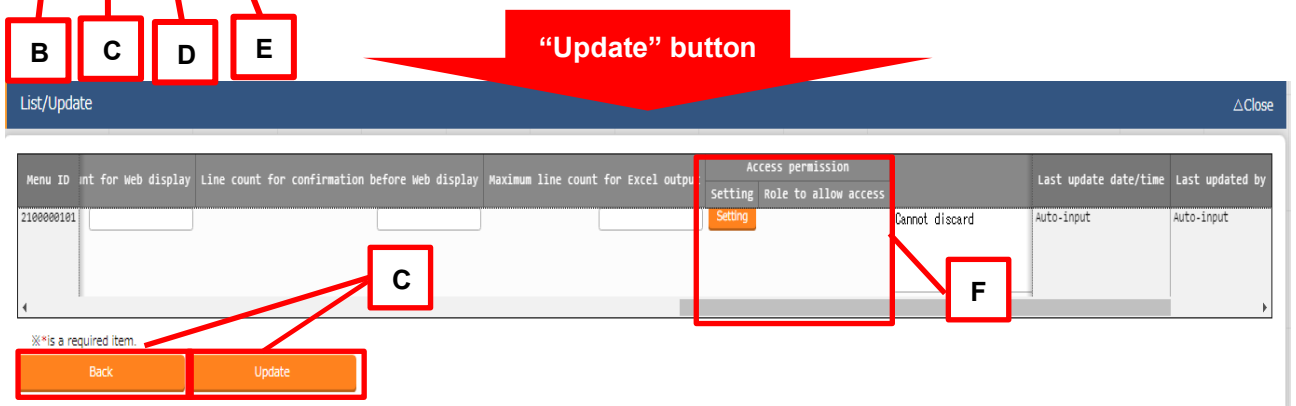


Figure 1.1-21 List/Update (Update) screen

A. Filter

- By entering the search criteria and pressing the Enter key or clicking the “Filter button”, the registered information will be displayed in “List/Update” submenu.

B. History

- Press the “History” button to move to the History screen and see the change history of the item.

C. Duplicate

- Press the “Duplicate” button to register an item with the same values as the target item.

D. Update

- Move to the update screen by clicking the “Update button” of each item.
- Update the information and click the “Update” button to finish update.

E. Discard

- Click the “Discard” button to move to the discard screen.
- Click the “Discard” button to disable the registered information.

※Disabled information can be restored.

Select “Only discarded records” to display the information. Click the “Restore” button, then the information will become available.

F. Access permission

For more information about access permission, please refer to “ITA_User_Instruction_Manual_Role-based Access Control”.

(3) Duplicate

Pressing the button will move the user to a register screen that contains the same values as the target item.

History	Duplicate	Update	Discard	Menu ID	Menu group		Menu name
					ID	Name	
History	Duplicate	Update	Discard	1	2100011610	Input	Gathered Facts

Register △Close

Menu ID	Menu group (ID: name)	Menu name	Authentication requirement	Last update date/time	Last updated by
Auto-Input	2100011610:Input	Gathered Facts	Required	Auto-Input	Auto-Input

※*is a required item.

Back

Register

Table setting

Figure 1.1- 22 Register screen (Duplicate)

Password items and access permission role items will not be duplicated.

History	Duplicate	Update	Discard	User ID	Login ID	Login Password	User name
History	Duplicate	Update	Discard	1	administrator	*****	System Administrator

User ID	Login ID*	Login Password*	User name*	Mail address	Last update date/time of password
Auto-input	administrator		System Administrat		Cannot input

Figure 1.1- 23 Register screen (Duplicate-Password item)

History	Duplicate	Update	Discard	User ID	Login ID	Login Password	User name	Authentication provider user ID	Access permission
History	Duplicate	Update	Discard	2	Testuser	*****	Test		System Administrator

User ID	ress	Last update date/time of password	Last login date/time	Password counter	Lock date/time	Access permission
Auto-input		Cannot input	Cannot input	Cannot input	Cannot input	Setting Role to allow access

Figure 1.1- 24 Register screen (Duplicate-Access permission role item)

The Substitute value list menu in the Ansible-Legacy menu group is similar where only items with its sensitive settings set to "OFF" can be duplicated.

Sensitive settings "OFF"

History	Duplicate	Update	Discard	Item No.	Movement	Host	Variable name	Sensitive setting	Specific value
History	Duplicate	Update	Discard	1	2:getSSL	1:targethost	1:VAR_ssl_name	OFF	test.crt

Item No.	Host*	Variable name*	Sensitive setting*	Specific value	Substitu	Last update date/time	Last updated by
Auto-input	1:targethost	1:VAR_ssl_name	OFF	test.crt		Auto-input	Auto-input

Sensitive settings “ON”

History	Duplicate	Update	Discard	Item No.	Movement	Host	Variable name	Sensitive setting	Specific value
History	Duplicate	Update	Discard	1	2:getSSL	1:targethost	1:VAR_ssl_name	ON	*****

Item No.	Host	Variable name	Sensitive setting	Specific value	Last update date/time	Last updated by
Auto-input	1:targethost	1:VAR_ssl_name	ON		Auto-input	Auto-input

Figure 1.1- 25 Register screen (Duplicate- Sensitive settings)

(4) Register

Register new items to each menu.

The registration content differs from each menu, so please refer to each user instruction manual.

Register

Start Registration

A

Register

Menu ID	filter check	Onload filter	Maximum line count for Web display	Line count for confirmation before Web display	Maximum line count for Excel output	Access permission	Last update date	Last updated by
Auto-Input						Setting		

B

Back

Register

A

Figure 1.1-21 Register (One at a time) screen

A. Register

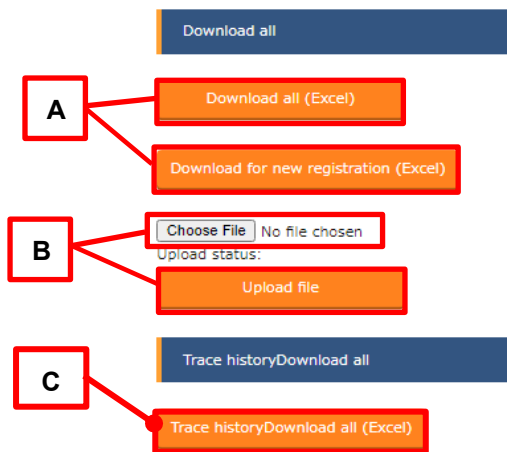
• Open the “Register” submenu and click the “Start Registration” button to display the registration form. Enter the required information then click the “Register” button.

B. Access permission

For more information about access permission, please refer to “ITA_User_Instruction_Manual_Role-based Access Control”.

(5) Download all and edit file uploads

The information register in each menu screen can be downloaded together at once in Excel format. In addition, registering information together at once with the file in same format is also possible.



	A	B	C	D	E	F	G	H
1	Notes		Execution process type	Discard	Menu D	Menu group (D: name)	Menu name	Authentication require
2	• : Required	Register		x	x	•	•	•
3	• : Optional	Update		x	x	•	•	•
4	x : Cannot edit	Discard		x	x	x	x	x
5		Restore		x	x	x	x	x
6	OK : Line break OK/ NG : No line break	Other notes	Select processing type.	NG	NG	NG	NG	NG
7				Discard flag. Cannot do operation other than restore. Must be blank when	Cannot edit because of auto- numbering .	Pull-down selection required item	Multiple lines of character string are not allowed, character count is 1 to 64 characters	Pull-down selection required
8			Execution process type	Discard	Menu	Menu group (D: name)	Menu name	Authentication require
9			-					
10			-					
11			-					
12			-					
13			-					
14			-					
15			-					
16			-					
17			-					
18			-					
19			-					

準備完了

Figure 1.1-21 Register(All in one)screen

A Download all, Download for new registration

- By clicking Download all, users can download the item list registered in each menu in excel format.
- By clicking “Download for new registration”, users can download the Excel sheet which is for new registrations corresponding to each menu.

B Upload file

- Edit the Excel file downloaded in Download all, Download for new registration of A, upload and register the information at once in here.
- Please click “Choose file” to specify the file and click “Upload file”.

C Trace history Download all (Excel)

- Press the “Trace history Download all (Excel)” button to download a list of all the items and their change history in the menu.

(6) Trace history

The change history of the item registered in each menu can be displayed here.

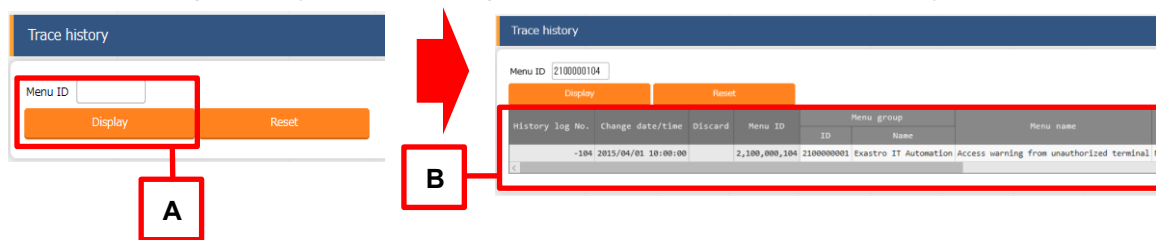


Figure 1.1-22 Trace history screen

- A. By specifying the primary key for each of the menus, users can display the change history of the corresponding items.
- B. The information is displayed in the order of latest update/time in list, and content changed from the previous time is displayed in blue bold characters.

➤ Change history for cases with Pulldown selections

If there has been a change to the reference source of the “Pulldown” selection, the referred value will also be automatically changed to reflect so.

The “Change history” will be updated when the value itself has been updated (registered, updated, abolished or restored).

The following section explains it further.

Example:

If the item, “ParamB” in the parameter sheet, “Param001” references the item, “Master”, in the “Master001” parameter sheet.

✖ In the section below, the following parameter sheets/ data sheets have been created in advance.

Data sheet “Master001”

The screenshot shows the 'Menu create' (メニュー作成) interface. On the left, the 'Master' (マスタ) configuration panel is visible, showing a dropdown menu for 'Text (Single Line)' (文字列(単一行)) and a 'Maximum Byte Count' (最大バイト数) of 124. The 'Initial Value' (初期値) is set to 'Required' (必須) and 'One-time Restriction' (一意制約). The 'Menu create information' (メニュー作成情報) panel on the right shows the 'Menu Name' (メニュー名) as 'Master001', 'Creation Target' (作成対象) as 'Data Sheet' (データシート), 'Display Order' (表示順序) as 1, 'Last Updated Time' (最終更新日時) as 2021-11-19 17:56:51, and 'Last Updated By' (最終更新者) as 'System Administrator' (システム管理者).

Figure 1.1-4 Data sheet created in the "Menu create" menu.

Parameter sheet, “Param001”

The screenshot shows the 'Menu create' (メニュー作成) interface. On the left, the 'Param001' configuration panel is visible, showing a dropdown menu for 'Text (Single Line)' (文字列(単一行)) and a 'Maximum Byte Count' (最大バイト数) of 124. The 'Initial Value' (初期値) is set to 'Optional' (任意) and 'One-time Restriction' (一意制約). The 'Menu create information' (メニュー作成情報) panel on the right shows the 'Menu Name' (メニュー名) as 'Param001', 'Creation Target' (作成対象) as 'Parameter Sheet (Operation Available)' (パラメータシート (オペレーションあり)), 'Display Order' (表示順序) as 1, 'Last Updated Time' (最終更新日時) as 2021-11-19 17:57:44, and 'Last Updated By' (最終更新者) as 'System Administrator' (システム管理者).

Figure 1.1-5 Parameter sheet created in the "Menu create" menu.

Do as following:

- ① Register a value called “mas1-1” to “Master001”.



Figure 1.1- 6 _Data sheet: "Master001"

② Register 1 item to "Param001"

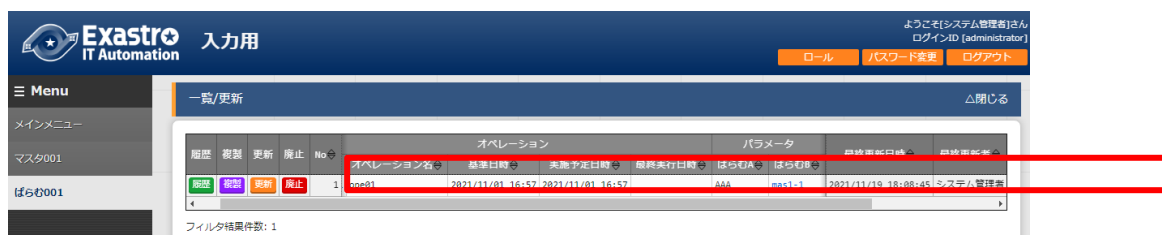


Figure 1.1- 7 _Parameter sheet"Param001"

③ Update "Param001" ※Press the "Update" button.



Figure 1.1- 8 _Parameter sheet"Param001"

④ Change the "Master001" value to "mas1-2"



Figure 1.1- 9 _Data sheet"Master001"

⑤ Change the "Master001" value to "mas1-3
(No figure)

⑥ Update "Param001" ※Press the "Update" button.

(No figure)

⑦ Change the "Master001" value to "mas1-4"

(No figure)

⑧ Change the "Master001" value to "mas1-5"

(No figure)

⑨ Update "Param001" ※Press the "Update" button.

(No figure)

Result:

"Master001"'s change history

履歴番号	変更日時	廃止	No	マスタ	アクセス権	アクセス許可	最終更新日時	最終更新者
5	2021/11/19 18:18:54		1	mas1-5			2021/11/19 18:18:54	システム管理者
4	2021/11/19 18:18:16		1	mas1-4			2021/11/19 18:18:16	システム管理者
3	2021/11/19 18:15:55		1	mas1-3			2021/11/19 18:15:55	システム管理者
2	2021/11/19 18:11:05		1	mas1-2			2021/11/19 18:11:05	システム管理者
1	2021/11/19 18:07:22		1	mas1-1			2021/11/19 18:07:22	システム管理者

Figure 1.1- 10 Data sheet"Master001"'s change history

"Param001"'s change history

履歴	更新	廃止	No	ID	オペレーション名	基準日時	実施予定日時	最終実行日時	パラメータ	最終更新日時
4	2021/11/19 18:22:11		1	1	ope01	2021/11/01 16:57	2021/11/01 16:57		AAA mas1-5	2021/11/19 18:22:11
3	2021/11/19 18:18:01		1	1	ope01	2021/11/01 16:57	2021/11/01 16:57		AAA mas1-3	2021/11/19 18:18:01
2	2021/11/19 18:10:19		1	1	ope01	2021/11/01 16:57	2021/11/01 16:57		AAA mas1-1	2021/11/19 18:10:19
1	2021/11/19 18:08:45		1	1	ope01	2021/11/01 16:57	2021/11/01 16:57		AAA mas1-1	2021/11/19 18:08:45

The "Change history" displays only values when they have been edited (updated), so "mas1-2" and "mas1-4" will not be displayed in the change history.

Figure 1.1- 11Parameter sheet "Param001"'s change history

(7) Input items from Pulldown selections.

The specification of the item that can be selected from pull-down menu during registration/update is as follows.

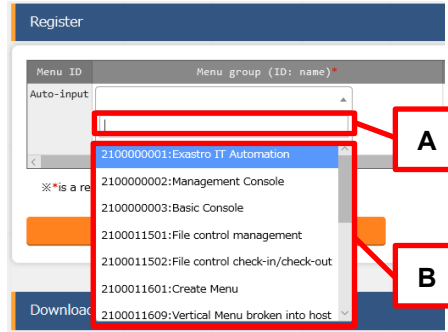


Figure 1.1-23 Entering item via pull-down menu

A. Search windows is displayed. Users can narrow down items by entering the phrases that they want to search for. The search is partial match search, uppercase/lowercase and full-width/half-width characters are case-insensitive.

B. The item for selection are displayed.

(8) Table setting

- Switching the show/hidden state of table items and set the section to be fixed when scrolling the table.
- Table setting can be performed in Display filter, List/Update, and Trace history submenu.
- Since settings of table are saved in the local storage of web browser, settings are based on each web browser.

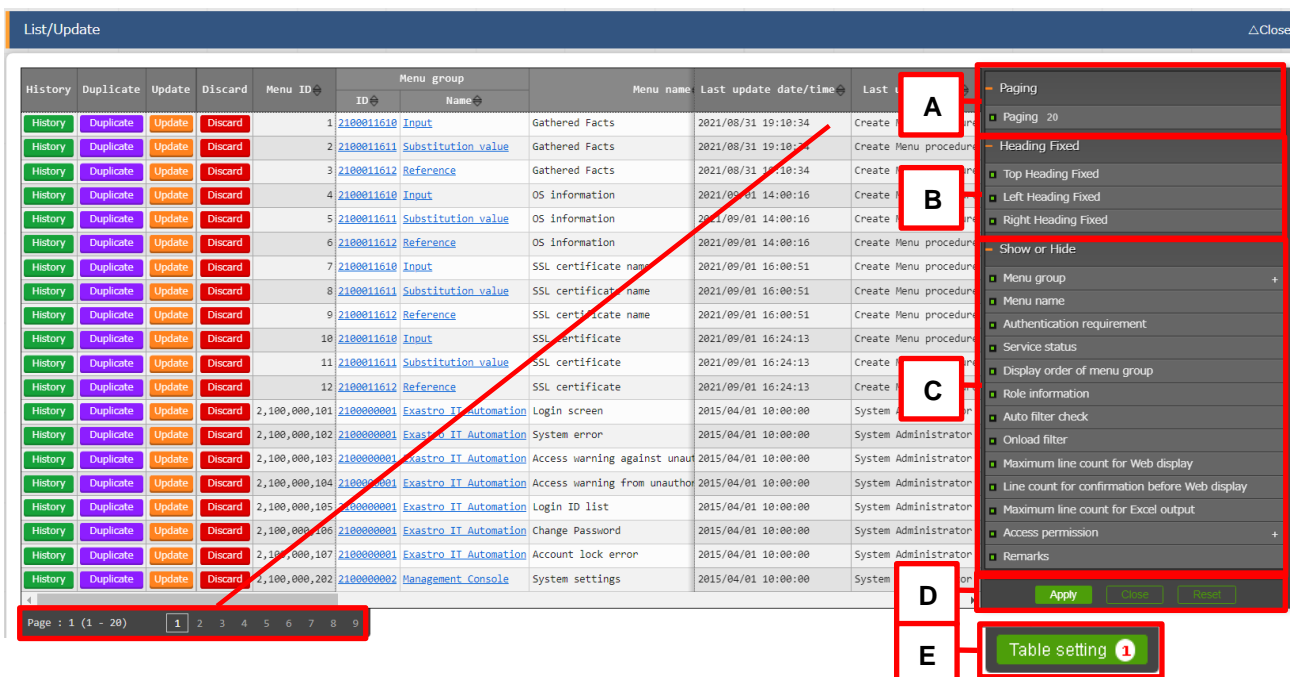


Figure 1.1-25 Display of table setting menu (List/Update)

- A. Paging
 - The paging function will display on the bottom of List if selected.
 - It is possible to change the max display count in single page by changing the value.
 - B. Heading Fixed
 - Set the fixed part when scrolling the table.
 - All heading are set to fixed on default.
 - The description of each heading are as bellows.
 - Top Heading Fixed • • • The item name on the top of table.
 - Left Heading Fixed • • • "Update", "Discard", and unique items(e.g. Menu ID in "Menu list" menu) on the left of the table.
 - Right Heading Fixed • • • "Last update date/time" and "Last updated by" column on the right of table.
 - C. Show or Hide
 - Set the show/hidden state of the selected item.
 - All items are set to be displayed on default.
 - D. Button
 - The setting execution button and menu.
 - The state of the selected/unselected items will be reflected to the setting when clicking the Apply button.
 - The table setting menu will close when clicking the Close button.
 - All selected/unselected items will return to the default state when clicking the Reset button.
 - E. Display of the hidden item count.
 - The number of the hidden items in "Show or Hide" is displayed.
 - The number will not display if all items are displayed.
- (9) Fixed header setting
- Users can fix and un-unfixed the header by pressing the icon on the left in the footer.

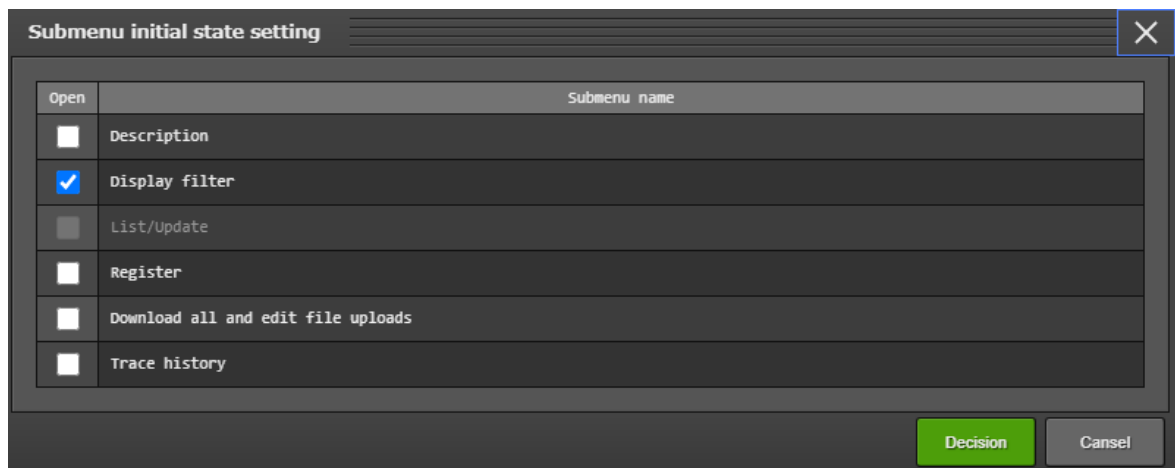


Figure 1.1-28 Sub menu initial state setting screen

(11) System settings

Register/Update/Discard information that should be set when installing or operating the ITA system.

[Note]

The "System settings" in the submenu is a menu for the product support, so please don't use the menu.

If the setting is changed, the behavior of ITA is not guaranteed.

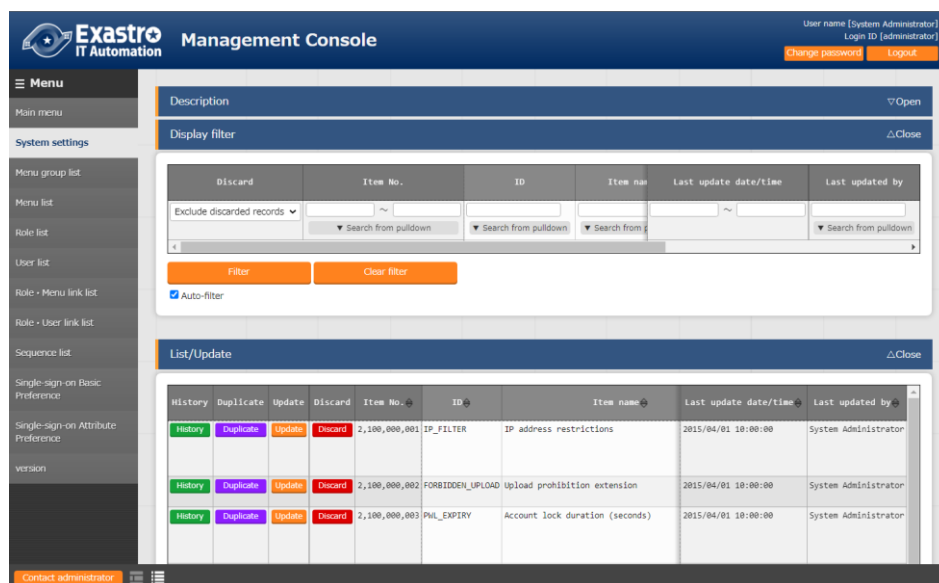


Figure 1.1-29 System Settings Screen

① IP address restrictions

Allows users activate and deactivate access through IP address.

Leave the setting value blank if you want it deactivated. Input "1" if you want it to be activated.

If activated, users can edit the white list in the "IP address filter list" menu.

- ② Upload prohibition extension
Allows users to prohibit file extensions for file uploads.
※Separate multiple file extensions with semicolons.
※Increasing the amount of allowed file extensions might lead to a security hole.
- ③ Account lock duration (seconds)
Allows users to set the amount of time (seconds) accounts are locked.
Valid number (integers only): Amount of time (seconds) the account will be locked
0(zero): No lock
Negative number: Locked accounts will be locked forever.
- ④ Password error threshold (frequency)
Allows users to set the frequency of incorrect password inputs before the account is locked.
Valid number (integers only): frequency of incorrect passwords before lock
0 (zero): Not configurable
Negative number (integers only): Turns off the account lock function (accounts cannot be locked)
- ⑤ Password error count upper limit (times)
Allows users to set the maximum amount of incorrect password inputs allowed.
Any incorrect password inputs when the number of incorrect password inputs exceeds the set Password error threshold (frequency) value will be added to the amount of incorrect password inputs.
※Exceeding the set number will not lock the account.
Valid number(integer only): Sets the max amount of incorrect password inputs.
Zero or lower: Incorrect password inputs will not be counted.
- ⑥ Password re-registration prevention period (days)
Allows users set the amount of days passed before previously used password can be registered again.
Valid numbers(integer): Sets the amount of days the same password cannot be registered.
Zero or lower: Deactivates the function and lets users register previously set passwords.
- ⑦ Password validity period (days)
Allows users to set the validity period (days) for passwords.
Valid numbers(integer): Makes the user change password on the first login after the set number of days.
Zero or lower: No validity period. Passwords will be valid forever.
- ⑧ Authentication duration : Not operated (seconds)
Allows users to set the maximum amount of seconds before the session runs out when there is no user input.
Valid number(integer): Sets the amount of seconds before session runs out when no user input.
(※Make sure to set a value lower than the value specified in the php.ini file's session.gc_maxlifetime section)
Zero or lower: Not configurable
Negative numbers, non-integer values: 3600

- ⑨ Authentication duration : Maximum period (seconds)
 Allows users to set the maximum amount of seconds before the session runs out, regardless of user input.
 Valid number(integer): Sets the amount of seconds before session runs out.
 (※Make sure to set a value lower than the value specified in the php.ini file's session.gc_maxlifetime section)
 Zero or lower: Not configurable
 Negative numbers, non-integer values: 3600
- ⑩ Screen design selection
 By changing the setting value of the item "Screen design selection" to desired value, users can change the screen design of ITA for each system.
 Available setting values and their corresponding screen design is as follows.

Table 1.1-6 Design list

Setting value	Screen design
default	Default design based on blue.
red	A design based on red.
green	A design based on green.
blue	A design based on blue.
orange	A design based on orange.
yellow	A design based on yellow.
purple	A design based on purple.
brown	A design based on brown.
gray	A design based on gray.
cool	A design based on cool colors.
cute	A design based on pink.
natural	A design based on "Nature"
gorgeous	A "gorgeous" design based on black and red.
oase	A design based on Exastro OASE
epoch	A Design based on Exastro EPOCH
darkmode	A dark design that fits night.

※Setting value can be changed only by inputting exactly matched values.
 default will be set if setting value is not entered or the entry is wrong.

【Change screen design】

- Click the "Update" button of item "Screen design selection" in "List/update".
 - Enter the setting value corresponding to the screen design to change in "Setting value" column then click update.
- ※There is no guarantee that ITA will function properly if the ID is changed.

List/Update
Close

Item No.	Setting value	Remarks	Last update date/time	Last updated by
2100000010	default	Screen design settings The screen design can be changed by specifying to one of the following keys. If there is no input or the setting value is incorrect, it is automatically selected by default. default(initial design based on blue)	Auto-input	Auto-input

※* is a required item.

Back
Update

Figure 1.1-30 System settings screen (Screen design selection)

- ⑪ Symphony / Conductor Interval time
Time before the Symphony/Conductor, registered in the "Regularly execution" menu, changes status to "Not yet executed".
(Default value is 3 minutes)

Value	Value reflected in system
1~525600	Configured value (minutes)
Any other value	3 (minutes)

Figure 1.1- 31 System settings screen (Symphony / Conductor interval time)

(12) Menu group list

Menu (child) belongs to menu group (parent). Perform register/update/discard in this parent menu group screen. Menu group names must be **unique**.

1) Checking the menu group's Menu.

Users can check the functions menu information from the "List/Update" sub-menu.

The screenshot shows the Exastro Management Console interface. The sidebar on the left contains a 'Menu' section with options: Main menu, System settings, Menu group list, Menu list, Role list, User list, Role + Menu link list, Role + User link list, Sequence list, Single-sign-on Basic Preference, Single-sign-on Attribute Preference, and version. The main content area is titled 'Menu group list' and shows a table of menu groups. The table has columns: History, Duplicate, Update, Discard, Menu group ID, Menu group name, Image for panel, Menu information, Role, Last update date/time, and Last updated by. The 'Menu information' column is highlighted with a red box. The table lists various menu groups, including 'Exastro IT Automation', 'Management Console', 'Basic Console', 'Export/Import', 'Create Menu', 'Vertical Menu broken into host', 'Input', 'Substitution value', 'Reference', 'Vertical conversion', 'HostGroup management', 'Ansible Common', 'Ansible-Legacy', 'Ansible-Pioneer', 'Ansible-LegacyRole', 'Cobbler', and 'Terraform'.

Figure 1.1-36 Menu group list screen

2) Moving to the Menu list

Clicking either the Menu ID or the Menu name URL will move the user to the target Menu list.

The screenshot shows the 'Menu information' screen. It has a header 'Menu information' and two main sections. The first section, 'Menu group information', contains a table with columns: Discard, Menu group ID, Menu group name, Remarks, Last update date/time, and Last updated by. The second section, 'Menu information', contains a table with columns: No., Display order of menu group, Menu ID, Menu name, and Authentication requirement. The 'Menu ID' column in the second table is highlighted with a red box. The table lists menu items with their IDs and names, such as '2100000101 Login screen', '2100000102 System error', '2100000103 Access warning against unauthorized operations', '2100000104 Access warning from unauthorized terminal', '2100000105 Login ID list', '2100000106 Change Password', and '2100000107 Account lock error'.

Figure 1.1-37 Menu information screen (Menu list)

The operation for each submenu is explained here. The operation in other menu is the same.
[For performing data update operations, please log in as system administrator.](#)

(Update/discard of registered content - update/discard/restore one data at a time)

The operation for updating/discarding/restoring the menu group one by one.

- ① Display the registered information in the "List/Update" submenu.
 After entering the search criteria in "Display filter", press the Enter key or click the "Filter" button.

After entering the search criteria in "Display filter", press the Enter key or click the "Filter" button.

- 1) Update the registered content -Click the "Update" button to enter Edit mode
- 2) Disable the item -Click the "Discard" button
- 3) Enable the disabled (discarded) item -Click the "Restore" button

- ② Click "OK" or "Cancel" when the operation checking pop-up screen display.

(Register - Register items one by one)

The operation for registering menu group one by one.

- ① Open the "Register" sub menu and click the "Start Registration" button to display the register form.
- ② Enter the "Menu group name" column and click the "Register" button.

※ Duplicate menu group names cannot be registered.

※ "Display order" is optional but the menu group will not be displayed in the main menu if left blank.

※ Menu groups are displayed in ascending order of "Display order". If the "Display order" is same, the menu groups are display in ascending order of "Menu group ID"

※ "Remarks" is optional.

Figure 1.1-38 menu group list screen (Register)

(Update/discard of registered content - update/discard items all together)

The operation for registering multiple menu groups at once.

- ① Open the "Download all and edit file uploads" sub menu and download the registration sheet by clicking the "Download for new registration (Excel) button."
- ② Enter the following items and save the file.

Execution process type	= select register/update/discard/restore
· Menu group name	= updated name

- Display order = updated content
 - Remarks = updated content
- ③ Press the “choose file” button to assign the file in ② and press "Upload file" to upload the file.
- ※ If "Execution process type" is not selected or the correct process type is not selected, registration will not be executed.

(Register - Register items all together)

The operation for registering multiple menu groups at once.

- ① Open the "Download all and edit file uploads" sub menu and download the registration sheet by clicking the "Download for new registration (Excel) button.
- ② Enter the following items and save the file.
 - Execution process type = register
 - Menu group name = The name of new menu group name to register
 - Display order = the display order of menu group

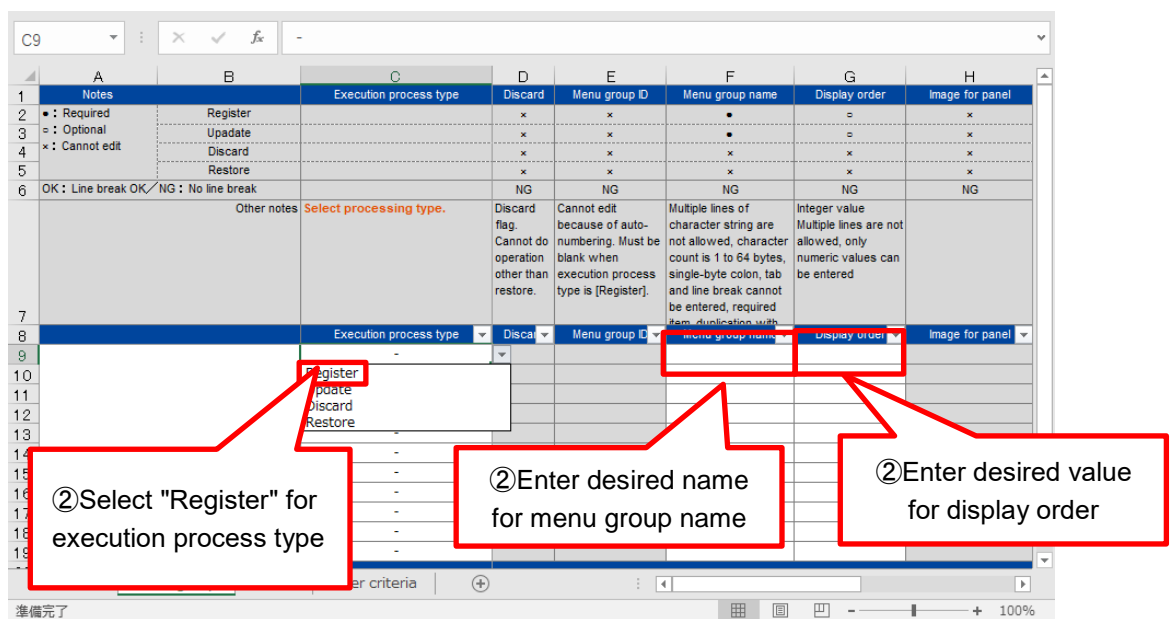


Figure 1.1-39 Menu group list screen

- ③ Press the “choose file” button to assign the file in ② and press "Upload file" to upload the file.

※ If "Execution process type" is other than "register", registration will not be executed.

※ When a menu group is registered, the “Main Menu” is automatically registered under the created menu group and the menu group can be referenced by users of the “System Administrator” role.

In particular, the following menu will be registered automatically.

- "Menu list" menu
- "Role/Menu link list" menu"

Panel Image)

“Image for panel” can be set into the “Register” submenu.

※ **Only PNG files** can be used for “Image for panel”. IPF files*¹ cannot be used.

Figure 1.1-35 Panel Images

Users can create image for panels in the “Panel image editor” submenu.

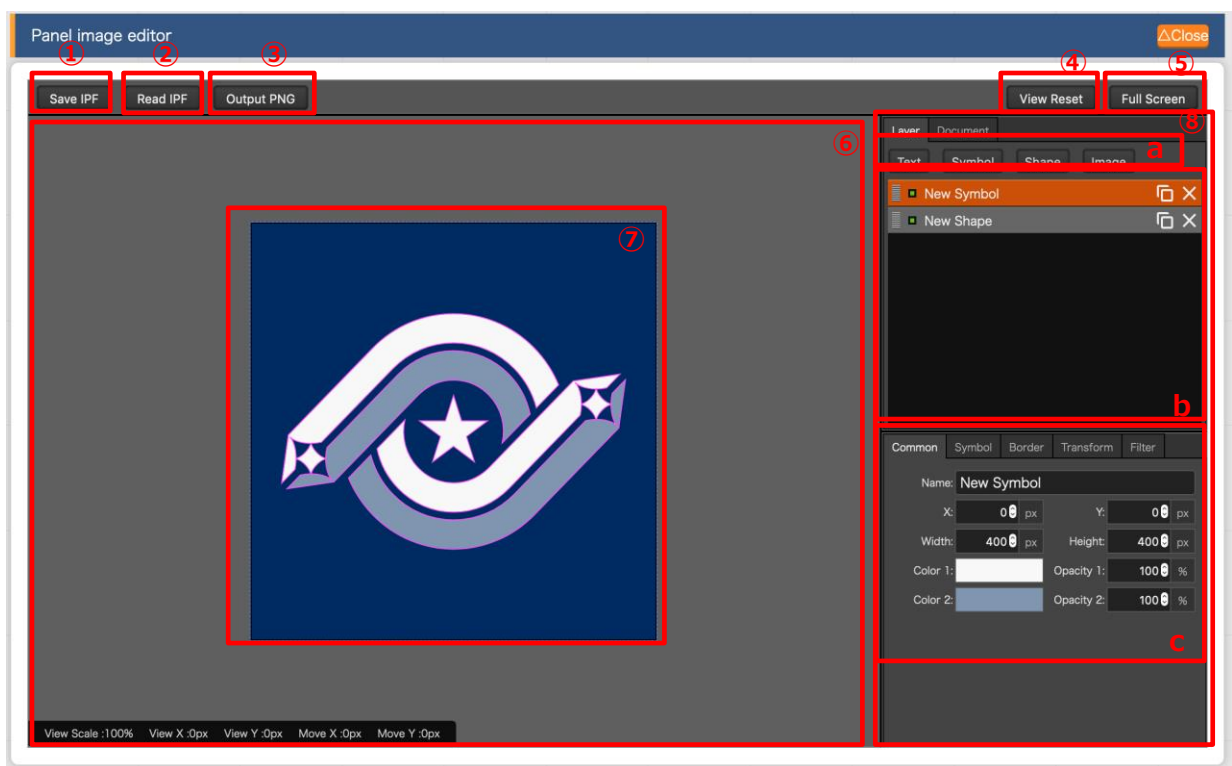


Figure 1.1-40 Panel image editor screen

【Notes】

“Panel image editor” does not support Internet Explorer

*¹ A original file extension that can be edited and saved in “Panel image editor”.

- ① “Save IPF” button
Save the edited panel image data as a IPF compressed file.
- ⑫ “Read IPF” button
Read the IPF file to canvas.
※ Users can continue editing from the state saved by “Save IPF” button.
- ⑬ “Output PNG” button
Save the panel image in the art board area edited on the canvas as PNG file.
※Editing can’t be continued.
- ⑭ “View Reset” button
Reset the position of canvas to default state.
- ⑮ “Full Screen” button
Display the editor in full screen.
- ⑯ Canvas
Users can move the position by drag and drop using right click.
- ⑰ Art board
The area that will be output to PNG file.
- ⑱ Detail setting function of panel image.
 - “Layer” tab
 - a. Users can add various layers.
 - “Text”button : Single line text
 - “Symbol”button : Icon
 - “Shape”button : Basic shapes
 - “Image”button : Image
 - b. Select the edit target and perform the following operations from the left side of the icon.
 - Swap order : Change the order of layer by drag and drop.
 - Display/hidden : Click the icon the hide/display layer.
 - Copy : Copy the selected layer.
 - Delete : Delete the selected layer.
 - c. The following setting can be applied to the various added layers.
 - ※ Items that can be edited are different for each layer.
 - “Common” tab : Common/main item. Users can change the color and the size
 - “IME” tab : (In the case that the layer is “text”) IME function can be used.
 - “Symbol” tab : (In the case that the layer is “Symbol”) Users can change the symbol.
 - “Shape” tab : (In the case that the layer is “Shape”) Users can change the shape.
 - “Border” tab : The details of border can be set.
 - “Transform” tab : The details of size and angle can be set.
 - “Filter” tab : The details of various filter/effect can be set.
※Not supported for Edge so is not displayed.
- D. “Document” tab
Users can set the name of the created panel image as desired.

(13) Menu list

Register/update/discard of function contents is operated in this screen. The menu name must be **unique**.

- ① Check the role information / content file according to the menu.
Check the correspondence between role information and content files of function from the "list/update" submenu
- ② Checking the Role information.
Users can check the function's role information from the "List/Update" sub-menu.

History	Duplicate	Update	Discard	Menu ID	Menu group	Menu name	Role information	Auto filter	Last update date/time	Last updated by
History	Duplicate	Update	Discard	1	2100011610 Input	Gathered Facts	Role information	Yes	2021/08/31 19:10:34	Create Menu procedure
History	Duplicate	Update	Discard	2	2100011611 Substitution value	Gathered Facts	Role information	Yes	2021/08/31 19:10:34	Create Menu procedure
History	Duplicate	Update	Discard	3	2100011612 Reference	Gathered Facts	Role information	Yes	2021/08/31 19:10:34	Create Menu procedure
History	Duplicate	Update	Discard	4	2100011610 Input	OS Information	Role information	Yes	2021/09/01 14:00:16	Create Menu procedure
History	Duplicate	Update	Discard	5	2100011611 Substitution value	OS Information	Role information	Yes	2021/09/01 14:00:16	Create Menu procedure
History	Duplicate	Update	Discard	6	2100011612 Reference	OS Information	Role information	Yes	2021/09/01 14:00:16	Create Menu procedure
History	Duplicate	Update	Discard	7	2100011610 Input	SSL certificate name	Role information	Yes	2021/09/01 16:00:51	Create Menu procedure
History	Duplicate	Update	Discard	8	2100011611 Substitution value	SSL certificate name	Role information	Yes	2021/09/01 16:00:51	Create Menu procedure
History	Duplicate	Update	Discard	9	2100011612 Reference	SSL certificate name	Role information	Yes	2021/09/01 16:00:51	Create Menu procedure
History	Duplicate	Update	Discard	10	2100011610 Input	SSL certificate	Role information	Yes	2021/09/01 16:24:13	Create Menu procedure
History	Duplicate	Update	Discard	11	2100011611 Substitution value	SSL certificate	Role information	Yes	2021/09/01 16:24:13	Create Menu procedure
History	Duplicate	Update	Discard	12	2100011612 Reference	SSL certificate	Role information	Yes	2021/09/01 16:24:13	Create Menu procedure
History	Duplicate	Update	Discard	2,100,000,101	2100000001 Exastro IT Automation	Login screen	Role information	No	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,102	2100000001 Exastro IT Automation	System error	Role information	No	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,103	2100000001 Exastro IT Automation	Access warning against unauthorized operations	Role information	No	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,104	2100000001 Exastro IT Automation	Access warning from unauthorized terminal	Role information	No	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,105	2100000001 Exastro IT Automation	Login ID list	Role information	No	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,106	2100000001 Exastro IT Automation	Change Password	Role information	No	2015/04/01 10:00:00	System Administrator

Figure 1.1-37 Menu list

③ Moving to the Role list.

Clicking either the Role ID or the Role name URL will move the user to the target Role list.

Discard	Menu ID	Menu group	Menu name	Authentication requirement	Display order of menu group	Remarks	Last update date/time	Last updated by
	5	2100011611 Substitution value	Test Parameter	Required		2	2021/05/12 10:50:46	Create Menu procedure

Role ID	Access rights	Role name
1	View only	System Administrator

Figure 1.1-38 Role information screen (menu list)

④Parameter

Information registered in the menu includes the following items.

Authentication requirement*	Service status*	Display order of menu group*	Auto filter check*	Onload filter*
<input type="text"/> ①	<input type="text"/> ②	<input type="text"/> ③	<input type="text"/> ④	<input type="text"/> ⑤
Maximum line count for Web display		Line count for confirmation before Web display		Maximum line count for Excel output
<input type="text"/> ⑥		<input type="text"/> ⑦		<input type="text"/> ⑧

Figure 1.1-37 Menu register screen (menu list)

Table 1.1-3 parameter of "menu list"

	Item name	Description
1	Authentication requirement	Not required: Accessible without login
		Required: Accessible only after login
2	Service status	Service available: Active state. Normal user can access.
		Menu under development: Only system manager can access.
3	Display order in menu group	The order of submenu displaying in the menu group. Submenu displays in ascending order from the top.
4	Auto filter check	The setting whether the "auto filter" checkbox being checked or not when the menu displays.
5	Onload filter	The setting of whether the "filter" button is pressed or not when the menu displays.
6	Maximum line count for Web display	The maximum number of lines to display in "list/update"
7	Line count for confirmation before Web display	The maximum number of lines to display in the confirmation dialog before outputting to "list/update".
8	Maximum line count for Excel output	The maximum number of lines to output to Excel.

Figure 1.1-37 Menu register screen (menu list)

The relationship between "Maximum line count for Web display" and "Line count for confirmation before Web display" is as below.

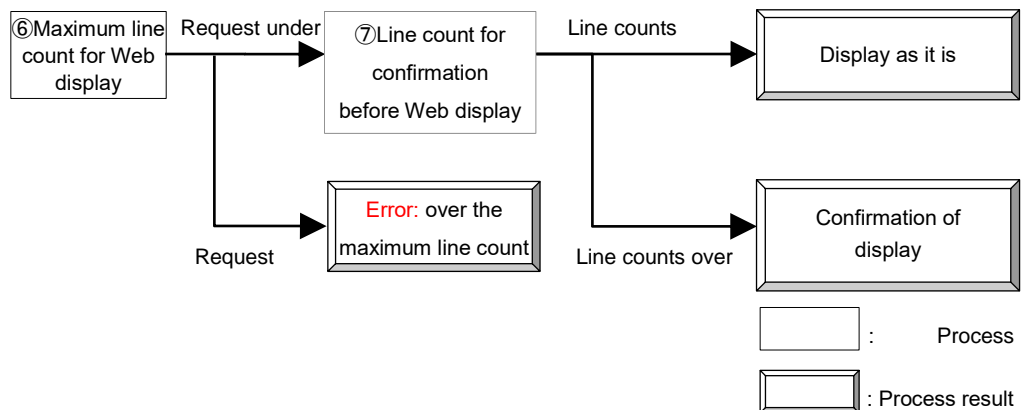


Figure 1.1-40 Overview of maximum web display line count operation

If the line count of output file is larger than "Maximum line count for Excel output", the display of items in "Download all and edit file uploads" will become as below.



Figure 1.1-41 Error display screen (Menu list)

Files that can be downloaded from this screen are not Excel files but CSV files in original format. When users want to edit and upload using this file, please click the "Original format editing Excel creation tool" button to download the tool. Please read the "Readme" file for information regarding how to operate the file.

The "Trace history Download all" button allows users to download a file that includes the change history for all the items. It is a file that is used for users to confirm the change history only and cannot be changed to then be uploaded to ITA.

(14) Role list

Register/update/discard roles.

The role can only check the user it owns and the menu that associates with it.

Role names must be **unique**.

The 3 roles, "System administrator", "SSO default role" and "OASE action" are registered by default when installing ITA.

- The "System administrator" is linked to the "Administrator" user.
- The "SSO default role" is used for Single sign on. For more information, please see "Exastro-ITA_User_Instruction_Manual_Role-based_access_control_for_data_records"
- The "OASE action" role is used for Exastro Operation Autonomy Support Engine (OASE). For more information, please refer to the OASE Manuals

① Checking the Role's User information

Users can check the function's User information from the "List/Update" sub-menu.

② Checking the Role's Menu information.

Users can check the function's Menu information from the "List/Update" sub-menu.

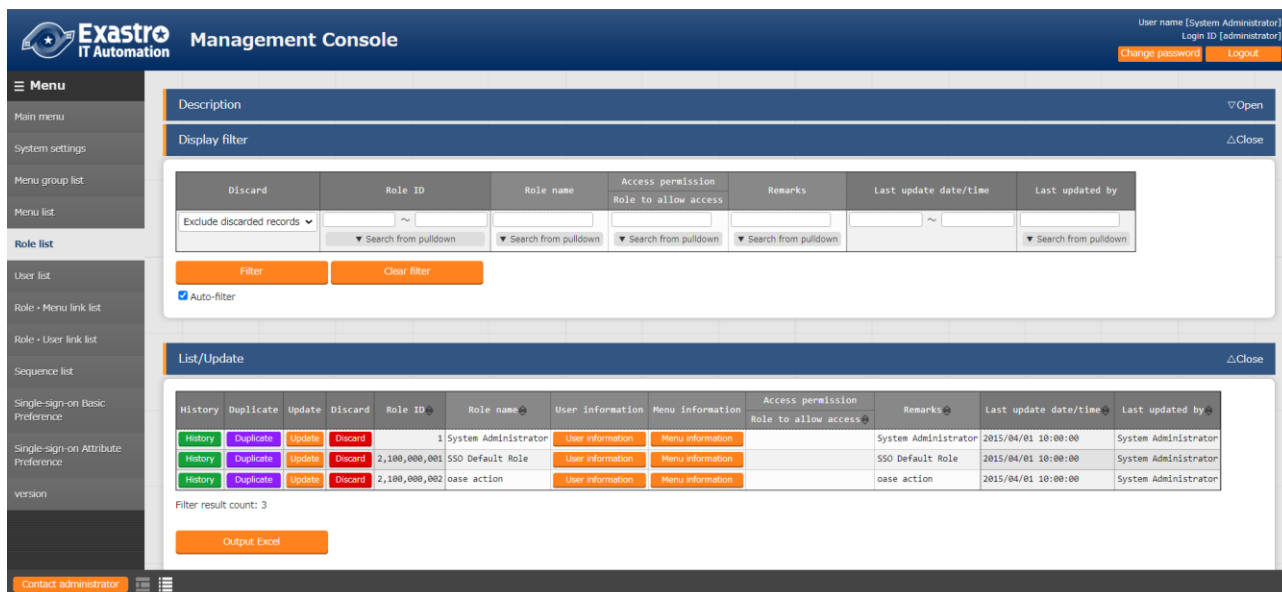


Figure 1.1-42 Role list screen

- ① Moving to the User list
Clicking either the User ID or the Login ID URL will move the user to the target user list.

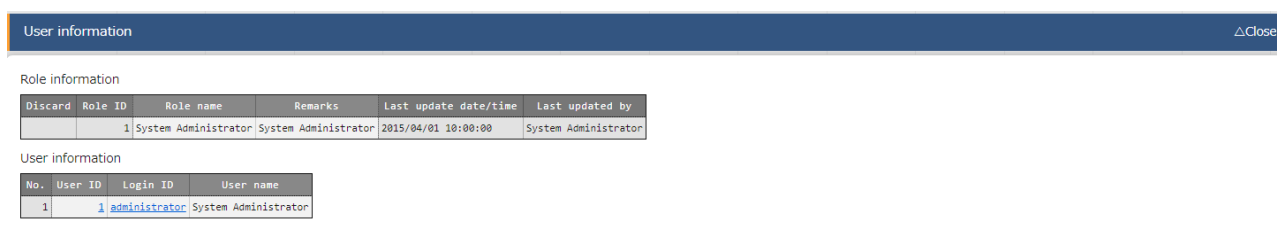


Figure 1.1- 12 User Information sub-menu(Role list)

- ② Moving to the Menu group list
Clicking either the Menu group Id or the Menu group name URL will move the user to the target menu group list.
- ③ Moving to the Menu list.

Clicking either the Menu ID or the Menu name URL will move the user to the target menu list.

Menu information

△Close

Role information

Discard	Role ID	Role name	Remarks	Last update date/time	Last updated by
	1	System Administrator	System Administrator	2021/04/12 14:15:21	System Administrator

Menu information

No.	Menu group ID	Menu group name	Display order of menu group	Menu ID	Menu name	Authentication requirement	Role information
1	2100000002	Management Console		2 2100000202	System settings	Required	Can perform maintenance
2	2100000002	Management Console		4 2100000204	Menu group list	Required	Can perform maintenance
3	2100000002	Management Console		5 2100000205	Menu list	Required	Can perform maintenance
4	2100000002	Management Console		7 2100000207	Role list	Required	Can perform maintenance
5	2100000002	Management Console		8 2100000208	User list	Required	Can perform maintenance
6	2100000002	Management Console		9 2100000209	Role - Menu link list	Required	Can perform maintenance
7	2100000002	Management Console		10 2100000210	Role - User link list	Required	Can perform maintenance
8	2100000002	Management Console		16 2100000216	Sequence list	Required	Can perform maintenance
9	2100000002	Management Console		31 2100000231	Single-sign-on Basic Preference	Required	Can perform maintenance
10	2100000002	Management Console		32 2100000232	Single-sign-on Attribute Preference	Required	Can perform maintenance
11	2100000002	Management Console		50 2100000299	version	Required	Can perform maintenance
12	2100000003	Basic Console		20 2100000303	Device list	Required	Can perform maintenance
13	2100000003	Basic Console		40 2100000304	Operation list	Required	Can perform maintenance
14	2100000003	Basic Console		50 2100000305	Movement list	Required	View only
15	2100000003	Basic Console		60 2100000326	ER Diagram	Required	Can perform maintenance
16	2100000003	Basic Console		70 2100000327	ER Diagram Menu List	Required	Can perform maintenance
17	2100000003	Basic Console		80 2100000328	ER Diagram Item List	Required	Can perform maintenance
18	2100000004	Export/Import		10 2100000211	Export menu	Required	View only
19	2100000004	Export/Import		20 2100000212	Import menu	Required	View only
20	2100000004	Export/Import		30 2100000213	Export - Import menu list	Required	View only

Figure 1.1- 13 Menu information screen (Role list)

(15) User list

Register/update/Discard user (account).

Maintain the association between user and the role (operate permission) by pressing the "Role information" button.

If account is locked, unlock it in this screen.

Login ID must be **unique**.

Figure 1.1-46 Screen of transiting to role setting screen (User List)

(16) Role/Menu link list

Register/update/discard the link between each role and menu.

Menu screens that doesn't associate with the role will not be displayed in the role's user group.

① Moving to the Role list

Clicking either the Role ID or the role name URL will move the user to the target role list.

② Moving to the Menu group list

Clicking either the Menu group ID or the Menu group name URL will move the user to the target Menu group list.

③ Moving to the Menu list

Clicking either the Menu ID or the Menu name URL will move the user to the target Menu list.

Exastro
IT Automation

Management Console

User name [System Administrator]
Login ID [administrator]

[Change password](#) [Logout](#)

Menu

[Main menu](#)

[System settings](#)

[Menu group list](#)

[Menu list](#)

[Role list](#)

[User list](#)

[Role - Menu link list](#)

[Role - User link list](#)

[Sequence list](#)

[Single sign-on Basic Preference](#)

[Single sign-on Attribute Preference](#)

[Version](#)

Description

Open

Display filter

Open

List/Update

Close

History	Duplicate	Update	Discard	Item No.	ID	Role	ID	Menu group	ID	Menu	Last update date/time	Last updated by
						Name		Name		Name		
History	Duplicate	Update	Discard	1	1	System Administrator	2100001610	Inout	1	Gathered Facts	2021/08/31 19:10:34	Create Menu procedure
History	Duplicate	Update	Discard	2	2	System Administrator	2100001610	Reference	2	Gathered Facts	2021/08/31 19:10:34	Create Menu procedure
History	Duplicate	Update	Discard	3	3	System Administrator	2100001612	Reference	3	Gathered Facts	2021/08/31 19:10:34	Create Menu procedure
History	Duplicate	Update	Discard	4	4	System Administrator	2100001610	Inout	4	OS information	2021/09/01 14:00:16	Create Menu procedure
History	Duplicate	Update	Discard	5	5	System Administrator	2100001611	Substitution value	5	OS information	2021/09/01 14:00:16	Create Menu procedure
History	Duplicate	Update	Discard	6	6	System Administrator	2100001612	Reference	6	OS information	2021/09/01 14:00:16	Create Menu procedure
History	Duplicate	Update	Discard	7	7	System Administrator	2100001610	Inout	7	SSL certificate name	2021/09/01 16:00:51	Create Menu procedure
History	Duplicate	Update	Discard	8	8	System Administrator	2100001611	Substitution value	8	SSL certificate name	2021/09/01 16:00:51	Create Menu procedure
History	Duplicate	Update	Discard	9	9	System Administrator	2100001612	Reference	9	SSL certificate name	2021/09/01 16:00:51	Create Menu procedure
History	Duplicate	Update	Discard	10	10	System Administrator	2100001610	Inout	10	SSL certificate	2021/09/01 16:24:13	Create Menu procedure
History	Duplicate	Update	Discard	11	11	System Administrator	2100001611	Substitution value	11	SSL certificate	2021/09/01 16:24:13	Create Menu procedure
History	Duplicate	Update	Discard	12	12	System Administrator	2100001612	Reference	12	SSL certificate	2021/09/01 16:24:13	Create Menu procedure
History	Duplicate	Update	Discard	2,100,000,202	1	System Administrator	2100000002	Management Console	2100000002	System settings	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,203	1	System Administrator	2100000002	Management Console	2100000003	IP address filter list	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,204	1	System Administrator	2100000002	Management Console	2100000004	Menu group list	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,205	1	System Administrator	2100000002	Management Console	2100000005	Menu list	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,207	1	System Administrator	2100000002	Management Console	2100000007	Role list	2015/04/01 10:00:00	System Administrator
History	Duplicate	Update	Discard	2,100,000,208	1	System Administrator	2100000002	Management Console	2100000008	User list	2015/04/01 10:00:00	System Administrator

[Contact administrator](#)

Figure 1.1-46 Role/menu link list screen

Role and menu registered in "(12) menu list" and "(13) role list" will display in the list box(①,② in the Figure below), so please select each of them and select their "associate"(③ in the Figure below).

Register

Item No. Auto-Input

Role (ID: Name) ①

Menu group: Menu ②

Associate ③

※* is a required item.

Back Register

Figure 1.1-47 Group menu permission setting screen (role/menu link list)

(17) Role/User link list

Register/update/discard the link between each user (account) and role (execution permission).

The user (account) that is not linked to role can't access each menu screen.

- ① Moving to the Role list
Clicking either the Role Id or the Role name URL will move the user to the target Role list.
- ② Moving to the User list
Clicking either the User ID or the Login ID URL will move the user to the target user list.

Figure 1.1-48 Role/user link list screen

Role and user registered in "(13) role list" and "(14) user list" will display in the list box(①,② in the Figure below), so please select each of them.

For more information about default access permission for ③, Please refer to ITA_User_Instruction_Manua_role-based access control.

Figure 1.1-49 User permission setting screen (Role / User link list)

(18) Sequence list

For the unique items (Number, ID, Etc.) of each menu, set the numerical value to be used for the next registration.

For records whose remarks is "For history Table", users can set the value (Numerical value) of the history serial number used in the change history.

- ※1 New registration/abolition will not be possible.
- ※2 The registration of the target menu will result in an error if the value set is already in use.
- ※3 The configurable minimum and maximum value is -2147483648 and 2147483646 respectively. If the value is 2147483647, the target menu turns into an un-registerable state, so please change the value.
- ※4 Export/Import of this menu is not supported.
Sequence values are also inherited when each menu unit is exported/imported.
- ※5 Menu sequences created with any version after 1.6.0 menu creation function will be automatically added to this menu.
- ※6 Having items with unique numbers that exceeds 10,000,000 in the "Device list" will cause the Host group to not function properly. If you want to use the Host group function, make sure that no items in the "Device list" have a unique number that exceeds 10,000,000.

The screenshot shows the 'Exastro IT Automation Management Console' interface. The top header displays the user name 'System Administrator' and login ID 'administrator'. The left sidebar contains a 'Menu' section with options like 'Main menu', 'System settings', 'Menu group list', 'Menu list', 'Role list', 'User list', 'Role/Menu link list', and 'Role/User link list'. The 'Sequence list' section is active, showing a 'List/Update' table with columns: 'Update', 'Sequence Name', 'Setting Value', 'Menu Group', 'Menu', 'Display Order', and 'Remarks'. The table lists several system settings and menu groups, with some remarks indicating they are for the history table. A search filter is visible above the table, and a 'Filter' button is present.

Update	Sequence Name	Setting Value	Menu Group	Menu	Display Order	Remarks
Update	SEQ_A_SYSTEM_CONFIG_LIST		1 Management Console	System settings	2,100,110,001	
Update	SEQ_A_SYSTEM_CONFIG_LIST		2 Management Console	System settings	2,100,110,002	for the history table.
Update	SEQ_A_PERMISSIONS_LIST		1 Management Console	IP address filter list	2,100,110,003	
Update	SEQ_A_PERMISSIONS_LIST		1 Management Console	IP address filter list	2,100,110,004	for the history table.
Update	SEQ_A_MENU_GROUP_LIST		1 Management Console	Menu group list	2,100,110,005	
Update	SEQ_A_MENU_GROUP_LIST		1 Management Console	Menu group list	2,100,110,006	for the history table.

Figure 1.1-50 Sequence list screen

(19) SSO basic preference

Register/Update/Discard the basic information for the authentication provider of Single-Sign-On (SSO). For the details to set SSO, please refer to the “System configuration guide_SSO (Single-Sign-ON)” manual.

The screenshot shows the Exastro Management Console interface. The left sidebar contains a menu with options like Main menu, System settings, Menu group list, Menu list, Role list, User list, Role + Menu link list, Role + User link list, and Sequence list. The main content area is titled 'Single-sign-on Basic Preference'. It features a 'Description' section with a 'Display filter' button. Below this is a table with columns: Discard, Provider ID, Provider Name, Authentication Method, Logo, Display flags, Last update date/time, and Last updated by. The table has search filters and a 'Filter' button. Below the table is a 'List/Update' section with a message: 'Record does not exist. New registration can be done as per the following.' At the bottom, there are three buttons: 'Register', 'Download all and edit file uploads', and 'Trace history'.

Figure 1.1-51 Single-sign-on Basic Preference

(20) SSO attribute preference

Register/Update/Discard the attributes for the authentication provider of Single-Sign-On (SSO).

The screenshot shows the Exastro Management Console interface. The left sidebar contains a menu with options like Main menu, System settings, Menu group list, Menu list, Role list, User list, Role + Menu link list, Role + User link list, and Sequence list. The main content area is titled 'Single-sign-on Attribute Preference'. It features a 'Description' section with a 'Display filter' button. Below this is a table with columns: Discard, Attribute ID, Provider Name, Item Name, Last update date/time, and Last updated by. The table has search filters and a 'Filter' button. Below the table is a 'List/Update' section with a message: 'Record does not exist. New registration can be done as per the following.' At the bottom, there are three buttons: 'Register', 'Download all and edit file uploads', and 'Trace history'.

Figure 1.1-52 Single-sign-on Attribute Preference

(21) Check ITA version

Check the version of each ITA function.

Only installed functions can be checked.

The screenshot displays the Exastro IT Automation Management Console. On the left is a sidebar menu with the following items: Menu, Main menu, System settings, Menu group list, Menu list, Role list, User list, Role • Menu link list, Role • User link list, Sequence list, Single-sign-on Basic Preference, and Single-sign-on Attribute Preference. The main content area has a 'version' tab selected, which displays a table of installed components.

driver	version
Base	Exastro IT Automation Base functions version 1.8.1
Ansible	Exastro IT Automation Ansible Driver version 1.8.1
CI/CD	Exastro IT Automation CI/CD for IaC version 1.8.1
Cobbler	Exastro IT Automation Cobbler Driver version 1.8.1
Create_param	Exastro IT Automation Create_param version 1.8.1
Hostgroup	Exastro IT Automation Hostgroup version 1.8.1
Terraform	Exastro IT Automation Terraform Driver version 1.8.1

Figure 1.1.53 ITA version check screen

(22) IP address filter list

Register/update/discard the user devices that can connect to ITA system.

This function is not displayed because it's disabled during installation on default.
Please follow the instructions below to enable the function when using it.

- ① Open the "Role/menu link list" menu
- ② Select "management console" from the pulldown menu of "Display filter" → "Menu group".
- ③ "Restore" "IP address filter list"
- ④ Reload the screen

Register address in IPv4 format and if "IP address restrictions" in the "System settings" menu is enabled, it's only possible to access the system from registered device.

The screenshot shows the Exastro Management Console interface. The top header includes the Exastro logo, 'Management Console' title, and user information (System Administrator, administrator). The left sidebar menu has 'IP address filter list' selected. The main content area shows a message 'The IP filter function is disabled.' above a table with columns: Discard, Item No., IP address, Notes, Last update date/time, and Last updated by. Below the table are 'Filter' and 'Clear filter' buttons, and a checked 'Auto-filter' checkbox. At the bottom, there are buttons for 'List/Update', 'Register', 'Download all and edit file uploads', and 'Trace history'.

Figure 1.1-54 IP address list screen

※ If "IP address restrictions" in the "System settings" menu is disabled, the "The IP filter function is disabled." message will display.

[Note]

Please enable "IP address restrictions" in the "System settings" menu **after registering devices that is able to connect the system**. If "IP address restrictions" is enabled **without** registering valid devices, it will be **unable to connect to the ITA system**.

(22) Operation delete list

Configure settings to delete the data associated with the scheduled operation date registered in the basic console "Input operation list" according to the specified "Logical deletion days" and "Physical deletion days".

Operation will be discarded after the "Logical deletion days" and will be deleted from the DB after the "Physical deletion days".

This function is not displayed because it's disabled during installation on default.
Please follow the instructions below to enable the function when using it.

- ① Open the "Role/menu link list" menu
- ② Select "management console" from the pulldown menu of "Display filter" → "Menu group".
- ③ "Restore" "Operation delete list"
- ④ Reload the screen

The screenshot shows the 'Operation delete list' screen in the Exastro Management Console. The top header includes the Exastro logo, the title 'Management Console', and user details: 'User name [System Administrator]' and 'Login ID [administrator]'. There are 'Change password' and 'Logout' buttons. The left sidebar menu lists various system settings, with 'Operation delete list' highlighted. The main content area features a 'Display filter' section with search criteria for 'Discard', 'No', 'Logical deletion days', 'Physical', 'Last update date/time', and 'Last updated by'. Below the filters are 'Filter' and 'Clear filter' buttons, and an 'Auto-filter' checkbox. A table below displays actions: 'List/Update', 'Register', 'Download all and edit file uploads', and 'Trace history', each with an 'Open' link.

Figure 1.1-55 Operation delete list screen

[Note]

If **"Logical deletion days" = "Physical deletion days"** is set,
data will not be deleted from the DB.

To delete the data from the DB, set **"Logical deletion days" < "Physical deletion days"**.

The item list of the screen is as below

Table 1.1-8 Item list of registration screen (Operation delete list)

Item	Description	Input required	Input type	Restrictions
Logical deletion days	Based on the machine date and time, operation will be logically deleted (discarded) after the specified days after the scheduled execution date.	○	Manual	Numeric
Physical deletion days	Based on the machine date and time, operation will be physically deleted (deleted from the database record) after the specified days after the scheduled execution date.	○	Manual	Numeric
Table name	Specify the name of the table to be deleted.	○	Manual	Maximum length 256 bytes
Primary key column name	Specify the column name of the primary key of the table	○	Manual	Maximum length 256 bytes
Operation ID column name	Specify the column name in the table that stores the operation ID	○	Manual	Maximum length 256 bytes
Data storage path acquisition SQL	Specify the SELECT statement for obtaining the data storage information from the interface information if the path of interface information under data storage is specified in history data path 1~4. This is optional when the path under data storage is not assigned. e.g.) select ANSIBLE_STORAGE_PATH_LNX AS PATH from B_ANSIBLE_IF_INFO where DISUSE_FLAG='0' ※Please set PATH for the alias name.	-	Manual	Maximum length 1024 bytes
History data path 1	History data path 1(optional) If operation instance directory of the input data history or the result data history is store under ~/ita-root/, enter the relative path after ~/ita-root/ e.g.) In the case of Ansible Legacy input data history uploadfiles/2100020113/FILE_INPUT In the case of Ansible Legacy result data history uploadfiles/2100020113 /FILE_RESULT For paths under the data storage of interface information such as the work instance directory (data storage), please enter the path that has the keyword "/__data_relay_storage__/" which shows the data storage. e.g.) In the case of Ansible Legacy operation instance directory / __data_relay_storage__ /legacy/ns/ Please enter absolute path if the path is under ~/ita-root/ or other than the path under data storage e.g.) /var/log/hoge The same applies to history data path 2 ~ 4	-	Manual	Maximum length 1024 bytes
History data path 2	History data path 2 (Optional)	-	Manual	Maximum length 1024 bytes
History data path 3	History data path 3 (Optional)	-	Manual	Maximum length 1024 bytes
History data path 4	History data path 4 (Optional)	-	Manual	Maximum length 1024 bytes

Remarks	Free description field	-	Manual	Maximum length 1024 bytes
---------	------------------------	---	--------	---------------------------

(23) File delete list

Check the last update date of the files on the server and delete the files whose expiration time has passed.

This function is not displayed because it's disabled during installation on default.

Please follow the instructions below to enable the function when using it.

- ① Open the "Role/menu link list" menu
- ② Select "management console" from the pulldown menu of "Display filter" → "Menu group".
- ③ "Restore" "File delete list"
- ④ Reload the screen

Figure 1.1-56 File delete list screen

The item list of the screen is as below.

Table 1.1-9 Item list of registration screen (File delete list screen)

Item	Description	Input required	Input type	Restrictions
Deletion days	Execute deletion if the assigned expiration day based on the last update date passed.	<input type="radio"/>	Manual	Numeric
Directories to delete	Specify the directory which stores the file to be deleted.	<input type="radio"/>	Manual	Maximum length 1024 bytes
Files to delete	Specify the name of the file to be deleted. Wildcard can be used for the specification.	<input type="radio"/>	Manual	Maximum length 1024 bytes
Delete subdirectories	Set whether the subdirectory under the deletion target directory has also to be deleted or not. If "Yes" is set, then the name and the last	<input type="radio"/>	List	Yes/No

	update time of subdirectory of the deletion target directory will be checked and deleted if it is also the deletion target.			
--	-----------------------------------------------------------------------------------------------------------------------------	--	--	--

(1) Delete file/file item function.

Users can update with the “Delete file” checkbox ticked in order to delete registered files.
(If it is a necessary item, the checkbox will not be displayed.)



Figure 1.1- 62 Delete file/file item checkbox

(2) File item/ File download function

Users can press the link in the file name to download the file.
※Note that key files cannot be downloaded.



Figure 1.1- 64 File item/File download

(3) Delete password/password item function

Users can update with the “Delete password” checkbox ticked in order to delete the value in the target item (in this case, password).
(If it is a necessary item, the checkbox will not be displayed.)



Figure 1.1- 63 Delete password/password item checkbox

1.2 BackYard contents

This part describes the Backyard contents in the basic functions of ITA.

BackYard is resident processes that works independently in the server.

Unlike the web content that is operated on the web browser, users will not notice the existence of BackYard.

Please perform controls such as start or stop of operation in command line

1.2.1 BackYard operation list

The list of BackYard operation is as below.

Table 1.2-1 BackYard function

No	Operation name	File name (※)	Description
1	Send mail	ky_mail※1	Can be stopped if not needed
2	Role link checking + cleaning	ky_std_checkcondition-linklist※1	Residential
3	Input operation checking + cleaning	ky_execinstance_dataautoclean-workflow.sh※2	Start by Cron
4	File checking + cleaning	ky_file_autoclean-workflow.sh※3	Start by Cron
5	ActiveDirectory information mirroring	ky_activedirectory_roleuser_replication-workflow.php※4	Resident

※1 The file locates in ~/ita-root/backyards/webdbcore

※2, 4 The file locates in ~/ita-root/backyards/ita-base

※3 The file locates in ~/ita-root/backyards/common

1.2.2 Description of BackYard operation

The description of Backyard operation is as below

(1) Send mail

The send mail function dynamically replaces sender address, destination address and content variables and send mail automatically.

The send mail function refer to three files including template list, template, mail request file (details are mentioned later) and operates while judging if the execution is needed or not.

There are three patterns of mail, including free type, safe type, and free format type. The following table shows the necessity and requirement of each file according to each pattern.

Table 1.2-2 Contents of reference type according to mail type

File name	Template	Template list				Mail request file			
	Items in the file	Template ID	Number of word substitutions	from, to	cc	Title	from, to	cc	String for substitution
	Position	1 st column	2 nd column	3 rd column	4 th column	1 st row	2 nd ,3 rd row	4 th row	5 th and later row
Free type	Required	Required	Numeric(0 or more)	Not required		Required	Required	Optional	Strings according to specified number
Safe type			X (fixed)	Required	Optional		Not required		Not required
Free format type	Not required(※)								

※ The content of the mail is written in mail request file

The explanation and sample of each file are as below

[Important] Please edit each file with **character encoding [UTF-8]** and **newline character (LF)**.

① Template list

- File name : sysmail.list
- Deployment directory : ~/ita-root/conf/ backyardconfs/

This file lists the number of variables and destination address used in the email template.

Mail are sent based on the list.

■ Template list example

	1	2	3	4	5
Free type	001	3			
Safe type	002	3	from_add@ita.com	to_add@ita.com	cc_add@ita.jp
	003	7	from_add@ita.com	to1@ita.com,to2@ita.com	null
Free format type	004	X	from_004@ita.com	to_004@ita.com	null

↑ ↑ ↑ ↑ ↑ Separated by tab

Figure 1.2-1 Example of template list

Table 1.2-3 List of required parameter in the template list

No	Item	Required	Remarks
1	Template ID	○	001~999 (000 is reserved so can't be used).
2	Number of word substitutions	○	Number of variable strings. E.g.) Date, person name, etc.
3	Source mail address	△	Required if not written in the mail request file.
4	Destination mail address	△	Same as above
5	cc address	×	Specify "null" if not required

※ ④ Separate with comma when assigning multiple addresses

② Template

- File name : sysmail_body_nnn.txt
 - Deployment directory : ~/ita-root/conf/yardconf/
- The body of the mail. Please enter [template ID] for the [nnn] in the file name.]
e.g.) ○ sysmail_body_001.txt
× sysmail_body_1.txt

Write the variable for substitution (%%001%% ~ %%999%%) in the mail body if there is part that needs substitution.

Variables have to be consecutive and has same amount as the "Number of word substitutions" specified in the template list file.

■ Template example [OK]

To: Everyone in %%001%%

This is a notice from the management department.

The password of %%003%% hasn't been changed for %%002%% days.

Please set a new password within 7 days.

OK to replace the order

※ Number of word substitutions = 3

■ Template example [NG]

To: Everyone in %%001%%

This is a notice from the management department.

The password of %%002%% hasn't been changed for %%005%% days.

Please set a new password within 7 days.

NG because the numbers are not consecutive

③ Mail request file

- File name : sysmail_nnn_desired alphanumeric characters.txt
- Deployment directory : ~/ita-root/temp/ky_mail_queues/ky_sysmail_0_queue/

Specify the strings to insert to the template.

Please enter [template ID] for the [nnn] in the file name.

Please enter any unique alphanumeric strings after [nnn].

e.g.) Example of file names

- sysmail_001_20140813123025_123456789
- sysmail_001_a001.txt
- × sysmail_001_
- × sysmail_001_.txt

After preparing the template list and the template file, the mail will be sent by placing this file in the deployment directory.

When the mail is sent, the substitution strings are inserted into the variables in the template file.

After sending the mail, the send request file will be moved to the following directory according to the status of mail delivery.

- Successfully sent → ~/ita-root/temp/ky_mail_queues/ky_sysmail_1_success
- Failed to sent → ~/ita-root/temp/ky_mail_queues/ky_sysmail_2_error

■ Mail request file format

The mail request file decides the meaning by each row.

- 1st row ... Mail title
- 2nd row ... Source email address
- 3rd row ... Destination mail address
(Separate with comma when assigning multiple addresses)
- 4th row ... cc mail address (Empty line if not needed)
- 5th ~ row ... String for substitution

※ 2nd ~4th row is needed for free type only.

※ Error occurs if the line count after the 5th row is not same with the number of variables in the template or the number of substitution word in template list.

Presenting example of mail request file using "①template list" and "template" as example.

■ Example of mail request file

1) Example of free type: Template ID = 001

sysmail_001_20160401_0001.txt

```
Request for changing password ..... > Mail title
admin@ita.jp ..... > Sender mail address
ml_dev1@ita.jp ..... > Destination mail address
ml_sup1@ita.jp ..... > cc address
system department ..... > %%001%% Substitution string
90 ..... > %%002%% Substitution string
development portal ..... > %%003%% Substitution string
```

Mail sent: places replaced by mail request file (red highlight)

```
Request for changing password
from: admin@ita.jp
to: ml_dev1@ita.jp
cc: ml_sup1@ita.jp

To: Everyone in system department

This is a notice from the management department.
The password of development portal hasn't been changed for 90 days.
Please set a new password within 7 days.
```

2) Safe type example: template ID = 002

sysmail_002_20160401_0001.txt

```
Request for changing password ..... > Mail title
system department ..... > %%001%% Substitution string
90 ..... > %%002%% Substitution string
development portal ..... > %%003%% Substitution string
```

※ The mail address is assigned by template list.

Mail sent: places replaced by mail request file (red highlight)
places replaced by template list (blue highlight)

Request for changing password
from: from_add@ita.com
to: to_add@ita.com
cc: cc_add@ita.com

To: Everyone in system department

This is a notice from the management department.
The password of development portal hasn't been changed for 90 days.
Please set a new password within 7 days.

3) Free format type: template ID = 004
sysmail_004_20160401_0001.txt

Request for changing password
To: Everyone in system department
This is a notice from the management department.
The password of development portal hasn't been changed for 90 days.
Please set a new password within 7 days.

Mail sent: places replaced by template list (blue highlight)

Request for changing password
from: from_004@ita.com
to: to_004@ita.com
cc:

To: Everyone in system department

This is a notice from the management department.
The password of development portal hasn't been changed for 90 days.
Please set a new password within 7 days.

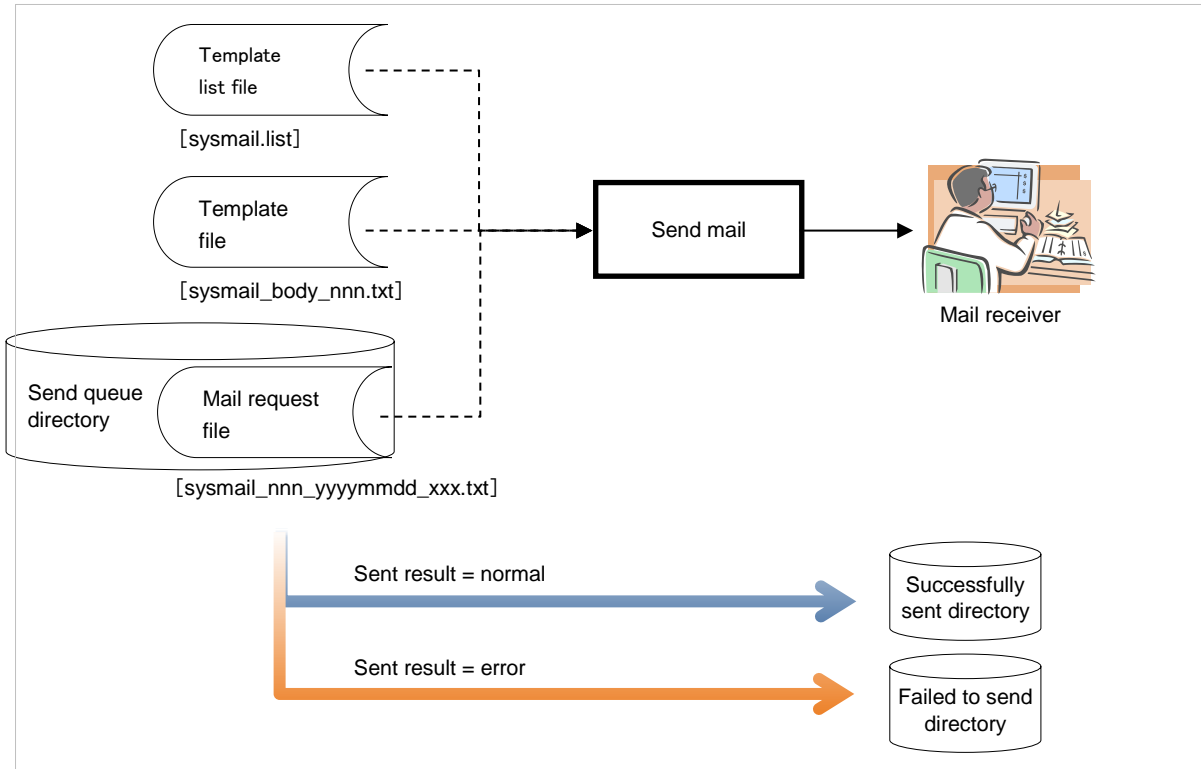


Figure 1.2-2 Operation image of send mail function

④ Sending mail procedure

Explaining the procedure from deciding the template ID to the mail being sent.

For the file format and naming rules, please refer to "p35①Template list ~ p36③Mail request file"

- 1) Edit the template list file and decide the template ID
Open the template list file in editor and decide the template ID (unique number). Add a line and enter the decided ID on the first row.
If users want to use substitutable string when using free type or safe type, enter the number of substitution strings on the second row.

Mail address is also entered depending on the mail type.

- 2) Create template file (except free format type)
Enter the content of mail.
If there are places that needs substitution, enter them as variables.

※If there is no need of substitution, the template file is not needed.

- 3) Create mail request file
- 4) Place files in specified directory
 - Template list → ~/ita-root/conf/yardconf/
 - Template → ~/ita-root/conf/yardconf/
 - Mail request file → ~/ita-root/temp/ky_mail_queues/ky_sysmail_0_queue/

(2) Role link checking + cleaning

Check role link list (role/user, role/menu) and delete the information if invalid relationship between role/user and role/menu.

Executes as a stand-alone resident process

(3) Input operation checking + cleaning

Delete the data according to the setting in "Operation delete list" menu

(4) File checking + cleaning

Delete the files according to the setting in "File delete list" menu

(5) ActiveDirectory information mirroring

Process mirroring (one-way synchronization) is performed according to the ActiveDirectory association function which is described later

※For details about the ActiveDirectory association function , please refer to " 1.3 Usage of ActiveDirectory association function".

1.3 Usage of ActiveDirectory association function

By using ActiveDirectory(refer to as AD), it's able to associate with ITA with the domain controller composed by the AD domain that the user is using.

If the following environment requirements are met, users can start the association by modifying the ITA side setting without making any modification to the setting on AD side.

I For the details of ITA side system construction and configuration, please refer to "System Configuration / Environment Construction Guide_ActiveDirectory association"

※ In the content of this chapter, the meaning of the following term is as below.

- (Term) sign-in ID → (Meaning) The value on the left side of @ mark of the property "userPrincipalName" in AD.
- (Term) group name → (Meaning) The value of security group of "sAMAccountName".

1.3.1 Getting started

[Environment requirement]

The following condition must met in AD side to use the function.

- Windows Server 2000 or higher
- The name of the user on the AD associated with ITA is set to userPrincipalName

※ITA only supports the login name of "userPrincipalName" while login authentication.

[Enabling AD association function]

The function will be automatically enabled only if the two following conditions are met.

- ① "External authentication configuration file" exists in following directory

(Specified directory)

- ~/ita-root/confs/webconfs/

- ② There is at least one valid line in the external authentication configuration file which is mentioned later

[Preparation of external authentication configuration file]

The external authentication configuration file should be written properly as the following ①~③ requirements

- ① File name

The file must be the following file name

(File name)

- ExternalAuthSettings.ini

- ② Specifying the DomainController to connect to

■Section: 『DomainController_1 (DomainController_2) (DomainController_3)』

- host --- Specify the host of connection target DomainController.
- port --- specify the port used when connecting to the DomainController specified above.

Any function introduced in later chapter "1.4.2 function overview", the host of connection target DomainController and the port used when connecting to the DomainController uses the configuration value specified above.

- ③ Specifying the user for mirroring

■Section 『Replication_Connect』

- ConnectionUser --- Specify the user to search for the information on AD to perform mirroring
- UserPassword --- Specify the password of user specified above
- basedn --- Specify the base dn of the domain(Also specify the OU in the case of assigning the search range)

The user specified here is for searching AD in order to perform mirroring operation. Therefore, the specified ConnectionUser is required to have the permission to search AD.

※Note: Even if these settings are incorrect, this function is still valid if the external authentication file exists. In this case, users beside the "non-association target user" and the "non-association target role" which are mentioned later can't log into ITA.

1.3.2 Function overview

Two functions are provided in this feature.

(1) AD information mirroring function

In order to log in to the ITA as an AD user, it is necessary to register records in the three tables of "User list" and "Role list" and "Role / User Link list" on the ITA.

AD information mirroring function automatically registers and updates these tables base on the AD information mentioned later.

Once a role is registered, its record will always be mirrored (one-way synchronization) as long as the AD linkage function is enabled, so any changes made on AD will be reflected on the corresponding record on ITA.

The details of mirroring function is described in "[1.3.3 AD information mirroring function](#)".

(2) AD authentication (Kerberos authentication) function

When it happens to authentication of login attempt, the Kerberos authentication function of the association target AD is used.

Automatic AD authentication happens only when AD association function is available.

The details of AD authentication function is described in "[1.3.4 AD authentication \(Kerberos authentication\) function](#)".

1.3.3 AD information mirroring function

AD association function treats the relation between the user on AD and the security group it belongs to as permission (excluding the non-association target user which is mentioned later).

Mirroring function is a function that automatically reflects the relation between the user on AD and the security group it belongs to on ITA.

[Register and Update]

The following AD information will be mirrored to ITA.

The AD information that hasn't been registered on ITA will be operated as "Register" and the AD information that has been registered on ITA even once will be operated as "Update".*2

- ① "User Information" on AD → "1.1.4(14) Role/Menu link list" on ITA
 - Sign-in ID — Login ID
 - Display name *3 — User name
 - Email *4 — Mail address
- ② "Security group information" on AD → "1.1.4(13) Role list" on ITA.
 - Group name — Role name
- ③ "Security group information which the user belongs to" on AD → "1.1.4(16) Role/Menu link list" on ITA
 - The role ID and name registered on ITA in ② — role(ID:name) *5
 - The user ID and name registered on ITA in ① of ② — user(UserID:LoginID)

※Note: OU is not treated as permission. Therefore, it is not treated as the Role name on ITA.

※Note: Manual setting is required in the "1.1.4(15) Role/Menu link list" menu

The last updater of the mirrored record is set to "ActiveDirectory user synchronization procedure"

The mirroring process is always in execution when the AD association function is enabled. Therefore, although the above ①~③ record is updated on ITA, the AD information will overwrite and update the records

Discard and Restore operation will be mirrored base on the enabled/disabled status on AD. The details of discard and restore is described later in this section.

※In the case of creating and editing the records on ITA with AD association function enabled, setting up the "special user" and the "special role" mentioned in the following is required.

Please refer to "1.3.5 About exceptions of this function" for details.

*2 If the ①~③ information above is not updated, the update operation will not be performed.

*3 If display name is not set on AD, the function will set the same ID as the sign-in ID to ITA automatically.

*4 If email address is not set on AD, a dummy value will be set to ITA automatically.

*5 If there is no user in the group in AD, then the record cannot be created.

【Discard】

In the following cases, the record on ITA will be discarded by mirroring operation if the record is in active state.

- User or security group is deleted on AD
- User account is disabled on AD
- The "userPrincipalName" of user is deleted on AD
- The type of group from security group to distribution group is changed on AD

【Restore】

In the following cases, the record on ITA will be restored by mirroring operation if the record is discarded.

- Deleted user or security group is restored on AD *⁶
- Disabled user account enabled on AD
- The "userPrincipalName" of the user whose "userPrincipalName" has been deleted was set on AD
- The type of group from distribution group to security group was changed on AD

Table 1.3-1 List of discard/restore operation by case

Information operation on AD	The activation status of record on ITA (before mirroring)	
	Discarded	Active
Delete user or group	Do nothing	Discard
Disable user account	Do nothing	Discard
Delete the "userPrincipalName" of user	Do nothing	Discard
Change the group type (security group→distribution group)	Do nothing	Discard
Restore deleted user or group	Restore	Do nothing
Enable the disabled user account	Restore	Do nothing
Reset the "userPrincipalName" of user	Restore	Do nothing
Change the group type (distribution group→security group)	Restore	Do nothing

⁶ In situations such as restoring by using the backup of AD itself or the full backup of server OS

1.3.4 AD authentication (Kerberos authentication) function

If the AD association function is available, please use the sign-in ID and password that users normally use on AD to perform Kerberos authentication to the using domain.

However, user who matches one of the following conditions can't login with this function

- Non-association target user ^{*7} (details in next section)
- User whose "Do not require Kerberos pre-authentication" flag is on in AD
- User whose "User must change password at next logon" flag is on in AD
- User whose account is in locked status on AD
- User who wants to login ITA with the log on information other than sign-in ID
- User who is not registered in "User list" for some reason
- User whose link permission is not registered in "Role/User link list" for some reason

Also, the screen of users who isn't given permission to access to the menu in " Role/Menu link list" will move to the "illegal access screen" although the user passed the authentication process.

※Note: If AD association function is enabled, lockout counter on AD will count if login on ITA fails. (Not including the "non-association target user" described in next section)

⁷ Please login with ITA internal authentication (the authentication based on the login ID and password managed on ITA).

1.3.5 About exceptions of this function

There are exceptions in “1.3.3 AD information mirroring function” and “1.3.4 AD authentication (Kerberos authentication)function”.

This section explains about the exceptions.

(1) Non-association target record

In principle, the "User list" record, "Role list" record , "Role/User link list" record created on ITA will be automatically discarded during mirroring process.

However, ①～⑧ are treated as non-association target of AD association function and is not discarded.

- ① The "User list" record of the ITA default system administrator user(userID:1)
- ② The "Role list" record of the ITA default system administrator role(roleID:1)
- ③ The "User list" record which is assigned as special user
- ④ The "Role list" record which is assigned as special role
- ⑤ The "Role/user link list" record which either the property of user or role is specified special.
- ⑥ SSO authentication user (Authentication type:sso) records
- ⑦ SSO default role (RoleID :2100000001) records
- ⑧ OASE Action (RoleID: 2100000002)'s system administrator role record.

If the AD user's sign-in ID is duplicated with the **non-association target user's**^{*8} login ID, the information of the AD user will not be mirrored.

Also, if the group name on AD is duplicated with the **non-association target role's**^{*9} role name, the information of the AD group will not be mirrored.

※Special user and special role can be set in the external authentication configuration file.

According to the property of function, the setting of special user and special role can be specified from the record mirrored from AD. However, it is not recommended.

The configuration function of special user and special role is provided assuming that the function is only used for excluding the record created on ITA from mirroring target.

※In the case of setting the records mirrored from AD as special user or special role, the records are not only won't be discarded but also won't be updated or restored.

(2) Non AD authentication target user (ITA internal authentication)

Even though the non-association target user is active on AD, the authentication process is always based on the login ID and password managed on ITA. (ITA internal authentication)

※ If the user originally mirrored from AD is assigned as special user, ITA internal

*8 User that meets the above ①③

*9 Role that meets the above ②④

authentication is performed.

2 Application operation

The operations on ITA system are not only user inputs from browser screen but also operations and maintenances of system via ssh console or FTP software. The targets of operation and maintenance are as follow.

- 2.1 Installation related
- 2.2 Delete operation execution history routinely
- 2.3 Change log level
- 2.4 Maintenance

2.1 Start of installation

For the post-installation work, please refer to the three operation check in "Installation manual"

2.2 Delete operation execution history routinely

The operation history that is linked to the Operations registered in the "Input operation list" whose execution date is specified will be deleted after the specified reservation time.(Treated as discard)

The operation histories are as below.

- ITA - Information managed by symphony
- The driver of each orchestrator - Information managed by Ansible driver

The reservation time can be assigned in the following file

```
•ITA
~/ita-root/confs/backyardconfs/ita_base/keep_day_length.txt
•Ansible
~/ita-root/confs/backyardconfs/ansible_driver/keep_day_length.txt
•Driver common
~/ita-root/confs/backyardconfs/ita_base/dataautoclean_conf.txt
```

This function is executed according to the date and time registered in Cron.

In Cron, by entering the lines below after the command {crontab -e}, the execution time can be specified.

```
•ITA
mm hh * * * su - -c '/exastro/ita-root/backyards/ita_base/ky_std_symphony-dataautoclean.sh'

•Ansible
mm hh * * * su - -c '/exastro/ita-root/backyards/ansible_driver/ky_ansible_dataautoclean-workflow.sh'

•Driver common
mm hh * * * su - -c '/exastro/ita-root/backyardconfs/commn/ky_execinstance_dataautoclean-workflow.sh
confs/backyardconfs/ita_base/dataautoclean_conf.txt'

mm: startup time(minute)
hh: startup time(hour)
```

2.3 Change log level

The method to change the log level of individual process in ITA system is as follow

■ Target file

~/ita-root/backyards/webdbcore/ky_mail

~/ita-root/backyards/webdbcore/ky_std_checkcondition-linklist

~/ita-root/backyards/ita_base/ky_std_symphony-dataautoclean.sh

~/ita-root/backyardconfs/commn/ky_execinstance_dataautoclean-workflow.sh

① NORMAL level

Enable "LOG_LEVEL='NORMAL'"

```
# Log output level
#  DEBUG  : Output log at analysis level
#  NORMAL: Only output critical information to log
#LOG_LEVEL='DEBUG'
LOG_LEVEL='NORMAL'
```

② DEBUG level

Enable "LOG_LEVEL='DEBUG'"

```
# Log output level
#  DEBUG  : Output log at analysis level
#  NORMAL: Only output critical information to log
LOG_LEVEL='DEBUG'
#LOG_LEVEL='NORMAL'
```

※ The log level change is available **after restarting the process** (refer to "2.4 Maintenance")

2.4 Maintenance

2.4.1 Start/Stop/Restart ITA system individual process

Taking send mail function for example.

In the case of "Role link checking + cleaning", please replace "ky_mail" with "ky_std_checkcondition-linklist"

(1) Start process

```
$ service ky_mail start ↵
```

(2) Stop process

```
$ service ky_mail stop ↵
```

(3) Restart process

```
$ service ky_mail restart ↵
```

3 Appendix

3.1 Troubleshooting

No	Content
Q-1	Display becomes slower. Takes too long to download large files. Operation times out. PHP script crashes.
A-1	The memory setting of PHP maybe insufficient. Please check the value of following parameter in PHP configuration file "php.ini" and set the maximum memory size that is able to allocate to PHP. •memory_limit The maximum memory size that PHP can be allocated Since similar cases may happen to file upload, please check the following parameter value as well. •post_max_size The maximum size allowed for POST data •upload_max_filesize The maximum size per file
Q-2	What are the precautions for creating "ita-root" (ITA system root directory)?
A-2	Please make sure that the directory location is within 1024 characters, including the "absolute path" and the "file name" specified by the browser. If the full path name is too long, the operation of server may be adversely affected (slow / freeze).
Q-3	On the Web screen of ITA, although keyword search and ambiguous search in the "Display filter" submenu system can be performed, the result of ambiguous search with wildcard symbol ("*", "#" for example) only may not as expected when the RDBMS is Oracle .
A-3	When performing ambiguous search with symbols on Oracle, please perform search with the string before/after the symbol together. (e.g.) × : "*" ○ : "fo*", "b*r", etc.
Q-4	The account is locked and can't login

No	Content
A-4	<p>The account will be locked if log in fails several times. The number of lock failures attempts can be set according to the parameter configuration in "System settings" menu.</p> <p>•PWL_THRESHOLD Password failure threshold(number of times)</p> <p>The duration of account lock can also be changed according to the parameter in "System settings" menu.</p> <p>•PWL_EXPIRY Account lock duration(seconds)</p> <p>※If the value of parameter "PWL_EXPIRY" is set to zero, the account will not get locked no matter how many times the login fails.</p>
Q-5	Is it possible to set the DomainController of different domain when setting multiple DomainControllers in the external authentication configuration file of the AD association function?
A-5	<p>No.</p> <p>ITA will obtain SID - the unique domain key of AD during the internal process of AD association. Since SID may duplicate between different domain, it's not able to synchronize the AD information to ITA if the DomainControllers are set to different domains.</p>
Q-6	After reconstructing the AD domain that has once associated with ITA, AD association became unavailable.
A-6	<p>After reconstruction (including backup), the SID obtained during internal process may duplicate with the SID in ITA database. When duplication happens, the process of AD association function will not work correctly.</p> <p>In the case of associating ITA with the reconstructing AD that has once associated with ITA, please reconstruct ITA itself.</p>
Q-7	The AD association function is disable after once enabled because it's no longer needed. However, the user/role record mirrored to ITA was not discarded.
A-7	<p>It's a specification.</p> <p>Please manually discard the records from the web console or use the file upload function to remove all records at once.</p>
Q-8	Some AD users can't login although their record have been mirrored to ITA.
A-8	<p>If the content in external authentication file has difference between ① and ② and the users are not in the range of ①, the AD users can't login although their record have been mirrored to ITA.</p> <p>①【basedn】 of 『DomainController_1 (DomainController_2) (DomainController_3)』 ②【basedn】 of 『Replication_Connect』</p> <p>Please refer to "System configuration/environment construction guide - ActiveDirectory association function" for details</p>
Q-9	Is it possible to specify multiple OU when specifying search range with OU?

No	Content
A-9	<p>No.</p> <p>In case of specifying multiple OU, please create an OU at the layer above those OU and specify it as the search range.</p>
Q-10	Is it possible to perform AD association function to ITA with Azure ActiveDirectory (referred to as Azure AD below)?
A-10	No.
Q-11	Sometimes the group name of group created or edited in Azure AD will not reflect to the role name on ITA when using the AD association function of ITA to associate with the AD synchronizing to Azure AD with "Azure AD Connect"
A-11	<p>The group name that the AD association function obtains is the sAMAccountName of the group.</p> <p>As the product specifications of AD, group names created or edited on Azure AD are not necessarily reflected to sAMAccountName on AD. If they are not reflected, they will not be reflected in role names on ITA.</p> <p>※For detailed specification of AD, please refer to the support or official document of Microsoft.</p>