ITA_User Instruction Manual

Conductor

－ Version 1.5 －

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Introduction

This document describes the functions and operation methods of the ITA Conductor function.

1 Overview of ITA Conductor

This chapter explains the functions and operation methods of the Conductor menu.
Conductor menu provides the following functions that are commonly required to perform work using ITA.

- Create, manage, execute workflow

Refer to the「First Step Guide」for the position of the Conductor menu in the ITA operation procedure.

2 ITA Conductor menu screen configuration

This chapter explains the menu and screen configuration of the ITA Conductor menu.

2.1 ITA Conductor menu list

The ITA common/Conductor menu is shown below

Table 2.1-1 ITA Conductor screen list

No	Menu Group	Menu / Screen	Description
1	Conductor	Conductor interface information	Maintain (View/Register/Update/Discard) settings such as shared directory path of Movement when executing Conductor
2		Conductor class list	Maintain (View/Discard) Conductor class. Click “Details” to move to Conductor class edit menu.
3		Conductor class edit	Edit Conductor class
4		Conductor execution	Execute Conductor operation
5		Conductor confirmation	Check the result of Conductor operation execution
6		Conductor list	View the list Conductor (execution history) Click “Details” to move to Conductor confirmation
7		Conductor regularly execution	Manage Conductor operations that executes routinely.

3 ITA Conductor user instruction procedure

3.1 Work flow

The standard workflow in ITA Conductor is as follows
Details of each operation are described in next section.

- For the methods to register “Device information” and “Operation”, please refer to “User instruction manual – Basic console”.
- For the method to register Movement, please refer to user instruction manual of each driver.

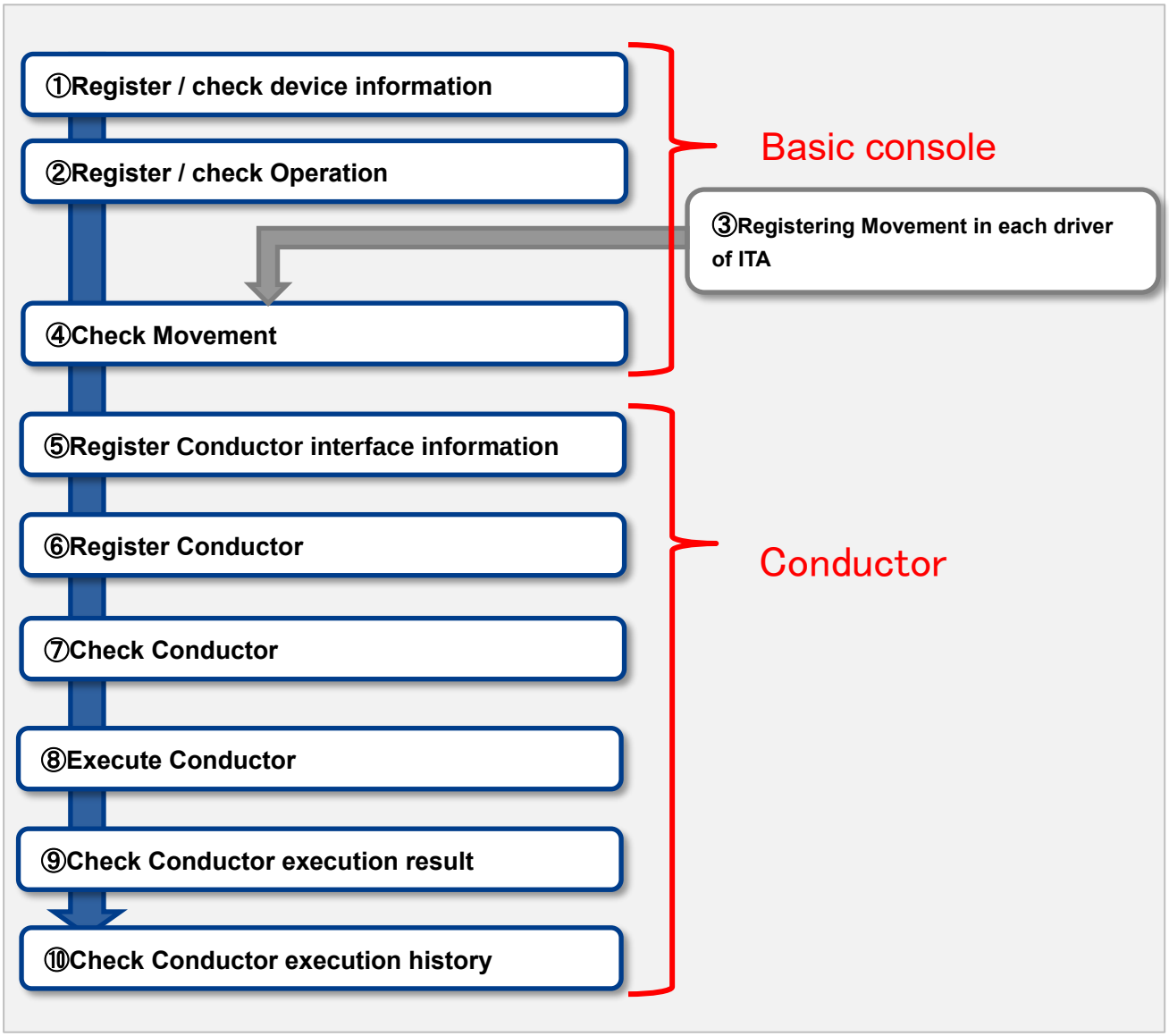


Figure 3.1-1 Work flow

4 Function and operation method description

4.1 ITA Conductor

4.1.1 Conductor interface information

(1) In [Conductor interface information] screen, users can set the path of shared directory for each Movement executed by Conductor and the refresh interval for [Conductor confirmation] screen.

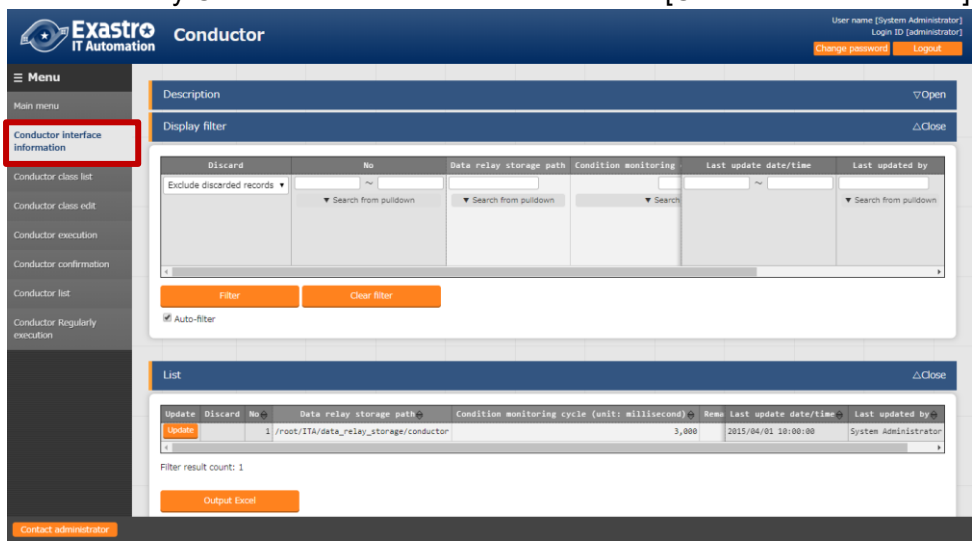


Figure 4.1-1 Submenu screen (Conductor interface information)

(2) The list of common items on the registration screen is as follows.

Table 4.1-1 List of Registration Screen Items (Conductor interface information)

Item	Description	Input Required	Input type	Restrictions
Data relay storage path	When executing Symphony, enter the directory shared by each Movement with the directory path viewed from the ITA server. For the path viewed from each driver, please refer to the interface information in the instruction manual for each driver. Drivers that can share the directory are as follows. ・Ansible ・Ansible-Tower	○	Manual input	Maximum length 128 bytes
Status monitoring cycle (unit: millisecond)	Etner the interval for refreshing the display of “4.1.4 Conductor execut”. Generally, it is recommended to set the number to 3000 millisecond.	○	Manual input	Minimum value 1000ms
Remarks	Free description field	-	Manual input	-

4.1.2 **Conductor class list**

(1) In the [Conductor class list] screen, users can view or discard registered Conductor class. Click the “Details” button to move the edit screen “4.1.3 Conductor class edit”.

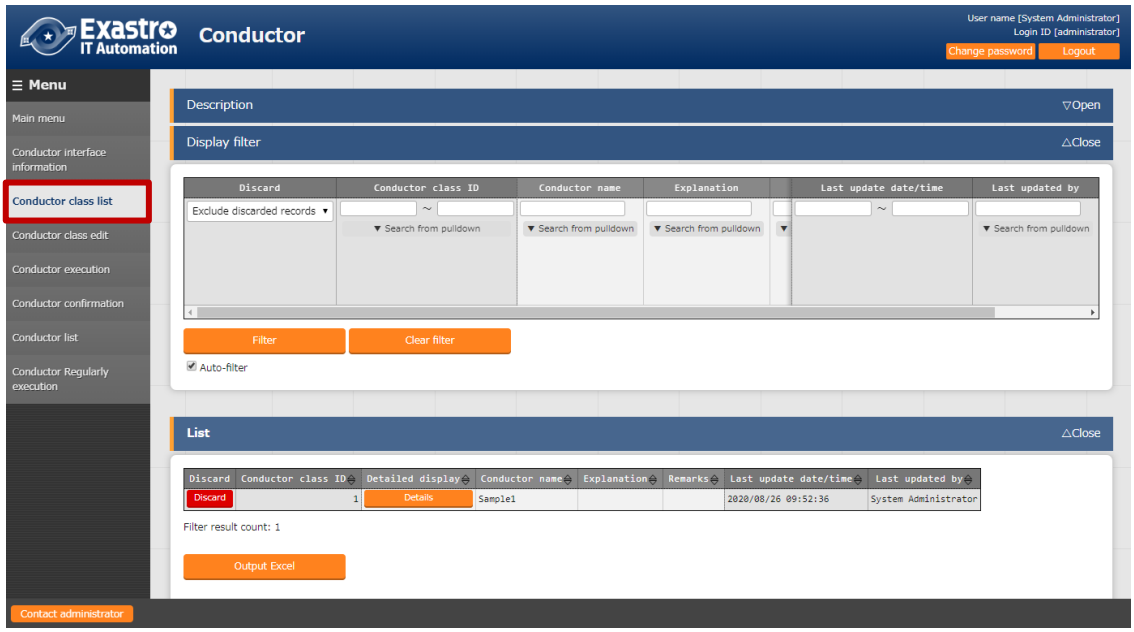


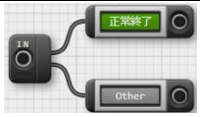
Figure 4.1-2Submenu screen (Conductor class list)

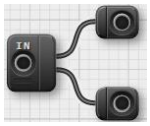
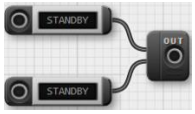
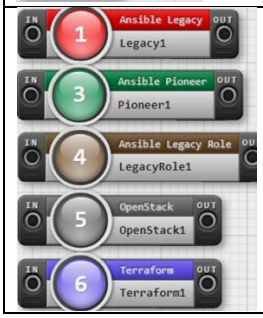
4.1.3 **Conductor class edit**

The following shows the components (referred to as Node) that are used to form a Conductor in Conductor class edit menu.

(1) About Node

Table 4.1-2 Node list

Figure	Name	Description
	Conductor start	Start of Conductor
	Conductor end	End of Conductor ※If there are multiple Conductor end, the operation will end until all Conductor end is achieved.
	Conductor pause	Pause the workflow temporary. Cancel the pause to move on to next step.
	Conductor call	Call another register Conductor class and execute it.
	Conditional branch	Branch process according to the result of “Movement” and “Conductor call” that the Node connects to. Status that can be specified is as follows. ・Normal end ・Abend ・Emergency stop ・Preparation error

		・Unexpected error ・SKIP complete
	Parallel branch	Execute “Movement” or “Conductor call” in parallel. ※ The maximum parallel process number depends on the configuration and server spec of ITA.
	Parallel merge	Execute all process when all Nodes connected to this Node are finished.
	Movement	Execute Movement

Restriction

・IN/OUT of all Nodes have to be connected.

・When using Parallel merge, Parallel branch is required to be used.

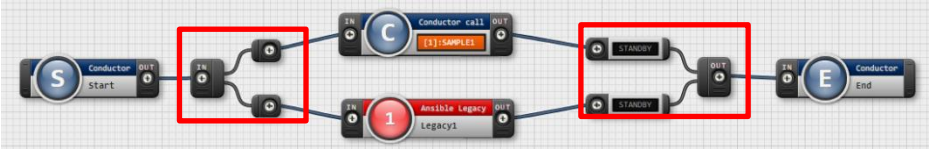


Figure 4.1-3 Node restriction (Correct sample：Parallel branch)

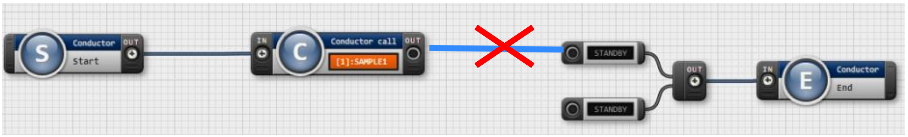


Figure 4.1-4 Node restriction (NG sample：Parallel branch)

・Flow that is branched by Conditional branch can’t be merged to Parallel merge.

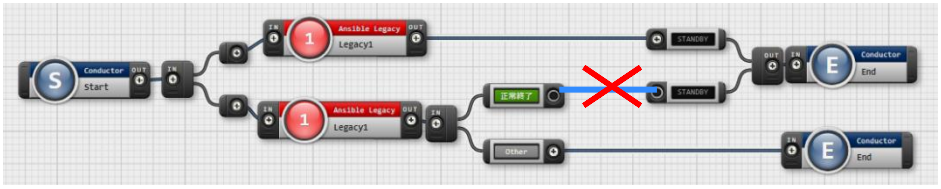


Figure 4.1-5 Node restriction（NG sample：Conditional branch）

・For Parallel branch, Conditional branch, Parallel merge, and Conductor pause, it is invalid to connect them to same type of Node.

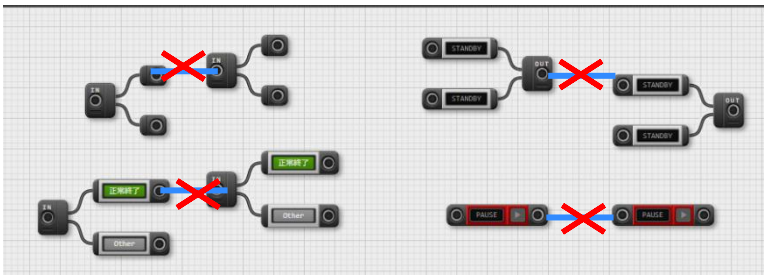


Figure 4.1-6 Node Restriction (NG sample： Successive use）

・It is invalid to assign the Conductor that is currently begin updated to Conductor Call.

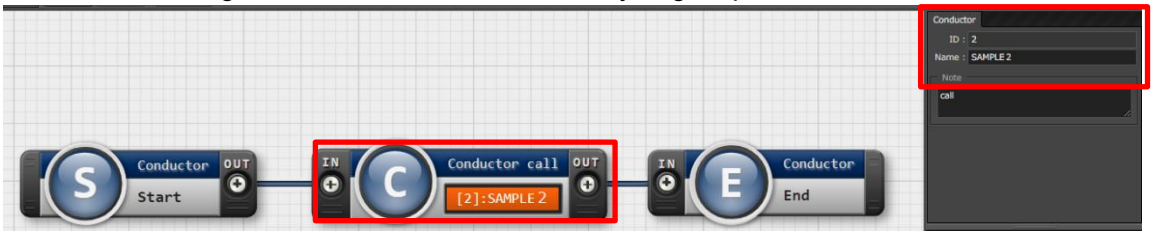


Figure 4.1-7 Node restriction (NG sample：Conductor call)

(2) About [Conductor class edit] screen

- Register the name of Conductor class and the Node for workflow.
- The mode of the screen is as follows.
  For the operations that can be performed in each mode, please refer to “Table 4.1-11 List of operations that can be performed in Conductor class edit screen”.

Table 4.1-3 Conductor class edit screen mode list

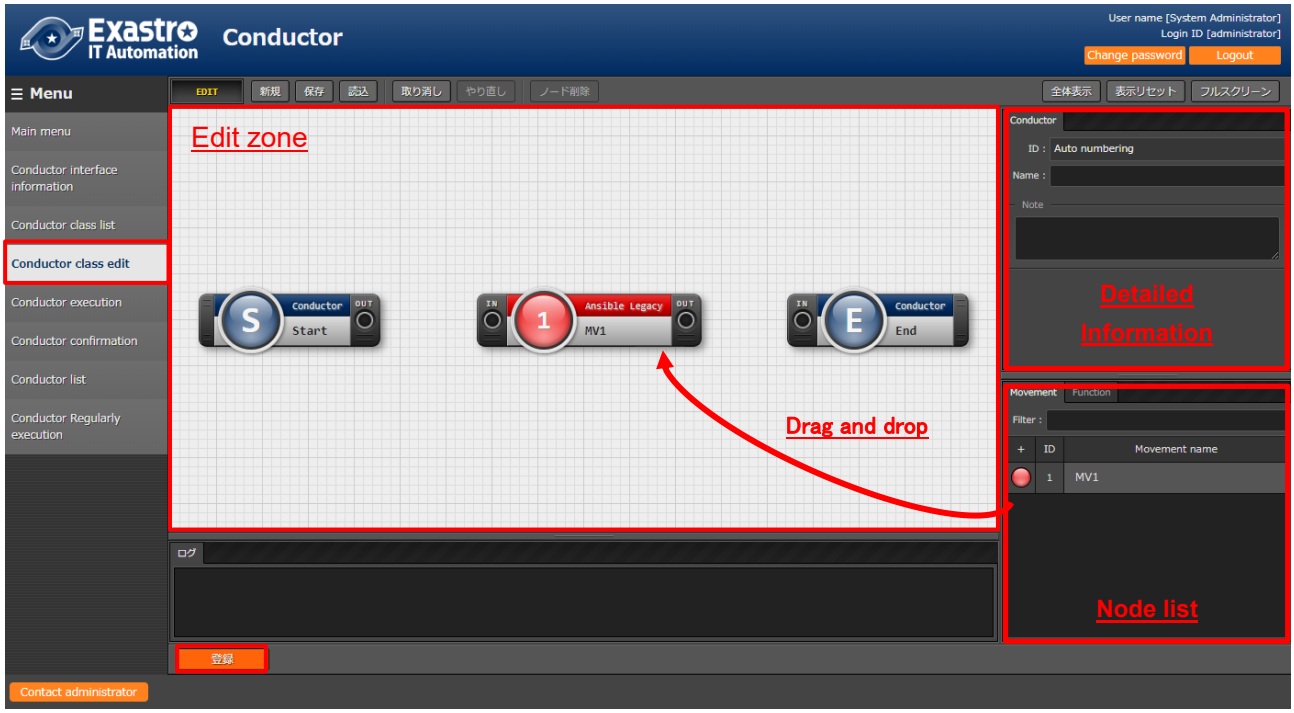
Mode	Description
EDIT	・The mode that users can edit Conductor class ・Default mode of Conductor class edit screen ・Switch to VIEW mode by clicking register/update button in EDIT mode
VIEW	・The mode that users can only view Conductor class ・The mode that is displayed when clicking the “Details” button in Conductor class list ・Switch to EDIT mode by clicking the edit button in VIEW mode

- The detailed information of the Node being selected is displayed in the area on the top-right side of screen.
- Nodes that are can be used is displayed on the bottom-right side of screen.

i. Movement tab
   - ✧ List of ID and name of registered Movement.

ii. Function tab
   - ✧ Conductor end
   - ✧ Conductor pause
   - ✧ Conductor call
   - ✧ Conditional branch
   - ✧ Parallel branch
   - ✧ Parallel merge

- User can set Node by drag and drop the Nodes on the bottom-right side of screen
- Users can memo the description of operation or comment in the Note column of each node.
  The column is only for reference on the web, it doesn’t affect operation execution.
- Click the “Register” button after setting up Nodes to register the Conductor class.



・

Figure 4.1-8 Submenu screen (Conductor class edit：EDIT)

・ The details and columns of Class edit screen is as follows.

i. Conductor detail and input item

Table 4.1-4 Conductor class edit item list (Conductor)

Item	Description	Input Required	Input type	Restriction
ID	Unique ID for Conductor is auto-numbered	-	Auto input	-
Name	Enter any desired name for Conductor class	○	Manual	-
Note	Enter description and comment for Conductor class	-	Manual	-

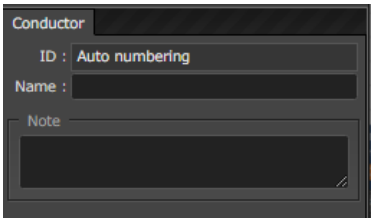


Figure 4.1-9 Detail and input items (Conductor)

ii. Node (common) detail and input item

Table 4.1-5 Conductor class edit item list (Node common)

Item	Description	Input required	Input type	Restriction
Type	Type of selected Node is displayed	-	Auto input	-
Note	Enter description and comment for Node	-	Manual	-

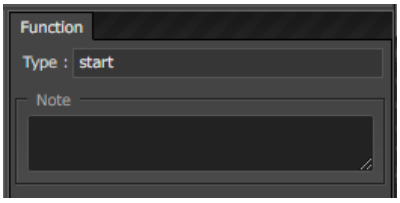


Figure 4.1-10 Detail and input items (Node common)

iii. Movement detail and input item

Table 4.1-6 Conductor class edit item list (Movement)

Item	Description	Input required	Input type	Restriction
Movement ID	ID of the selected Movement is displayed.	-	Auto input	-
Orchestrator	Orchestrator name of the selected Movement is displayed.	-	Auto input	
Name	Name of the selected Movement is displayed.	-	Auto input	-
Default skip	Target operation will be skipped if checked. This is a parameter that can be changed in Conductor execute screen.	-	Manual	
Operation	・Click the Select button to select Operation from the displayed list. ・Specified operation name is displayed.	-	Select	-

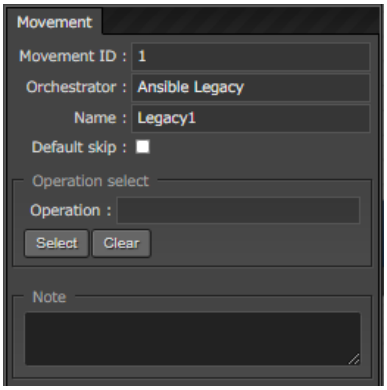


Figure 4.1-11 Detail and input items (Movement)

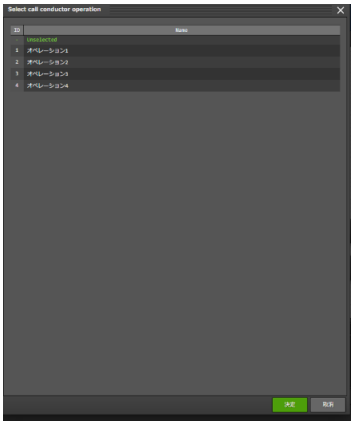


Figure 4.1-12 Detail and input items (Operation select)

iv. Conductor call detail and input items

Table 4.1-7 Conductor class edit item list (Conductor call)

Item	Description	Input required	Input type	Restriction
Default skip	Target operation will be skipped if checked. This is a parameter that can be changed in Conductor execute screen.	−	Manual	−
Conductor	・Click the Select button to select Conductor class from the displayed list. ・Specified Conductor class name is displayed.	○	Select	−
Operation	・Click the Select button to select Operation from the displayed list. ・Specified operation name is displayed.	−	Select	−

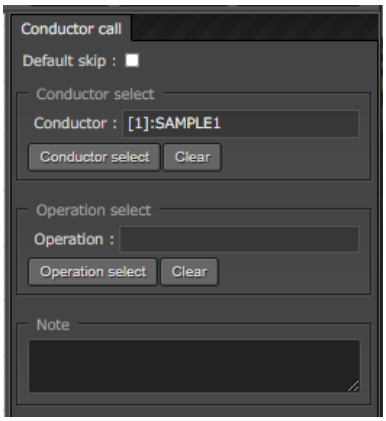


Figure 4.1-13 Detail and input items (Conductor call)

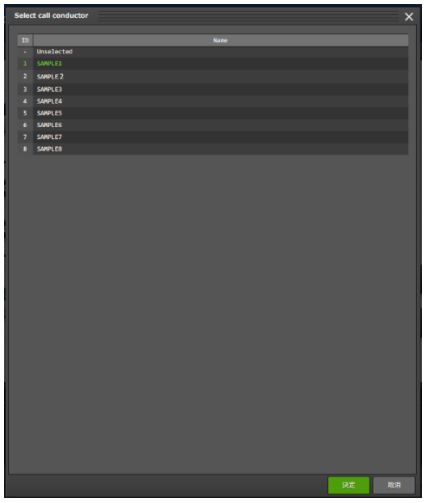


Figure 4.1-14 Detail and input items (Conductor call select)

v. Parallel branch detail and input items

Table 4.1-8 Conductor class edit item list (Parallel branch)

Item	Description	Input required	Input type	Restriction
case	Set number of branches. 2 branches is set on default, click the following to add or delete branch. ・Add ・Delete	-	Select	

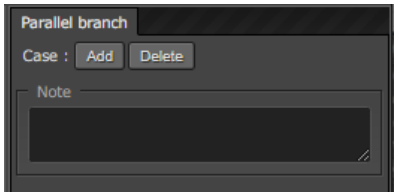


Figure 4.1-15 Detail and input items (Parallel branch)

vi. Conditional branch detail and input items

Table 4.1-9 Conductor class edit item list (Conditional branch)

Item	Description	Input required	Input type	Restriction
case (1-6)	Set conditional branch according to the execution result of Movement and Conductor Call. User can change the condition by drag and drop The following is set on default case1: Normal end other : Abend, Emergency stop, Preparation error, Unexpected error, Skip complete	-	Select	

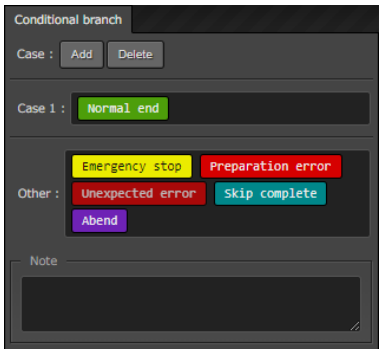


Figure 4.1-16 Detail and input items (Conditional branch)

vii. Conditional branch detail and input items

Table 4.1-10 Conductor class edit item list (Parallel merge)

Item	Description	Input required	Input type	Restriction
case	Select the number of parallel operation. 2 branches is set on default, click the following to add or delete branch. ・Add ・Delete	－	Select	

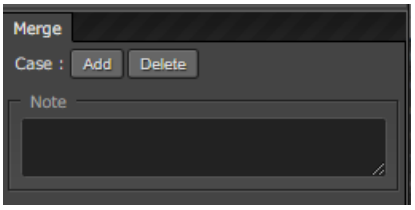


Figure 4.1-17 Detail and input items (Parallel merge)

・ Operations that can be executed in Class edit screen is as follows.

Figure 4.1-11 List of operations that can be performed in Conductor class edit screen

Item	Description	Register (EDIT)	Update (VIEW)	Update (EDIT)	Remarks
New	Return to the default status.	○	－	－	
Save	Save the current edit screen as file.	○	－	－	
Read	Read and restore status from saved file.	○	－	－	
Cancel	Cancel the previous operation.	○	－	○	
Redo	Redo the cancelled operation.	○	－	○	
Delete node	Delete the selected node.	○	－	○	
Registration	Perform registration	○	－	－	
To Edit	Switch to EDIT mode to perform edit of Constructor class.	－	○	○	
Diversion	Diverse registered Conductor and register a new conductor.	－	○	○	
Update	Update the edited content.	－	－	○	
Reload	Discard the modification and return to the status before edit.	－	－	○	
Cancel	Discard the modification and switch to VIEW mode		－	○	

(3) When moving from [Conductor class list] screen to Conductor class edit screen or after registration, the following screen will be displayed

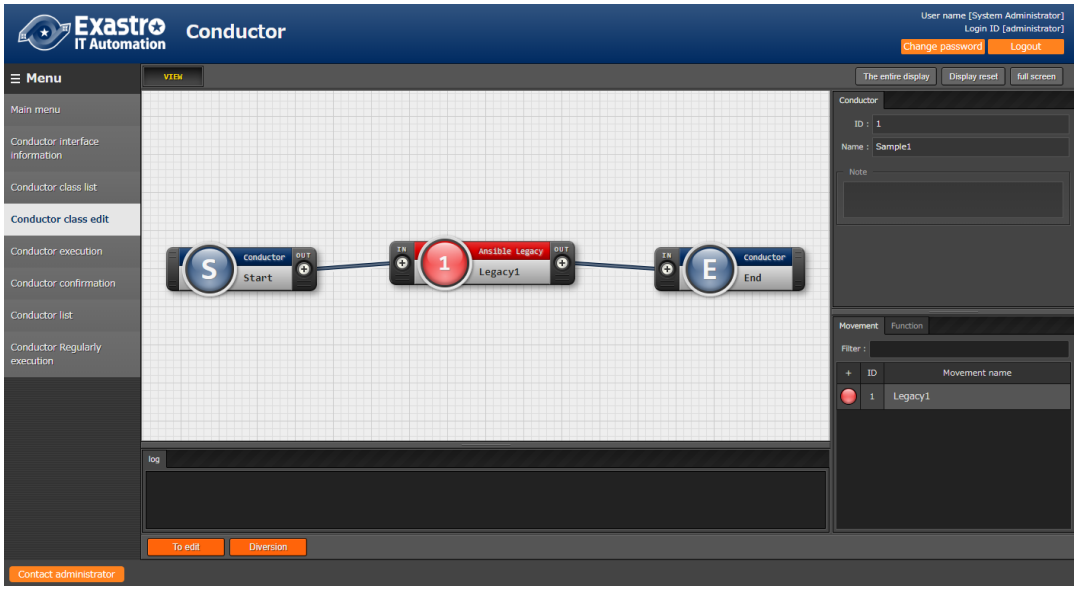


Figure 4.1-18 Submenu screen (Conductor class edit：VIEW)

- Click the “To edit” button to edit registered Conductor.
- Click the “Diversion” button to copy registered Conductor then create as a new one.

(4) The following screen will be displayed if “To edit” button is clicked.

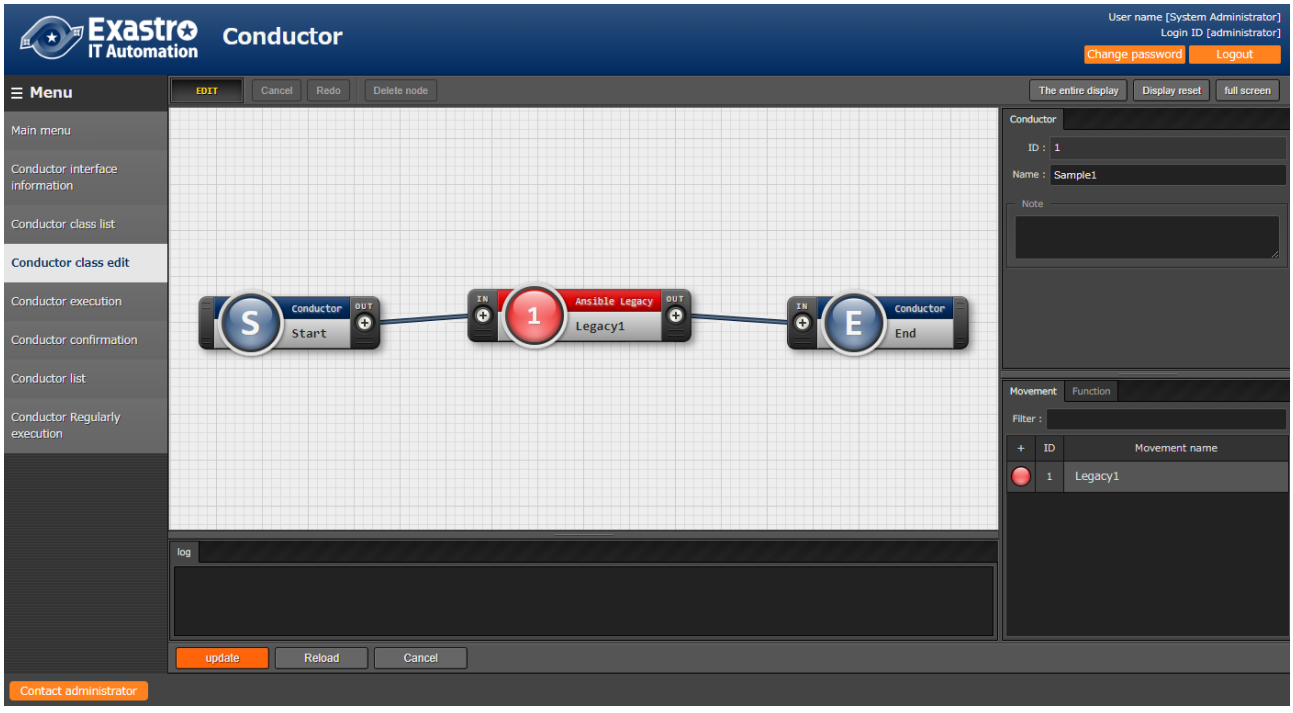


Figure 4.1-19 Submenu screen (Conductor class edit: EDIT)

- Click the “Reload” to discard the edited content then return to the status before edit.
- Click the “Update” button to save edited content.
- Click the “Cancel” button to return to the status before edit.

4.1.4 **Conductor execution**

(1) Indicate Conductor execution in [Conductor execution] screen.

- “Conductor [List]” displays the Conductors registered in “4.1.2 Conductor class list”.
- “Operation [List]” displays the Operations registered in “Basic console.
    i. Please refer to “User Instruction Manual” for details.
- Select radio button in “Conductor [List]” and “Operation [List]”, then click the “Execution” button to move to “4.1.5 Conductor confirmation” then start tracing of execution.
- Enter “Scheduled date/time” then click the “Execution” button will schedule execution. The scheduled execution can be checked in “4.1.6 Conductor list”.
  ※Date/Time before current time can’t be entered.
- The setting value of Operation and skip for Movement and Conductor Call can be changed.
    i. Setting value will not reflect to registered data. The setting value will only reflect to Conductor executions.

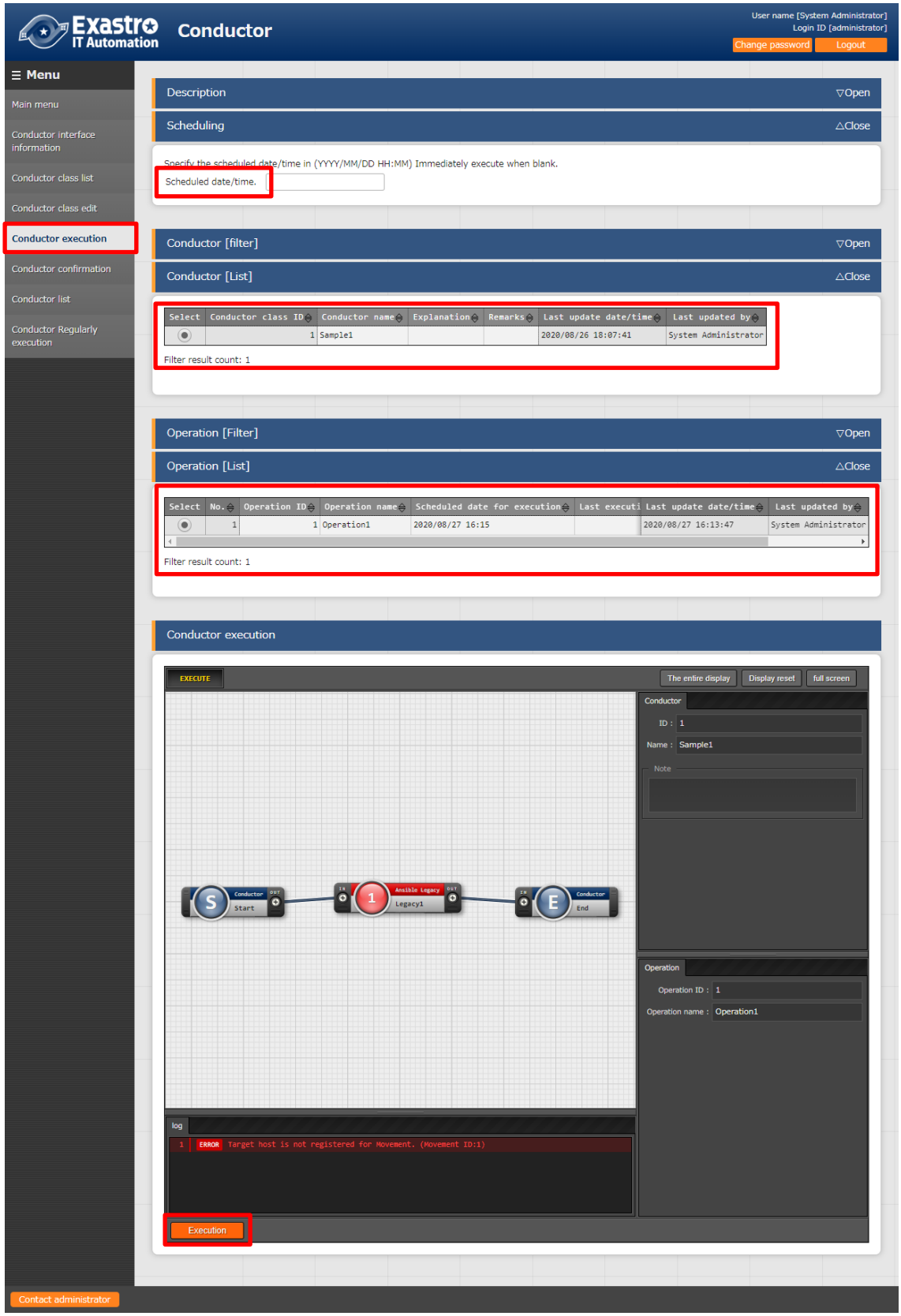


Figure 4.1-20 Submenu screen (Conductor execution)

The list of items in Conductor execution screen is as follows.

Table 4.1-12 Registration screen items (Conductor execution)

Item	Description	Input Required	Input type	Restrictions
Scheduled date/time	Specify the scheduled date and time of Conductor execution	-	Manual input	Date and time before the current time cannot be entered
Conductor [List]	The Conductor registered in “4.1.7 Conductor class list” will be displayed.	○	Radio buttons	
Operation [List]	The operations registered in “Basic console” will be displayed	○	Radio buttons	
Skip	Check to skip the target operation ※Refer to the “About skip” in below	-	Checkbox	
Operation	※Refer to the “About specifying Operation” in below	-	Manual input	
Execution	Execute register Conductor	○	Button	

※ About specifying Operation.

Click the “Select” button in “Operation Select” column will display a modal of Operation list.
Users can specify Operation that is different from the Operation specified by radio button.
According to the specification, Conductor can be executed with the “Specific value” substituted with the value registered for other Operation ID in the “Substitution value list” menu of the orchestrator which that Movement belongs to (e.g. “Substitution value list” in ITA Anisble-Legacy console).
The Operation ID specified in Conductor class edit screen is saved according to register/update.
Moreover, users can change the Operation for each step of Conductor before execution.
However, the settings in Conductor execution screen only reflects to Conductor execution. The settings will not be saved.
Users can take use of this function to diverse the Movement to operate for another server.

※ About Skip

Users can change the status of Skip.
The skip setting in Conductor class edit screen is saved according to register/update.
Moreover, users can change the skip setting for each step of Conductor before execution.
However, the settings in Conductor execution screen only reflects to Conductor execution. The settings will not be saved.
Users can take use of this function to temporary skip operation or execute operation while executing Conductor.

4.1.5 **Conductor confirmation**

(1) In [Conductor confirmation] screen, the status of Conductor execution is displayed.
By clicking the “Details” button in “4.1.6 Conductor list”, the status of the selected Conductor will be displayed. Users can execute “Cancel reservation”, “Resume” or “Emergency stop” according to the situation.
The execution status of each Node can be displayed by selecting them.
To check the details of the execution status, uses can select the URL in “Operation status” of “Movement” and “Conductor Call”.

※If you edit the Conductor that has been executed in “Conductor execution” with "Conductor class edit", it will be in a different state from the Conductor during execution, so even if you click the "Details" button, the status may not be displayed. If you want to edit the Conductor that has already been executed and then execute again, it is recommended to create another Conductor with a new diversion by using "Conductor class edit" and use it.

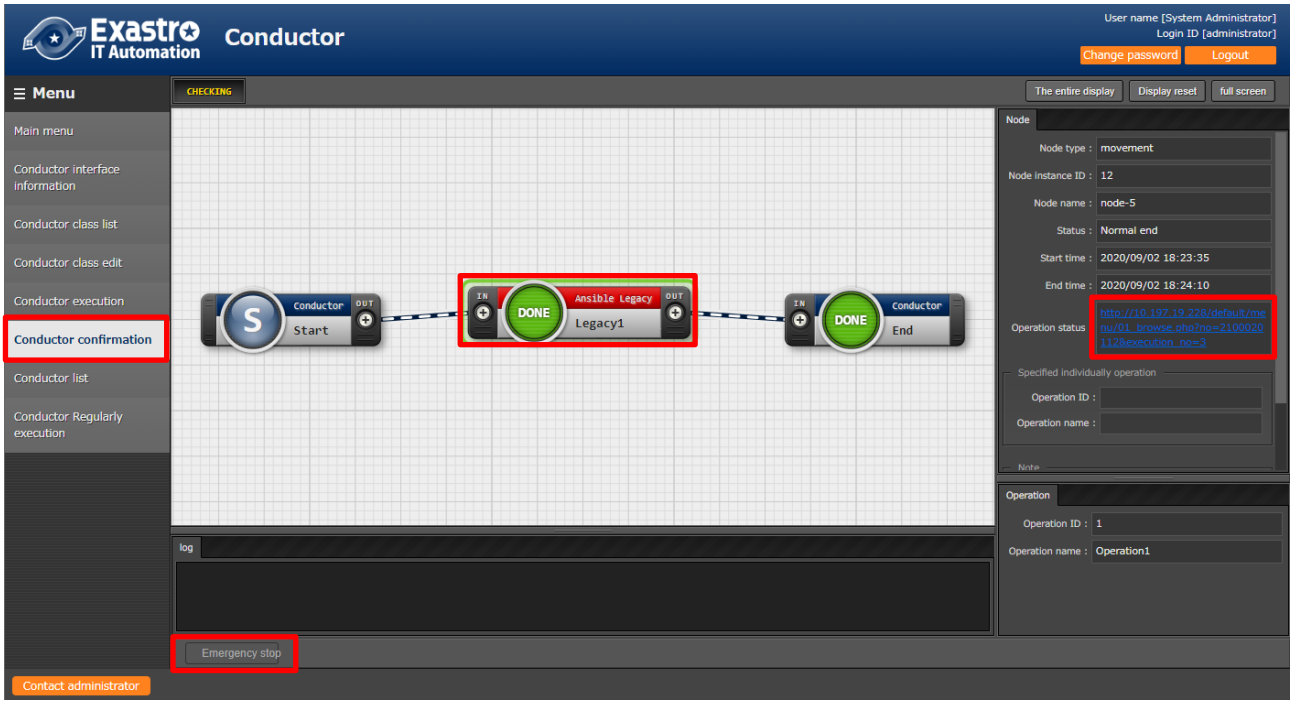


Figure 4.1-21 Submenu screen (Conductor confirmation)

If the selected Conductor execution is scheduled and is yet executed, a “Cancel reservation” button will be displayed. If the button is clicked, the status in “4.1.6 Conductor list” will become “Unexecuted (Schedule)” and will not be executed.

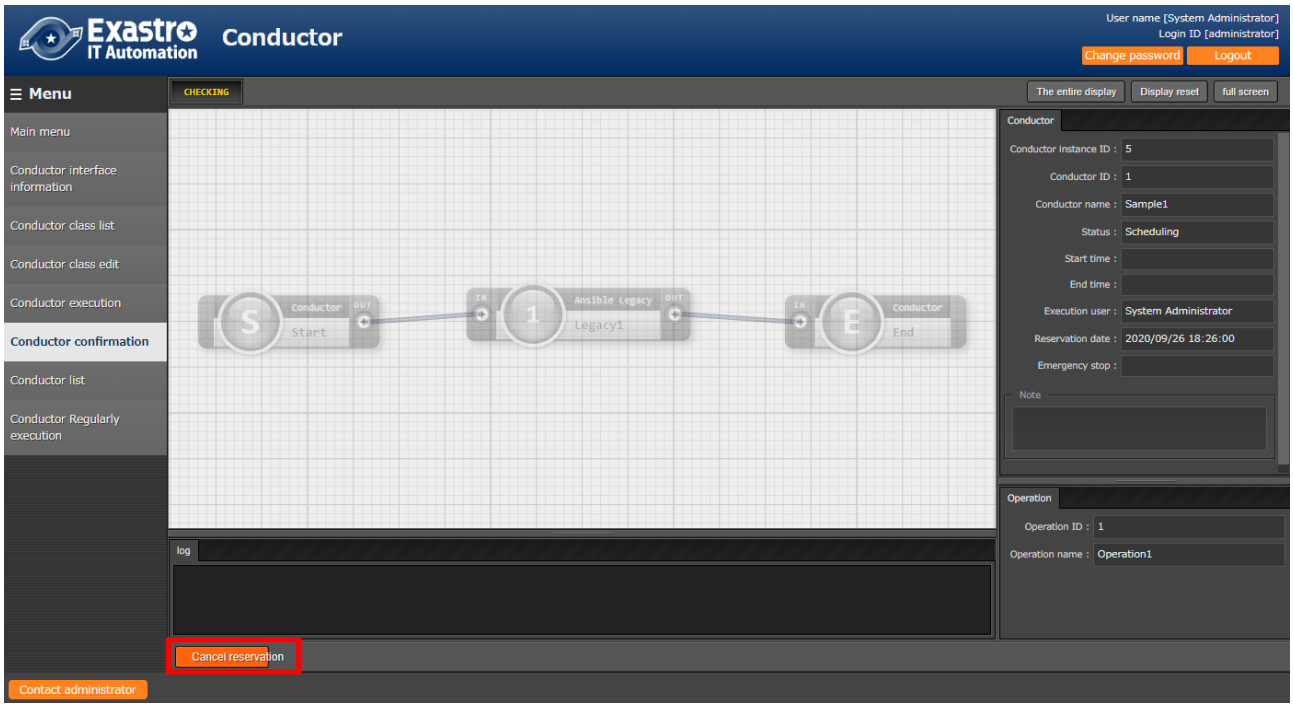


Figure 4.1-22 Submenu screen (Conductor confirmation – Cancel reservation)

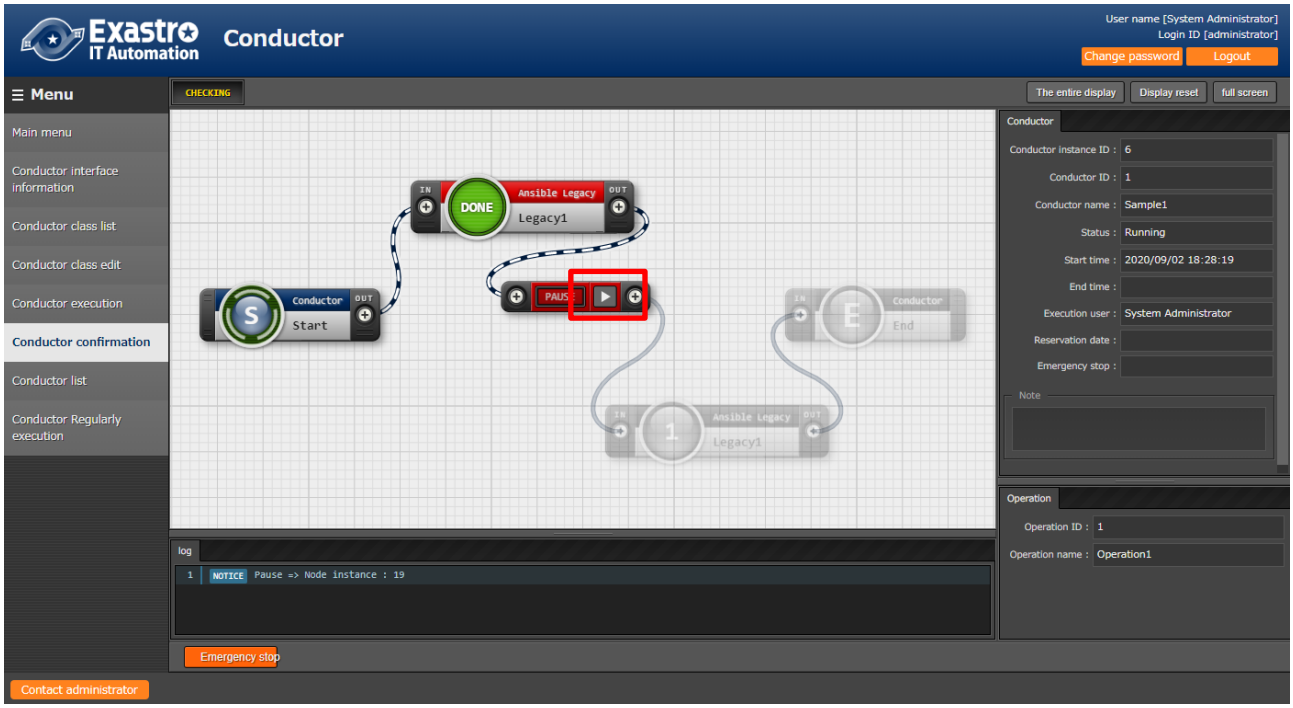


Figure 4.1-23 Submenu screen (Conductor confirmation – Resume)

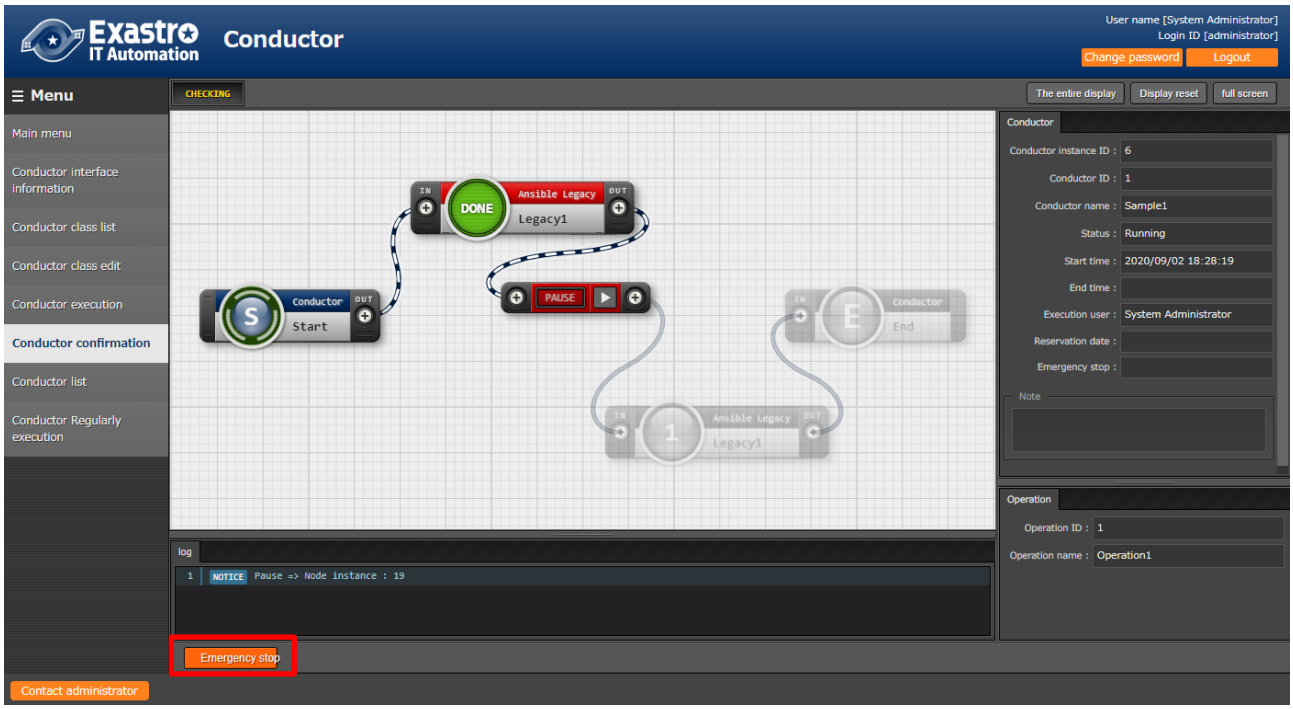


Figure 4.1-24 Submenu screen (Conductor confirmation – Emergency stop)

The list of items in Conductor confirmation screen is as follows.

Table 4.1-13 Registration screen list (Conductor confirmation)

Item	Description	Input required	Input type	Restriction
Resume	Cancel pause and continue operation execution	-	button	-
Emergency stop	Stop Conductor execution	-	button	-
Cancel reservation	Cancel scheduled Conductor execution	-	button	Displayed only when execution is scheduled and is yet executed.

4.1.6 **Conductor list**

(1) Users can manage executed Conductor operations in “Conductor list” screen.
By specifying the criteria and clicking the “Filter” button, the table of Conductor list will be displayed.

Users can click the “Details” button to move to “4.1.5 Conductor confirmation” screen.

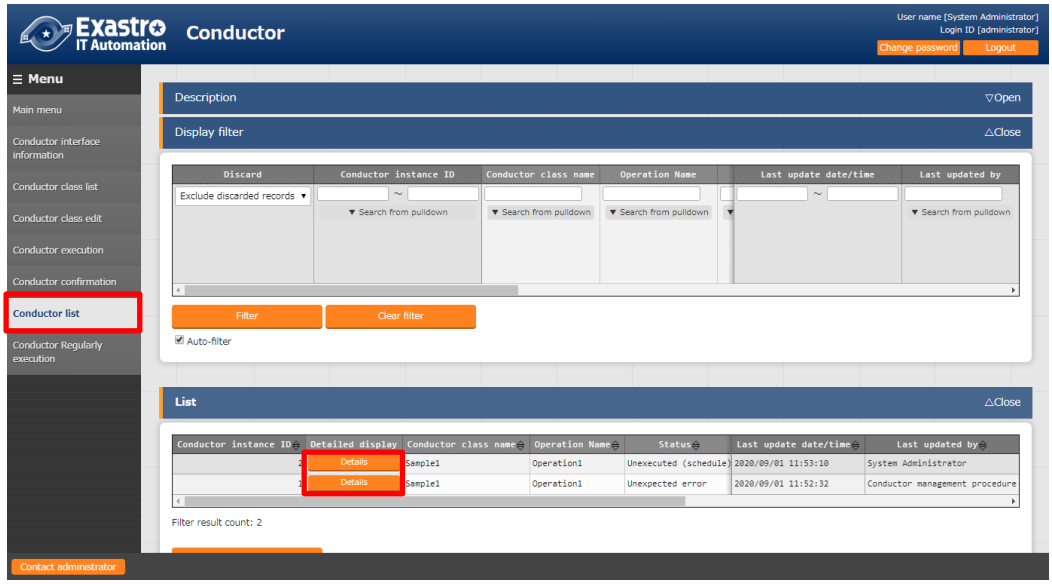


Figure 4.1-25 Submenu screen (Conductor list)

4.1.7 **Conductor regularly execution**

(1) Users can manage regular execution of Conductor operation in [Conductor regularly execution] screen.
Click the “Check the work list” in “List” will move to “4.1.6 Conductor list” screen with the target Conductor executed by regular execution.

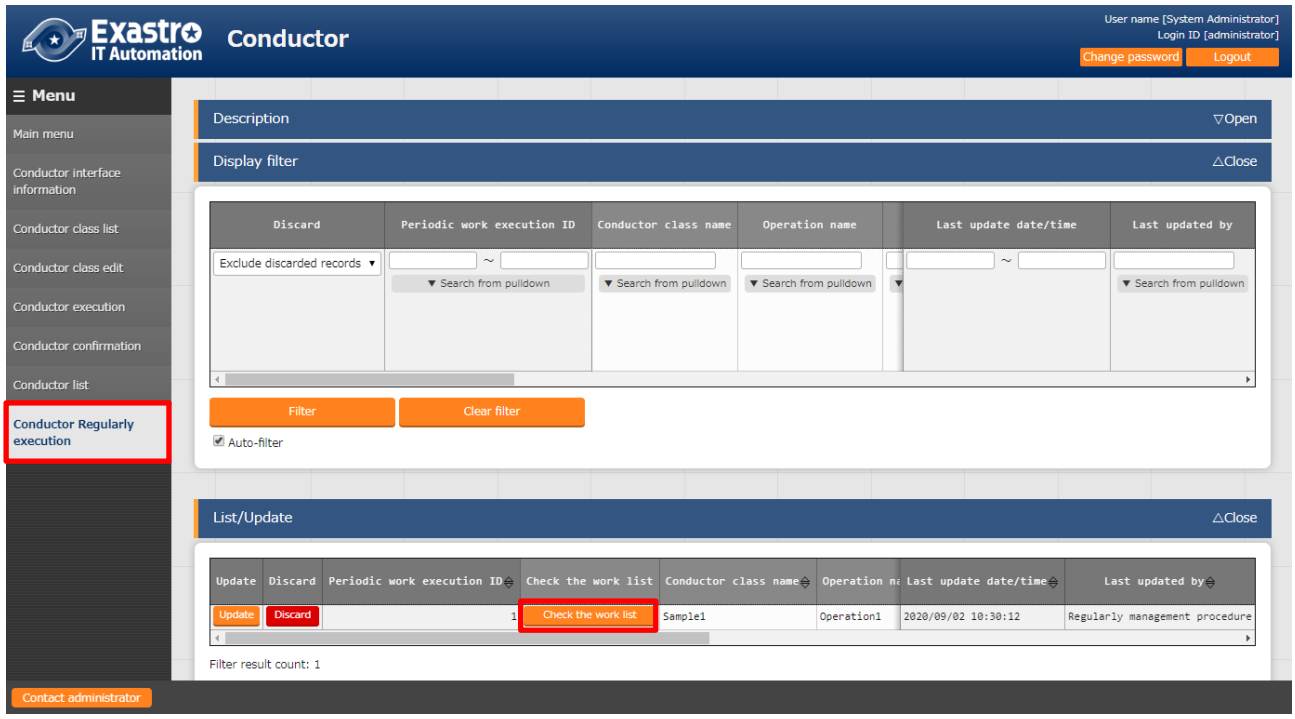


Figure 4.1-26 Submenu screen (Conductor regularly execution)

(2) Click “Register” - “Start Registration” button to set regular execution.
Schedule can only be set in the setting window by clicking “Schedule settings” button.

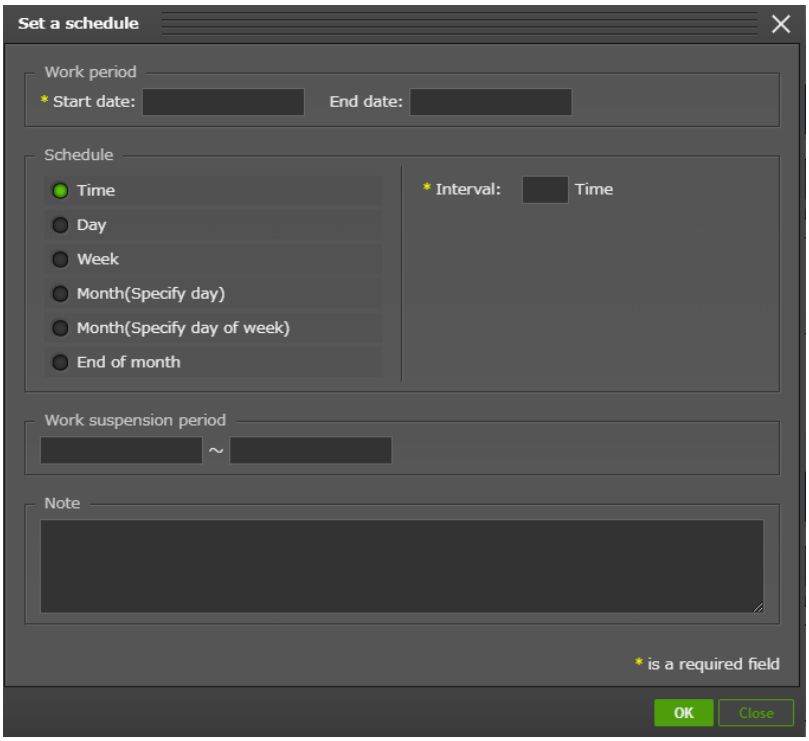


Figure 4.1-27 Schedule settings screen (Regularly execution)

(3) The list of items in Conductor confirmation screen is as follows.

Table 4.1-14 Register screen item list (Regularly execution)

Item		Description	Input Required	Input type	Restrictions
Conductor class name		Conductor registered in "4.1.2 Conductor class list" are displayed.	○	List	-
Operation name		Operation registered in "Basic Console – Input operation list"	○	List	-
Status		Refer to the following "Table 4.2-11 Status list (Regularly execution)"	-	Automatic	-
Schedule setting		A button that opens a modal window to set details of schedule.	-	-	-
Schedule	Next execution date	Based on the registered schedule, the execution date will be updated automatically.	-	Automatic	-
	Start date	Enter the start date of regular work execution. "Next execution date" is always updated with the date after "Start date".	○	Manual	Enter by Schedule setting only
	End date	Enter the end date of regular work execution. The status will become "completed" if "Next execution date" passed "End date".	-	Manual	Enter by Schedule setting only
	Period	Select the period of regular execution. "Time", "Day", "Week", "Month (Specify day)", "Month (Specify day of week)", "End of month" can be selected.	○	Radio button	Enter by Schedule setting only
	Interval	Select the regular execution interval based on the selected period.	○	Manual	Enter by Schedule setting only
	Week number	Used when period is "Month (Specify day of week)", select the week number to execute work.	※1	List	Enter by Schedule setting only
	Day of week	Used when period is "Week" or "Month (Specify day of week)", select the day of week to execute work.	※2	List	Enter by Schedule setting only
	Day	Used when period is "Month (Specify day)", select the date to execute work.	※3	Manual	Enter by Schedule setting only
	Time	Enter the time of regular execution.	※4	Manual	Enter by Schedule setting only
Work suspension period	Start	Enter the start date/time of work suspension period. During the time between start time and end time, registered Symphony will not be executed.	※5	Manual	Enter by Schedule setting only
	End	Enter the end date/time of work suspension period. During the time between start time and end time, registered Symphony will not be executed.	※5	Manual	Enter by Schedule setting only
Remarks		Free description field.	-	Manual	-

※1 Week number is required when period is "Month (Specify day of week)".

※2 Day of week is required when period is "Month (Specify day of week)".

※3 Day is required when period is "Month (Specify day)".

※4 Time is required when period is "Day", "Week", "Month (Specify day)", "Month (Specify day of week)", "End of month".

※5 When setting work suspension period, both "Start" and "End" are required.

Table 4.1-15 Status list (Regular execution)

Status name	Description
In preparation	The status immediately after registration. The status will become “In operation” when backyard updates “Next execution date” automatically.
In operation	The status of normal execution. The system registers operation to “4.1.6 Conductor list” 3 minutes before “Next execution date”, then updates “Next execution date” based on the schedule setting.
Completed	The status when “Next execution date” passed “End date”. Further Conductor execution registration will not be performed.
Mismatch error	The status when setting value of schedule is not correct.
Linking error	The status when registering execution failed in “4.1.6 Conductor list”. Same as the status “In operation”, system registered execution in “4.1.6 Conductor list”, then updates “Next execution date” based on the schedule setting. If registration of execution failed again, the status will remain “Linking error”.
Unexpected error	The status when errors other than “Mismatch error” and “Linking error” happens.
Conductor discard	The status when the registered Conductor is discarded. The status will be updated to “In preparation” if the discarded Conductor is restored.
Operation discard	The status when the registered Operation is discarded. The status will be updated to “In preparation” if the discarded Operation is restored.

(4) The status will become “In preparation” immediately after registered in “Regular execution” menu. Backyard will update “Next execution date” based on the registered schedule setting, then the status will become “In operation”.
If the status is “In operation” or “Linking error”, the system registers operation to “4.1.6 Conductor list” 3 minutes before “Next execution date”, then updates “Next execution date” based on the schedule setting.

※ When pause is set in the Symphony which is registered in regularly execution, if users don’t “resume” in “4.1.5 Conductor confirmation” after operation is registered, the status in “4.1.6 Conductor list” will remain “Executing”.