



# IT Automation BASE Tutorial

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

Ver.1.3

Exastro developer

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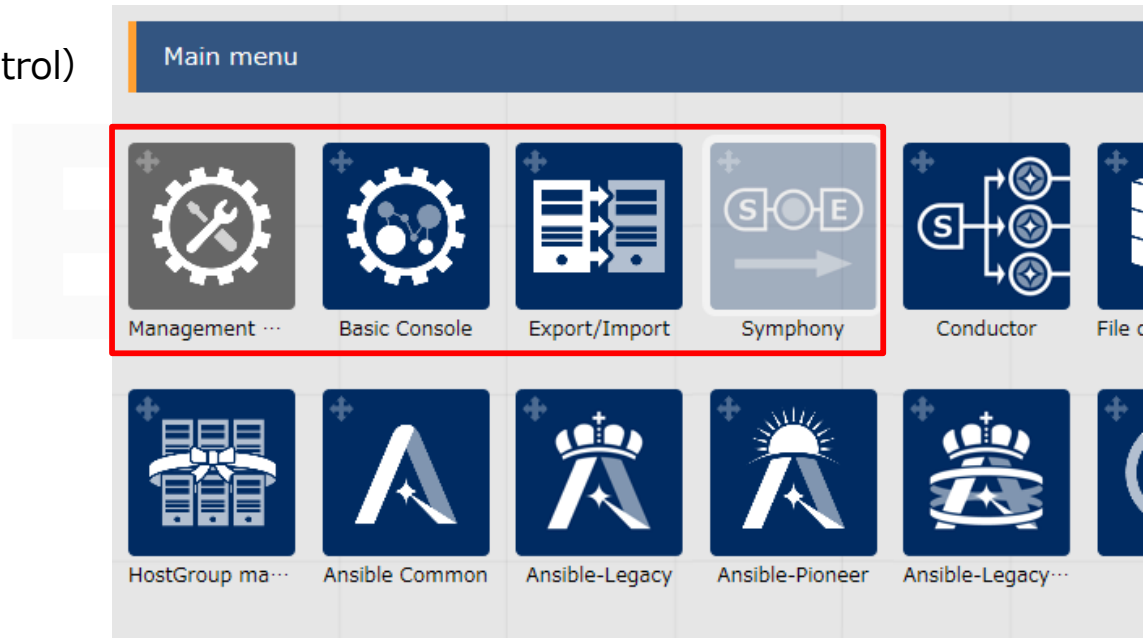
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# 1. Introduction

# 1.1 About this document

## Main Menu

- This document describes the Management console, Basic Console, Export/Import and Symphony menu groups
- **Management Console**
  - System settings
  - RBAC (Role Based Access Control)
- **Basic Console**
  - Device management in ITA
  - Operation overview
- **Export/Import**
  - Export menu
  - Import menu
- **Symphony**
  - Symphony class definition
  - Symphony execution



## 1.2 Standard workflow for Management Console and Export/Import

### Workflow

### Menu

### Menu Group

#### 2.1 System settings

System settings

Basic Console



#### 2.2 RBAC (Role Based Access Control)

Menu group list

Menu list

Role list

User list

Role/Menu link list

Role/User link list



#### 2.3 Export/Import

Export menu

Import menu

Export/Import menu list

Export/Import

# 1.3 Standard workflow for Basic Console and Symphony

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## 2.1 System Settings (1/2)

**Workflow**

**Menu**

**Menu Group**

**2.1 System settings**

**System settings**

**Management  
Console**

**2.2 RBAC  
(Role Based Access Control)**

**Menu group list**

**Menu list**

**Role list**

**User list**

**Role/Menu link list**

**Role/User link list**

**2.3 Export/Import**

**Export Menu**

**Import Menu**

**Export/Import menu list**

**Export  
/Import**

## 2.1 System Settings (2/2)

In the “System Settings” menu, users can register all the necessary information for operating the system.

The settings items are as shown below.

Item name	Description
<b>IP address restrictions</b>	Choose if access by IP address to be regulated or not
<b>Upload prohibition extension</b>	Extension file names that prohibit upload
<b>Account lock duration (seconds)</b>	Time period(seconds) to maintain locked state from start time of account lock.
<b>Password error threshold (frequency)</b>	Password failure threshold before locking account
<b>Password error count upper limit (frequency)</b>	Max amount of times continuous password errors
<b>Password re-registration prevention period (days)</b>	Time period (days) to prevent registration of same password
<b>Password validity period (days)</b>	Validity period of password (days)
<b>Authentication duration: Not operated(seconds)</b>	Time period (seconds) the session is valid with no operation
<b>Authentication duration : Maximum period (seconds)</b>	Maximum time period (seconds) a session.



## 2.2 RBAC (Role Based Access Control) (1/4)

### Workflow

### Menu

### Menu Group

#### 2.1 System settings

System settings

**Management  
Console**

#### 2.2 RBAC (Role based access control)

Menu group list

Menu list

Role list

User list

Role/Menu link list

Role/User link list

#### 2.3 Export/Import

Export Menu

Import Menu

Export/Import Menu list

**Export/  
Import**

## 2.2 RBAC (Role Based Access Control) (2/4)

### **About RBAC**

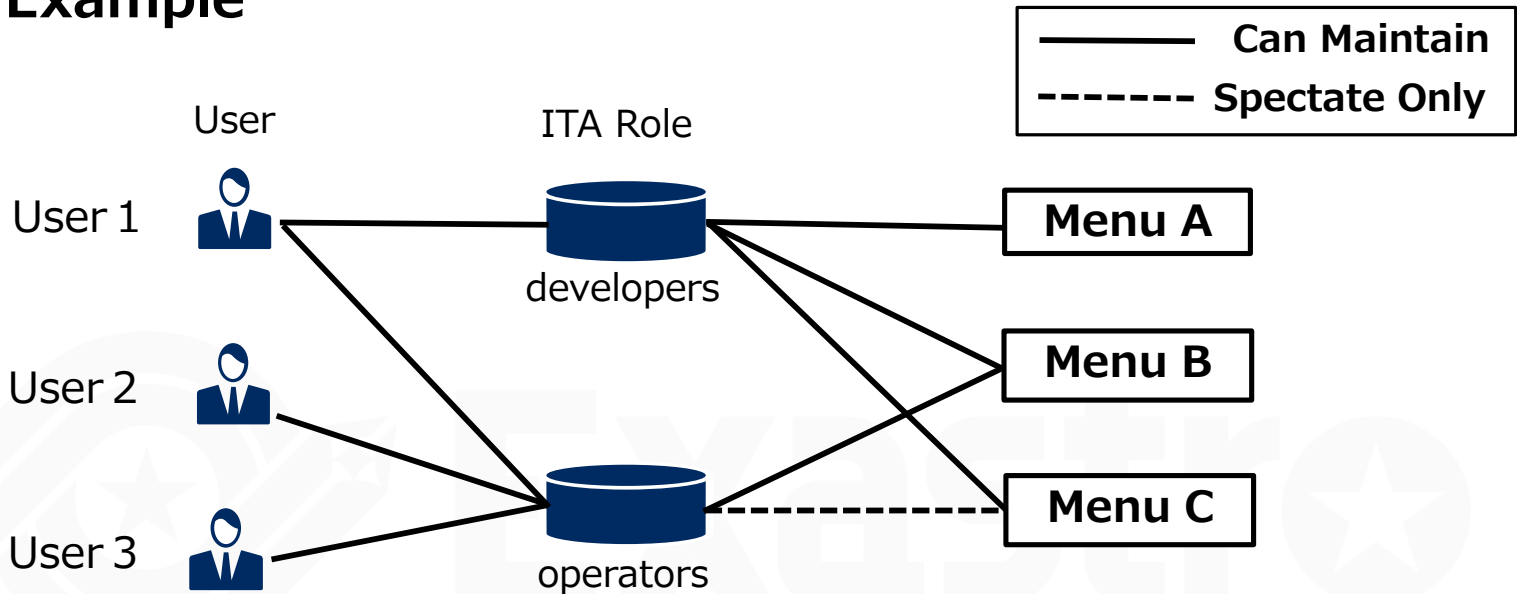
RBAC is a method that allows users to assign authority by role.

Since authorization isn't given directly to each user, but by a role basis, the access authority management is allocated by local access.



## 2.2 RBAC (Role Based Access Control) (3/4)

### RBAC Example



- **Menu A . . .**  
Only User 1 can maintain
- **Menu B . . .**  
All users can maintain
- **Menu C . . .**  
User 1 can maintain, user 2 and 3 can only spectate

※ While user 1 has both the authorization “Can Maintain” and “Spectate Only”, “Can Maintain” will be prioritized.

## 2.2 RBAC (Role Based Access Control) (4/4)

### Description of the Menu groups inside “Management Console”

- **Menu group list**
  - Multiple groups bundled.
- **Menu list**
  - A Menu is always attached to a menu group.
- **Role List**
  - Role define access authority to Menus
- **User list**
  - A user can have multiple roles
  - It is possible to link with Active Directory and acquire user information.
- **Role/Menu link menu**
  - Maintain each users access authority to menus
- **Role/User link menu**
  - Maintain each users affiliation to other users.



## 2.3 Export/Import (1/2)

### Workflow

### Menu

### Menu Group

#### 2.1 System Settings

System settings

Management Console



#### 2.2 RBAC (Role Based Access Control)

Menu Group list

Menu list

Role list

User list

Role/Menu link list

Role/User link list



#### 2.3 Export/Import

Export menu

Import menu

Export/Import menu list

Export/  
Import

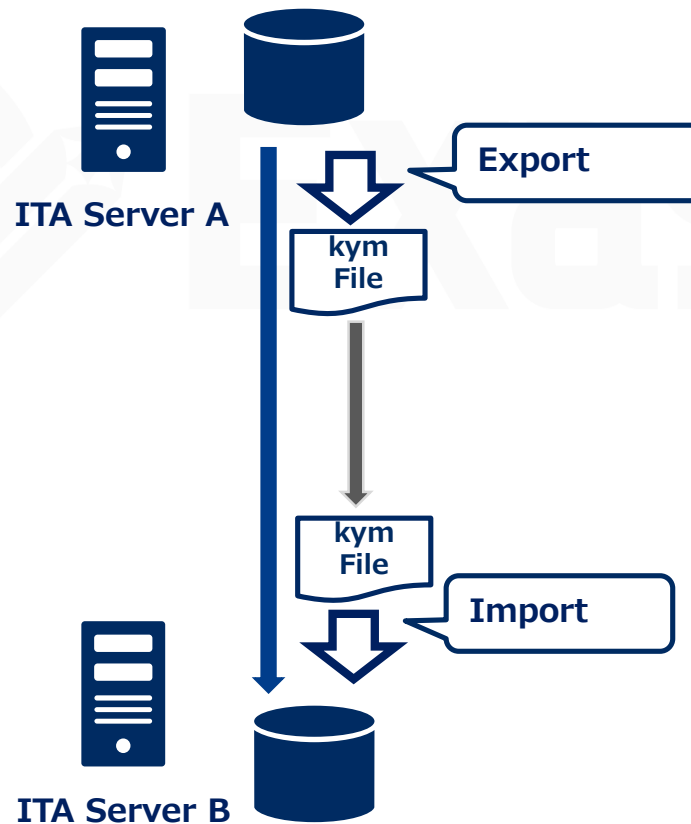
## 2.3 Export/Import (2/2)

### Export/Import

Users can export and import menus registered in ITA.

For more information on how to operation method, please refer to the user manuals.

※Attention※ Exporting and Importing in ITA will overwrite Menu units.



## 2.4 Device management in ITA (1/3)

### Workflow

### Menu

### Menu Group

**2.4 Device management in ITA**

**Device list**

**Basic Console**

**2.5 Operation overview**

**Input operation list**

**Movement list**

**2.6 Symphony class definition**

**Symphony interface information**

**Symphony class list**

**Symphony class edit**

**Symphony**

**2.7 Symphony execution**

**Symphony execution**

**Symphony execution checking**

**Symphony execution list**

## 2.4 Device management in ITA (2/3)

### Device management in ITA (1)

In the "Basic Console">"Device list" menu, users can register the needed information for the targeted host.

Users can check authorization information settings per host.

For authentication, it is possible to choose from Password authentication and Key authentication.

#### Main registration items

- HW Device type
- Host name
- IP Address
- Log-in User ID
- Log-in Password
- Authentication method

The screenshot shows the 'Device list' registration interface in ITA. The form is titled 'Display filter' and contains several input fields and dropdown menus. The following fields are highlighted with red boxes:

- HW device type**: A dropdown menu with options like '{Blank}', 'SV', and 'Search from pulldown'.
- Host name**: A text input field with a 'Search from pulldown' button.
- IP address**: A text input field with a 'Search from pulldown' button.
- MAC address**: A text input field with a 'Search from pulldown' button.
- Network device name**: A text input field with a 'Search from pulldown' button.
- Login user ID**: A text input field with a 'Search from pulldown' button.
- Login password**: A text input field with a 'Search from pulldown' button.
- ssh authentication key file**: A text input field with a 'Search from pulldown' button.
- Dedicated**: A dropdown menu with options like '{Blank}', 'Password authentication', and 'Search from pulldown'.
- Authentication method**: A dropdown menu with options like '{Blank}', 'Password authentication', and 'Search from pulldown'.

At the bottom of the form, there are buttons for 'Filter' and 'Clear filter', and a checkbox for 'Auto-filter'.

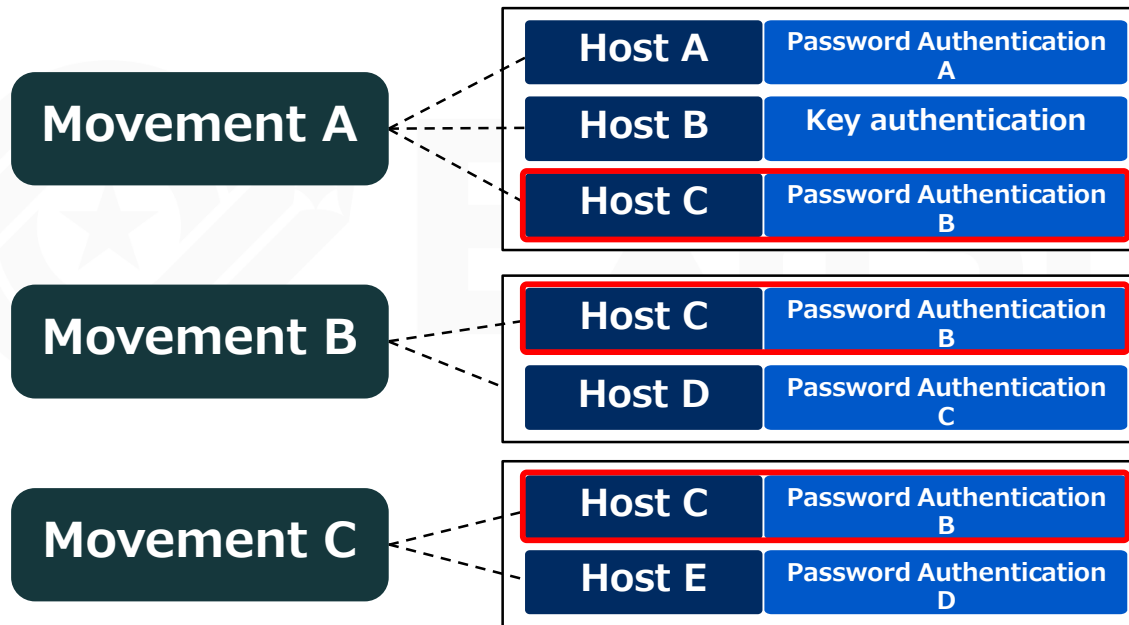


## 2.4 Device management in ITA (3/3)

### Device management in ITA (2)

in ITA, users can increase the reusability of device information as well as being able to respond flexibly to setting information changes by managing the user information separately.

※ Movement (original ITA terminology) means a work unit.



Example: Host C will need to change password  
and the changes will be carried out

↓  
Result: All movements connected to C will be automatically updated  
to show the updated information

## 2.5 Operation overview (1/2)

### Workflow

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2.4 Device management in ITA

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**Symphony**

2.7 Symphony Execution

Symphony execution

Symphony Execution checking

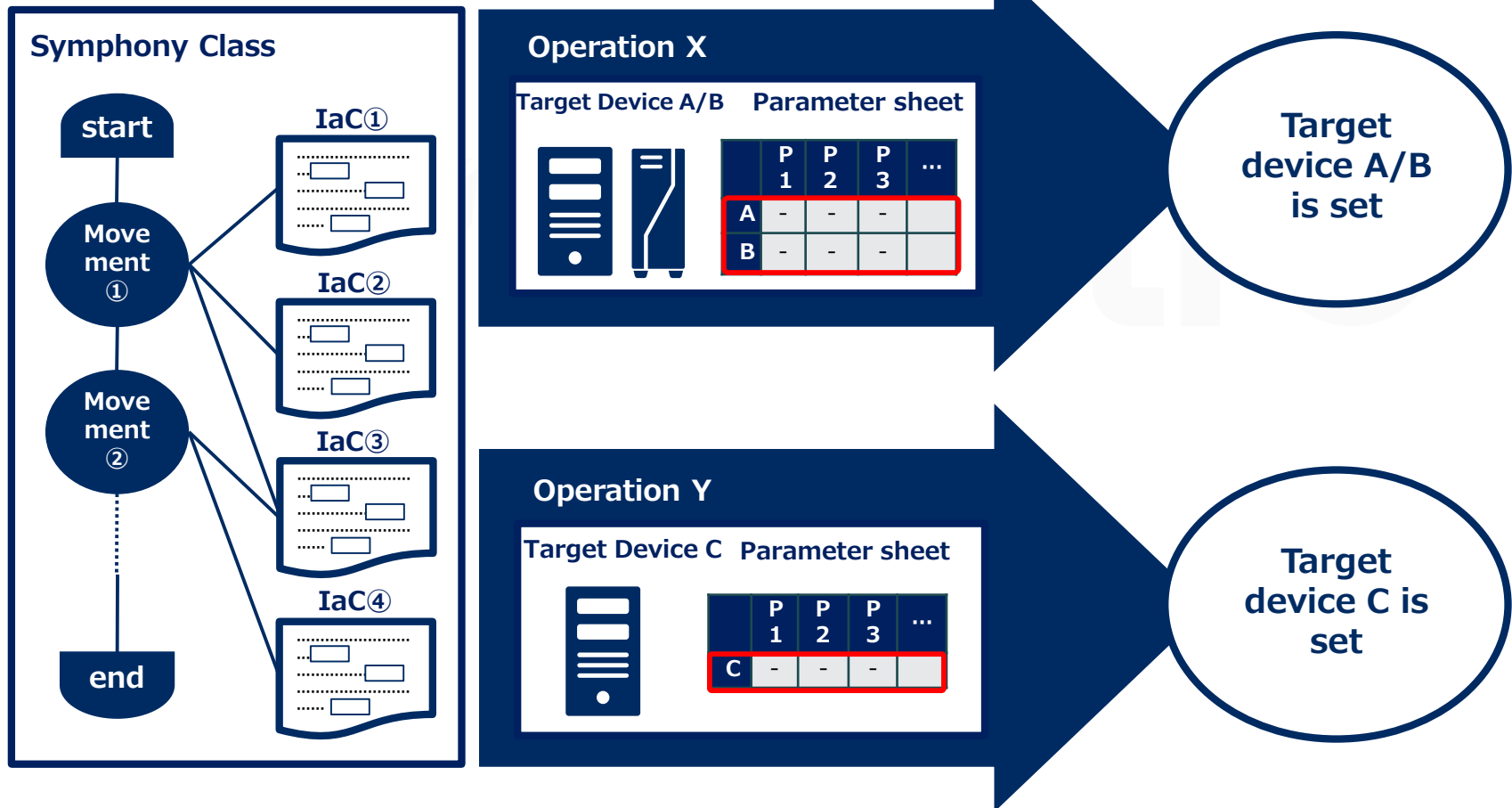
Symphony Execution list

## 2.5 Operation overview (2/2)

### About Operation

Operation is an execution unit in ITA.

It is possible to manage execution history and execution schedule.



## 2.6 Symphony class definition (1/4)

### Workflow

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2.6 Symphony class definition

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Symphony class list

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Symphony



2.7 Symphony Execution

Symphony Execution

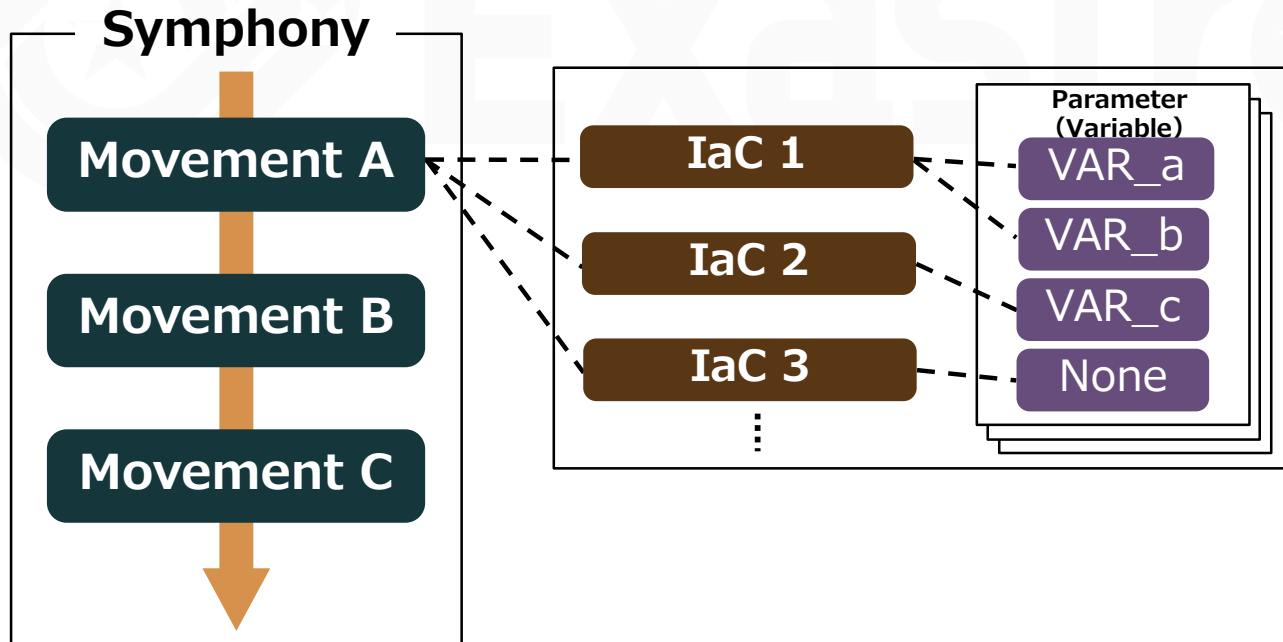
Symphony Execution checking

Symphony Execution list

## 2.6 Symphony class definition (2/4)

### Workflow in ITA

- **Symphony** (※ITA original terminology)
  - Combines work patterns called Movement and creates a workflow. Executes construction and settings operations..
- **Movement** (※ITA original terminology)
  - Movement means a work unit.



## 2.6 Symphony class definition (3/4)

### Adding and removing Movement

Users can remove and add Movements in the Symphony> Symphony class edit menu screen.

#### "Symphony class editor" screen

The screenshot shows the 'Symphony class editor' interface. On the left is a 'Menu' sidebar with options like 'Main menu', 'Symphony Interface information', 'Symphony class List', and 'Symphony class editor'. The main area is titled 'Edit Symphony' and contains a 'Start' button, a list of movements (Legacy1, Legacy\_movement, movement01), and an 'end' button. A 'Display filter' section on the right allows filtering by contents and has an 'Auto filter' checkbox. Three red callout boxes provide instructions: 1. 'Pressing the X Icon will remove the Movement' points to the 'X' icon next to 'Legacy1'. 2. 'Add Movement by dragging and dropping' points to the 'Test', 'Legacy\_movement', and 'movement01' items in the filter list. 3. 'Switch Movements by dragging and dropping' points to the movement list, with red arrows indicating the 'Legacy\_movement' and 'movement01' items being swapped.

**Pressing the X Icon will remove the Movement**

**Add Movement by dragging and dropping**

**Switch Movements by dragging and dropping**

## 2.6 Symphony class definition (4/4)

### About Pause settings

In the Symphony>Symphony class edit menu, users can press the pause button under the movement box.

Pressing it will pause any process after the movement.

### "Symphony class editor" screen

The screenshot displays the 'Symphony class editor' interface. At the top, the Exastro IT Automation logo and 'Symphony' title are visible. The top right corner shows user information: 'User name [System Administrator]' and 'Login ID [administrator]', along with 'Change password' and 'Logout' buttons. A left sidebar contains a 'Menu' with options: 'Main menu', 'Symphony Interface information', 'Symphony class List', 'Symphony class editor' (highlighted), 'Symphony execution', 'Symphony execution checking', 'Symphony execution list', and 'Symphony Regularly execution'. The main area is titled 'Edit Symphony' and includes a 'Close' button. It features input fields for 'Symphony class ID', 'Auto numbering', 'Note', 'Symphony name' (set to 'Symphony'), and 'Contents'. Below these is a 'Start' button and a list of movements. The first movement, 'Legacy1', has a 'Pause' button highlighted with a red box. The second movement, 'Legacy\_movement', also has a 'Pause' button. A right sidebar shows a 'Display filter' section with a 'Contents' input, an 'Auto filter' checkbox, and a list of movements: 'Legacy1', 'Test', 'Legacy\_movement', and 'movement01'.

## 2.7 Symphony Execution (1/8)

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## 2.7 Symphony Execution (2/8)

### Symphony Execution

In the Symphony>Symphony Execution menu, users can direct symphony executions.

Pressing the "Execution" button in Symphony "list", as well as Operation "list" sub menu will move the user to " Symphony Execution check" screen and start tracing. Users can reserve execution by entering time and date in the " Scheduling" field

### " Symphony Execution "screen

The screenshot displays the Exastro IT Automation Symphony Execution interface. The main area features a calendar for scheduling and a table of Symphony classes and operations. The right-hand panel shows the execution flow for a selected symphony, including steps like Legacy1 and Legacy\_movement.

**Symphony [List]**

Select	Symphony class ID	Symphony name	Description	Remarks	Last update date/time	Last updated by
<input type="checkbox"/>	1	Demo	This is a demo		2020/10/06 08:36:43	System Administrator
<input type="checkbox"/>	2	demon			2020/10/07 10:38:00	System Administrator
<input type="checkbox"/>	3	123	This is a demo		2020/10/07 13:42:15	System Administrator

**Operation [List]**

Select	No.	Operation ID	Operation name	Scheduled date for execution	Last execution date	Last update date/time	Last updated by
<input type="checkbox"/>	1	1	Operation1	2020/10/27 16:15	2020/10/14 14:13	2020/10/14 14:11:03	LegacyHole execution procedure
<input type="checkbox"/>	2	2	Test Operation	2020/10/06 10:00	2020/10/14 13:23	2020/10/14 13:23:39	LegacyHole execution procedure

Filter result count: 2

**Execute Symphony**

Symphony class ID: 5  
Symphony name: Symphony

**Start**

1 Legacy1 ☐ Skip  
Operation ID (Specified individually)

**Pause**

2 Legacy\_movement ☐ Skip  
Operation ID (Specified individually)

**end**

**Execute**

## 2.7 Symphony Execution (3/8)

### About scheduling executions.

If scheduled, the Symphony will not be executed and the status will be changed to "Scheduling"

Choose "Schedule Cancellation" to cancel reservation.

"Symphony" Menu Group > "Symphony execution checking" Menu

**Status: Scheduling**

The symphony will automatically be executed when the time passes the scheduled date/time

**Schedule cancellation button**

**Status : Executing**

The interface displays the 'Check Symphony execution' window. The left screenshot shows Symphony instance ID 7, 'TestSymph', with a status of 'Scheduling'. It lists two operations: '[1] Legacy1' and '[2] movement01'. A 'Schedule cancellation' button is highlighted at the bottom. The right screenshot shows Symphony instance ID 42, 'Test symphony with pause', with a status of 'Executing'. It lists two operations: '[1] move1' and '[2] Set Timezone'.

## 2.7 Symphony Execution (4/8)

### Symphony Execution Checking

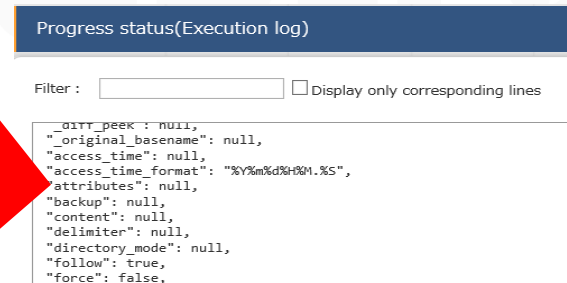
The Symphony execution state can be checked in the Symphony Execution checking menu.

Users can press "Unhold" and "emergency stop" depending on the situation. Clicking "Movement" will move you to "Execution state confirmation" screen

#### "Symphony Executing checking" Screen



#### "Progress status (Execution log)" screen



You can see the operation status and check the log for errors in the "Progress Status" screen.

## 2.7 Symphony Execution (5/8)

### About un-pausing

If the pause settings in the Symphony class edit menu is set to "active", the continuing process will be set to pause after the previous movement is completed. Press "cancel pause" to continue the movement.

**"Symphony execution checking"  
screen when Symphony is paused**

The screenshot displays the 'Symphony' interface for 'Check Symphony execution'. The main area shows a flowchart with two steps: [1] move1 and [2] Set Timezone. Step [1] is marked 'DONE' and has a green 'Unhold' button highlighted with a red box and a red arrow pointing to the word 'Unhold' in large red text. Step [2] is marked with a grey circle and has a grey 'Unhold' button. The flowchart starts with a green 'Start' button and ends with a grey 'end' button. A red arrow points from the 'Unhold' button for step [1] to the 'Unhold' text. The right sidebar shows 'Operation ID 9' and 'Operation Name operation'. The status is 'Executing', the executing user is 'System Administrator', and the scheduled date/time is '2020/12/03 15:50:00'. The emergency stop command is 'Not issued'. The bottom of the interface has an 'Emergency stop' button.

Exastro IT Automation Symphony

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

Menu  
Main menu  
Symphony Interface information  
Symphony class List  
Symphony class editor  
Symphony execution  
Symphony execution checking  
Symphony execution list  
Symphony Regularly execution

Check Symphony execution

Symphony instance ID 42  
Symphony name Test symphony with pause

Start

[1] move1  
Start datetime 2020/12/03 15:50:00  
End datetime 2020/12/03 15:50:10  
Unhold

[2] Set Timezone  
Start datetime  
End datetime

end

Emergency stop

Operation ID 9  
Operation Name operation

Status Executing  
Executing user System Administrator  
Scheduled date/time 2020/12/03 15:50:00  
Emergency stop command Not issued

## 2.7 Symphony Execution (6/8)

### About Emergency Stop (1)

In the Symphony>Symphony execution checking Menu, Users can stop the execution by pressing the "Emergency stop" button while the Symphony is executing.

- ① Press the Emergency stop button
- ② Press the OK on the pop-up window
- ③ Symphony emergency stop complete message will be displayed.

The screenshot displays the Exastro IT Automation Symphony interface. The main window shows the 'Check Symphony execution' screen with details for Symphony instance ID 38 (name: symphony test 2) and operation ID 9 (name: operation). The status is 'Executing'. A red box highlights the 'Emergency stop' button in the bottom left corner, labeled with a red circle containing the number 1.

A pop-up window titled 'サイトからのメッセージ' (Message from the site) is displayed in the center. It asks 'Are you sure you want to emergency stop Symphony? (Symphony instance ID38)' and includes a checkbox 'このページからのメッセージを非表示にする' (Hide messages from this page). The 'OK' button is highlighted with a red box and labeled with a red circle containing the number 2.

Another pop-up window titled 'サイトからのメッセージ' (Message from the site) is shown on the right, displaying the message: 'Emergency stop executed for Symphony. (Symphony instance ID38)'. The 'OK' button is highlighted with a red box and labeled with a red circle containing the number 3.

A red arrow points from the 'OK' button in the first pop-up to the second pop-up. A red box highlights the 'Emergency stop command' field in the top right, which has changed from 'Not issued' to 'Issued', with a callout text: '“Emergency stop command” will change from “Not issued” to “Issued”'.

## 2.7 Symphony Execution (7/8)

### About Emergency Stop (2)

In the Symphony>Symphony execution checking Menu, If an emergency stop happened during Movement ""Move02" execution, each movement status will be as shown below.

- "move01" [Normal execution]
- "move02" [Emergency stop]
- "move03" [Not yet executed]

The screenshot shows the Exastro IT Automation Symphony interface. The main window is titled 'Check Symphony execution' and displays a sequence of three movements. The first movement, 'Normal execution', is shown with a green circle and a green box. The second movement, 'Emergency stop', is shown with a red circle and a red box. The third movement, 'Not yet executed', is shown with a grey circle and a grey box. The interface also includes a sidebar menu, a top header with user information, and a right panel with operation details.

Movement	Status	Start Time	End Time
1	Normal execution	12/03 12:28:23	12/03 12:28:35
2	Emergency stop	12/03 12:28:38	12/03 12:28:44
3	Not yet executed		

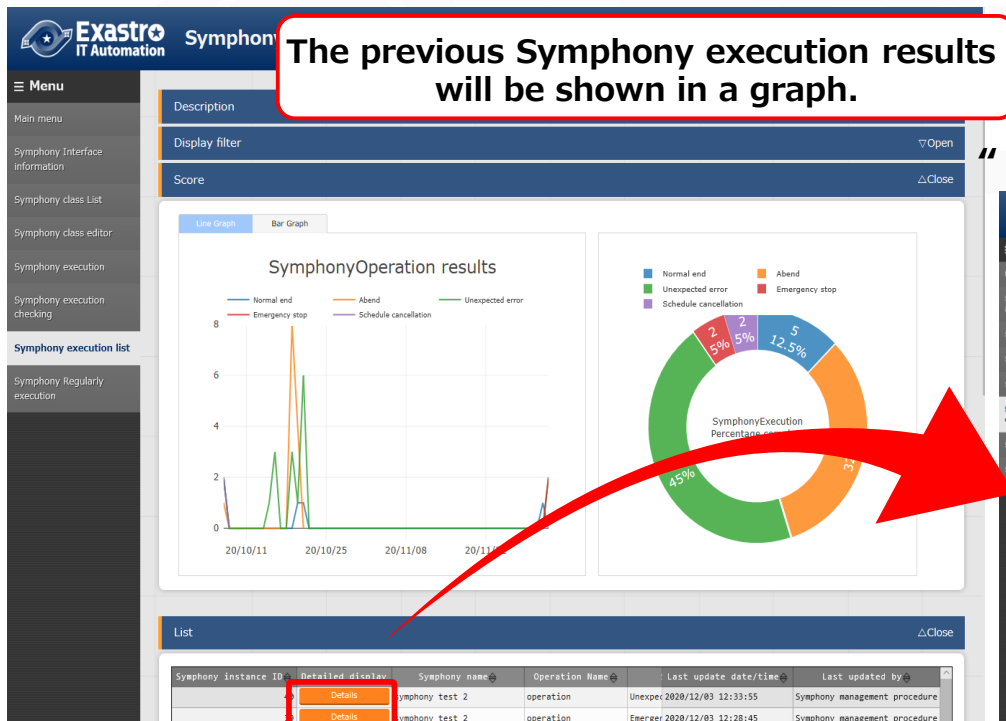
## 2.7 Symphony Execution (8/8)

### Symphony Execution list

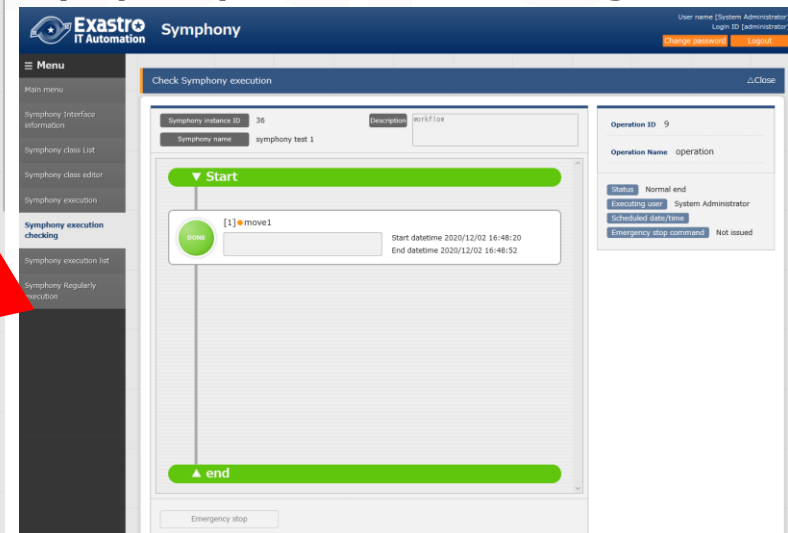
The Symphony execution history list is displayed in the symphony execution list. Pressing the "Details" button will move the user to "Symphony execution check" screen.

Users can check all the previous execution history.

#### "Symphony execution list" screen



#### "Symphony execution checking" screen





**Exastro**