



IT Automation Conductor 【Practice】

※In this document, “Exastro IT Automation” is described as “ITA”.

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1. Introduction

1.1 About this document

- The "**Conductor**" menu group is explained in this document.

The screenshot displays the Exastro IT Automation dashboard. The top navigation bar includes the Exastro logo, user information (System Administrator), and links for 'Change password' and 'Logout'. The main menu on the left lists various categories: Management, Basic Console, Export/Import, Symphony, **Conductor** (highlighted with a red box), File control, Input, Substitution, Reference, Contrast, HostGroup, Ansible-Leg, Ansible-Pion, Ansible-Leg, Cobbler, and Terraform. The central dashboard area features three main widgets: 'Movement' (a donut chart showing 4 total movements with 25% each for four categories), 'Work status' (a donut chart showing 0 total status), and 'Work result' (a donut chart showing 0 total result). Below these are tables for 'Movement', 'Status', and 'Result' with columns for CON, SYM, and SUM. The bottom section shows a 'Work history' table.

Movement	SUM
Ansible Legacy	1
Ansible Pioneer	1
Ansible Legacy Role	1
Terraform	1

Status	CON	SYM	SUM
Executing	0	0	0
Unexecuted (schedule)	0	0	0
Unexecuted	0	0	0

Result	CON	SYM	SUM
Normal end	0	0	0
Abnormal end	0	0	0
Unexpected error	0	0	0
Emergency stop	0	0	0
Schedule cancellation	0	0	0

2. About Conductor



2.1 Scenario (1/2)

- The Scenario used in this document is as following.
- Ansible driver is required to proceed with the scenario, so in this scenario, we will explain using Ansible-Legacy.

①Register device information

Basic console menu

②Register operation

③Register Movement

Various driver menu

④Check Movement

⑤Register interface information

Conductor menu

⑥Register Conductor

⑦Check Conductor

⑧Execution Conductor

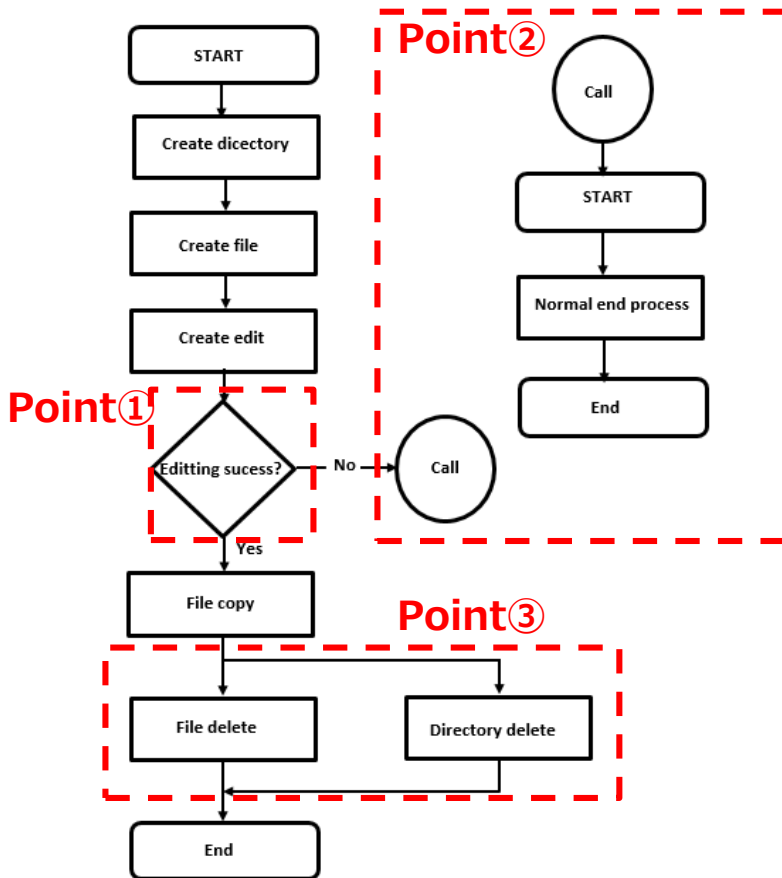
⑨Check execution result

⑩Check execution history

2.1 Scenario (2/2)

- In order to experience the Conductor functions in this document, we will create a Conductor similar to the following flowchart.

● Flowchart



□ Features of Conductor function

□ Point ①

Conditional branch function according to the success/end judgment of pre-processing.

□ Point ②

Registered Operation/Conductor Call function.

□ Point ③

Movement parallel processing function.

2.2 Preparation

●Create IaC(1/2)

In this scenario, Ansible-Legacy is explained with the use of an example.
Save the following **IaC as an yml file for each module.**

※Character code is "UTF-8", Newline code is "LF", file name extension is "yaml"format.
Please be careful about indents.

```
- name: create directory
  file:
    path=/tmp/{{ VAR_dir_name_1 }}
    state=directory
    mode=0755

- name: remove directory
  file:
    path=/tmp/{{VAR_dir_name_1 }}
    state=absent

- name: create file
  file:
    path=/tmp/{{VAR_dir_name_1 }}/{{VAR_file_name }}
    state=touch
    mode=0755
```


2.2 Preparation








● Create IaC(2/2)

Similarly, save the following **IaC as yaml files** for each module.

- name: remove file
file:
 path=/tmp/{{VAR_dir_name_1 }}/{{VAR_file_name }}
 state=absent
- name: copy file
copy:
 src=/tmp/{{VAR_dir_name_1 }}/{{VAR_file_name }}
 dest=/tmp/{{VAR_dir_name_2 }}/{{VAR_file_name }}
 owner=root
 group=root
 mode=0644
- name: edit file
copy:
 dest=/tmp/{{VAR_dir_name_1 }}/{{VAR_file_name }}
 content= {{VAR_edit_param_1 }}
- name: forced termination
fail: msg={{VAR_message_text }}



● Created image

Name	Update date/time	Type	Size
 copy_file.yml	2020/10/30 9:55	YML file	1 KB
 create_directory.yml	2020/10/30 9:55	YML file	1 KB
 create_file.yml	2020/10/30 9:55	YML file	1 KB
 edit_file.yml	2020/10/30 9:55	YML file	1 KB
 forced_termination.yml	2020/10/30 9:55	YML file	1 KB
 remove_directory.yml	2020/10/30 9:55	YML file	1 KB
 remove_file.yml	2020/10/30 9:55	YML file	1 KB

3. Operation

3.1 Register Target host

●Register Target host

"Basic Console" menu group >> "Device list" menu >> "Register" submenu >> "Start register" button.

- ① Enter the following "Host name", "IP address", "Login ID", "Management", "Login password" and "Authentication method".
- ② Click "Register" button.

Register

Managed system item number	Host name *	IP address *	EtherWakeOnLan	
			MAC address	Network device name
Auto-input	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

※* is a required item.

Back Register

1 Enter value for the item

Item	Value
Host name	testserver
IP address	(Free value)
Login ID	(Free value)
Management	●
Login password	(Free value)
Authentication method	Password authentication

POINT

This scenario assumes that you want to have a ssh password connection to the Target host. Please enter "IP Address", "Login ID", "Login password" appropriate to the settings set in the users environment.

3.2 Register operation

●Register operation

"Basic Console" menu group >> "Input list" menu >> "Register" submenu
>>"Start register" button.

- ① Enter "Operation name", "Schedule date for execution".
- ② Click "Registration" button.

Register

No.	Operation ID	Operation name*	Scheduled date for execution*	Remarks
Auto-input	Auto-input	<input type="text"/>	<input type="text"/>	

※*is a required item.

Back

Register

1

Enter value for item

Item	Value
Operation name	operation1
Schedule date for execution	(Free date/time)

2

POINT

The process will not be executed at the date and time specified here.

3.3 Register IaC (1/2)

●Register IaC

"Ansible-Legacy" menu group >> "Playbook files" menu >> "Register" submenu
>> "Start register" button.

- ① Input "Playbook file name".
Click the "Reference" button in the "Playbook files" column.
Upload all previously created yml files.
(Click "upload in Advance" button)
- ② Click "Registration" button.

Exastro IT Automation Ansible-Legacy

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

Menu

- Main menu
- Movement list
- Playbook files
- Movement details
- Substitution value auto-registration setting
- Target host
- Substitution value list
- Execution
- Check operation status
- Execution list

Description ▾ Open

Display filter ▾ Open

List/Update ▾ Open

Register ▲ Close

Playbook ID: Auto-Input

Playbook name:

Playbook files: No file chosen

Upload status:

* is a required item.

Enter value for item

Item	Value
Playbook file name	<free>
Playbook file	<free> .yaml

POINT Please refer to "2.2 Pre-preparation".
For more information on how to create IaC.

3.3 Register IaC (2/2)

● Register IaC

- When you're done registering, the list should be something like this:

List/Update									△Close
History	Update	Discard	Playbook ID	Playbook name	Playbook files	Movement playbook link	Ac Role	Last update date/time	Last updated by
History	Update	Discard	2	copy_file	CopyFile.yml	Movement playbook link		2021/06/17 13:03:13	System Administrator
History	Update	Discard	3	create_directory	CreateDirectory.yml	Movement playbook link		2021/06/17 13:03:36	System Administrator
History	Update	Discard	4	create_file	CreateFile.yml	Movement playbook link		2021/06/17 13:03:54	System Administrator
History	Update	Discard	5	forced_termination	ForcedTermination.yml	Movement playbook link		2021/06/17 13:04:24	System Administrator
History	Update	Discard	6	remove_file	RemoveFile.yml	Movement playbook link		2021/06/17 13:05:06	System Administrator
History	Update	Discard	7	remove_directory	RemoveDirectory.yml	Movement playbook link		2021/06/17 13:05:23	System Administrator
History	Update	Discard	8	edit_file	EditFile.yml	Movement playbook link		2021/06/17 13:19:28	System Administrator

Filter result count: 7

Output Excel

3.4 Register Movement (1/2)

● Register Movement

"Ansible-Legacy" menu group >> "Movement list" menu >> "Register" submenu >> "Start register" button.

- ① Input "Movement name" and select "Host specific format".
- ② Click "Register" button.

Exastro IT Automation Ansible-Legacy

Menu

- Main menu
- Movement list**
- Playbook files
- Movement details
- Substitution value auto-registration setting
- Target host
- Substitution value list
- Execution
- Check operation status
- Execution list

Description

Display filter

List/Update

Register

1 Set the value for item

Item	Value
Movement name	<Free>
Host specific format	IP

Movement ID **Movement Name*** **Delay timer** **Host specific format*** **WinRM connection**

Auto-input

※*is a required item.

2 **Register**

POINT Please create one Movement for each yml file.

3.4 Register Movement (2/2)

● Register Movement

- When you're done registering, the list should be something like this:

List/Update △Close

History	Update	Discard	Movement ID	Movement Name	Orchestrator	Delay timer	Dedicated information		Last update date/time	Last updated by
							Host specific format	WinRM connection		
History	Update	Discard	5	copy_file	Ansible Legacy		IP		2021/06/17 13:07:32	System Administrator
History	Update	Discard	6	create_directory	Ansible Legacy		IP		2021/06/17 13:07:43	System Administrator
History	Update	Discard	7	create_file	Ansible Legacy		IP		2021/06/17 13:07:52	System Administrator
History	Update	Discard	8	edit_file	Ansible Legacy		IP		2021/06/17 13:08:15	System Administrator
History	Update	Discard	9	forced_termination	Ansible Legacy		IP		2021/06/17 13:08:25	System Administrator
History	Update	Discard	10	remove_directory	Ansible Legacy		IP		2021/06/17 13:08:39	System Administrator
History	Update	Discard	11	remove_file	Ansible Legacy		IP		2021/06/17 13:08:49	System Administrator

Filter result count: 7

Output Excel

3.5 Register Movement details (1/2)

Register Movement details

"Ansible-Legacy" menu group >> "Movement playbook link" menu >> "Register" submenu >> "Start register" button.

- ① Input "Movement", "Playbook files" and "Include order"
- ② Click "Register" button.

Exastro IT Automation Ansible-Legacy

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

Menu

- Main menu
- Movement list
- Playbook files
- Movement details

Substitution value auto-registration setting

Target host

Substitution value list

Execution

Check operation status

Execution

Associated item No.	Movement	Playbook files	Include order	Remarks	Last update date/time	Last updated by
Auto-input					Auto-input	Auto-input

※ * is a required item.

Back Register

Set the value for item

Item	Value
Movement	Select the create Movement
Playbook file	Select the register playbook
Include order	1

POINT

Please create the same number of yml files as registered movement information.

3.5 Register Movement details (2/2)

● Register Movement details

When you're done registering, the list should be something like this:

List/Update △Close									
History	Update	Discard	Associated item No. ⌵	Movement ⌵	Playbook files ⌵	Include order ⌵	Ac Role	Last update date/time ⌵	Last updated by ⌵
History	Update	Discard	2	5:copy_file	copy_file	1		2021/06/17 13:17:05	System Administrator
History	Update	Discard	3	6:create_directory	create_directory	1		2021/06/17 13:17:13	System Administrator
History	Update	Discard	4	7:create_file	create_file	1		2021/06/17 13:17:20	System Administrator
History	Update	Discard	5	8:edit_file	edit_file	1		2021/06/17 13:20:38	System Administrator
History	Update	Discard	6	9:forced_termination	forced_termination	1		2021/06/17 13:21:49	System Administrator
History	Update	Discard	7	10:remove_directory	remove_directory	1		2021/06/17 13:21:58	System Administrator
History	Update	Discard	8	11:remove_file	remove_file	1		2021/06/17 13:22:07	System Administrator

Filter result count: 7

Output Excel

3.6 Register Movement and Host connected to the operation

●Register Movement and Host connected to the operation

"Ansible-Legacy" menu group >> "Target host" menu >> "Register" submenu >> "Start register" button.

- ① Input "Operation" , "Movement" and "Host".
- ② Click "Register" button.

Exastro IT Automation Ansible-Legacy

Menu

- Main menu
- Movement list
- Playbook files
- Movement details
- Substitution value auto-registration setting
- Target host
- Substitution value list
- Execution
- Check operation status
- Execution list

Description

Display filter

List/Update

Register

Item No.	Operation*	Movement*	Host*
Auto-input			

※*is a required item.

Back Register

POINT

Please register all the created Movements.

1

Set value to item

Item	Value
Operation	operation1
Movement	Created Movement
Host	testserver

2

3.7 Substitution value list(1/2)

●Substitution value list

"Ansible-Legacy" menu group >> "Substitution value list" menu >> "Register" submenu >> "Start register" button.

- ① Input "Operation" , "Movement" , "Host" , "Variable name" and "Specific value".
- ② Click "Register" button.

The screenshot displays the Exastro IT Automation Ansible-Legacy web interface. On the left is a dark sidebar menu with options: Menu, Main menu, Movement list, Playbook files, Movement details, Substitution value auto-registration setting, Target host, Substitution value list, Execution, Check operation status, and Execution list. The main content area has a top navigation bar with 'Description', 'Display filter', 'List/Update', and 'Register' (highlighted with a red circle and '1'). Below this is a registration form with a table header: 'Item No.', 'Operation*', 'Movement', 'Host', 'Variable name', and 'Specific value'. The first row is labeled 'Auto-input' and contains dropdown menus for 'Operation' (set to '1:Operation1'), 'Movement', 'Host', and 'Variable name', followed by a large text input field for 'Specific value'. A red box highlights the entire form area. Below the table, a note states '※* is a required item.' At the bottom of the form are two orange buttons: 'Back' and 'Register' (highlighted with a red box and '2'). The bottom of the interface features a dark blue bar with 'Download all and edit file uploads' and 'Trace history' links.

Item No.	Operation*	Movement	Host	Variable name	Specific value
Auto-input	1:Operation1				

※* is a required item.

Back Register

3.7 Substitution value list (2/2)

●Substitution value list

Please use the list below for registering substitute values.

Operation	Host	Variable name	Specific value	Substitution order
1:operation1	1:Testserver	3:copy_file:1:VAR_dir_name_1	dir1	
1:operation1	1:Testserver	3:copy_file:2:VAR_file_name	dir2	
1:operation1	1:Testserver	3:copy_file:3:VAR_edit_param_1	testfile	
1:operation1	1:Testserver	4:create_directory:4:VAR_dir_name_1	dir1	
1:operation1	1:Testserver	5:create_file:5:VAR_dir_name_1	dir1	
1:operation1	1:Testserver	5:create_file:6:VAR_file_name	testfile	
1:operation1	1:Testserver	6:edit_file:7:VAR_dir_name_1	dir1	
1:operation1	1:Testserver	6:edit_file:8:VAR_file_name	testfile	
1:operation1	1:Testserver	6:edit_file:9:VAR_edit_param_1	param1	
1:operation1	1:Testserver	7:forced_termination:10:VAR_message_text	testmsg_fail	
1:operation1	1:Testserver	8:remove_directory:11:VAR_dir_name_1	dir1	
1:operation1	1:Testserver	9:remove_file:12:VAR_dir_name_1	dir1	
1:operation1	1:Testserver	9:remove_file:12:VAR_dir_name_1	testfile	

3.8 Register Conductor (1/7)

●Register Conductor

Input "Conductor name" in the Conductor menu group>> Conductor Class edit.

- ① Drag and drop "Movements" and "Functions" displayed from the right side of the screen to center of the screen.
- ② Click "Registration" button.

Enter value for item

Item	Value
Name	Conductor_1

1

Drag and drop

2

3

To edit

※ The Conductor to be created is on the next page.

3.8 Register Conductor(2/7)

●Register Conductor

Please create the Conductor as shown the figure below.

The screenshot displays the Exastro interface. On the left, a workflow is shown on a grid background, consisting of three connected blocks: a 'Start' block (blue circle with 'S'), a 'forced_termination' block (red circle with '7' and 'Ansible Legacy' text), and an 'End' block (blue circle with 'E'). The 'Start' block has an 'OUT' port, and the 'forced_termination' block has an 'IN' port and an 'OUT' port. The 'End' block has an 'IN' port. On the right, a sidebar shows the 'Conductor' configuration with 'ID : 1' and 'Name : Conductor_2'. Below this, a 'Movement' table lists various functions.

Movement	Function	
+	ID	Movement name
3	copy_file	
4	create_directory	
5	create_file	
6	edit_file	
7	forced_termination	
8	remove_directory	
9	remove_file	

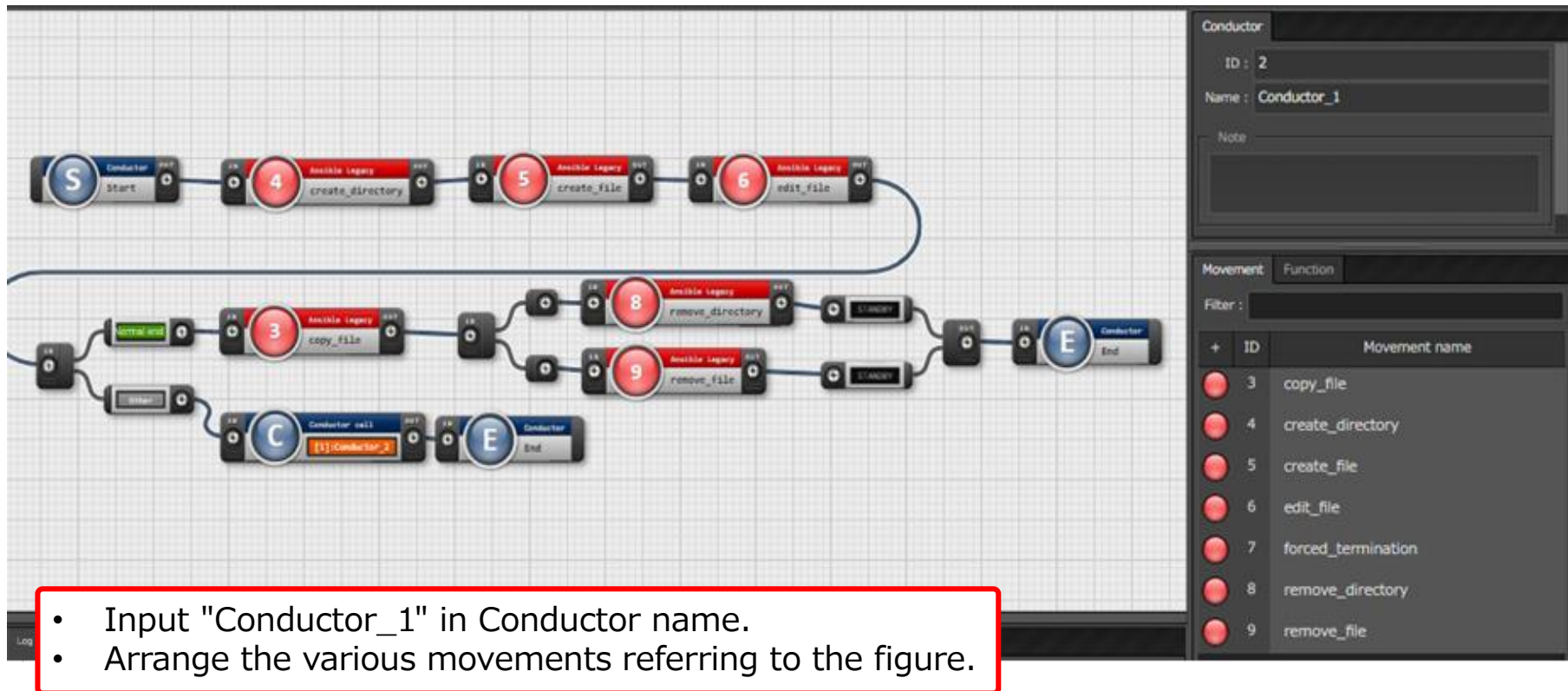
- Input "Conductor_2" in "Conductor name."
- Drag and drop "forced_termination" from the Movement.
- Drag and drop "Conductor" from the Function.
- Connect "IN" and "OUT" as shown in the figure.
- Click the "Register" button at the bottom of the screen.

3.8 Register Conductor(3/7)

●Register Conductor

The overall view of the created Conductor is as follows.

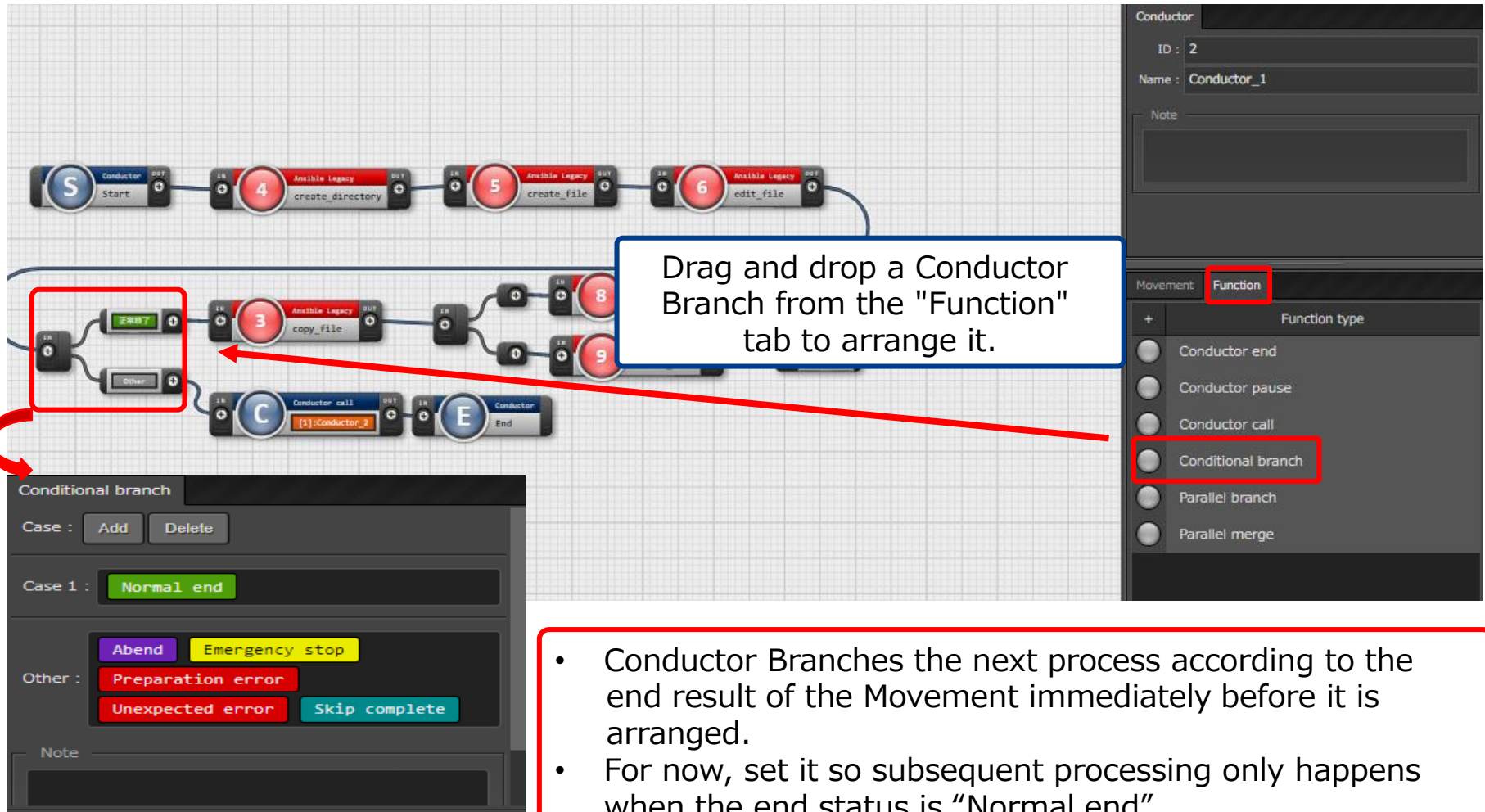
The details are explained on the next pages.



3.8 Register Conductor(4/7)

●Register Conductor

Please create the Conductor as shown in the figure below.



3.8 Register Conductor (5/7)

● Register Conductor

Please create the Conductor as shown in the figure below.

Drag and drop Conductor Call from the "Function" tab to arrange it.

Conductor call configuration:

- Default skip : ☒
- Conductor select: [1]:Conductor_2
- Operation select: Operation

Conductor configuration:

- ID : 2
- Name : Conductor_1
- Note :

Movement: Function

Function type:

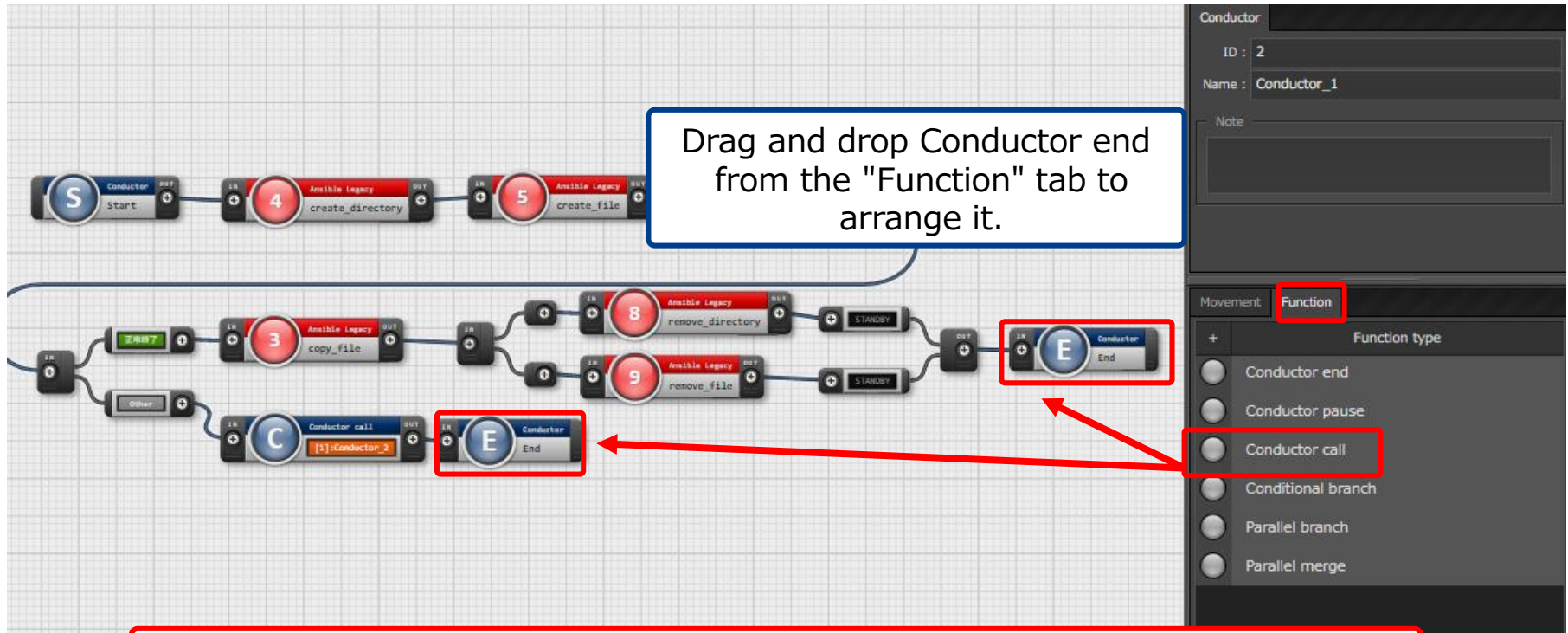
- Conductor end
- Conductor pause
- Conductor call
- Conditional branch
- Parallel branch
- Parallel merge

- "Conductor call" can call in and execute previously set Conductors and Operations.
- Specify the previously created Conductor_2.

3.8 Register Conductor (6/7)

● Register Conductor

Please create the Conductor as shown in the figure below.

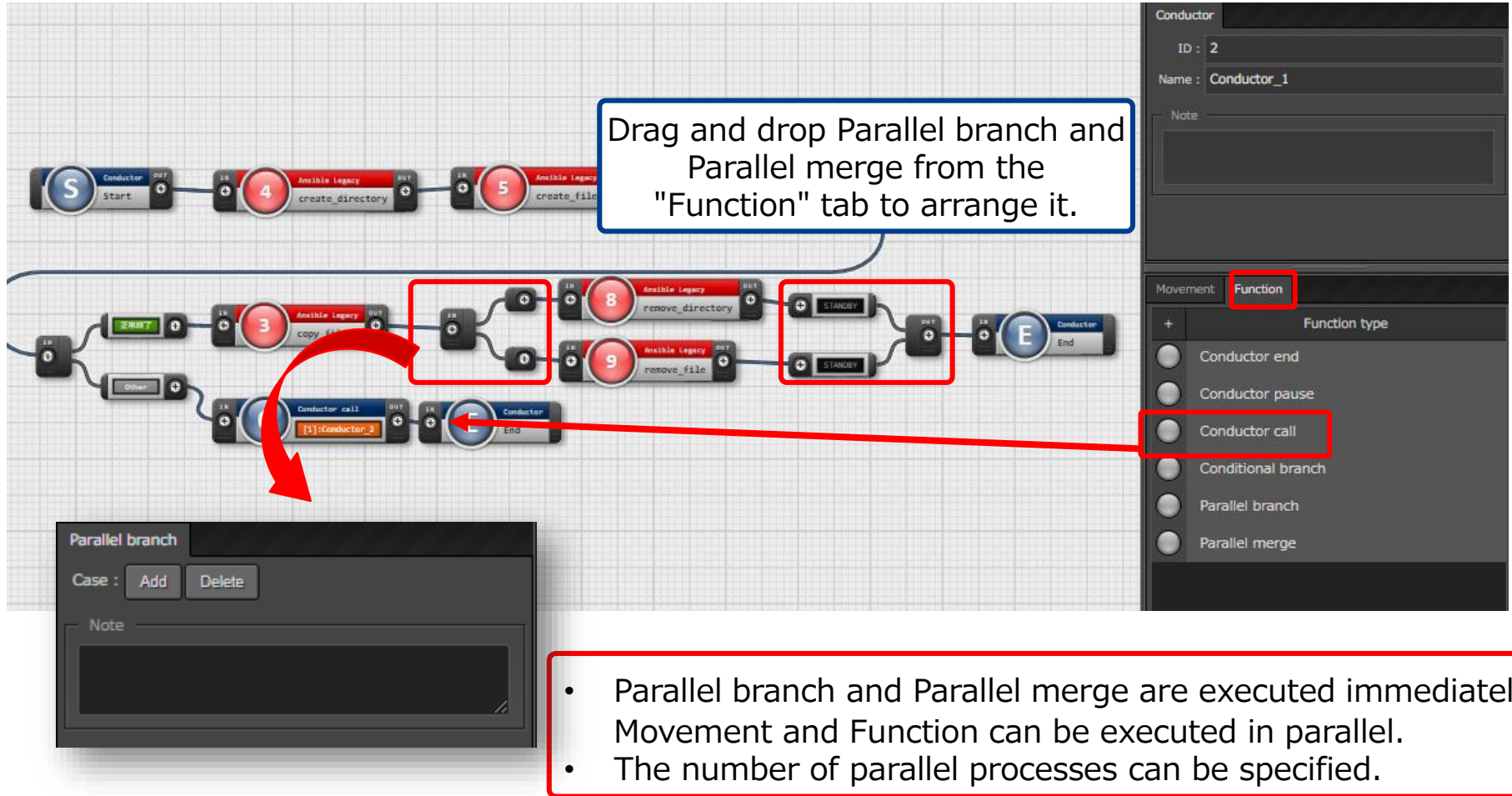


- Conductor end is a function is deployed at the end of a process..
- It is also deployed at the end of the branch process introduced in (5/7).

3.8 Register Conductor (7/7)

● Register Conductor

Please create the Conductor as shown the figure below.



3.9 Conductor execution

●Conductor execution

"Conductor" menu group >> "Conductor execution" menu.

- ① Determine the execution date and time from the "Schedule date/time" item in the "Conductor [list]" submenu.
- ② Select "Conductor_1" in the "Conductor name" , "Conductor [List]" submenu items.
- ③ Select "operation" in the "operation name" , "operation [list]" submenu items.
- ④ Click the "Execute" button.

The screenshot shows the Exastro Conductor execution interface. It includes a 'Scheduling' section with a 'Specify the scheduled date/time in (YYYY/MM/DD)' field and a 'Scheduled date/time' input field. Below this is a 'Conductor [filter]' section and a 'Conductor [List]' table. The 'Conductor [List]' table has columns 'Select', 'Conductor class ID', and 'Conductor name'. The 'Operation [Filter]' section and 'Operation [List]' table are also visible. The 'Operation [List]' table has columns 'Select', 'No.', 'Operation ID', and 'Operation name'. On the right side, there is a 'Last' section with a grid showing a sequence of operations. At the bottom right, there is an 'Execute' button.

1 Select the value for below

Item	Value
Schedule date/time	Optional

2 Select the value for below

Item	Value
Conductor name	Conductor_1

3 Select the value for below

Item	Value
Operation name	Operation_1

4 Execute

Conductor confirmation

-

Progress status(Execution log)

Filter : ☐ Display only corresponding lines

30



Exastro