Exastro

OASE Operation Autonomy Support Engine

Base【Practice】

※In this document, “Operation Autonomy Support Engine” will be written as “OASE”.

Exastro Operation Autonomy Support Engine Version 1.3.1

Exastro developer

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1. Introduction

1.1 Base【Practice】 (1/3)

Preface

- This document uses Exastro Operation Autonomy Support Engine (OASE) to help users better understand the software's basic functions.
- If you want to learn more about the overview of OASE, we recommend that you see the< Exastro OASE Base 【Classroom】 document.
- For documents with more comprehensive information, please see the official Exastro OASE manual page, OASE docs.

1.1 Base【Practice】 (2/3)

Prerequisites

- This document will have the user run ITA as an action,
  and will therefore assume that the following are installed/implemented.

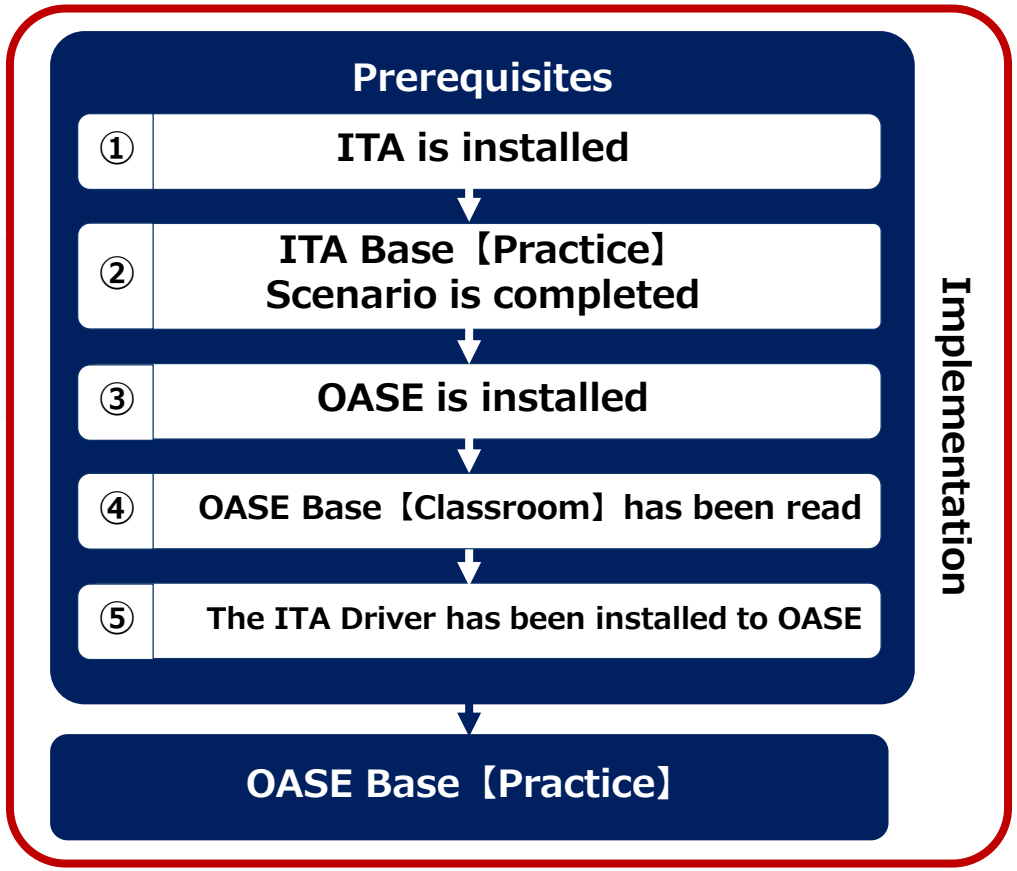
① Please see the following document for installing ITA.
- <ITA Online install manual>

② Please see the following document for the
IT Automation BASE Practice document
- <IT Automation BASE 【Practice】>
- Make sure to follow all the slides that comes after the "Scenario" slide,
  as we will use the settings from them.

③ Please see the following document for installing OASE.
- <OASE Online install manual>
- Make sure to include the mail server settings,
  as we will need them when we are creating a new user.

④ Please see the following document for OASE Base (Classroom)
- <OASE Base【lecture】>

⑤ Please see the following document for installing the ITA Driver.
- < Environment construction manual -Install drivers->

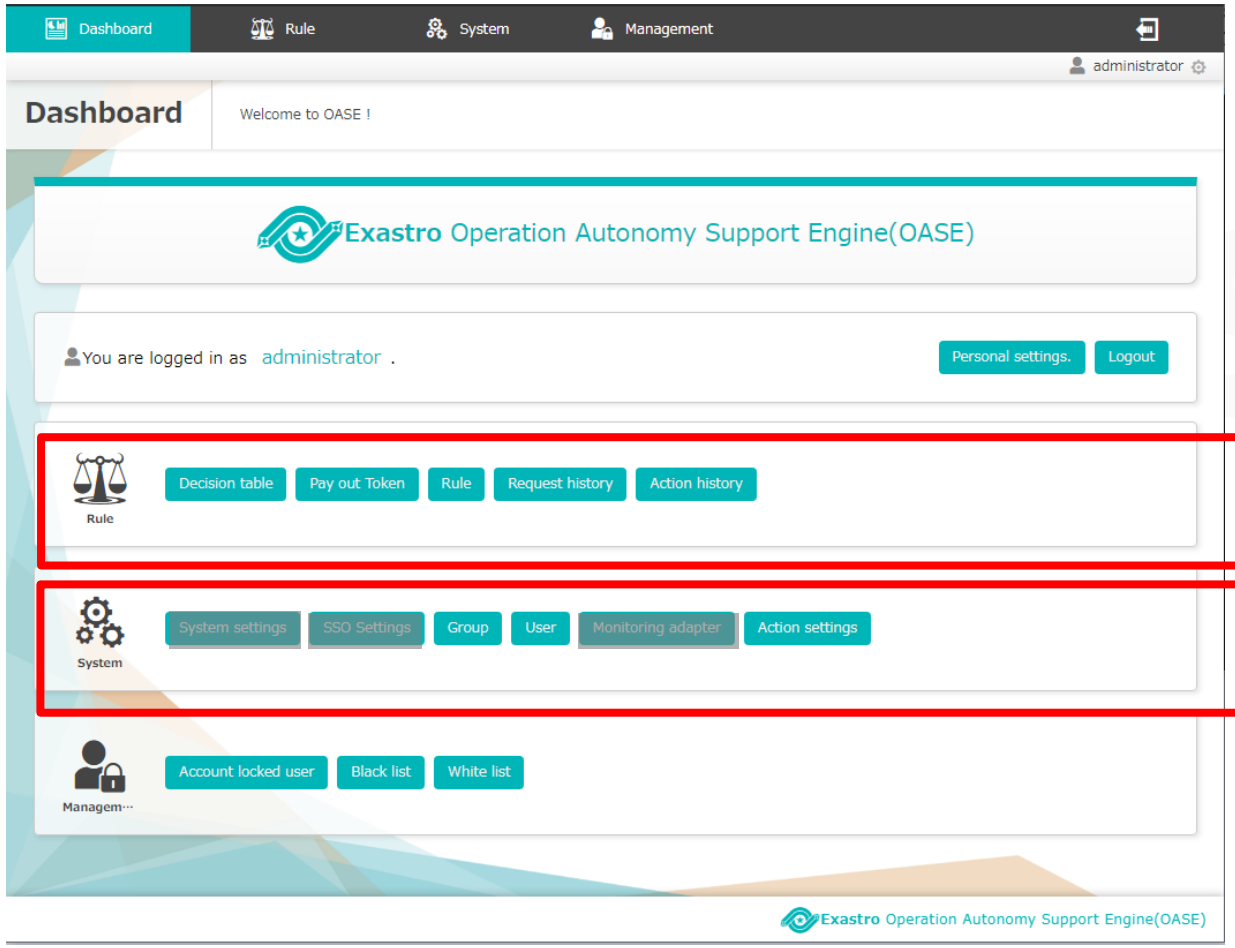


※In this document, IT Automation will be written as “ITA”

1.1 Base【Practice】 (3/3)

This guide will use the following OASE functions

- Dashboard screen



Category : rule

Screen
Decision table
Pay out Token
Rule
Request History
Action History

Category : System

Screen
Group
User
Action settings

2. Scenario

2.1 Scenario description (1/2)

The following illustrates the scenario of this document (After installing OASE)

【Preparation】

Various settings

1. **Create group**
2. **Create and log in as new user.**
3. **Pay out Token**
4. **Configure Action (ITA driver)**
5. **Create decision table**

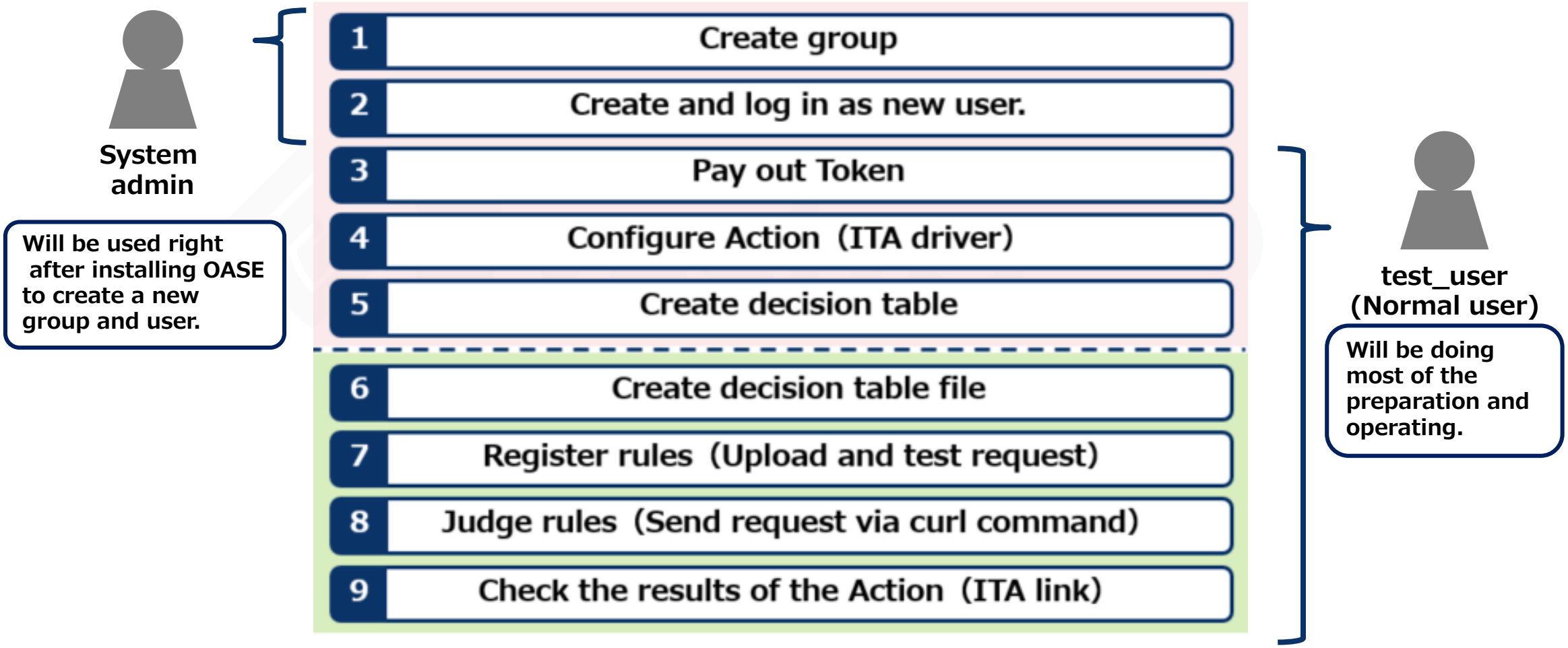
【Operation】

Creating and registering rules
Insert message
Rule matching
and
Executing

6. **Create decision table file**
7. **Register rules (Upload and test request)**
8. **Judge rules (Send request via curl command)**
9. **Check the results of the Action (ITA link)**

2.1 Scenario description (2/2)

In this scenario, the user will start logged in as the System admin and will then proceed to create a new group and user (test_group, test_user) that will be used for the rest of the scenario.



3. Preparation

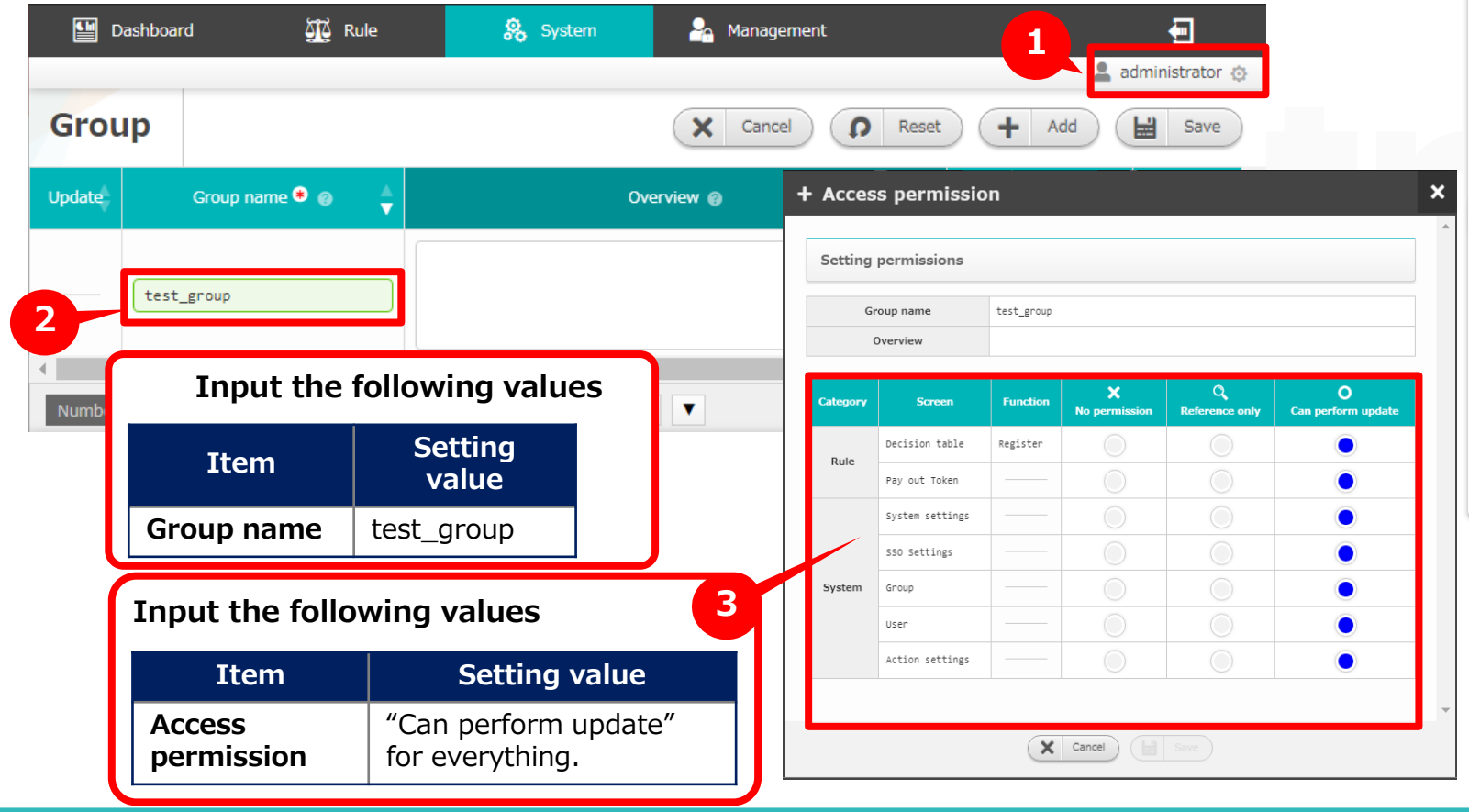
3.1 Create group

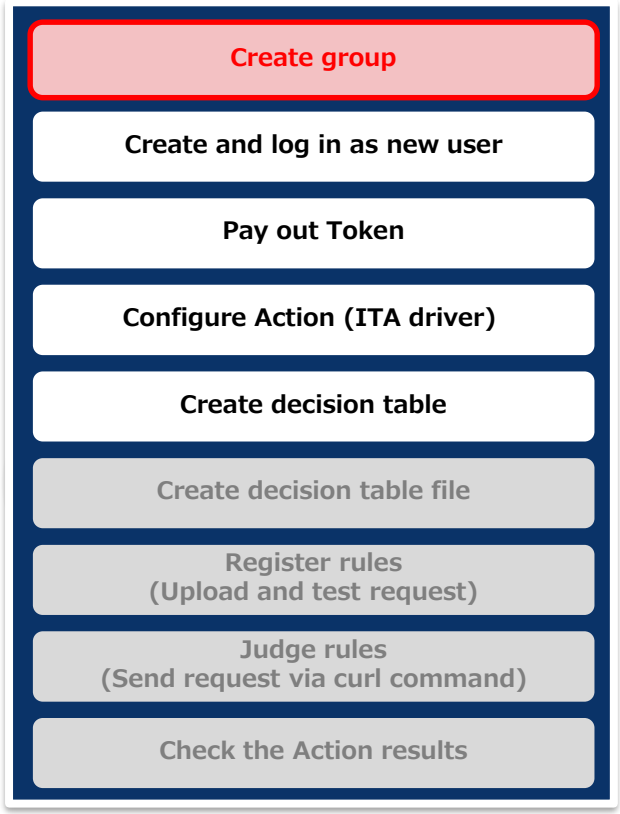
Create a new group called “test_group”

① Log in as the system administrator

② Move to the “group” screen and create a new group called “test_group”

③ Configure the “test_group”s access permission settings.





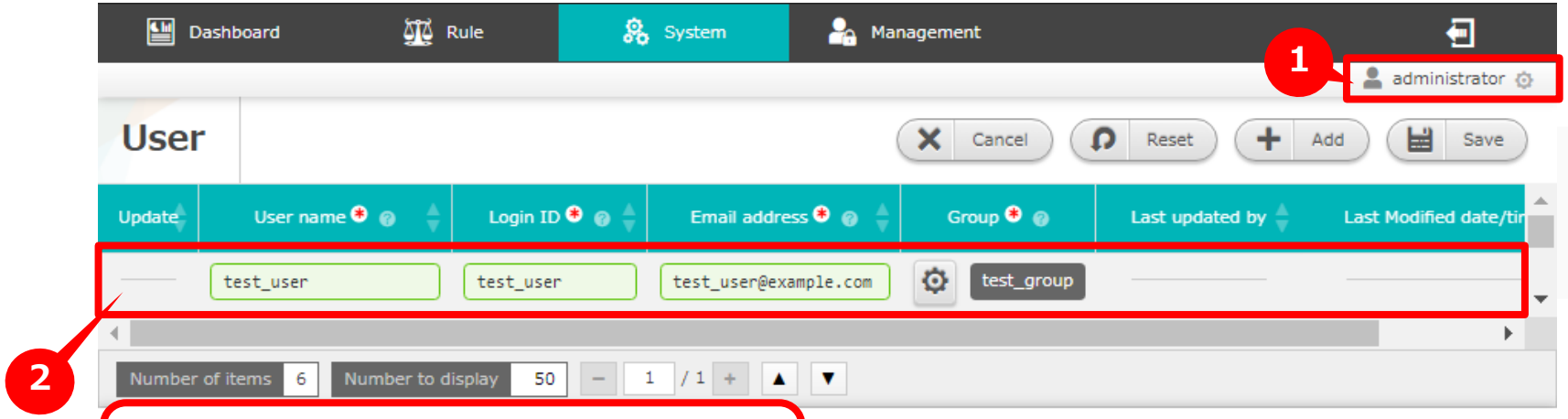
3.2 Create and log in as new user

Create a new user

① Move to the “user” screen while logged in as the system admin

② Create a new user called “test_user”

③ Log out from the system admin account and log in as “test_user”

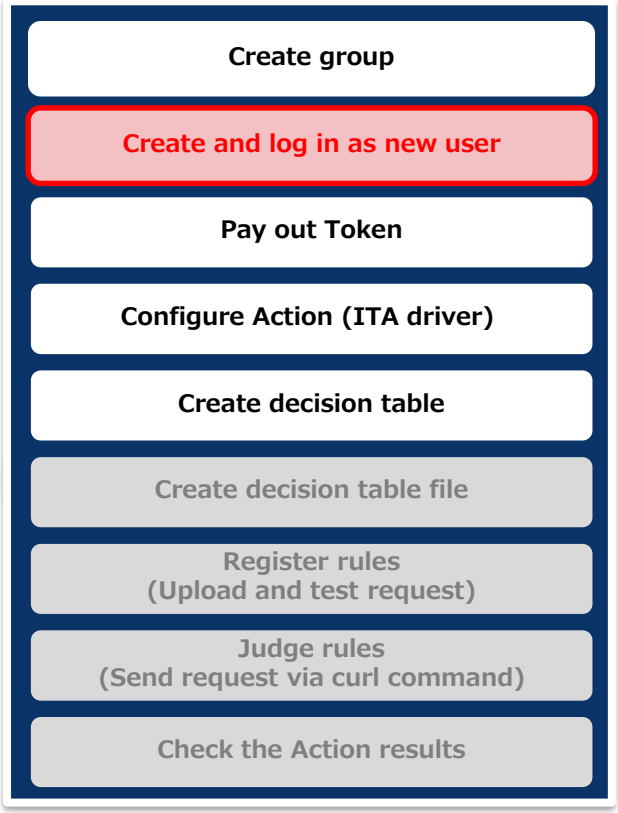


Input the following values

Item	Setting value
User name	test_user
Login ID	test_user
Mail address	(A mail address that can receive mail)
Group	test_group

POINT

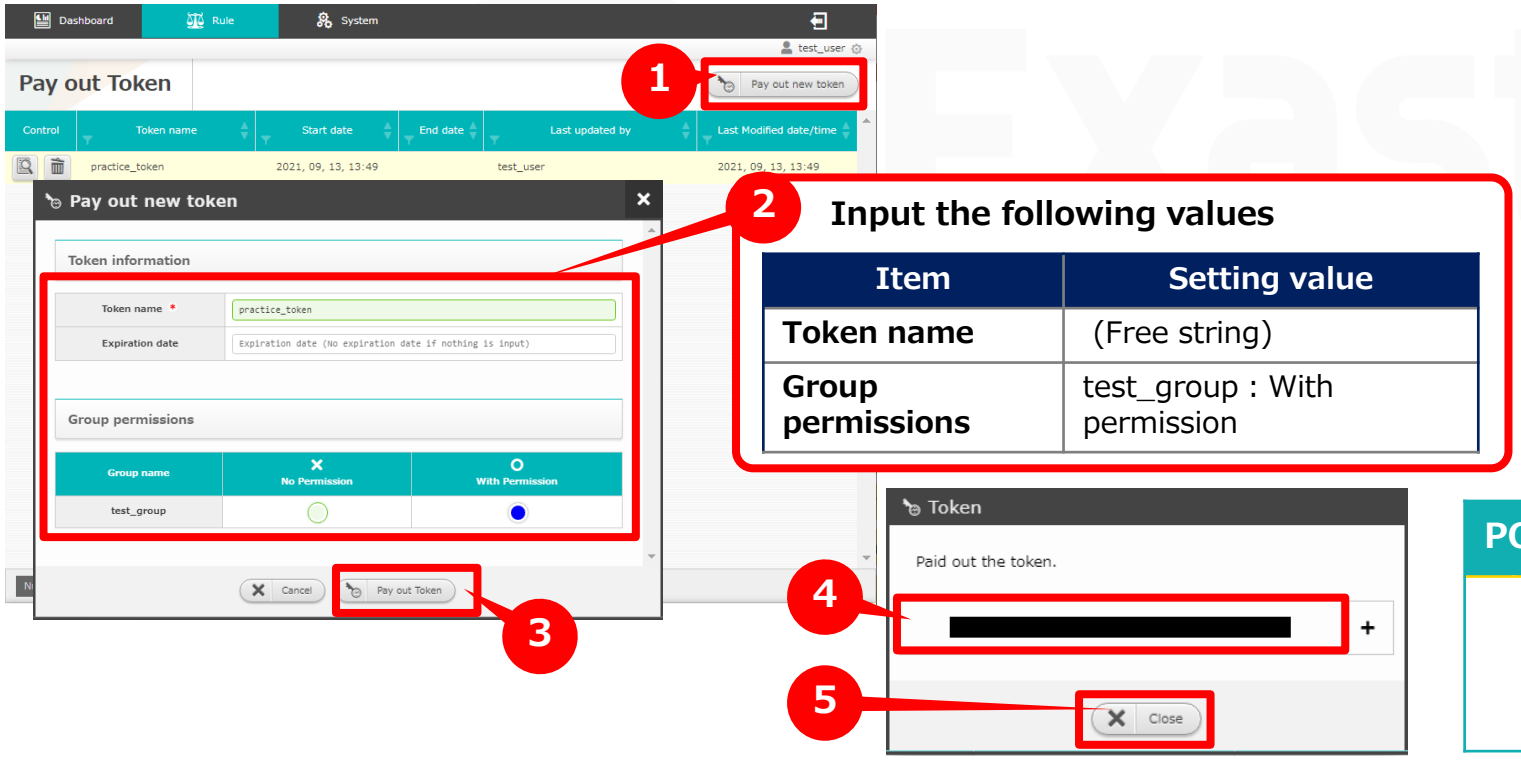
The user will receive two different mails when registering a new user in OASE. “Password notification” and “Login ID Notification”.
Use the login ID and password written in said mails to log in to OASE.

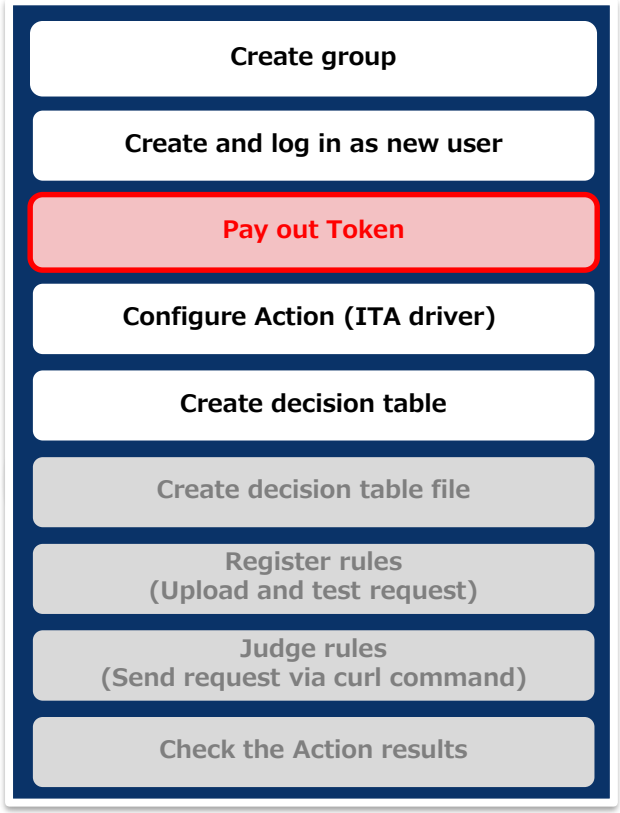


3.3 Pay out Token

Pay out a new Token

① Press the “Pay out new token” button
② Input all the required information
③ Press the “Pay out Token” button
④ Copy the token displayed on the screen
⑤ Press the “Close” button





POINT

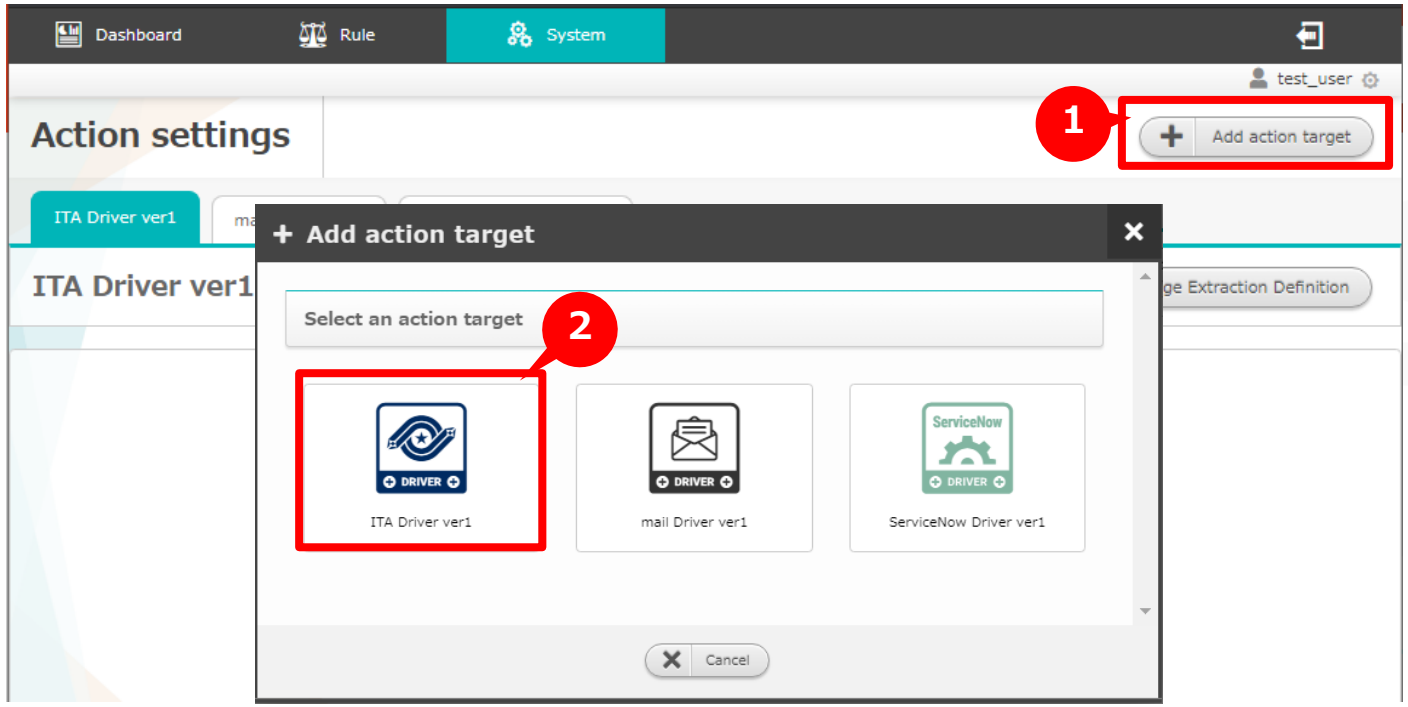
We will need a token when we are configuring the settings in chapter "4.3 Judge rules (Send request via curl command) ".

3.4 Action settings (ITA driver) (1/4)

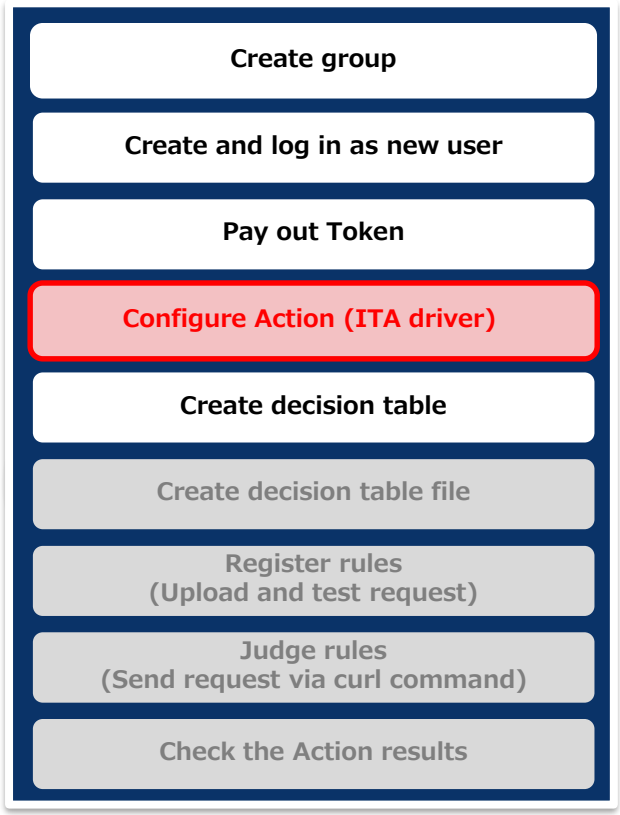
Add Action destination

① Go to the “Action settings” screen and press the “Add new action destination” button.

② Select ITA Driver ver1.



※The screen above will not display if you don’t have any drivers installed.



POINT

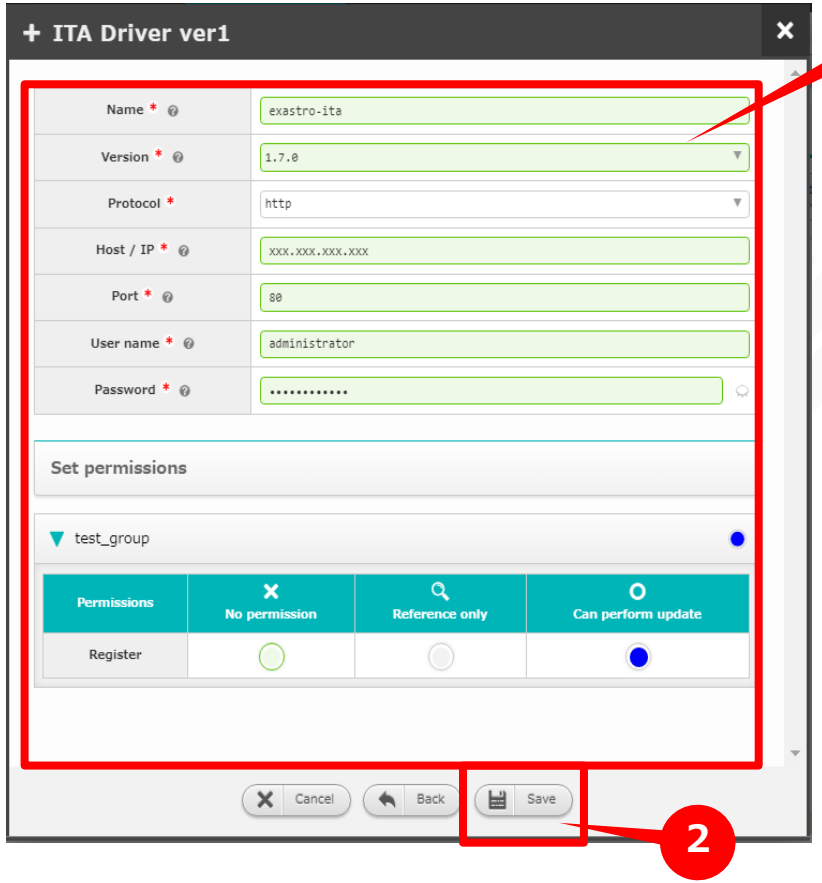
Make sure to read the following manual and install the Mail driver in advance.
<Environment construction manual - Install drivers –>

3.4 Action settings (ITA driver) (2/4)

Configure Action destination

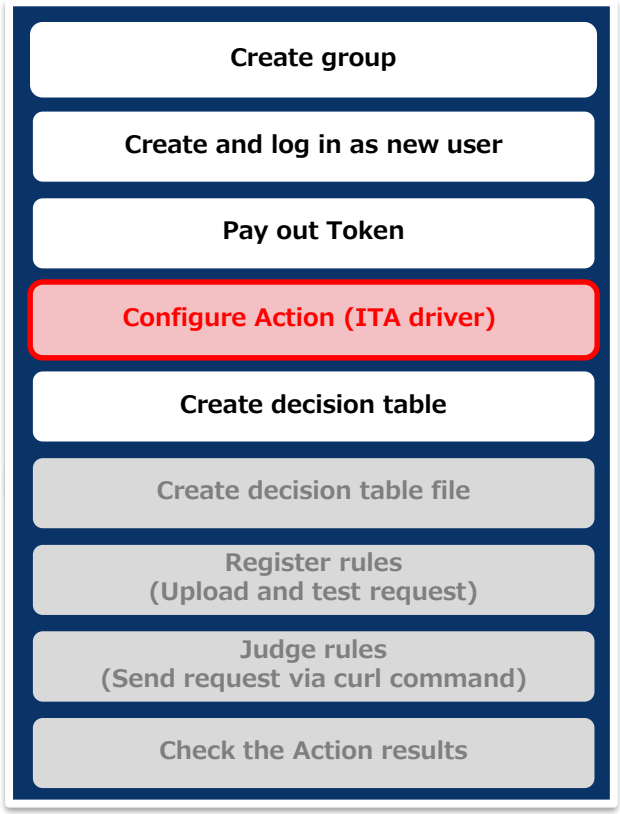
① Input all the necessary information in the ITA Driver ver1 window.

② Press the “Save” button.



1 Input the following values

Item	Setting value
Name	(Free string)
Version	1.7.1
Protocol	http
Host/IP	(IT Host name or IP Address)
Port	80
user name	administrator
Password	(ITA user password)
Permission settings	test_group : "Can update"



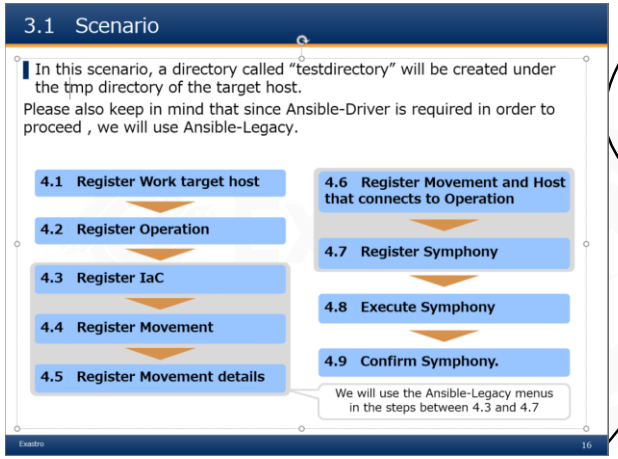
POINT

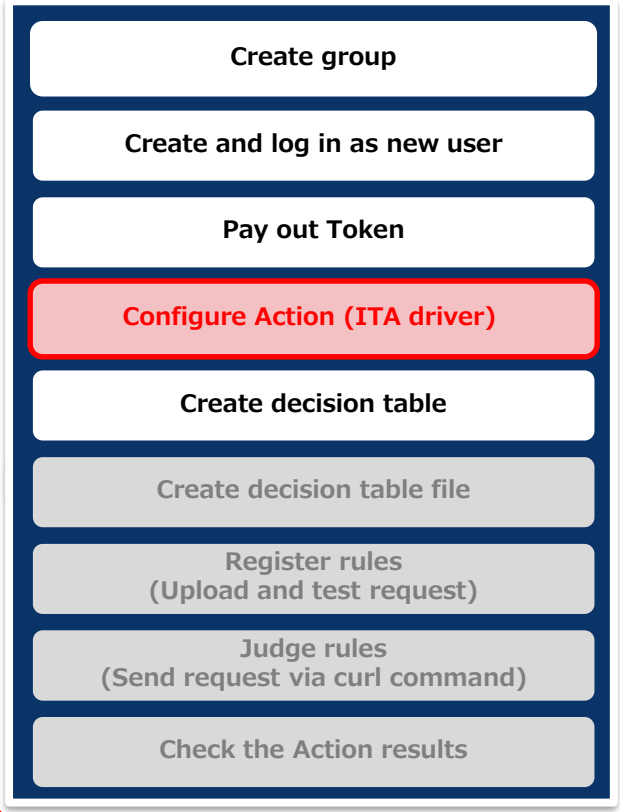
The "Name" will be used later in the <Create decision table file> when we are specifying the destination of the action.

3.4 Action settings (ITA driver) (3/4)

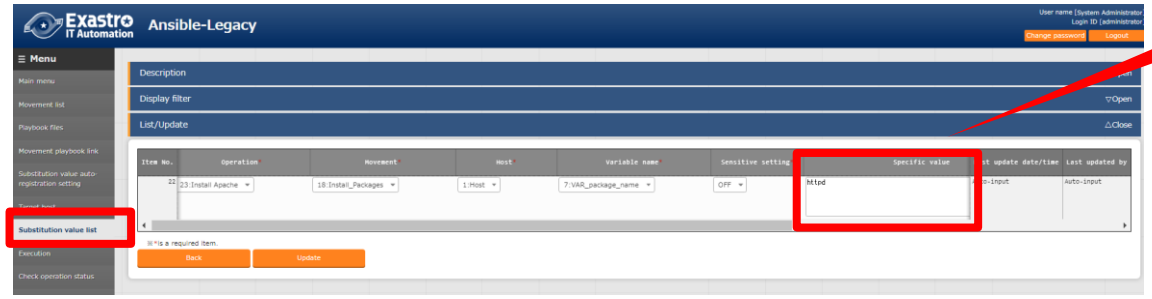
Change the ITA registration settings

① Log in to ITA and follow the <Learn ITA BASE【Practice】>document from the “Scenario” slide to the “Symphony confirmation” slide.
※The chapter name and pages might change.





② Go to the ITA ”Ansible-Legacy” menu group > ”Substitution value list” menu > ”List/Update” submenu and change the “specific value”



2 Input the following values

Item	Setting value
Specific value	(Free string)

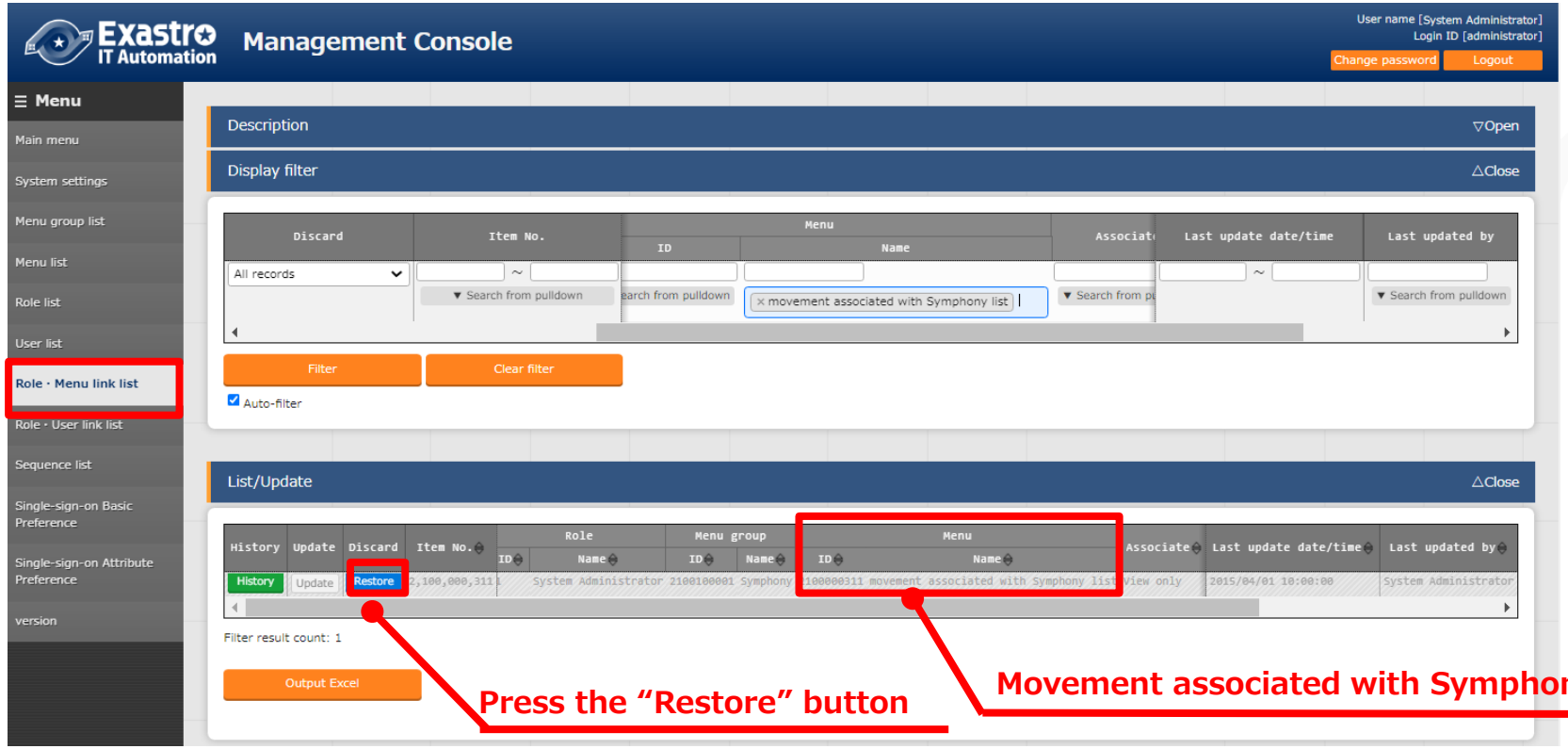
POINT

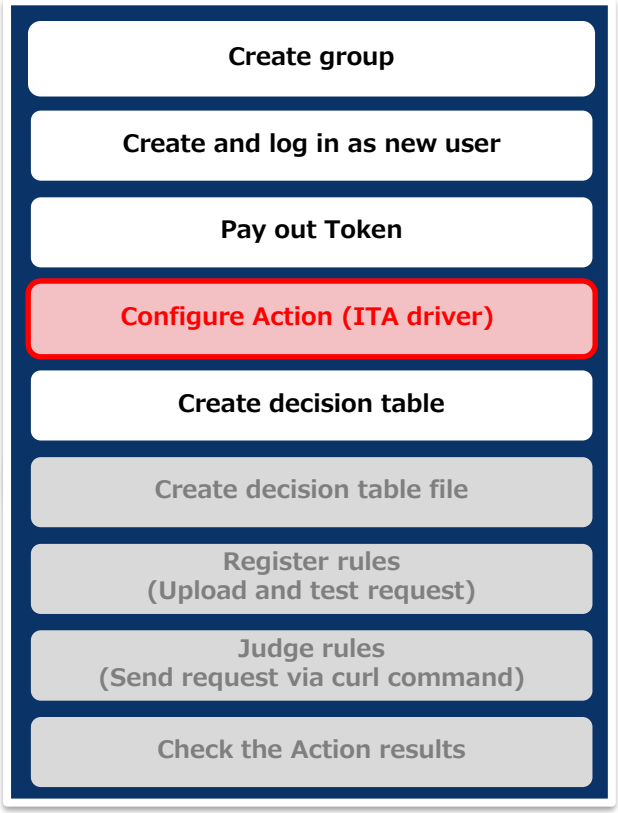
The string input for the specific value will be the name for the new directory that will be created.

3.4 Action settings (ITA driver) (4/4)

In order to link ITA and OASE, we will need to configure the following settings:

- Go to "Management console" Menu group> "Role Menu link list" Menu > "List/Update" Sub menu and revive “Symphony link movement list”.





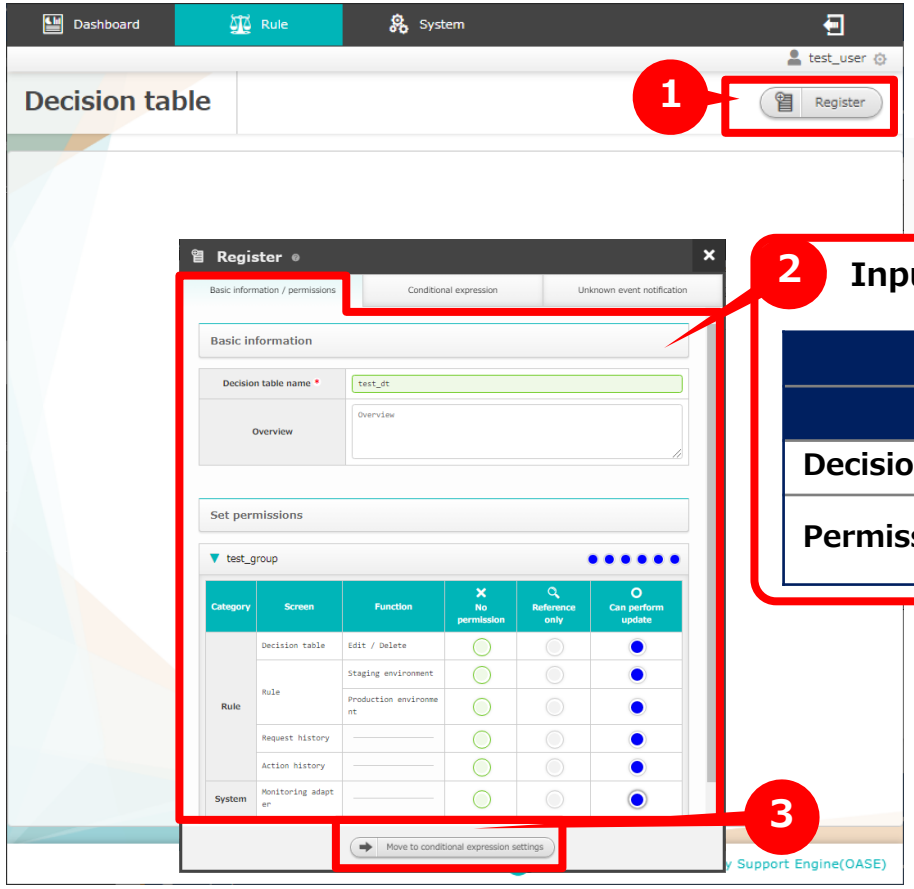
3.5 Create decision table (1/2)

Create decision table

① Go to the “Decision table” screen and press “Create new” button

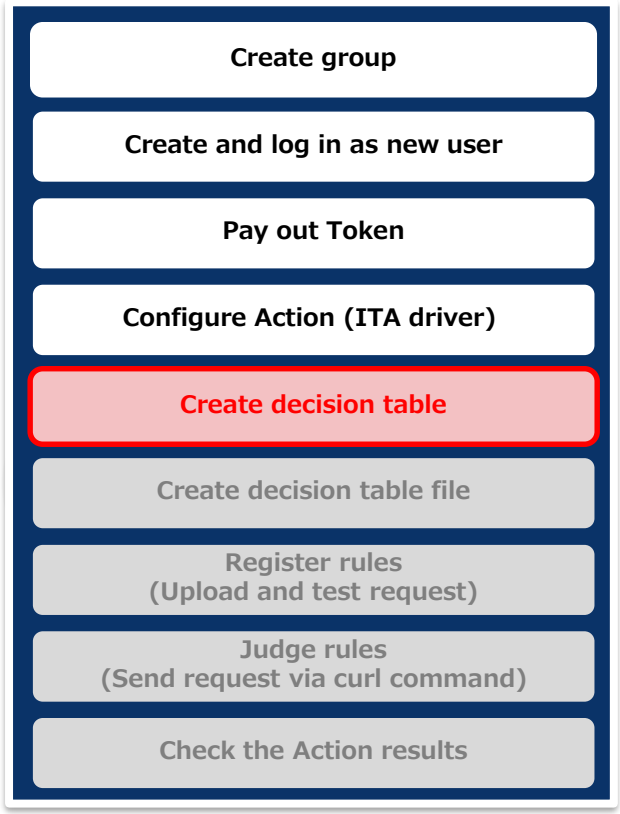
② Input all the necessary information in the “Create new” screen-> “Basic information/ permission” tab.

③ Press the "Condition expression" button



2 Input the following values

Basic information / permission tab	
Item	**Setting value**
Decision table name	(Free string)
Permission settings	test_group : ”Can perform update” for all.



POINT

Make sure to configure settings for at least one group in the "Permission settings".
You will not be able to make changes to the Decision table if you don't.

3.5 Create decision table (2/2)

Create decision table

④ Input the necessary information in the “ Create new “ screen -> Conditional branch tab.

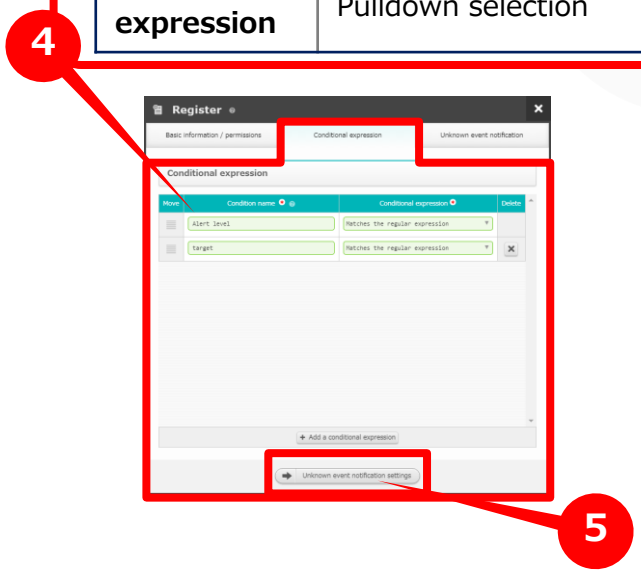
⑤ Press the “Unknown event notification” button

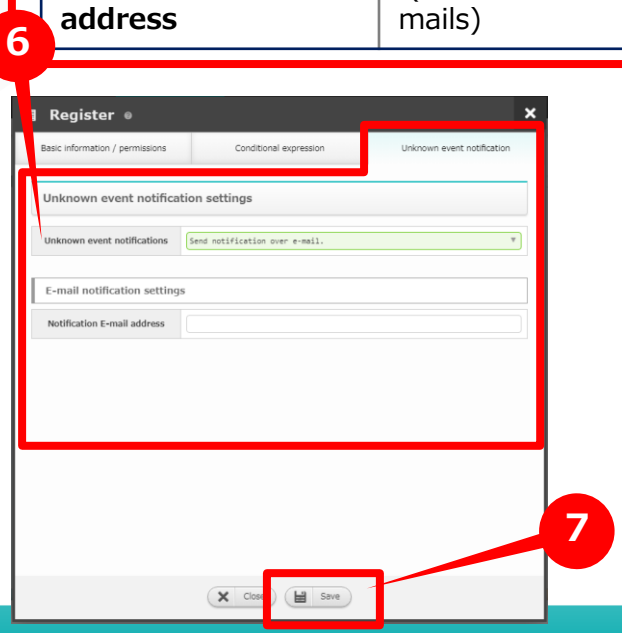
⑥ Input all the necessary information in the “Unknown event notification” tab

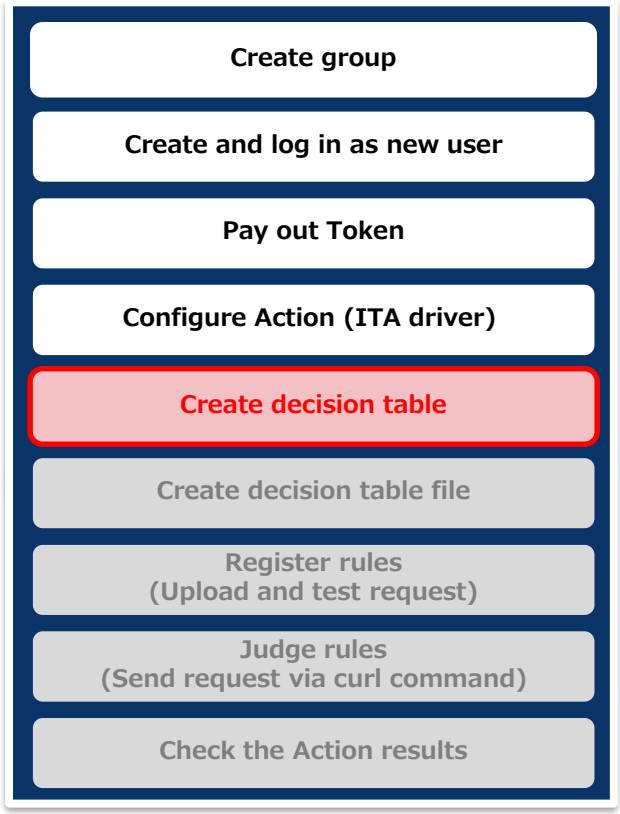
⑦ Press the “Save” button

Conditional expression tab	
Item	**Setting value**
Condition name	(Free string)
Conditional expression	Pulldown selection

Unknown event notification tab	
Item	**Setting value**
Unknown event notification	Select “Notify by mail”.
Notification E-mail address	(Mail address that can receive e-mails)







POINT

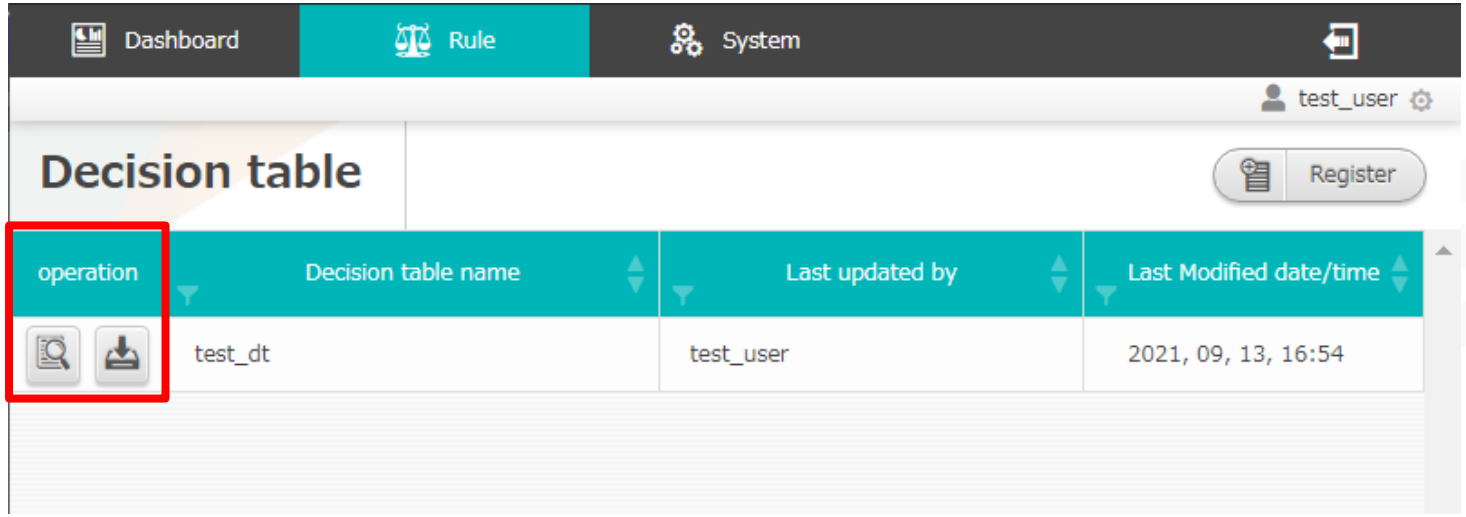
The configured conditional expression will be used later when we are setting specific values in the Decision table file's "Condition part".

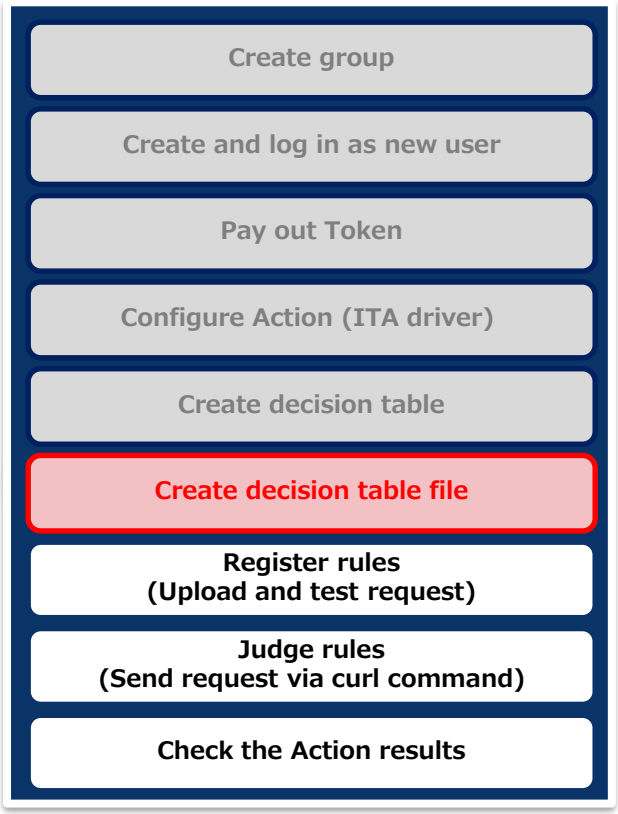
4. Operation

4.1 Create decision table file (1/3)

Download and create the decision table file

- Click the download button the right of the decision table we created in chapter 3.2 and download the decision table file





POINT

The name of the decision table file is automatically generated (E.g.”id00000000000.xlsx”).
Note that it will be different from the name of the decision table itself. In the next page, we will explain the contents of the file.

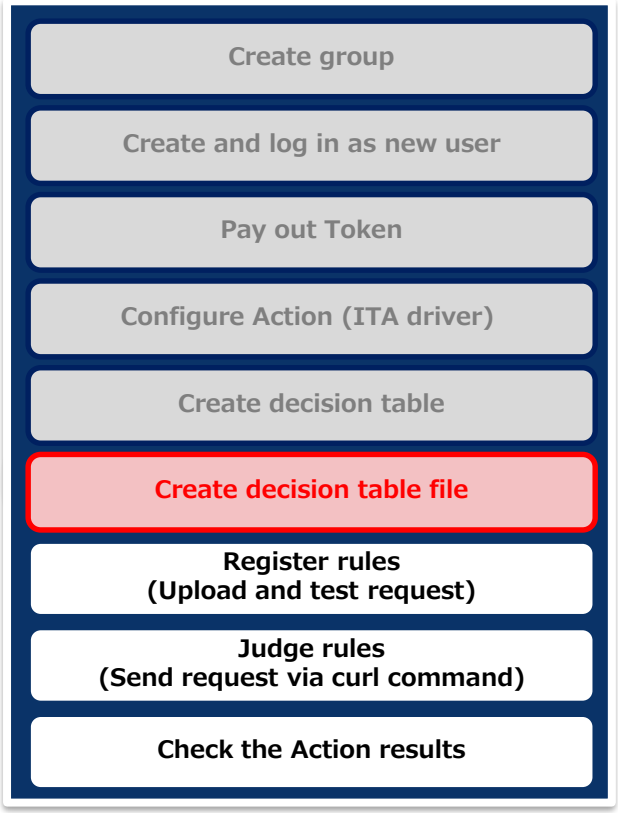
4.1 Create decision table file (2/3)

Fill in the Decision table file

※For an exact copy of the following decision table file, please see<A. Appendix Sample1>.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1																				
11		① Rule description	Alert level(Regular expression allowed. Match) ②	target(Regular expression allowed. Match)	Rule name (Required)	Action type (Required)	Action parameter information (Required) ※Can't use double quotation ③	Verification mail parameter information (required) ※Double quotation not needed	retry interval	For Action retries	det err ent inte	For det err ent acti	For action condition	con diti on peri	Big group (Required) ※Define with "X" if not needed	roup priority (R	Small group (Required) ※Define with "X" if not needed	gr up pri rity	Date Effective ④	Expiration date
12		Rule 1	^.*Error.*$	^.*HDD.*$	check_Error	ITA(ver1)	ITA_NAME=test_ita,SYMPHONY_CLASS_ID=1,OPERATION_ID=1	x	1	1	0	0	x	x	x	x	x	x		
13		Rule 2	^.*Warning.*$	^.*memory.*$	check_Warning		x	x	1	1	0	0	x	x	x	x	x	x		
14		Rule 3	^.*info.*$	^.*%.*$	check_Info		x	x	1	1	0	0	x	x	x	x	x	x		
15																				
16																				
17																				
18																				
19		↑If you want to add more rules, copy the 12th row and insert more.																		

①Comment part	Used for comments and descriptions. Can also be blank
②Condition part	Creates the condition that will be matched to the rules.
③Action part	• Can set different actions for each rule name. • The only type of "Action type" that can be used are the ones that have their drivers installed in the "Action settings" screen. • Note that the writing format of the "Action parameter information" depends on the type of action. • Can be used to perform an action or to send a validation mail.
④Action condition part	Used to specify the validity period. Can also be blank



POINT

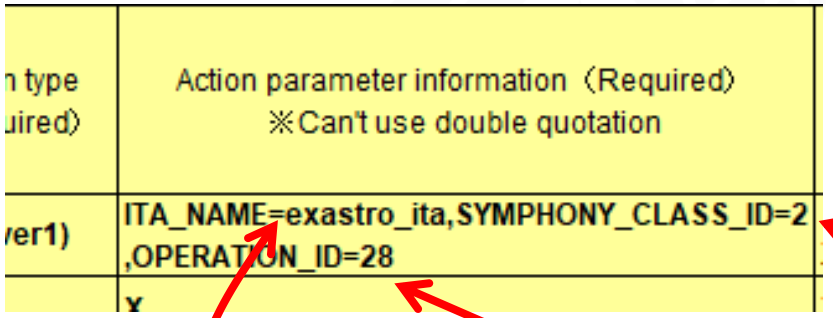
For all the different values and how to correctly write them, please see the "example" sheet in the excel file.
After changing the Decision table file, you can change the name of the file name to your liking.

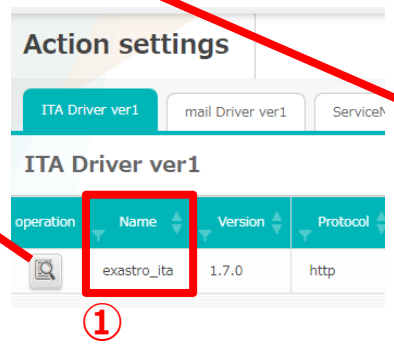
4.1 Create decision table file (3/3)

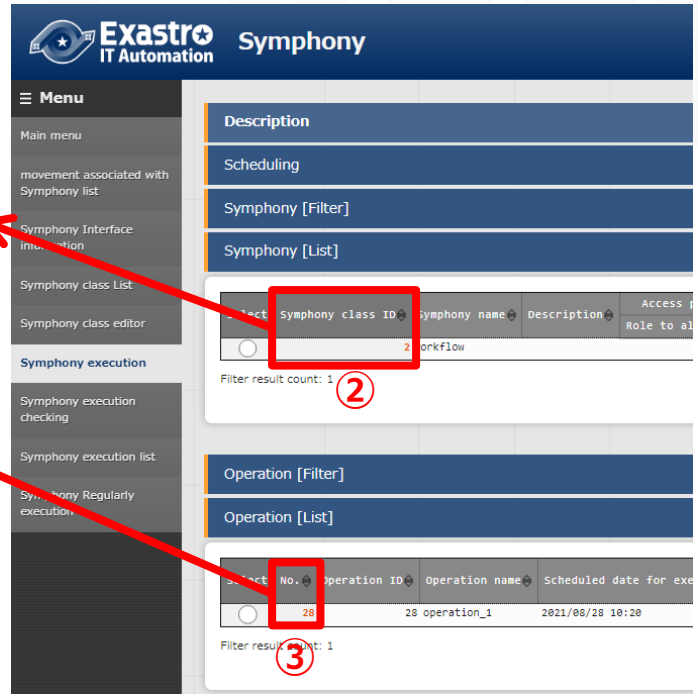
Input Action parameter information

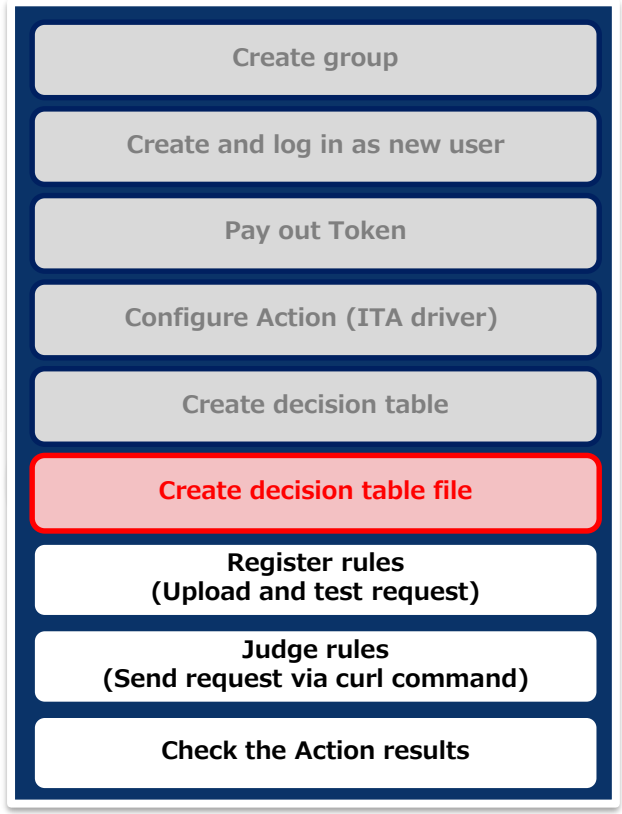
- Use the table below and fill out the Action parameter Information

No.	Action parameter information	Setting value
1	ITA_NAME	The name registered in the “ITA Driver ver1” name tab.
2	SYMPHONY_CLASS_ID	The Symphony class ID (Is found in ITA's "Symphony" menu group -> "Symphony execution" menu -> "Symphony [list]”)
3	OPERATION_ID	The Operation ID (Is found in ITA's "Symphony" menu group -> "Symphony execution" menu -> "Operation [list]")









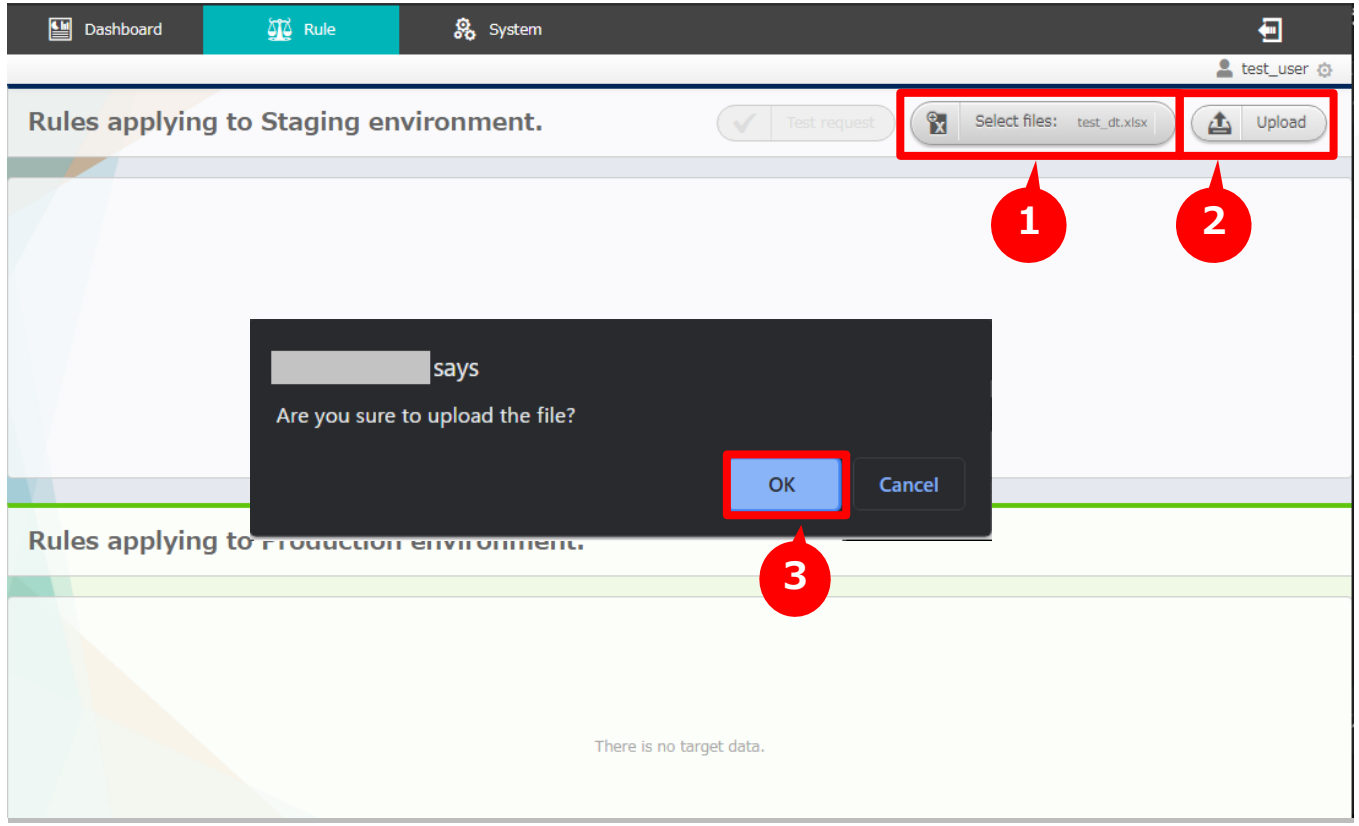
4.2 Register rules (Upload and test request) (1/6)

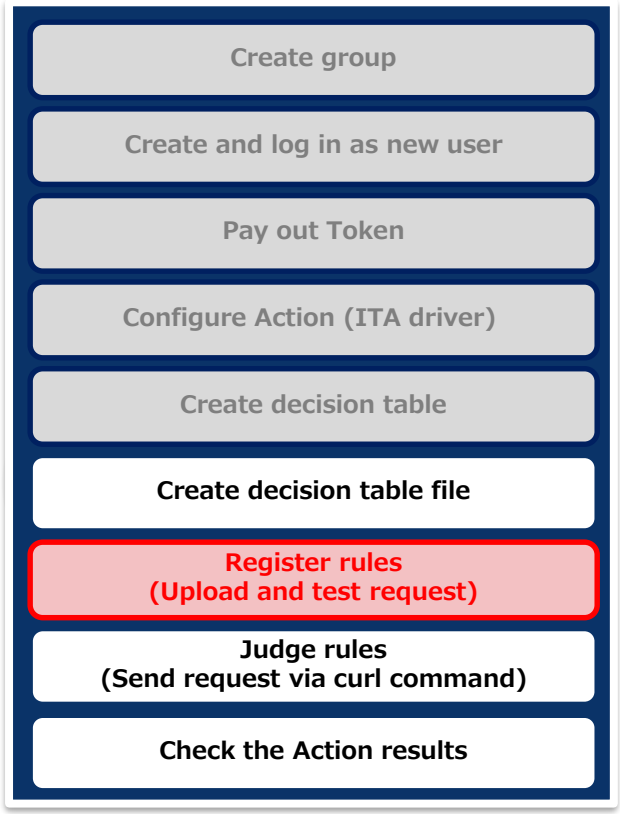
Select the decision table you want to test

① Click the “Upload” button in the Rule screen and select the previously created decision table file

② Press the “Upload” button

③ Press “OK” on the browser dialogue box





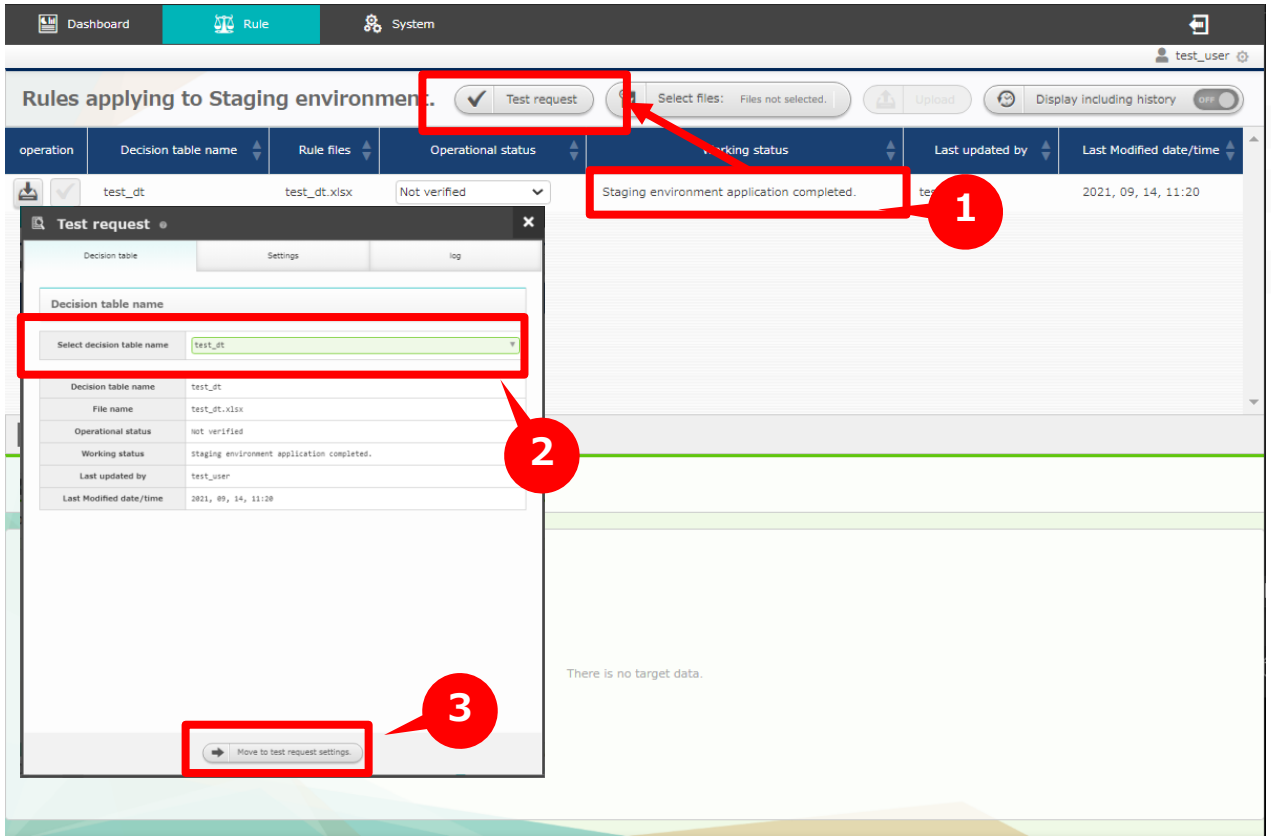
4.2 Register rules (Upload and test request) (2/6)

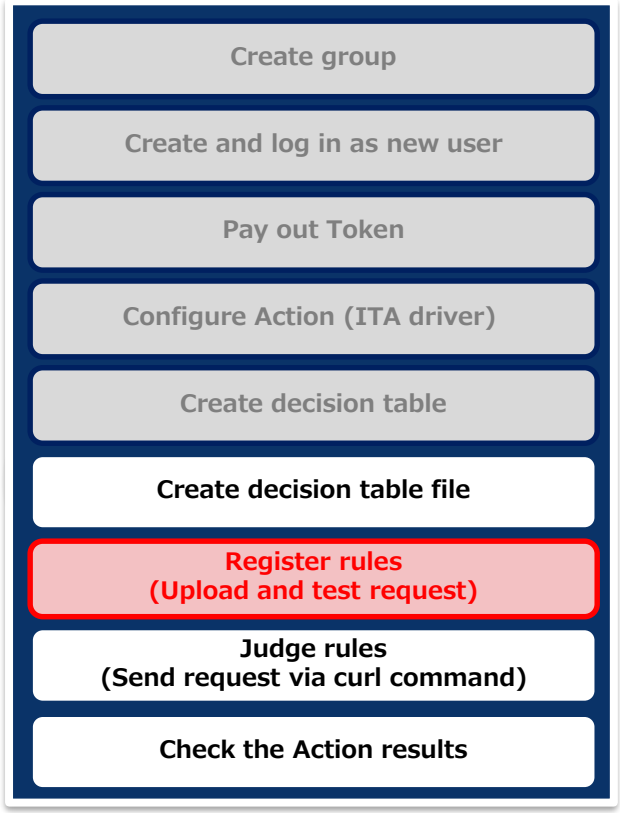
Select test request target

① After the “Operation status” has changed to “Staging environment application completed”, press the “Test request” button.

② Select the decision table file you want to test.

③ Press the “Test request” button.





POINT

The Operation status changes automatically every 5 seconds. For more information regarding the different statuses, please refer to <User manual - Rule screen- (1) Rule screen (Staging) >

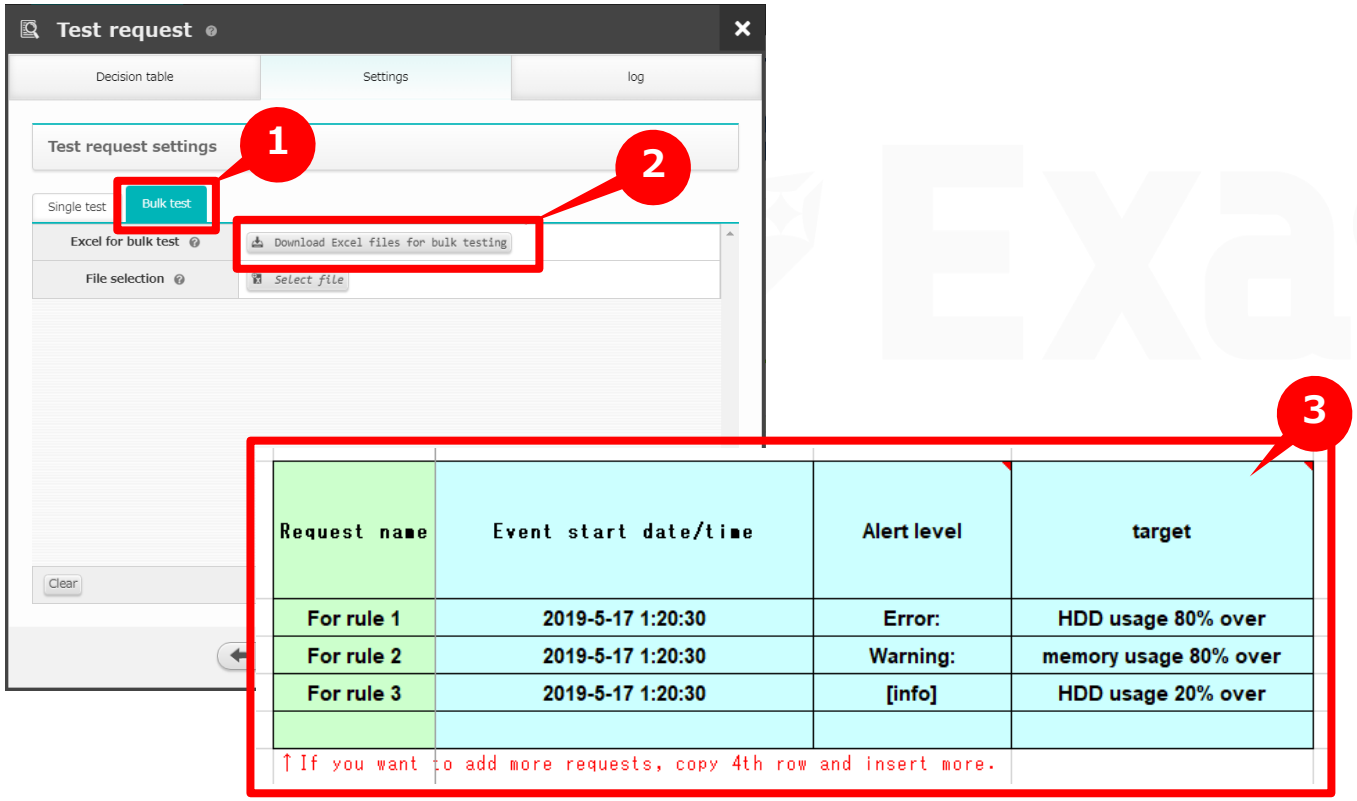
4.2 Register rules (Upload and test request) (3/6)

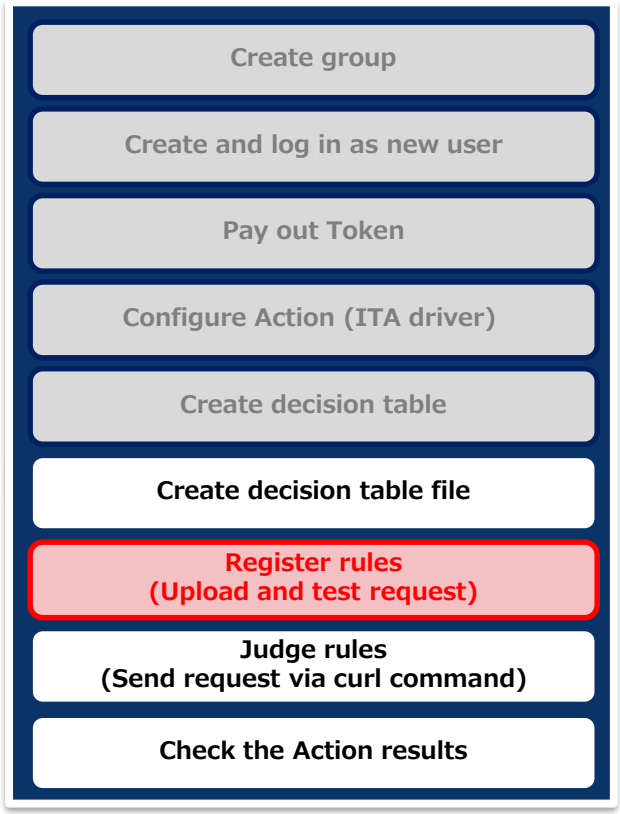
Input test values and run the test request

① In the settings tab, select “Bulk test”

② Press the “Download Excel files for bulk testing” button

③ In the file, input a value that matches the rule you previously created





POINT

We will test if the values matches the condition part in the decision table file.

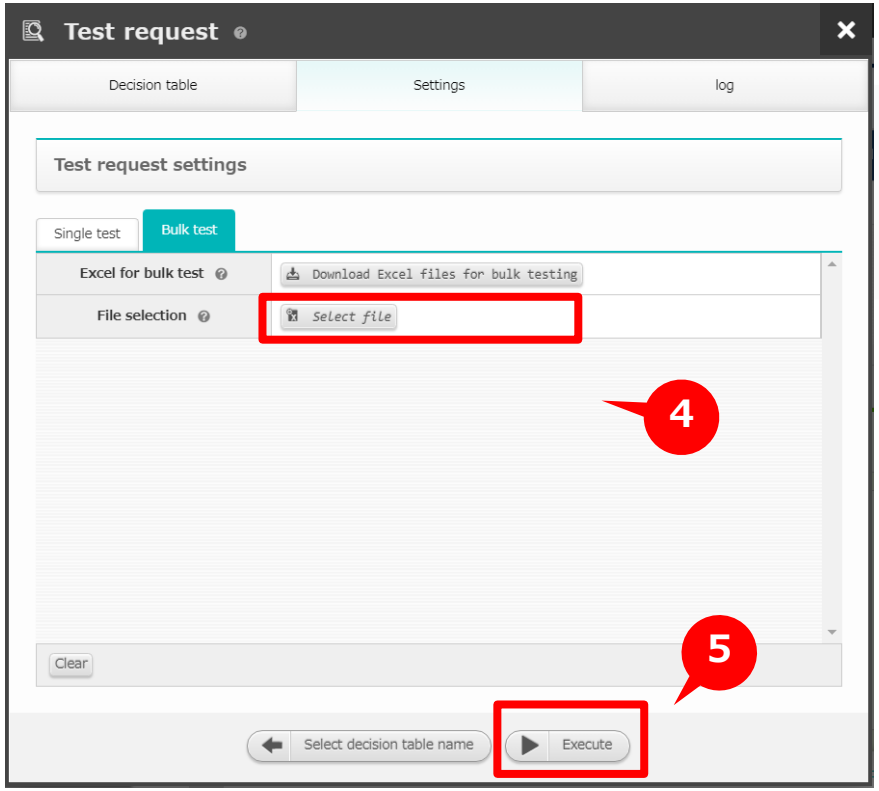
4.2 Register rules (Upload and test request) (4/6)

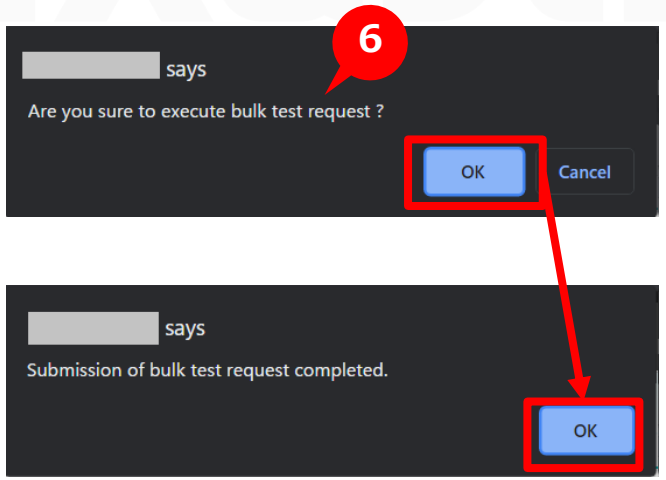
Input test values and run the test request

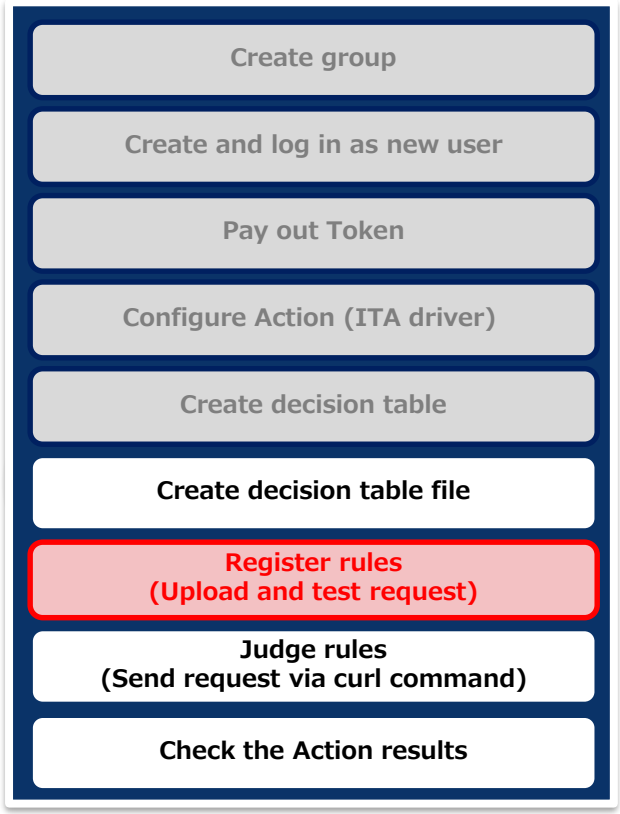
④ Press the "Select file" button and select the updated Excel file xx

⑤ Press the “Execute” button

⑥ Press “OK” on the browser dialogue box



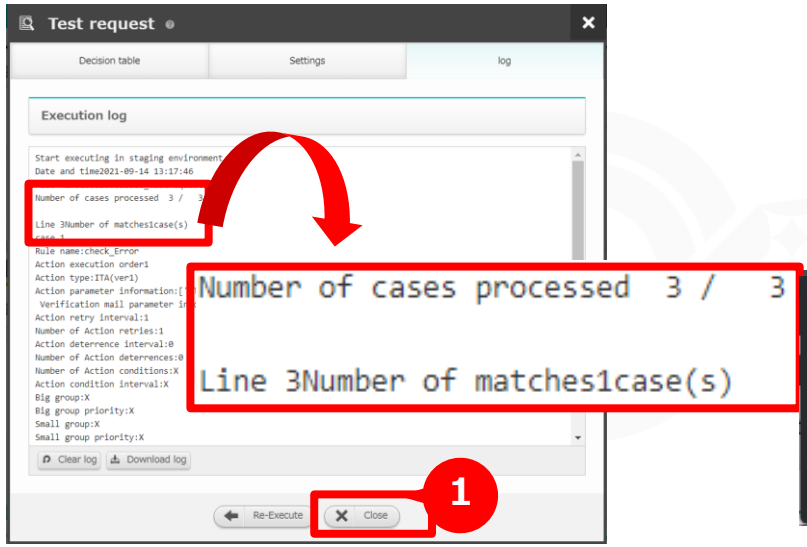


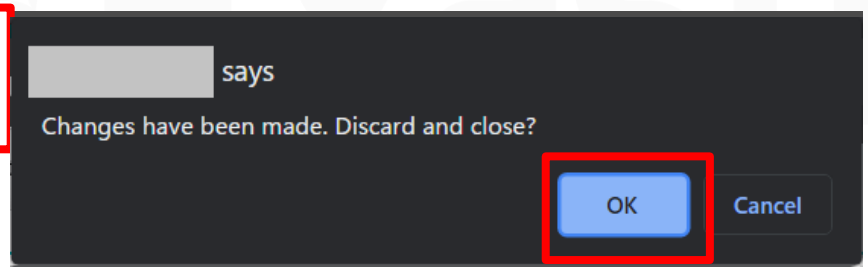


4.2 Register rules (Upload and test request) (5/6)

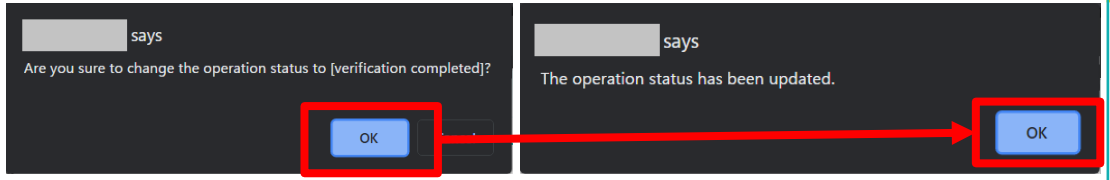
Check that the rule is active

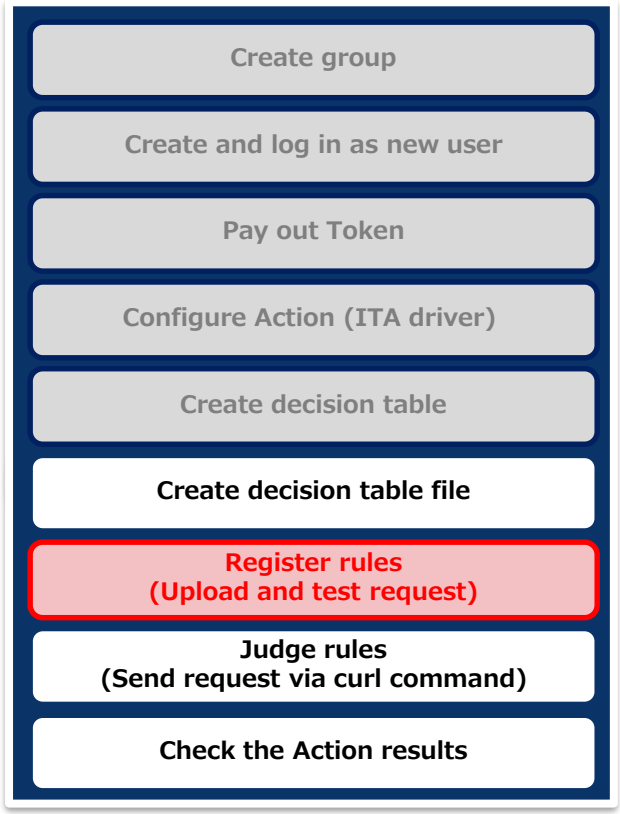
- Check the execution log in the log tab
  - ① Press the “Close” button
  - ② Press “OK” on the browser dialogue box





- If the rule matched
  - ① Press “OK” on the browser dialogue box





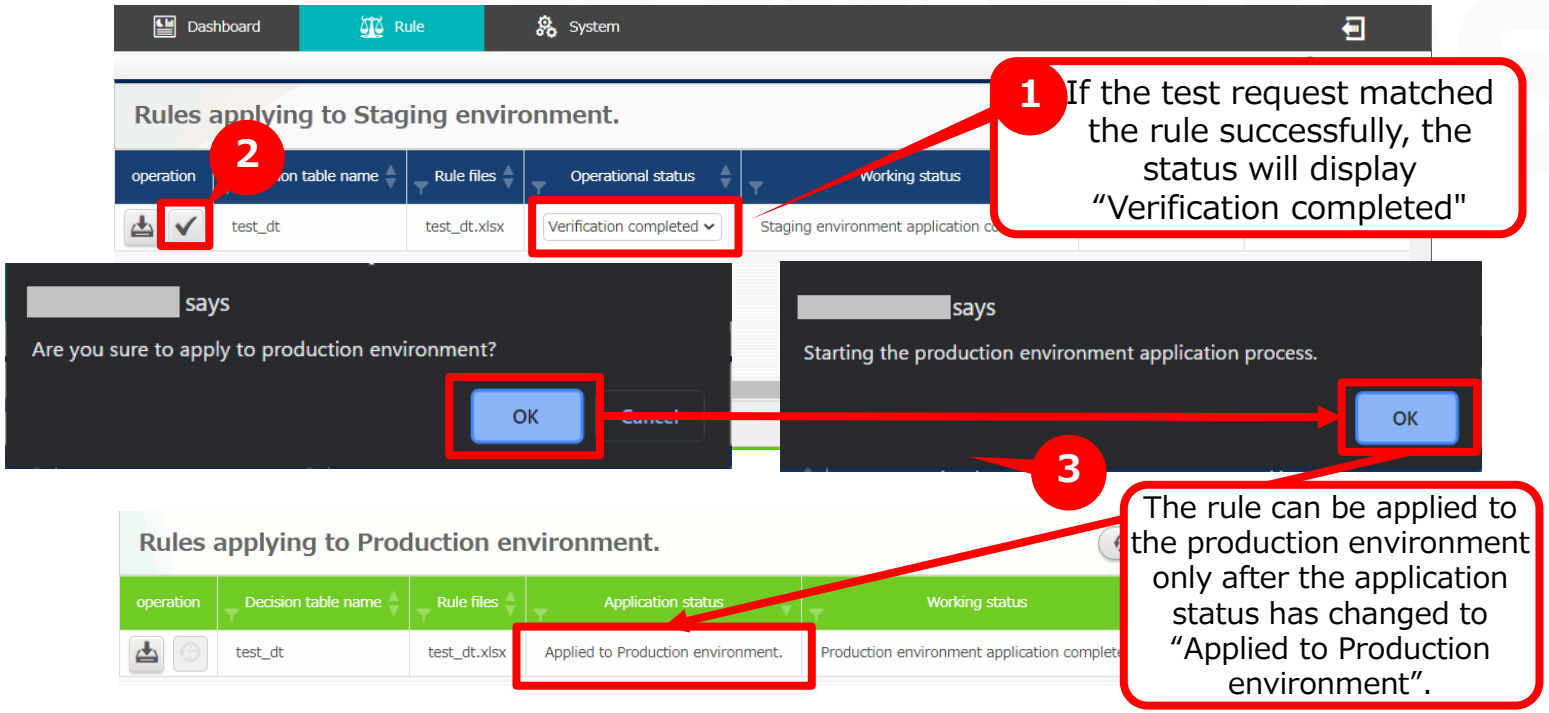
POINT

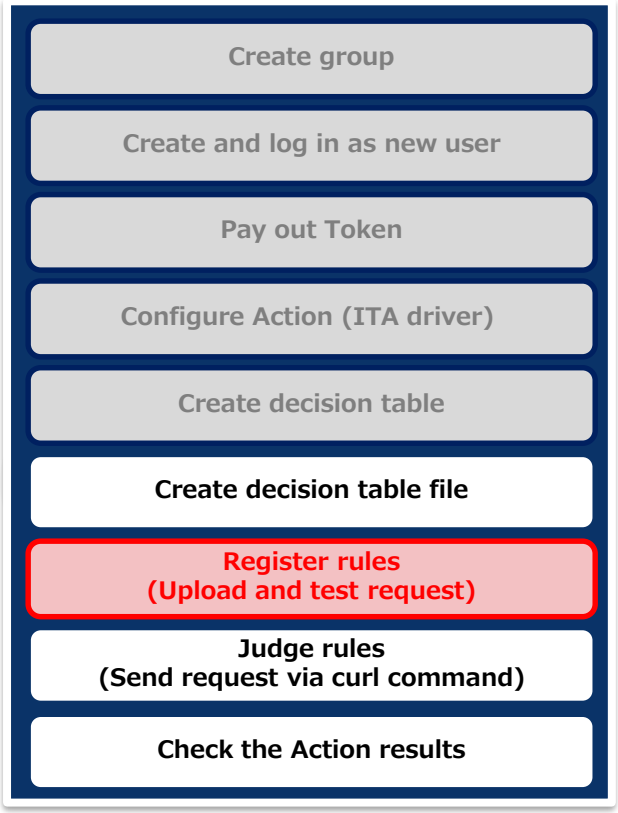
If test matches the rule we created in chapter 4.1, the execution log will display “Line X Number of matches X case(s)”
The decision table will change status to Verification completed when it's rule is hit.

4.2 Register rules (Upload and test request) (6/6)

Make the tested rule valid for production environment

- In order to use the rule in the production environment, we will need to change the status from “Not applied” to “Verification completed”
  - ① Check that the status has changed status to ”Verification completed”
  - ② Press the “Apply” button
  - ③ Press “OK” on the browser dialogue box





POINT

The operation status is automatically updated every 5 seconds. for more information regarding the different statuses, please see <User manual - Rule screen- (2) Rule screen (Production) >

4.3 Judge rules (Send request via curl command) (1/2)

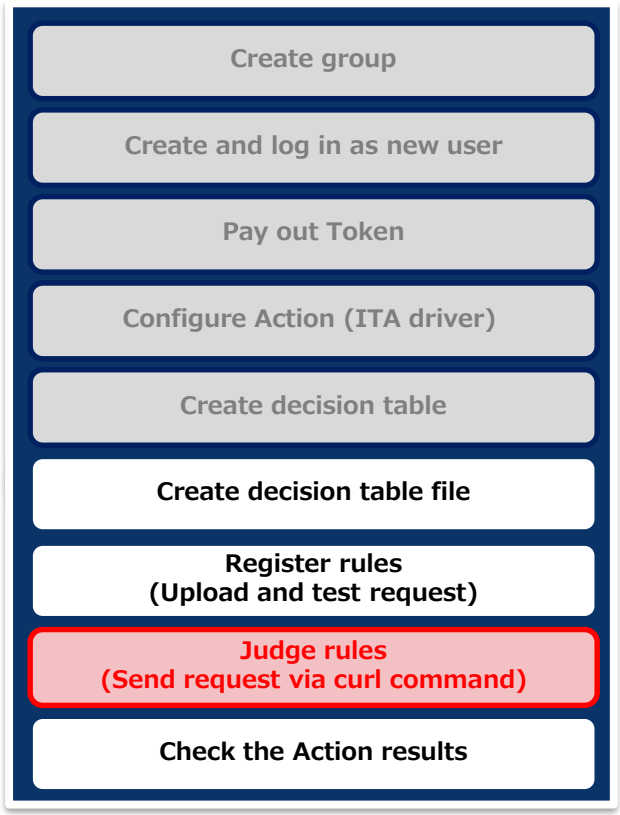
Input a message and match the production applied rule xx

- Open the terminal and change the following command to fit your rule and run it.

※See "A. Appendix Sample 1" for a more detailed example of the curl command.

```
curl -X POST -k "https://<①Host name>/oase_web/event/event/eventsrequest“ ¥
     -H "accept: application/json“ ¥
     -H "Authorization: Bearer <⑥Token>“ ¥
     -d ‘{"decisiontable":"<②Decision table name>","request type":"<③Request type>","eventdatetime":"<④Event start date>","eventinfo":["<⑤Event information>"]}’
```

① **Host name**	Input a valid host name or IP address
② **Decision table name**	Input a decision table applied to the production environment
③ **Request type**	Input the request destination type, "1“ E.g) "requesttype":"1"
④ **Event start date**	Input the event start date in the following format: yyyy/mm/dd hh:mm:ss E.g.) "eventdatetime":"2020/01/01 01:01:01"
⑤ **Event information**	Specify the event information in a list format. E.g.) "2","AAA"
⑥ **Token**	Input the token created at the "Pay out Token" screen



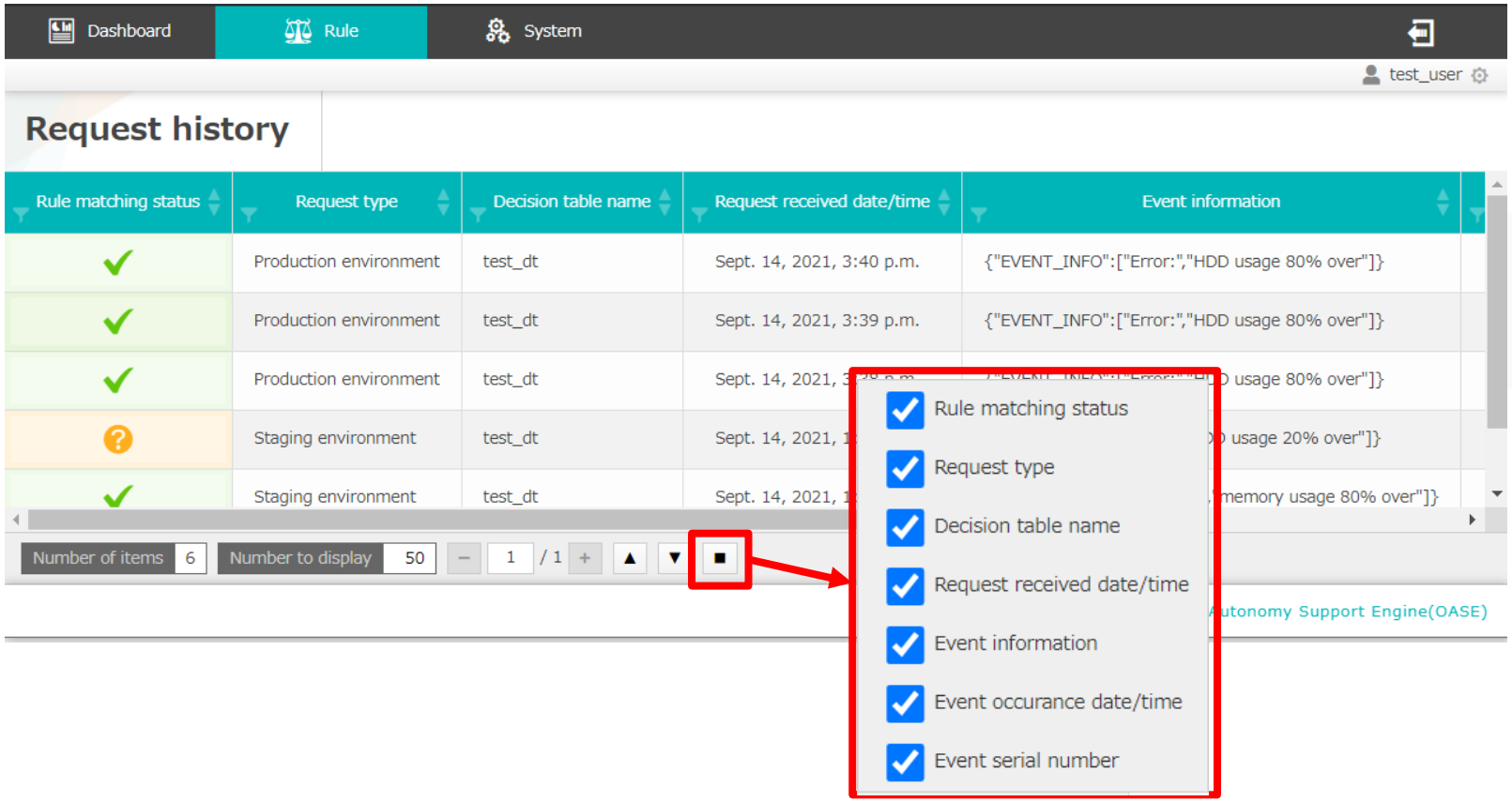
POINT

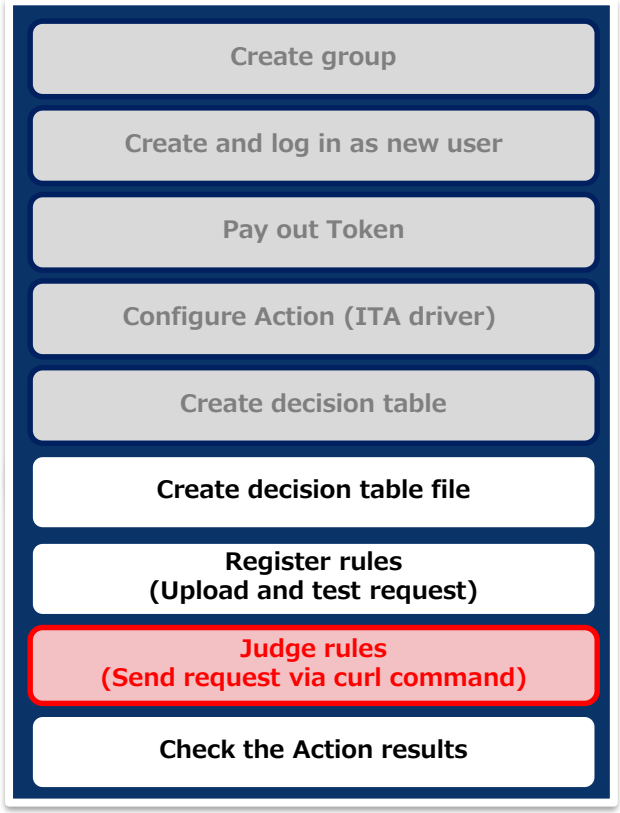
For more information regarding HTTPS requests, please see the <REST API Function User manual>

4.3 Judge rules (Send request via curl command) (2/2)

Check the Request history screen

- The request sent using the curl command should be displayed
- You can choose what items to display by pressing the ■ button.





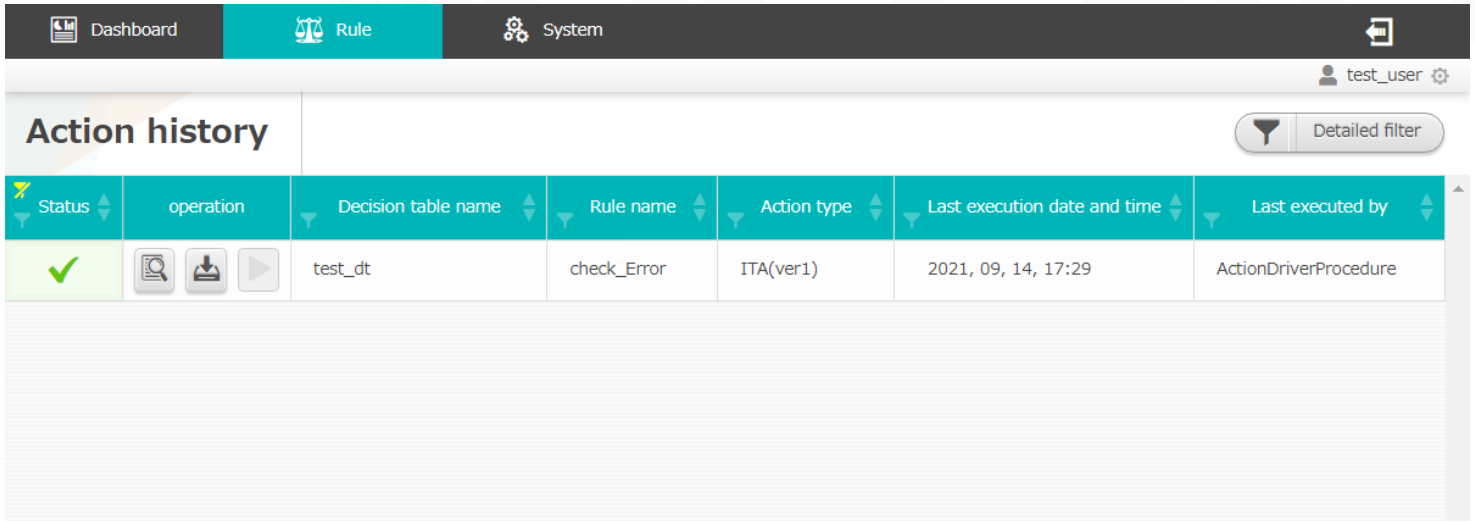
4.4 Check the Action results (1/3)

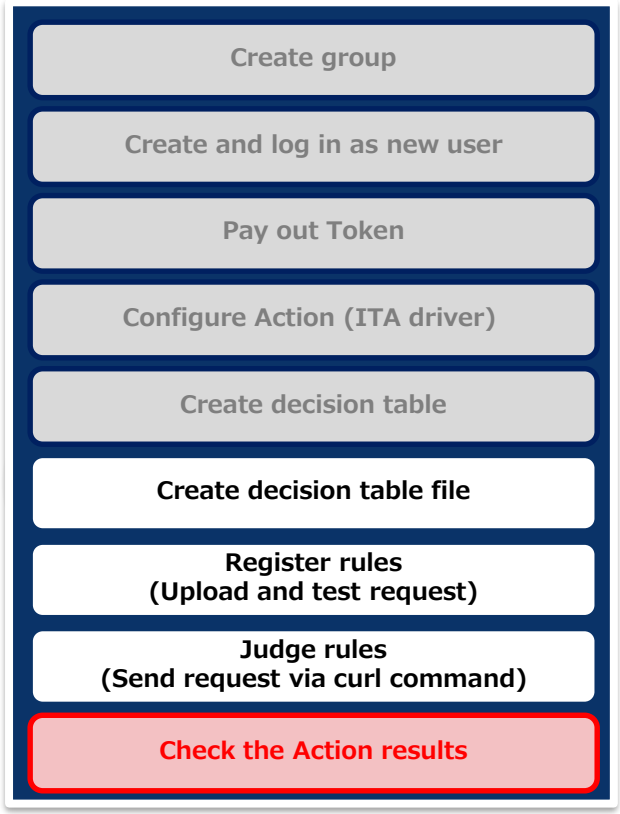
Run action

- If the rule matches, the action will be executed just as we set it to do in the preparation section. You can check the action in the Action history settings screen.
- The action is the results of the contents we configured in the action part in chapter 4.1 Create decision table file

Action History

- Check that the action executed by the rule matching is being correctly displayed in the action history screen.





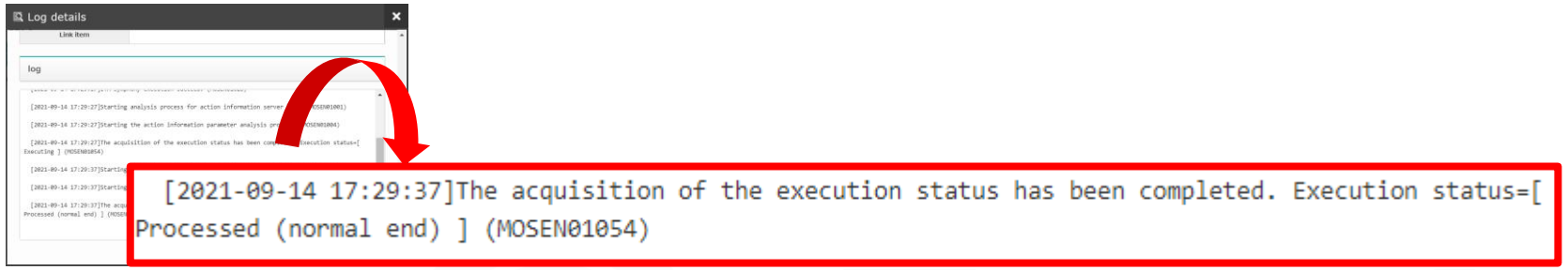
POINT

For more information regarding the different icons and buttons, please see <User manual -Action history->

4.4 Check the Action results (2/3)

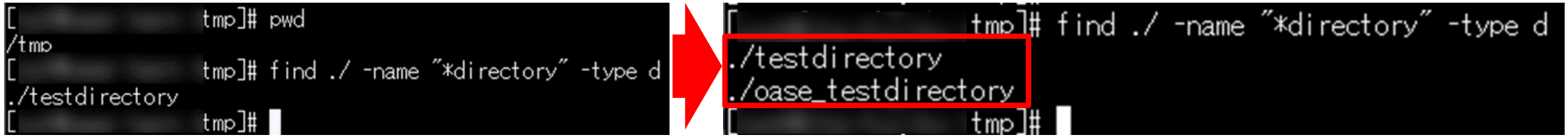
Check ITA has run the process

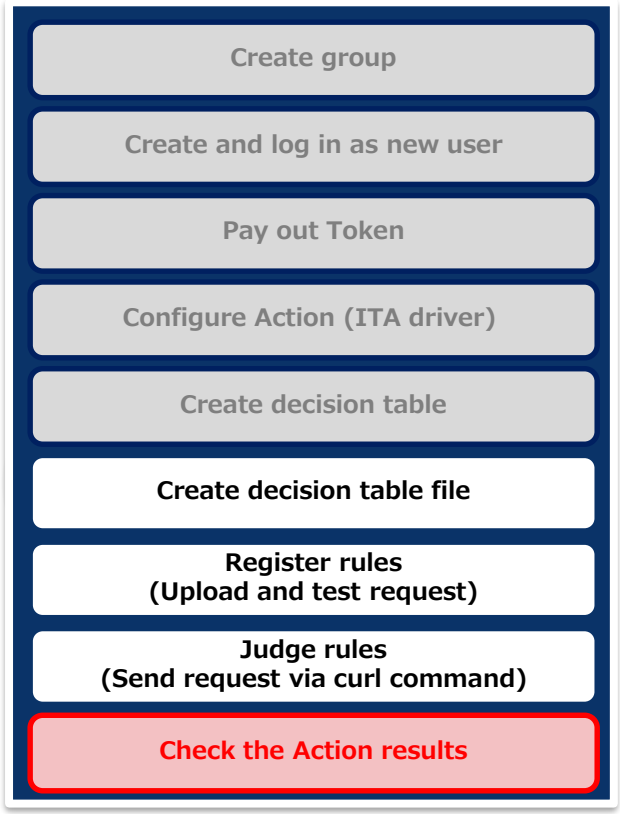
- Check the OASE log that the process has ended correctly



- Go to the ITA Symphony list and check that the status is displaying “Normal end”

- Check that a new directory has been created according to the previously set contents

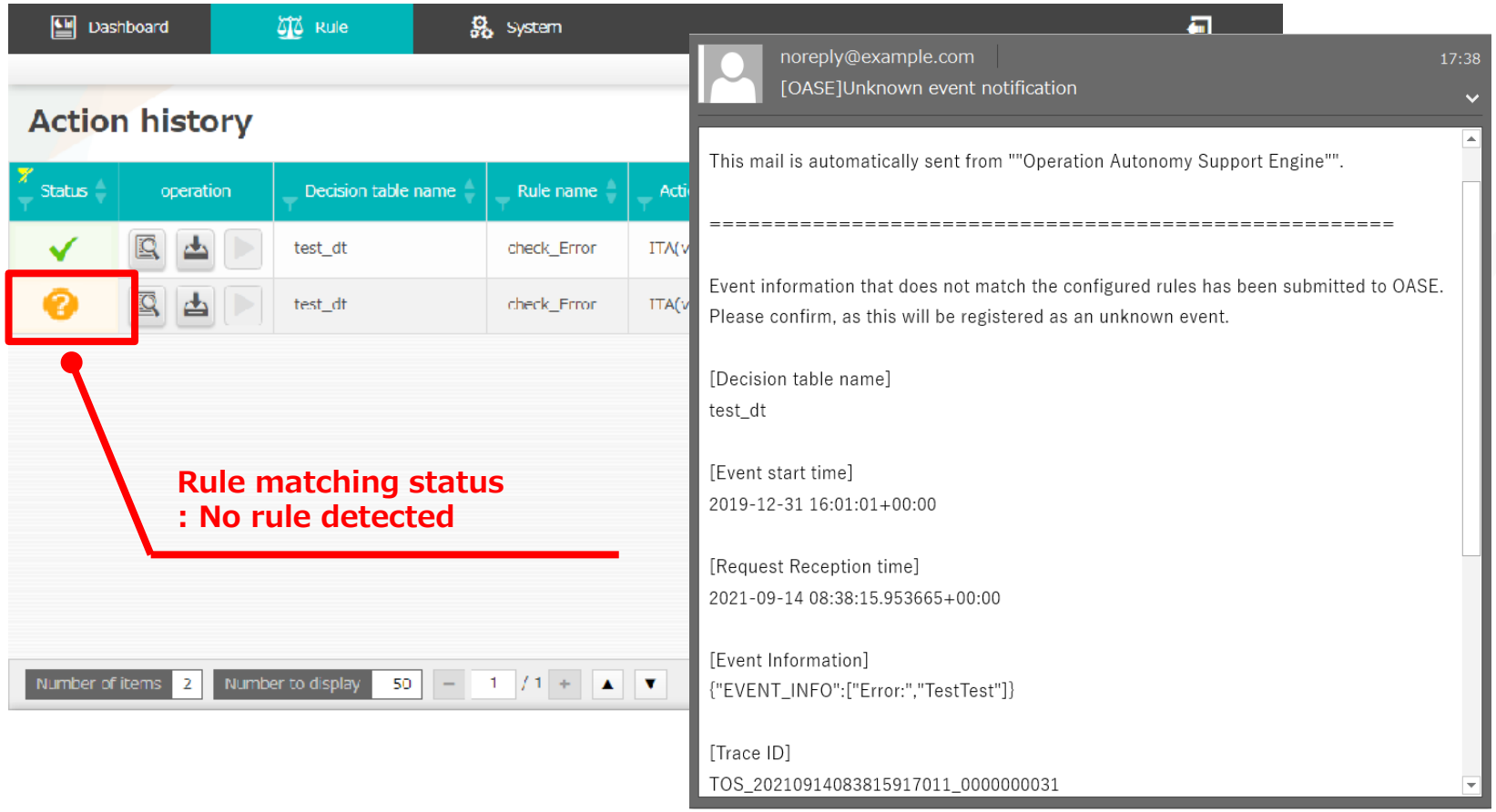


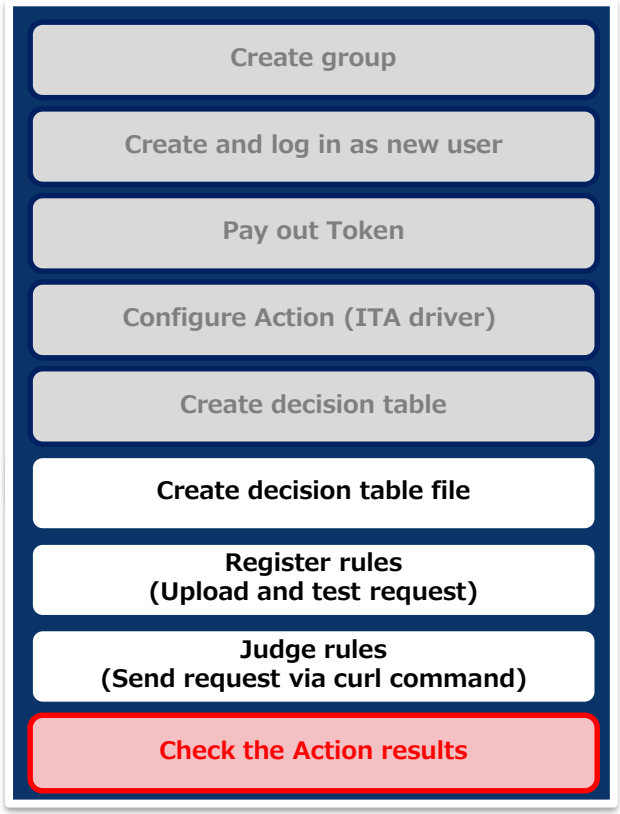


4.4 Check the Action results (3/3)

For Unknown events

- If a request with contents not defined as a known event is sent, a mail with the subject "OASE Unknown event notification" will be sent.





A Appendix

Sample 1 (1/4)

Input sample values and run OASE

- The following settings will make it so if a message containing either "Error:" or "HDD", ITA will start and create a directory called "oase_testdirectory"
- If a message that is not a known event (contains message: and "SKIP", A mail with the subject "[OASE]Uknown event notification" will be sent.

【Configuration】

① "Pay out Token" screen

- **Create token that will be used when sending request through curl command.**

Token name	practice_token

(Register other necessary info.)

② "Action settings" screen

- **Prepare "ITA Driver ver1"**

name	test_ita
Version	1.7.1

(Register other necessary info.)

③ "Decision table" screen

- **Create the decision table file containing conditions the "Alert level" and "Target" will hit.**

Decision table name	test_dt
Permission settings (test_group)	“Can update” for all"

Condition name	Conditional expression
Alert level	Matches the regular expression
target	Matches the regular expression

Unknown event notification	Notify by mail

(Register other necessary info.)

POINT

Used in the following chapters:
<3.3 Pay out Token>
< 3.4 Configure Action (ITA driver) >
and
<3.5 Create decision table>

Sample 1 (2/4)

【Operation】

④ "Decision table" file

- **Save the decision table file and rename it**

File name	test_dt.xlsx

- **Create a rule that matches with: "Alert level : ”Error:”" "Target : ”HDD”"**

Rule description	Alert level	Target	Rule name	Action type	Action parameter information
Rule 1	**^.*Error.*$**	**^.*HDD.*$**	check_Error	ITA (ver1)	ITA_NAME=test_ita,SYMPHONY_CLASS_ID=1,OPERATION_ID=1
Rule 2	**^.*Warning.*$**	**^.*memory.*$**	check_Warning	blank	X
Rule 3	**^.*info.*$**	**^.*%.*$**	check_Info	blank	X

(Use the "Example" sheet in the Decision table file as a reference and fill in the rest of the items)

⑤ "Rule (Stage application rule) " Screen

- **Upload the edited decision table file**

Select file	test_dt.xlsx

POINT

Used in the following chapters:
<4.1 Create decision table file > and
<4.2 Register rules (Upload and test request) >

Sample 1 (3/4)

⑥Test request screen

- **Test what rule that gets matched if there are multiple requests sent to the decision table file.**

Select decision table name	test_dt

Bulk test request			
Request name	**Event start date**	**Alert level**	**Target**
For rule 1	2019-5-17 1:20:30	Error:	HDD usage 80% over
For rule 2	2019-5-17 1:20:30	Warning:	memory usage 80% over
For rule 3	2019-5-17 1:20:30	[info]	HDD usage 20% over

Select file	id000000000xx_testrequest.xlsx

POINT

Used in this chapter: <4.2 Register rules (Upload and test request) >

Sample 1 (4/4)

⑦Terminal (Linux server)

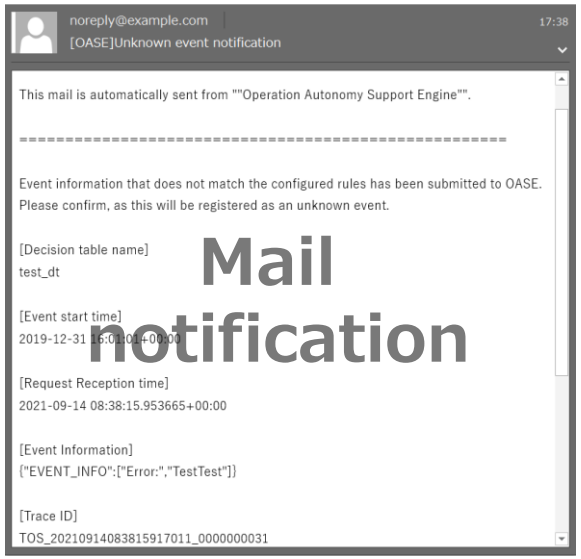
- **Use a curl command to send a request to the rule we created.** **※Change red text to fit your rule**

```
curl -X POST -k "https://<Hostname>/oase_web/event/event/eventsrequest" -H "accept: application/json“ ¥
      -d ‘{"decisiontable":"test_dt","requesttype":"1","eventdatetime":"2020/01/01
01:01:01","eventinfo":["Error:","HDD usage 80% over"]}‘ -H "Authorization: Bearer <Access_Token>"
```

⑧Unknown event notification

Check that you've received a mail with the following contents

Subject	[OASE]Unknown event notification
Main body	[Decision table name] [Event start time] [Request reception time] [Event Information] [Trace ID]



POINT

Used in the following chapters:
<4.3 Judge rules (Send request via curl command) >
and
< 4.4 Check the Action results>


Exastro