



ITA_User instruction manual

Management console

— Version 1.5 —

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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	ITA management screen	Main menu
5		System settings
6		Menu group list
7		Menu list
8		Role list
9		User list
10		Role/Menu link list
11		Role/User link list
12		IP address filter list (hidden on default)
13		Operation delete list (hidden on default)
14		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.

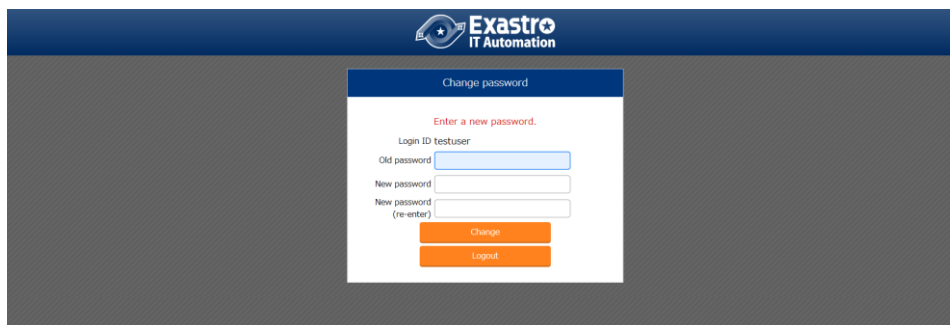


Figure 1.1-2 "Change password" screen of ITA

(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 logout screen of ITA

1.1.2 Screen description Basic screen configuration

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

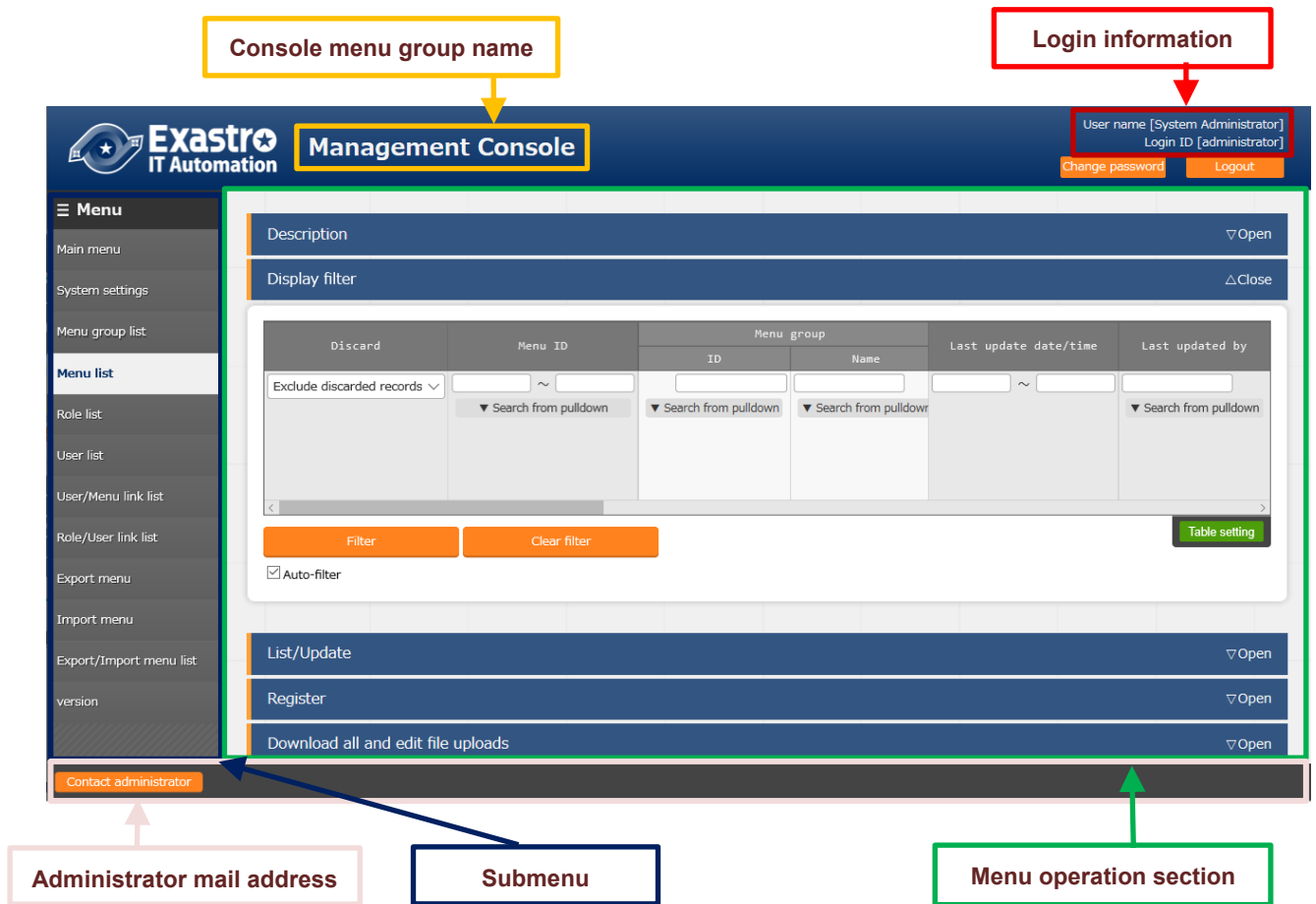


Figure 1.1-4 screen configuration

Table 1.1-2 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.

1.1.3 Screen description The method to operate operation section

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

(1) Display 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', with an 'Open' button. Below the tabs is a table with columns: Discard, Menu ID, Menu group, Menu name, Authentication require, Last update date/time, and Last updated by. Each column has a search dropdown menu. A red box highlights the search criteria area, with a note: '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 the table are buttons for 'Filter' and 'Clear filter', and a checkbox for 'Auto-filter'. A red box highlights the 'Auto-filter' checkbox, with a note: 'Table setting'. A red arrow points from the 'Table setting' note to a 'Table setting' dialog box. The dialog box has a title 'Table setting' and a list of items: 'Heading Fixed', 'Top Heading Fixed', 'Left Heading Fixed', 'Right Heading Fixed', 'Show or Hide', 'Menu group', and 'Menu name'. There are 'Apply', 'Close', and 'Reset' buttons at the bottom of the dialog box.

Figure 1.1-5 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. **Either one of them is required to 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. 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.

D. Column description

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

E. 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.

The screenshot shows the 'List/Update' screen with a table of menu items. The table has columns: Update, Discard, Menu ID, Menu group, Menu name, Authentication requirement, Service status, Last update date/time, and Last updated by. The 'Update' column contains 'Update' buttons for each row. The 'Discard' column contains 'Discard' buttons. The 'Menu ID' column contains values like 2100000001, 2100000002, etc. The 'Menu group' column contains 'Exastro IT Automation'. The 'Menu name' column contains 'Login screen', 'System error', etc. The 'Authentication requirement' column contains 'Not required'. The 'Service status' column contains 'Service availab'. The 'Last update date/time' column contains '2015/04/01 10:00:00'. The 'Last updated by' column contains 'System Administrator'. Above the table is a 'Display filter' section with search criteria and a 'Filter' button. A red box labeled 'A' highlights the 'Filter' button. A red box labeled 'B' highlights the 'Update' button in the first row. A red box labeled 'C' highlights the 'Menu ID' column header.

Update	Discard	Menu ID	Menu group	Menu name	Authentication requirement	Service status	Last update date/time	Last updated by
Update	Discard	2100000001	Exastro IT Automation	Login screen	Not required	Service availab	2015/04/01 10:00:00	System Administrator
Update	Discard	2100000002	Exastro IT Automation	System error	Not required	Service availab	2015/04/01 10:00:00	System Administrator
Update	Discard	2100000003	Exastro IT Automation	Access warning against unauthorized operations	Not required	Service availab	2015/04/01 10:00:00	System Administrator
Update	Discard	2100000004	Exastro IT Automation	Access warning from unauthorized terminal	Not required	Service availab	2015/04/01 10:00:00	System Administrator
Update	Discard	2100000005	Exastro IT Automation	Login ID list	Not required	Service availab	2015/04/01 10:00:00	System Administrator
Update	Discard	2100000006	Exastro IT Automation	Change Password	Not required	Service availab	2015/04/01 10:00:00	System Administrator
Update	Discard	2100000007	Exastro IT Automation	Account lock error	Not required	Service availab	2015/04/01 10:00:00	System Administrator

Figure 1.1-6 List/Update (List) screen

The screenshot shows the 'List/Update' screen with a table of menu items. The table has columns: Menu ID, Menu group, Menu name, Authentication requirement, Last update date/time, and Last updated by. The 'Menu ID' column contains values like 2100000001, 2100000002, etc. The 'Menu group' column contains 'Exastro IT Automation'. The 'Menu name' column contains 'Login screen', 'System error', etc. The 'Authentication requirement' column contains 'Not required'. The 'Last update date/time' column contains 'Auto-input'. The 'Last updated by' column contains 'Auto-input'. Below the table are 'Back' and 'Update' buttons. A red box labeled 'B' highlights the 'Update' button. A red box labeled 'A' highlights the 'Filter' button.

Menu ID	Menu group	Menu name	Authentication requirement	Last update date/time	Last updated by
2100000001	Exastro IT Automation	Login screen	Not required	Auto-input	Auto-input

Figure 1.1-7 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. 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.

C. 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.

(3) Register

Register new items to each menu.

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

Figure 1.1-8 Register (one in 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.

(4) 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.

Figure 1.1-9 Register(all) 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”.

(5) Trace history

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

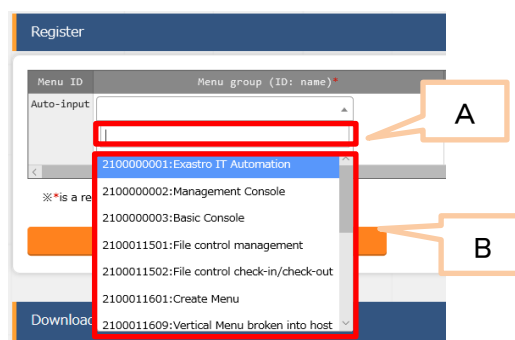


Figure 1.1-10 Trace history screen

- A. By specifying “Management system ID”, the primary key of each menu, to system ID, the change history of the corresponding item will be displayed.
- 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.

(6) About entering item with pull-down menu

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



- 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.

(7) 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 1.1-12 shows the 'List/Update' table setting menu. The table displays various menu items with columns for 'Update', 'Discard', 'Menu ID', 'Menu group' (ID, Name), 'Last update date/time', and 'Last updated by'. The 'Table setting' button is highlighted in green at the bottom right. The settings menu is open, showing options for 'Paging', 'Heading Fixed', and 'Show or Hide'. The 'Paging' section includes 'Paging 20'. The 'Heading Fixed' section includes 'Top Heading Fixed', 'Left Heading Fixed', and 'Right Heading Fixed'. The 'Show or Hide' section includes 'Menu group', 'Menu name', 'Authentication requirement', 'Service status', 'Display order of menu group', 'Role information', 'Auto filter check', 'Onload filter', 'Maximum line count for Web display', 'Line count for confirmation before Web display', 'Maximum line count for Excel output', and 'Remarks'. The 'Apply' button is also visible.

Figure 1.1-12 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.

1.1.4 Screen description ITA management console

(1) Main menu

The URL of the main menu of each group menu is displayed in the main menu. Move to the main menu of specific menu group by clicking the icons.

The menu on the menu list screen along with the displayed main menu are displayed **only for the installed driver**.

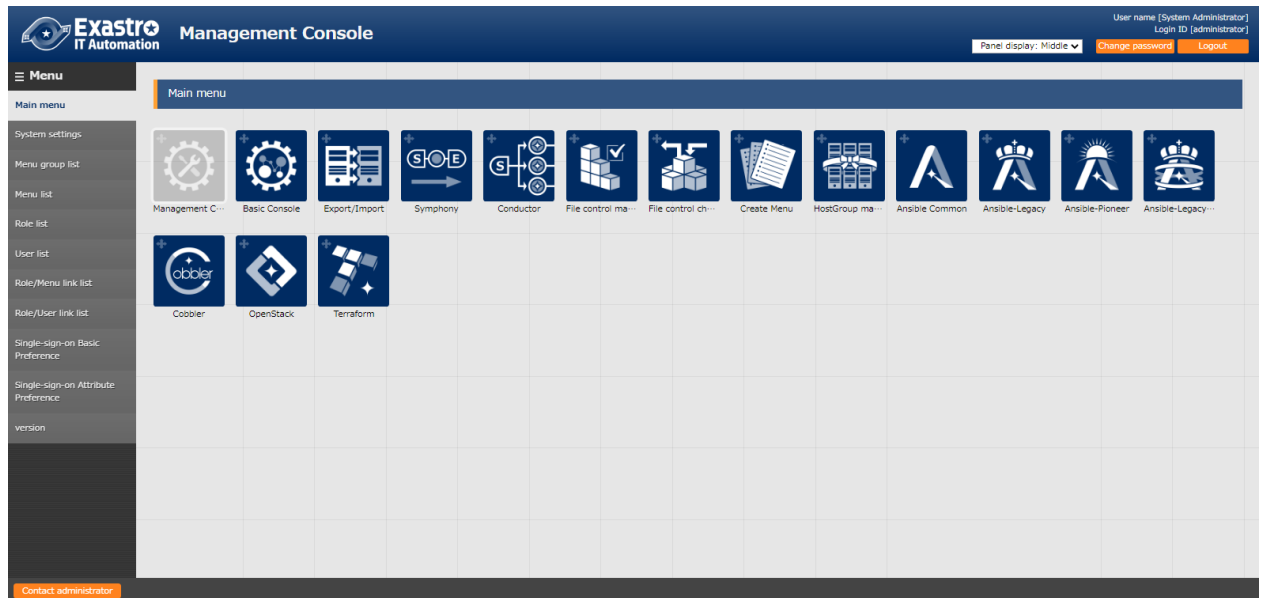


Figure 1.1-13 Main menu screen

(2) 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.

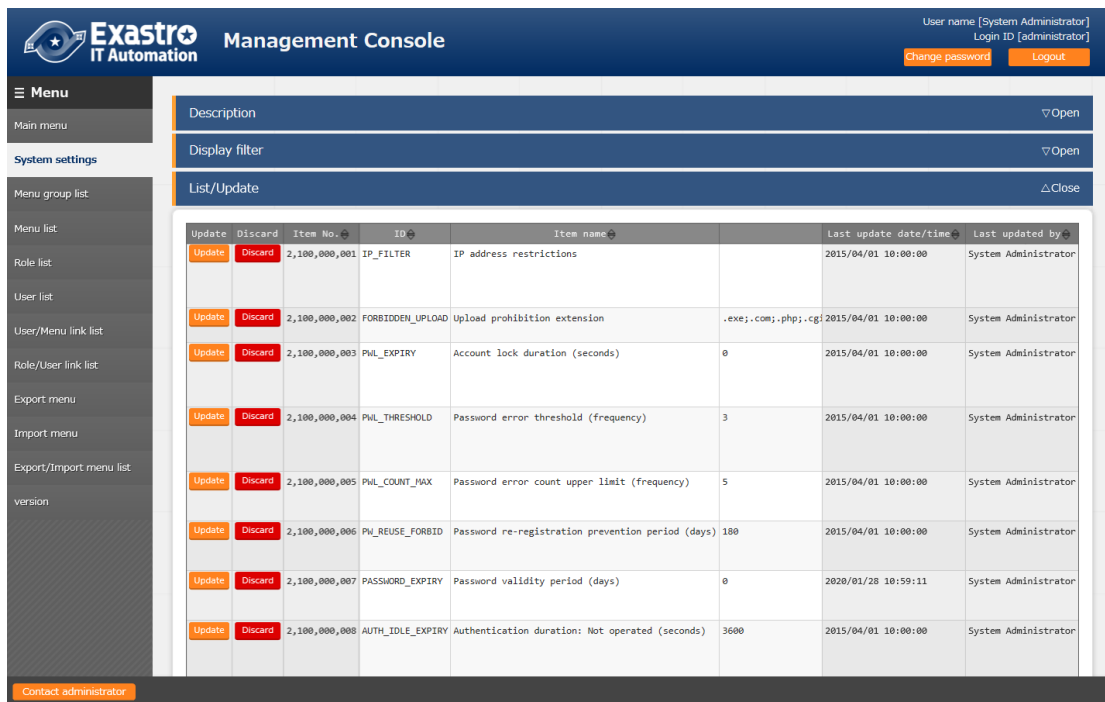


Figure 1.1-14 Management console screen

① 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.

Setting values to enter and their corresponding screen design is as follows.

Setting value	Screen design
default	Default design based on blue.
red	A design based on blue.
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 with the image of nature.
gorgeous	A gorgeous design based on black and red.
oase	A design with the image of Exastro OASE.
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.

【The method to 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.

※ Please don't change “ID” otherwise the behavior of ITA will not be guaranteed.

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 1.1-15 System settings screen (Screen design selection)

(3) 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**.

Update	Discard	Menu group ID	Menu group name	Display order	Image for panel	Menu information	Last update date/time	Last updated by
Update	Discard	2,100,000,001	Exastro IT Automation			Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,000,002	Management Console	10	kanri.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,000,003	Basic Console	20	kihon.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,011,501	File control management	30	sizi kanri.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,011,502	File control check-in/check-out	40	sizi harai.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,011,601	Create Menu	51	sheet.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,011,609	Vertical Menu broken into host	59		Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,011,701	HostGroup management	60	host_group.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,020,000	Ansible Common	70	anscen.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,020,001	Ansible-Legacy	80	anslrc.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,020,002	Ansible-Pioneer	90	ansprn.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,020,003	Ansible-LegacyRole	100	anslr.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,030,001	Cobbler	110	cobbler.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,060,001	DSC	140	dsc.png	Menu information	2015/04/01 10:00:00	System Administrator
Update	Discard	2,100,070,001	OpenStack	150	openstack.png	Menu information	2015/04/01 10:00:00	System Administrator

Filter result count: 15

Output Excel

Figure 1.1-16 Menu group list screen

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.

- | | |
|---|---|
| 1) Update the registered content | -Click the "Update" button to enter the editing mode and update the value |
| 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 1.1-17 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

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.

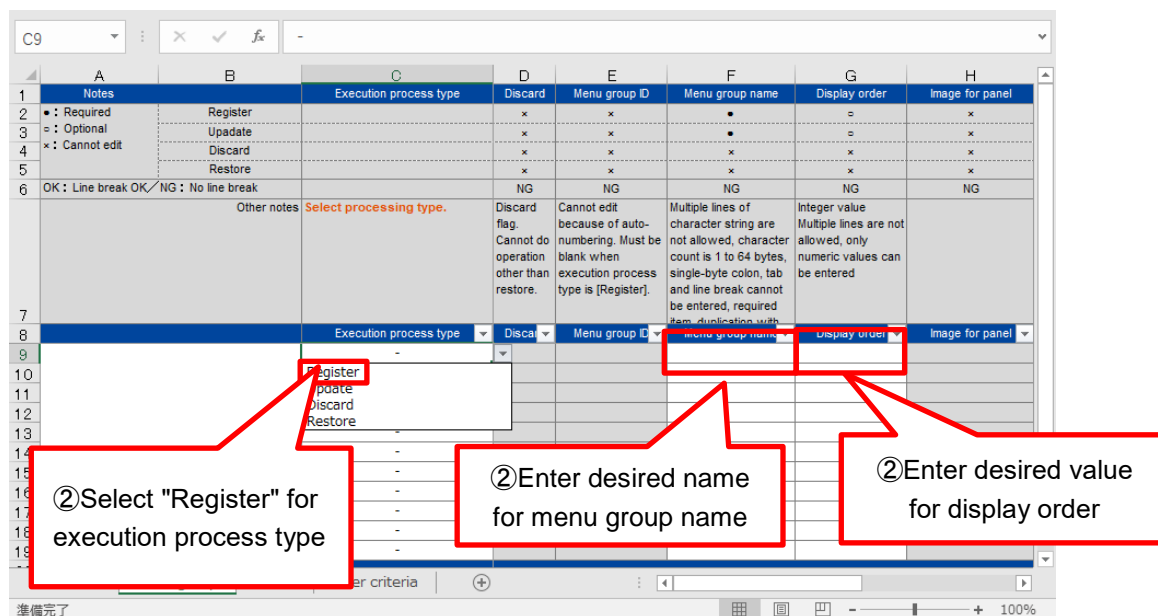


Figure 1.1-18 Menu group list screen

※ 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
- "Content File list" menu
- "Role/Menu link list" menu"

【Image for panel】

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

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

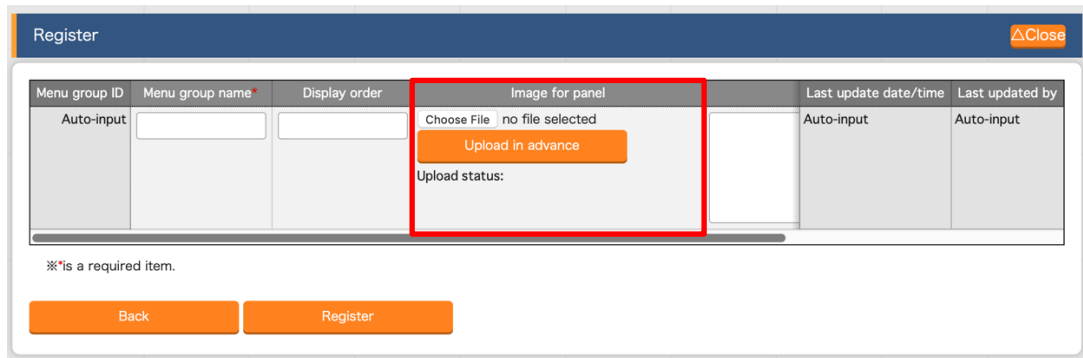


Figure 1.1-19 Image for panel

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

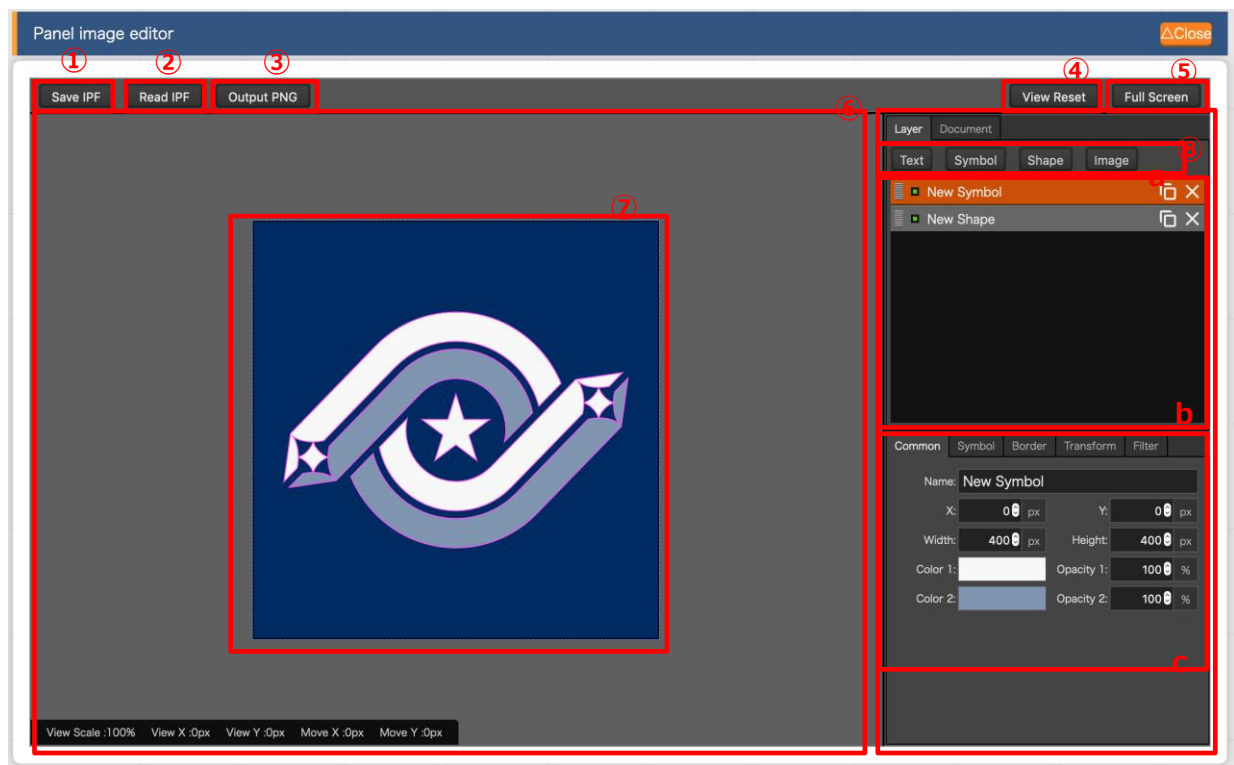


Figure 1.1-20 Panel image editor screen

【Notes】

“Panel image editor” does not support IE.

*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.
- ② 「Read IPF」 button
Read the IPF file to canvas.
※ Users can continue editing from the state saved by “Save IPF” button.
- ③ 「Output PNG」 button
Save the panel image in the art board area edited on the canvas as PNG file.
※Editing can't be continued.
- ④ 「View Reset」 button
Reset the position of canvas to default state.
- ⑤ 「Full Screen」 button
Display the editor in full screen.
- ⑥ Canvas
Users can move the position by drag and drop using right click.
- ⑦ Art board
The area that will be output to PNG file.
- ⑧ 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.
 - F. 「Document」 tab
Users can set the name of the created panel image as desired.

(4) 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

Update	Discard	Menu ID	Menu group	Display order of menu group	Role information	Auto filter	Last update date/time
		ID	Name				
Update	Discard	2,100,000,101	2100000001 Exastro IT Automation	1	Role information	No	2015/04/01 10:00:00
Update	Discard	2,100,000,102	2100000001 Exastro IT Automation	2	Role information	No	2015/04/01 10:00:00
Update	Discard	2,100,000,103	2100000001 Exastro IT Automation	3	Role information	No	2015/04/01 10:00:00
Update	Discard	2,100,000,104	2100000001 Exastro IT Automation	4	Role information	No	2015/04/01 10:00:00
Update	Discard	2,100,000,105	2100000001 Exastro IT Automation	5	Role information	No	2015/04/01 10:00:00
Update	Discard	2,100,000,106	2100000001 Exastro IT Automation	6	Role information	No	2015/04/01 10:00:00
Update	Discard	2,100,000,107	2100000001 Exastro IT Automation	7	Role information	No	2015/04/01 10:00:00
Update	Discard	2,100,000,202	2100000002 Management Console	2	Role information	Yes	2015/04/01 10:00:00
Update	Discard	2,100,000,203	2100000002 Management Console	3	Role information	Yes	2015/04/01 10:00:00
Update	Discard	2,100,000,204	2100000002 Management Console	4	Role information	Yes	2015/04/01 10:00:00
Update	Discard	2,100,000,205	2100000002 Management Console	5	Role information	Yes	2015/04/01 10:00:00
Update	Discard	2,100,000,207	2100000002 Management Console	7	Role information	Yes	2015/04/01 10:00:00
Update	Discard	2,100,000,208	2100000002 Management Console	8	Role information	Yes	2015/04/01 10:00:00
Update	Discard	2,100,000,209	2100000002 Management Console	9	Role information	Yes	2015/04/01 10:00:00

Figure 1.1-21 Menu list

Discard	Menu ID	Menu group	Menu name	Authentication requirement	Display order of menu group	Remarks	Last update date/time	Last updated by
		ID	Name					
	2100000211	2100000002	Management Console	Export menu	Required	11 data_export	2015/04/01 10:00:00	System Administrator

Role ID	Access rights	Role name
1	View only	System Administrator

[Maintenance](#)

Figure 1.1-22 Role information screen (menu list)

② Parameter

Information registered in the menu includes the following items.

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.

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 1.1-23 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.

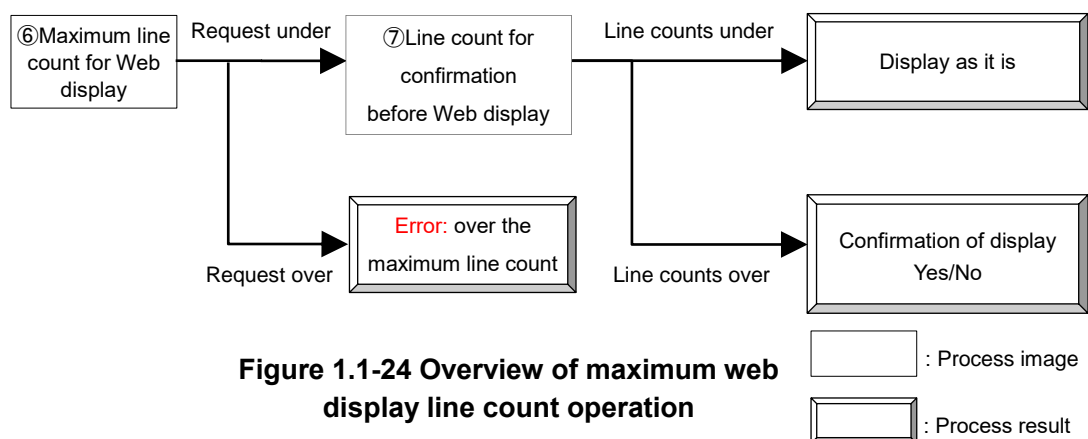


Figure 1.1-24 Overview of maximum web display line count operation

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.

Download all and edit file uploads △Close

Download all (Excel)

Cannot download because the number of target records are exceeding the upper limit. (Target records: 145 Upper limit: 5)

Download all (Proprietary format)

Excel creation tool for editing proprietary format

Excel creation materials for editing proprietary format

Download for new registration (Excel)

Upload status:

Upload file

Figure 1.1-25 Error display screen (Menu list)

File 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 and follow the "Readme" file in the downloaded file to operate.

(5) 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**.

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
- User/Menu link list
- Role/User link list
- Export menu
- Import menu
- Export/Import menu list
- version

Description ▽Open

Display filter △Close

Discard	Role ID	Role name	Remarks	Last update date/time	Last updated by
Exclude discarded records ▾	~	▽ Search from pulldown	▽ Search from pulldown	~	▽ Search from pulldown

[Filter](#) [Clear filter](#)

☒ Auto-filter

List/Update △Close

Update	Discard	Role ID	Role name	User information	Menu information	Remarks	Last update date/time	Last updated by
Update	Discard	1	System Administrator	User information	Menu information	System Adminis	2015/04/01 10:00:00	System Administrator

Filter result count: 1

[Output Excel](#)

Register ▽Open

[Contact administrator](#)

Figure 1.1-26 Role list screen

(6) 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**.

The screenshot displays the Exastro Management Console interface. The top header shows the Exastro logo and 'Management Console' title. The right header displays the user name 'System Administrator' and login ID 'administrator', with buttons for 'Change password' and 'Logout'. The left sidebar contains a 'Menu' section with various navigation options. The main content area is titled 'User list' and features a 'Description' section with a 'Display filter' dropdown. Below this is a table with columns: Discard, User ID, Login ID, User name, Last update date/time, and Last updated by. The table has a search bar and a 'Filter' button. Below the table is a 'List/Update' section with a table of users. The first user is 'System Administrator' with a 'Role information' button highlighted in red. The 'Filter result count' is 1. At the bottom, there is an 'Output Excel' button and a 'Contact administrator' button.

Figure 1.1-27 Screen of transiting to role setting screen (User List)

(7) 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.

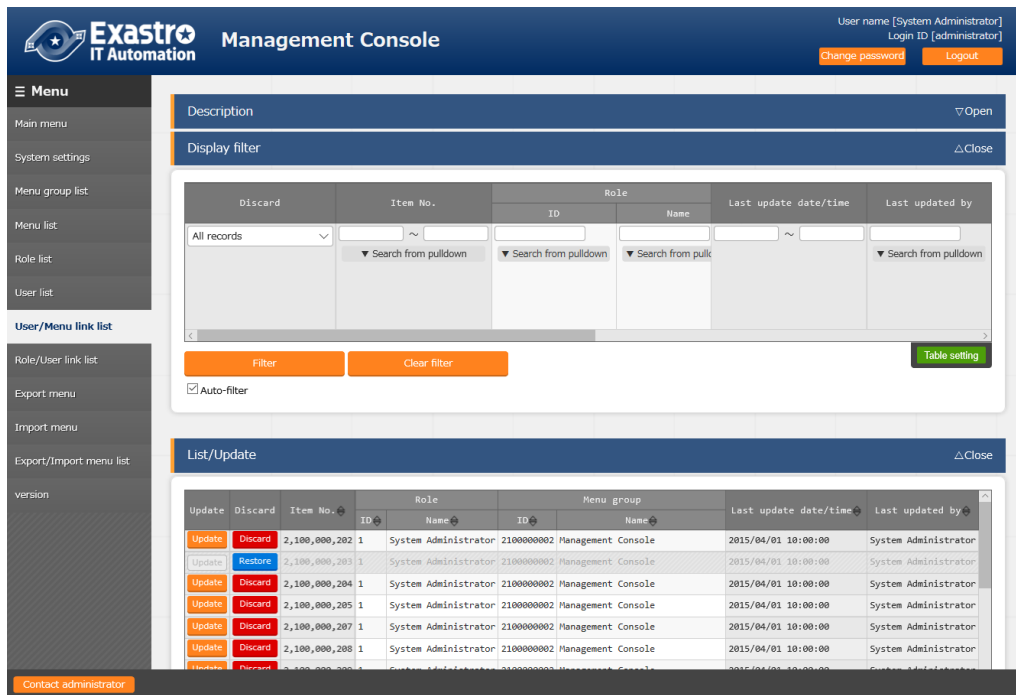


Figure 1.1-28 Role/menu link list screen

Role and menu registered in "④menu list" and "⑤role 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).

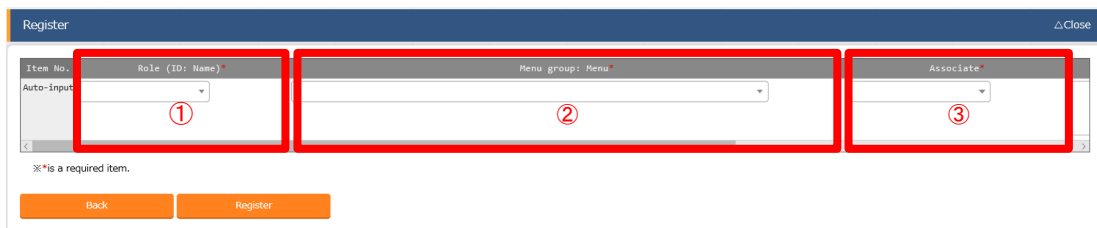


Figure 1.1-29 Group menu permission setting screen (role/menu link list)

(8) 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.

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
- User/Menu link list

Role/User link list

Export menu
Import menu
Export/Import menu list
version

Description [▽Open](#)

Display filter [△Close](#)

Discard	Item No.	Role		Last update date/time	Last updated by
		ID	Name		
All records	~			~	
	▼ Search from pulldown	▼ Search from pulldown	▼ Search from pulldown		▼ Search from pulldown

[Filter](#) [Clear filter](#)

☒ Auto-filter

List/Update [△Close](#)

Update	Discard	Item No.	Role		User		Remarks	Last update date/time	Last updated by
			ID	Name	User ID	Login ID			
Update	Discard	1	1	System Administrator	1	administrator	System Administrator	2015/04/01 10:00:00	System Administrator

Filter result count: 1

[Output Excel](#)

[Contact administrator](#)

Figure 1.1-30 Role/user link list screen

Role and user registered in "⑤role list" and "⑥user list" will display in the list box(①,② in the Figure below), so please select each of them.

Register [△Close](#)

Item No.	Role (ID name)*	User ID: Login ID*	Last update date/time	Last updated by
Auto-input	①	②	Auto-input	Auto-input

※* is a required item.

[Back](#) [Register](#)

Figure 1.1-31 User permission setting screen (Role / User link list)

(9) 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, Login ID: administrator) with 'Change password' and 'Logout' buttons. The left sidebar menu has 'Menu' expanded, showing 'Main menu' and 'System settings'. Under 'System settings', 'IP address filter list' is 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 'Time history'.

Figure 1.1-32 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**.

(10) Version

Check the version of each ITA function.
Only installed function can be checked.

The screenshot displays the Exastro IT Automation Management Console. The sidebar menu on the left includes options like Main menu, System settings, Menu group list, Menu list, Role list, User list, Role/Menu link list, Role/User link list, Single-sign-on Basic Preference, and Single-sign-on Attribute Preference. The main content area shows a table titled 'version' with two columns: 'driver' and 'version'. The table lists various drivers and their corresponding versions, all of which are 1.5.0. At the bottom of the sidebar, there is a 'version' link and a 'Contact administrator' button.

driver	version
Base	Exastro IT Automation Base functions version 1.5.0
Ansible	Exastro IT Automation Ansible Driver version 1.5.0
Cobbler	Exastro IT Automation Cobbler Driver version 1.5.0
Create_param	Exastro IT Automation Create_param version 1.5.0
Hostgroup	Exastro IT Automation Hostgroup version 1.5.0
Hostgroup2	Exastro IT Automation Hostgroup2 version 1.5.0
Hostgroup3	Exastro IT Automation Hostgroup3 version 1.5.0
Material	Exastro IT Automation Material version 1.5.0
Material2	Exastro IT Automation Material2 version 1.5.0
Material3	Exastro IT Automation Material3 version 1.5.0
OpenStack	Exastro IT Automation OpenStack Driver version 1.5.0
Terraform	Exastro IT Automation Terraform Driver version 1.5.0

Figure 1.1-33 Version screen

(11) 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 displays the user name 'System Administrator' and login ID 'administrator', with buttons for 'Change password' and 'Logout'. The sidebar menu on the left lists various system settings and user management options, with 'Operation delete list' highlighted. The main content area features a 'Description' section with an 'Open' button, followed by a 'Display filter' section with a 'Close' button. Below this is a table with columns for 'Discard', 'No', 'Logical deletion days', 'Physical', 'Last update date/time', and 'Last updated by'. Each column has a search dropdown and a 'Search from pulldown' button. There are 'Filter' and 'Clear filter' buttons below the table. A checkbox for 'Auto-filter' is also present. At the bottom, there is a table with four rows: 'List/Update', 'Register', 'Download all and edit file uploads', and 'Trace history', each with an 'Open' button.

Figure 1.1-34 Operation delete list screen

The item list of the screen is as below

Table 1.1-4 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

(12) 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 1.1-35 File delete list screen

The item list of the screen is as below.

Table 1.1-5 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.	○	Manual	Numeric
Directories to delete	Specify the directory which stores the file to be deleted.	○	Manual	Maximum length 1024 bytes
Files to delete	Specify the name of the file to be deleted. Wildcard can be used for the specification.	○	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 update time of subdirectory of the deletion target directory will be checked and deleted if it is also the deletion target.	○	List	Yes/No

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.

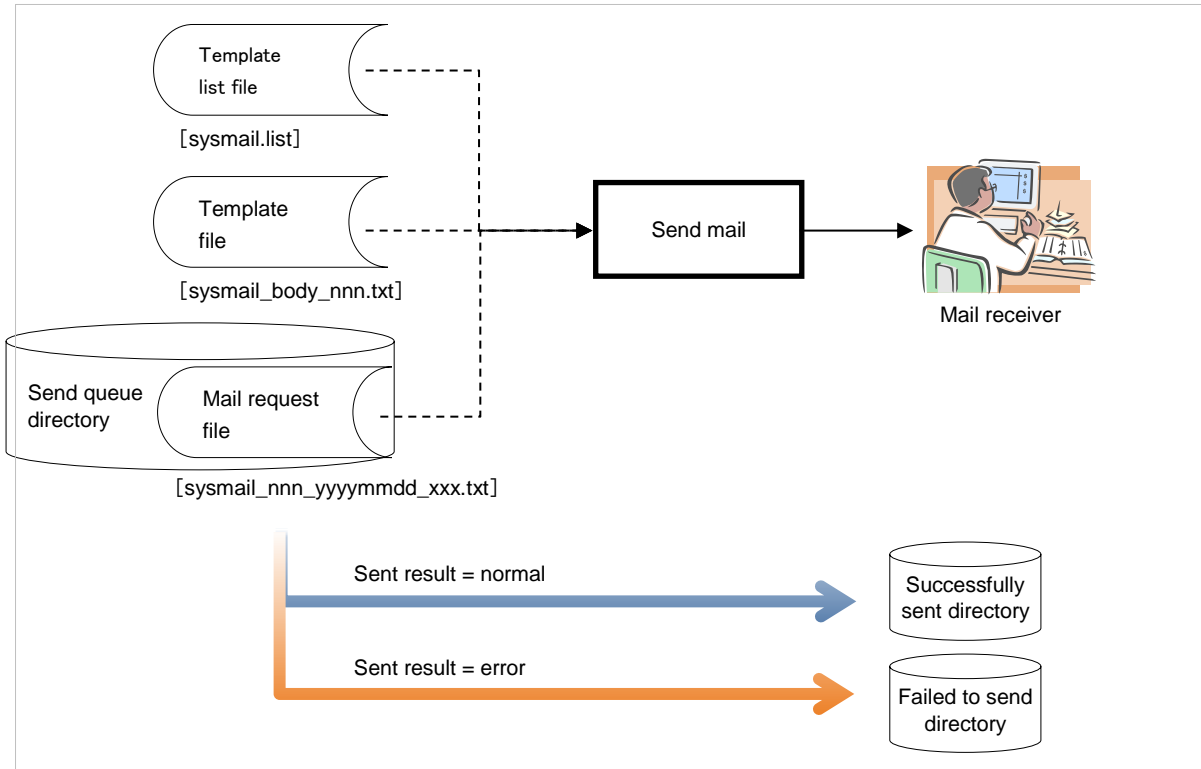


Figure 1.2-2 Operation image of send mail function

④ Procedure of sending mail

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.

- WindowsServer 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 "1.3.4 AD information mirroring function".

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 "1.3.5 AD authentication (Kerberos authentication) function".

1.3.4 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 → "User list" on ITA
 - Sign-in ID — Login ID
 - Display name *3 — User name
 - Email *4 — Mail address
- ② "Security group information" on AD → "Role list" on ITA
 - Group name — Role name
- ③ "Security group information which the user belongs to" on AD → "Role/User 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 "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 "1.3.6 About the exception 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

1.3.5 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).

1.3.6 About the exception of this function

There are exceptions in 「1.3.4 AD information mirroring function」 and 「1.3.5 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, exception ①~⑤ is 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.

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 authentication is performed.

*8 User that meets the above ①③

*9 Role that meets the above ②④

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.

- Installation related
- Delete operation execution history routinely
- Change log level
- 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/conf/backupdconf/ita_base/keep_day_length.txt
•Ansible
~/ita-root/conf/backupdconf/ansible_driver/keep_day_length.txt
•Driver common
~/ita-root/conf/backupdconf/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 a 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>