



IT Automation Conductor 【Practice】

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

Version1.5

Exastro developer

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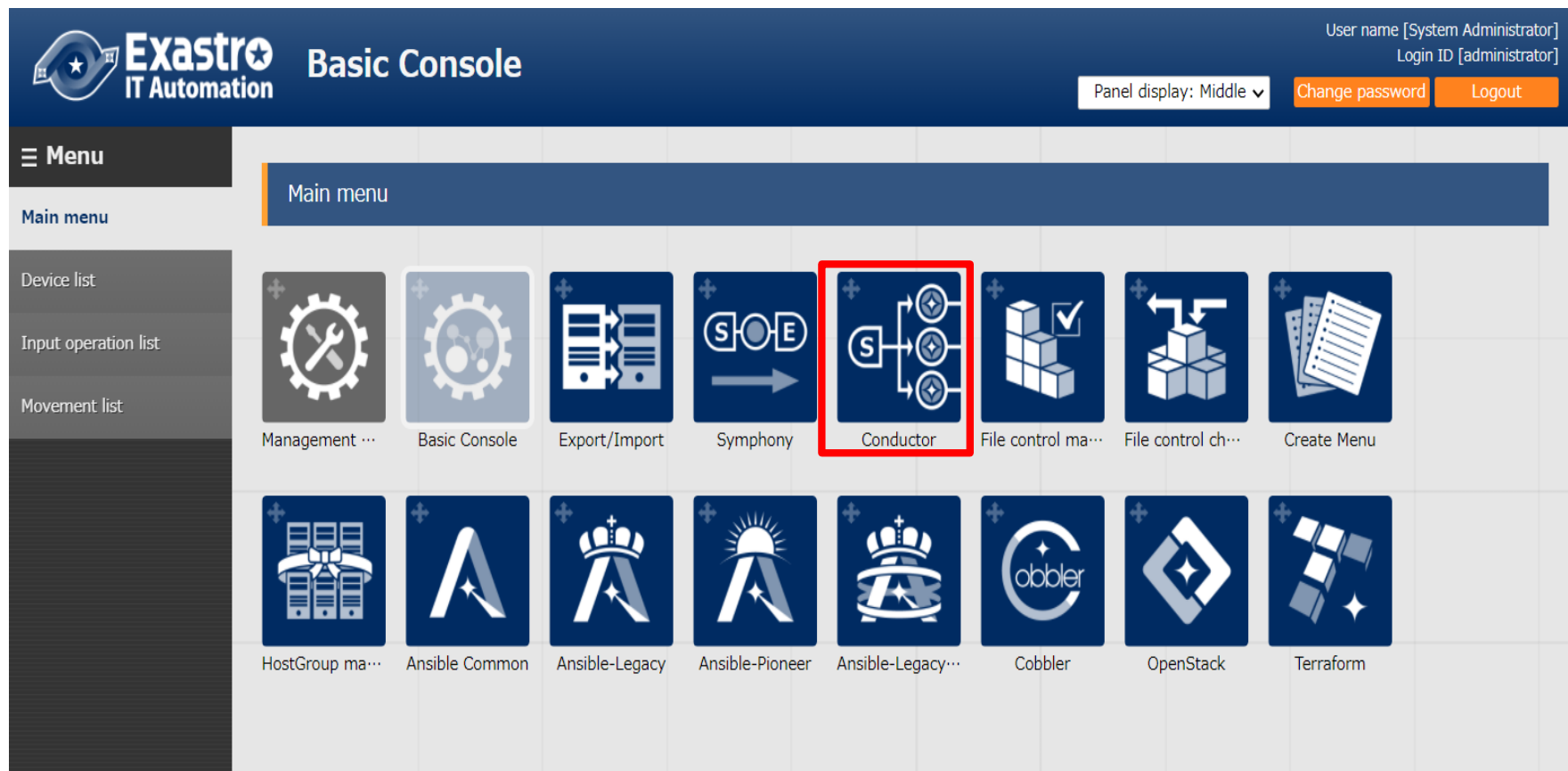
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1. Introduction

1.1 About this document

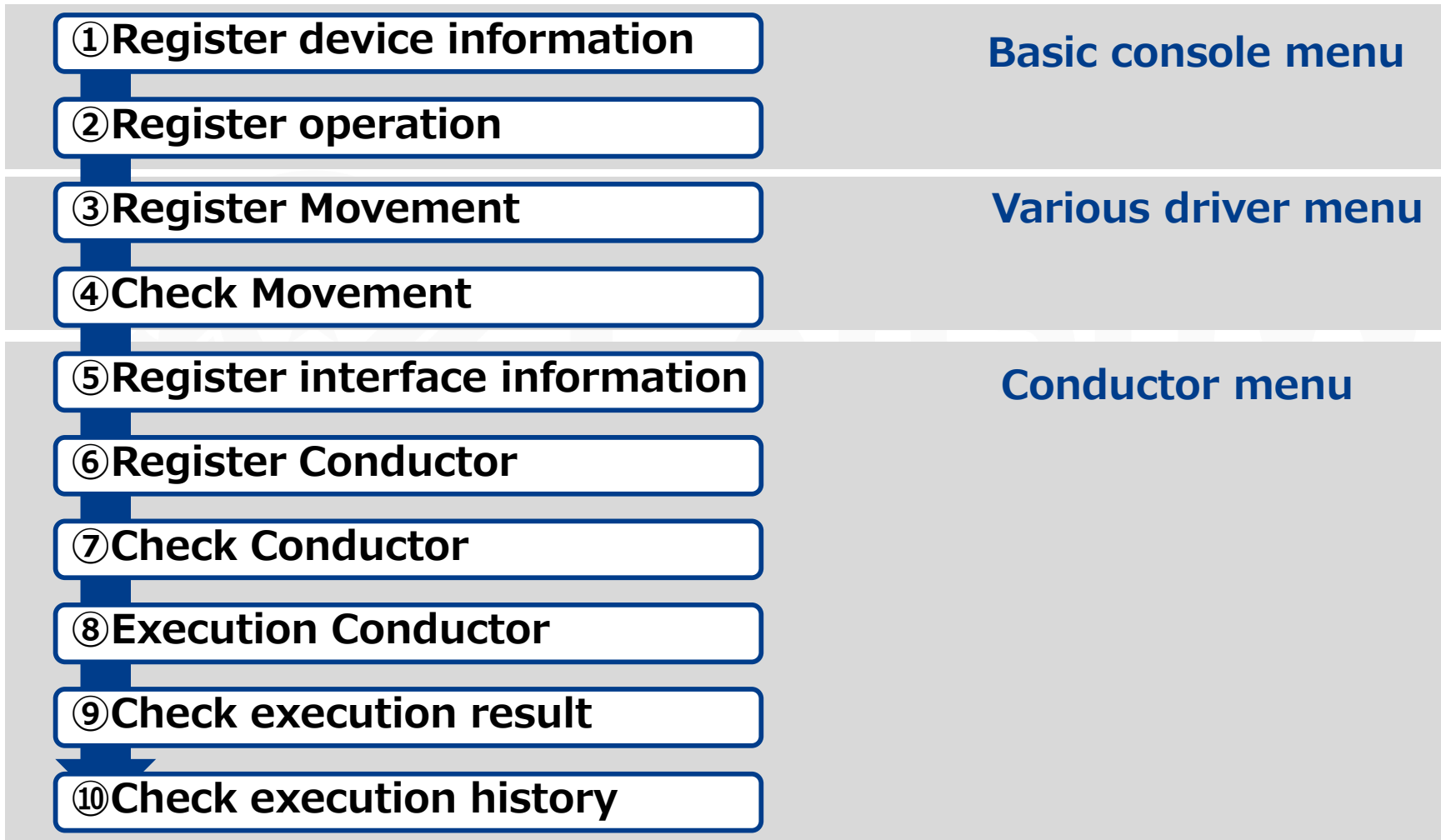
- The "**Conductor**" menu group is explained in this document.



2. Description about Conductor

2.1 Scenario (1/2)

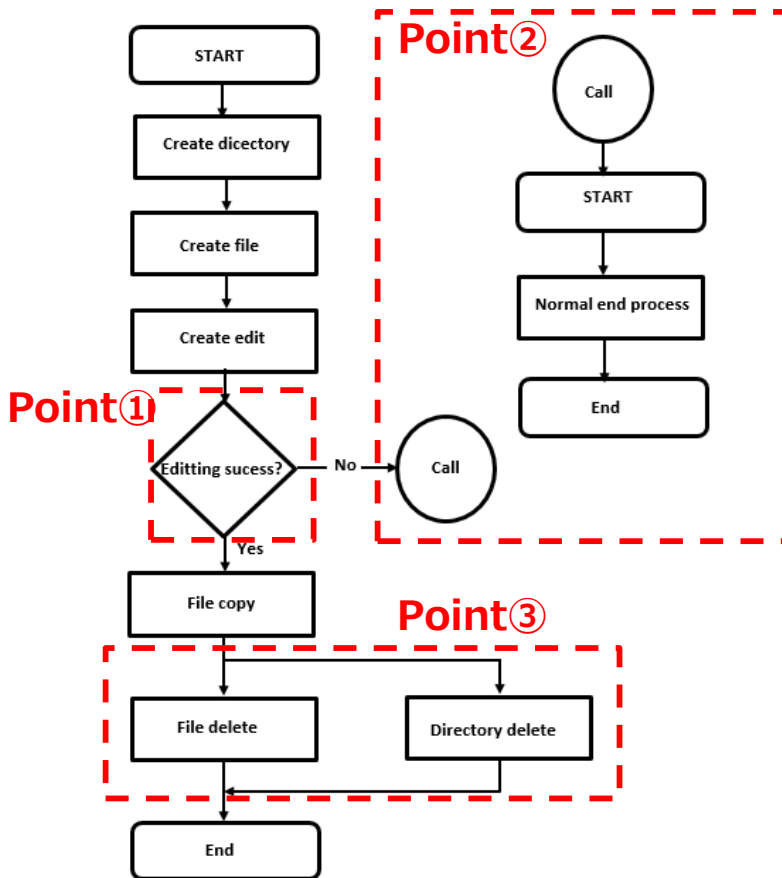
- Scenario flow is as follows.
- Ansible driver is required to proceed with the scenario, so in this scenario, we will explain using Ansible-Legacy.



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

□ Point①

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

□ Point②

Registered Operation/Conductor Call function.

□ Point③

Movement parallel processing function.

2.2 Preparation work

●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 work








● Create IaC(2/2)

Similarly, save the following **IaC as yml 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. Practice

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				

※* is a required item.

Back Register

1 Enter value for the item

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

POINT

2

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	(Optional 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.

3.3 Register IaC (2/2)

●Register IaC

The resulting image is as follows.

List/Update △Close

Update	Discard	Playbook ID	Playbook name	Playbook files	Remarks	Last update date/time	Last updated by
Update	Discard	1	mkdir	mkdir.yml		2020/09/01 11:42:28	System Administrator
Update	Discard	3	Sample1	Sample1.yml		2020/10/19 13:11:33	System Administrator
Update	Discard	4	Sample2	Sample2.yml		2020/10/21 09:19:01	System Administrator
Update	Discard	5	Sample3	Sample3.yml		2020/10/21 09:19:21	System Administrator

Filter result count: 4

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" , "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	<Optional>
Host specific format	IP

Movement ID

Movement Name*

Delay timer

Host specific format*

WinRM connection

Auto-input

※*is a required item.

Back **Register**

2

POINT Please create the same number of Movements as the yml file.

3.4 Register Movement (2/2)

● Register Movement

The image after register is as follows.

List/Update △Close

Update	Discard	Movement ID	Movement Name	Orchestrator	Delay timer	Dedicated information for ansible			Last update date/time	Last updated by
						Host specific format	WinRM connection	Header section		
Update	Discard	1	Legacy1	Ansible Legacy		IP			2020/08/26 18:07:00	System Administrator
Update	Discard	3	Legacy_movement	Ansible Legacy		IP			2020/10/07 10:24:32	System Administrator
Update	Discard	5	Move1	Ansible Legacy		IP			2020/10/21 09:32:49	System Administrator
Update	Discard	7	Set Timezone	Ansible Legacy		IP			2020/10/22 09:55:55	System Administrator
Update	Discard	8	Set Hostname	Ansible Legacy		IP			2020/10/23 15:59:22	System Administrator
Update	Discard	9	Add Nameserver	Ansible Legacy		IP			2020/10/22 09:56:34	System Administrator

Filter result count: 6

Output Excel

3.5 Register Movement details (1/2)

Register Movement details

"Ansible-Legacy" menu group >> "Movement details" 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

Description ▾Open

Display filter ▾Open

List/Update ▾Open

Register △Close

Associated item No	Movement*	Playbook files*	Include order*	Remarks	Last update date/time	Last updated by
Auto-input	<input type="text"/>	<input type="text"/>	<input type="text"/>		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

The image after register is as follows.

List/Update								△Close
Update	Discard	Associated item No.⌵	Movement⌵	Playbook files⌵	Include order⌵	Remark	Last update date/time⌵	Last updated by⌵
Update	Discard	1	1:Legacy1	mkdir	1		2020/10/15 10:23:20	System Administrator
Update	Discard	2	Exchange ID has failed(2)	Exchange ID has failed(2)	1		2020/10/05 14:46:54	System Administrator
Update	Discard	3	3:Legacy_movement	Exchange ID has failed(2)	1		2020/10/07 10:29:00	System Administrator
Update	Discard	4	5:Move1	Sample1	1		2020/10/21 09:39:38	System Administrator

Filter result count: 4

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

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

※*is a required item.

Back Register

POINT

Please register all the created Movements.

1

Set the value for item

Item	Value
Operation	operation1
Movement	Created Movement
Host	testserver

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.

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	Variable name	Specific value
Auto-input	1:Operation1				

※* is a required item.

Back Register

Download all and edit file uploads

Trace history

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.

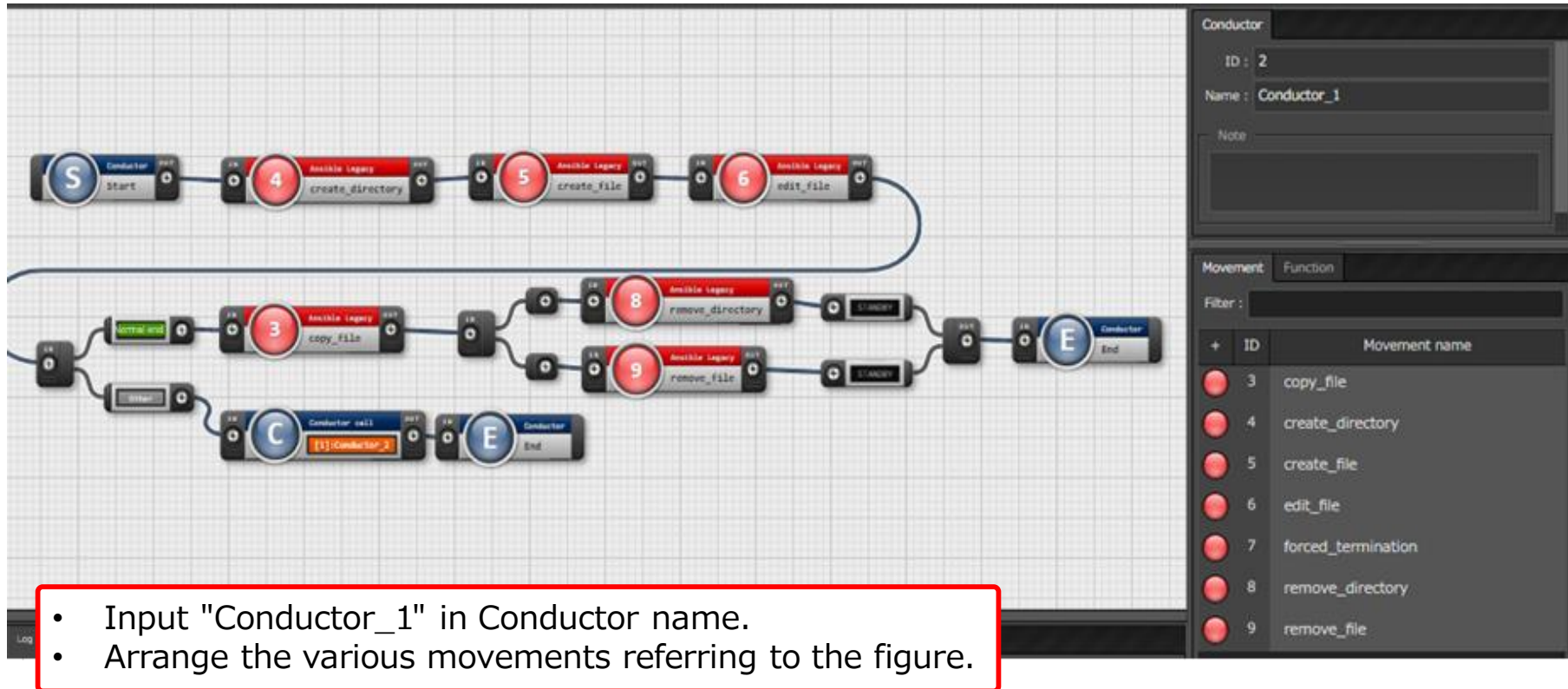
The screenshot displays the Exastro interface. On the left, a workflow diagram is shown on a grid background. It consists of three components connected in a sequence: a 'Start' conductor (blue circle with 'S'), a 'forced_termination' movement (red circle with '7'), and an 'End' conductor (blue circle with 'E'). The 'Start' conductor has an 'OUT' port connected to the 'IN' port of the 'forced_termination' movement. The 'forced_termination' movement has an 'OUT' port connected to the 'IN' port of the 'End' conductor. On the right, a sidebar contains two panels. The top panel, titled 'Conductor', shows 'ID : 1' and 'Name : Conductor_2'. The bottom panel, titled 'Movement', shows a list of movements with a filter field. The list includes movements with IDs 3 through 9, such as 'copy_file', 'create_directory', 'create_file', 'edit_file', 'forced_termination', 'remove_directory', and '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

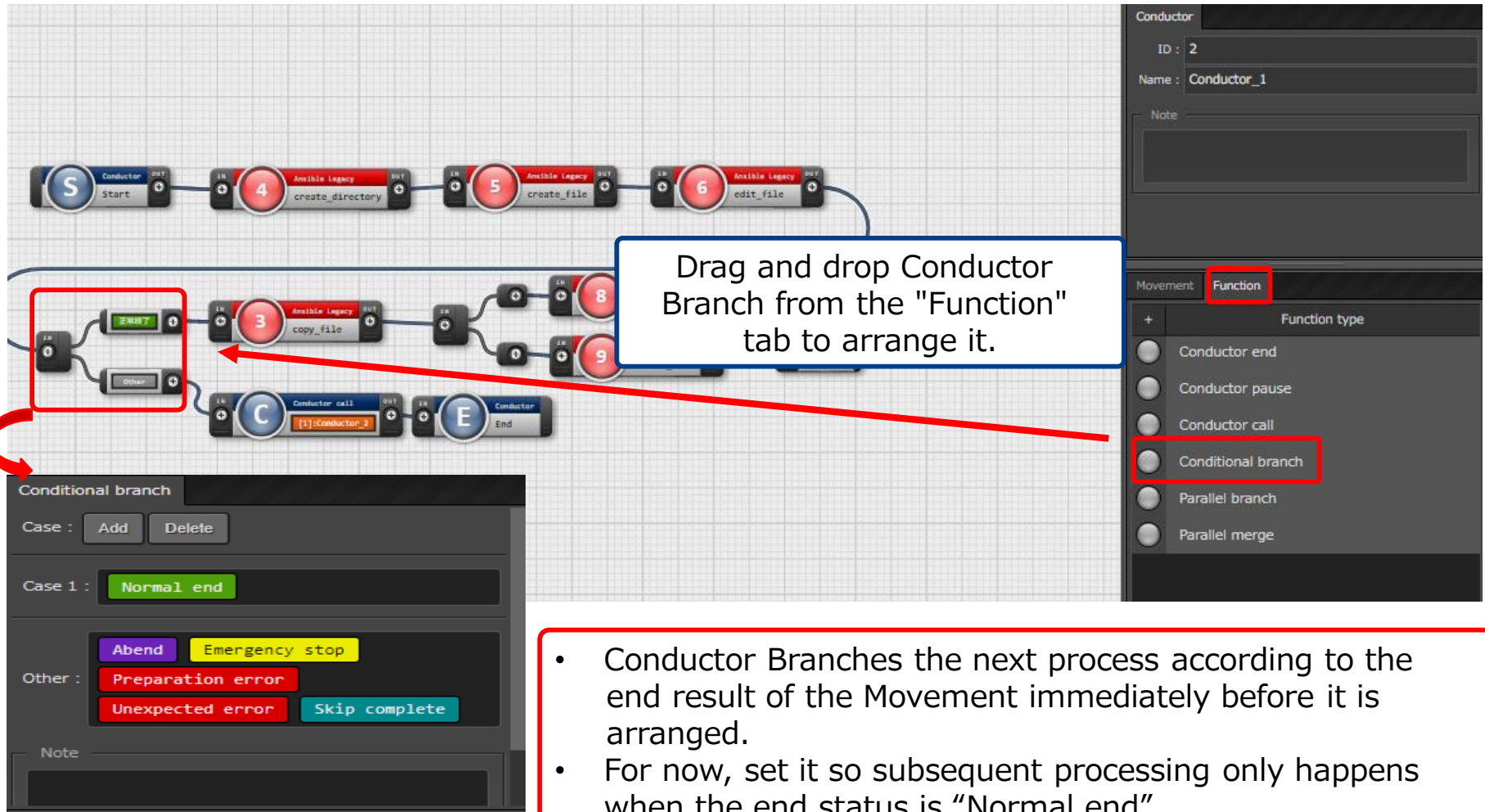
The overall view of the created Conductor is as follows.
The details are explained on the next pages.



3.8 Register Conductor(4/7)

●Register Conductor

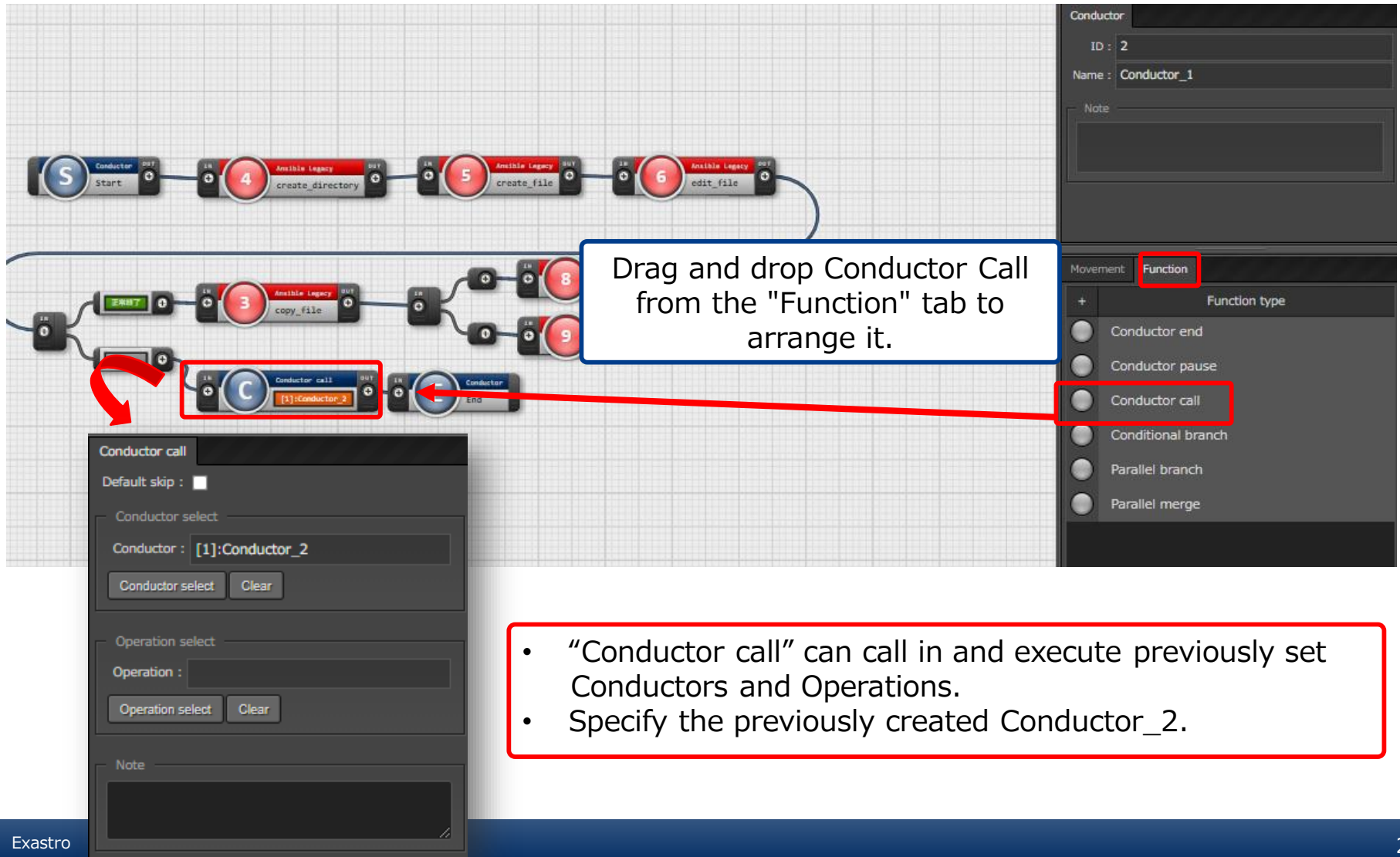
Please create the Conductor as shown the figure below.



3.8 Register Conductor (5/7)

● Register Conductor

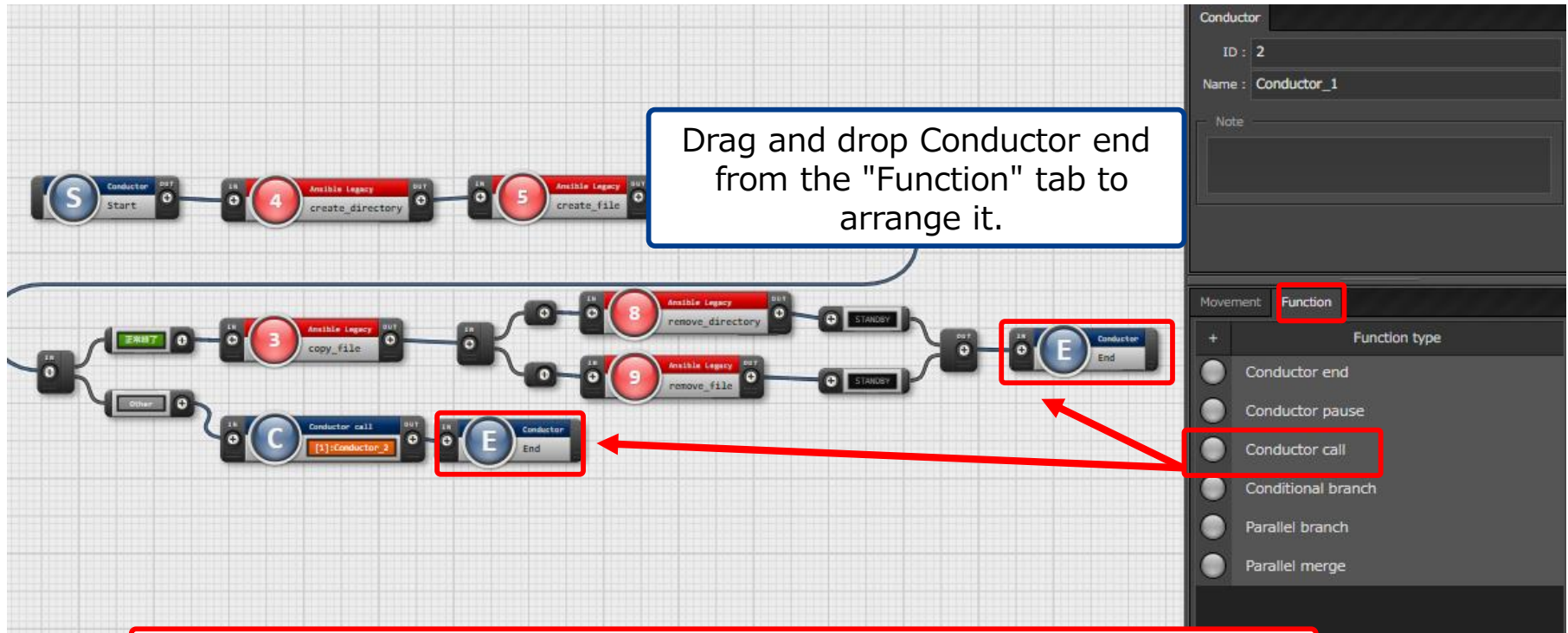
Please create the Conductor as shown in the figure below.



3.8 Register Conductor (6/7)

● Register Conductor

Please create the Conductor as shown in the figure below.

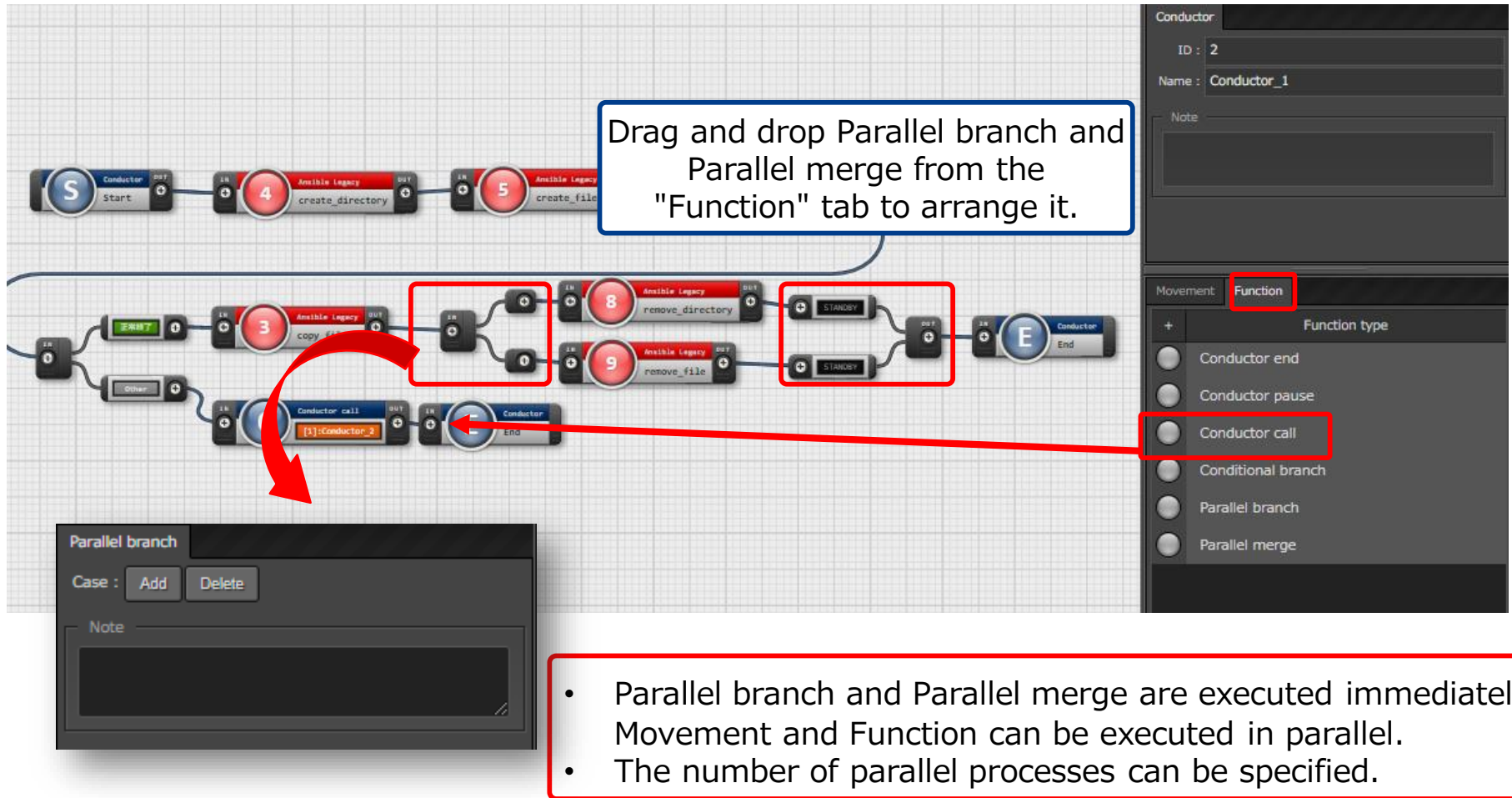


- Conductor end is a function that arranges conductors after processing.
- It is also arranges the branch processing introduced in (5/7).

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 displays the Exastro software interface with four numbered callouts indicating the steps for conductor execution:

- Callout 1:** Points to the "Schedule date/time" input field in the "Conductor [filter]" section. A dialog box titled "Select the value for below" is shown with the following table:

Item	Value
Schedule date/time	Optional

- Callout 2:** Points to the "Conductor class ID" list in the "Conductor [List]" section. The list shows five items, with "5 conductor1" selected. A dialog box titled "Select the value for below" is shown with the following table:

Item	Value
Conductor name	Conductor_1

- Callout 3:** Points to the "Operation ID" list in the "Operation [List]" section. The list shows seven items, with "1 Operation_1" selected. A dialog box titled "Select the value for below" is shown with the following table:

Item	Value
Operation name	Operation_1

- Callout 4:** Points to the "Execute" button at the bottom right of the interface.

The background interface includes sections for "Description", "Scheduling", "Conductor [filter]", "Conductor [List]", "Operation [Filter]", and "Operation [List]". The "Conductor [List]" section shows a table with columns "Select", "Conductor class ID", and "Conductor name". The "Operation [List]" section shows a table with columns "Select", "No.", "Operation ID", and "Operation name". The right side of the interface displays a graphical workflow diagram with various nodes and connections.

Conductor confirmation

-

```
Progress status(Execution log)

Filter :  ☐ Display only corresponding lines

{
  "rotate_spec": null,
  "selevel": null,
  "serole": null,
  "setype": null,
  "spuser": null,
  "src": null,
  "state": "directory",
  "unsafe_writes": null
}
},
"mode": "0755",
"owner": "root",
"path": "/root/test",
"size": 0,
"state": "directory",
"uid": 0
}
META: ran handlers
META: ran handlers

RAW output *****
4
```



Exastro