

IT Automation

Host group management
Menu creation
[Practice]

XIn this document, "Exastro IT Automation" is described as "ITA".

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1. Introduction

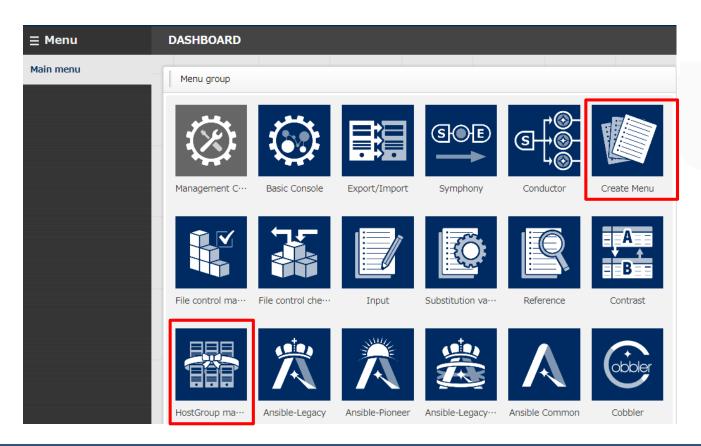


1.1 About this document

About this document

This document will guide users through a practice scenario where users will be able to get some hands on experience to get a deeper understanding about the following functions. We will use Ansible Legacy to execute the operations.

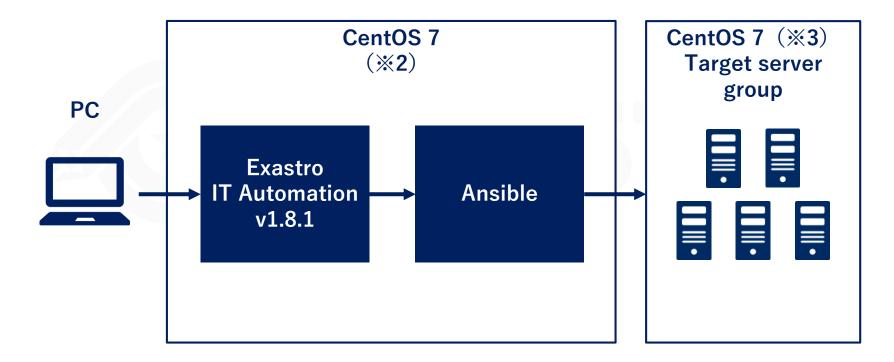
- Host group Management
- Create menu



1.2 Work Environment

Work environment

- The work environment used in this document is as follows.
- Please prepare 5 servers in addition to the ITA Host server.(※1)



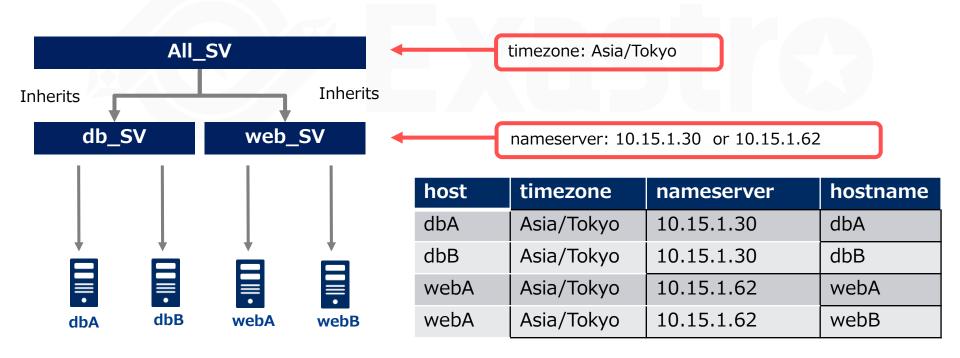
- ※1 While we recommend that you prepare 5 servers in order to get the best experience, it is possible to complete this scenario with 3~4 servers.
- ※2 ITA can be installed on OS RHEL7 and RHEL8.
- *3 Any OS compatible with Ansible can be used.

1.3 Scenario (1/2)

Scenario 1. Set basic settings for the whole server

Use the host group and menu creation functions to execute the tasks below.

- ① Set a common time zone for the parent host group "All_SV".
- ② Set different IP address of DNS server for child host group "db_SV" and "web_SV".
- 3 Set individual host name for each host.



1.3 Scenario (2/2)

Scenario 2 - Execute only on the additional server

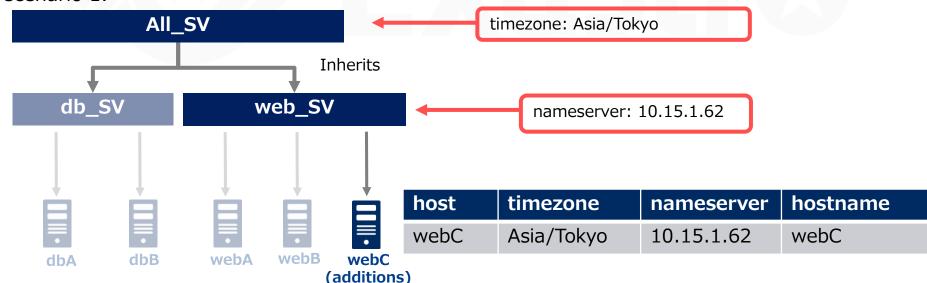
This scenario assumes that the operation done in the previous section is completed. If the playbook is idempotent,

1)Add the additional server to host group.2)Execute the same operation settings completed.

However, there are some playbooks are not idempotent such as those that add to the file. If this is applied repeatedly to the same host, excess Post Scripts and other troubles might occur.

Taking that into consideration, all operation in scenario 2 will take place on the additional servers.

The contents of the Conductor that is going to get executed are the same as the ones in scenario 1.

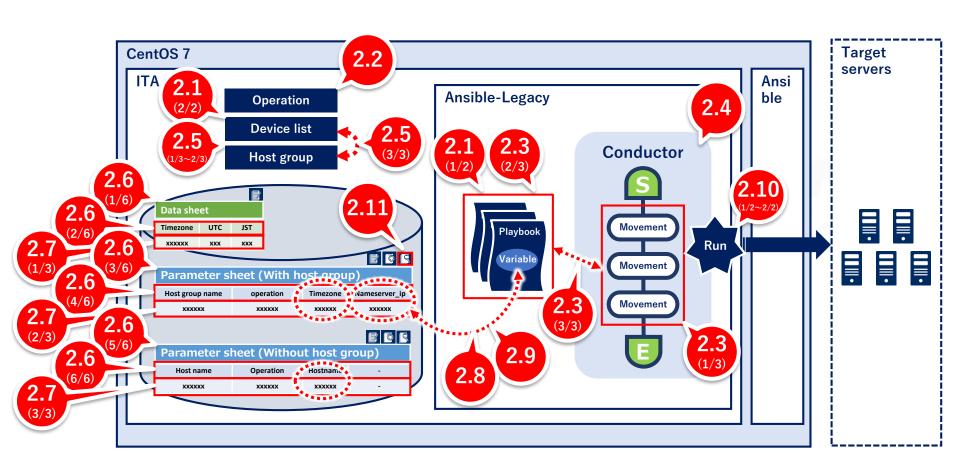


2. Practice Scenario 1



Scenario 1 - Overview

The diagram below displays Scenario 1's procedure.



2.1 Preparation (1/2)

Playbook creation

This scenario will use the following three playbooks. Please create a file with the following contents. [Attention] Create the yml file with Character code " UTF-8", New line code "LF".

```
- name: Set Timezone timezone:
```

name: "{{ VAR_locale_timezone }}"

```
- name: Set Hostname
hostname:
name: "{{ VAR_hostname }}"
```

- name: Add Nameserver shell: 'echo nameserver {{ VAR_nameserver_ip }} >> /etc/resolv.conf'

File name: 1-set_timezone.yml Changes the time zone to the specified

value.

In this scenario, all host's common value will be substituted.

File name: 2-set hostname.yml Changes the hosts name. In this scenario, value will be

substituted per host.

File name: 3-set nameserver.yml
Adds postscript to /etc/resolv.conf.
As it isn't idempotent, it will be only be executed to each host once.

2.1 Preparation(2/2)

Target host registration

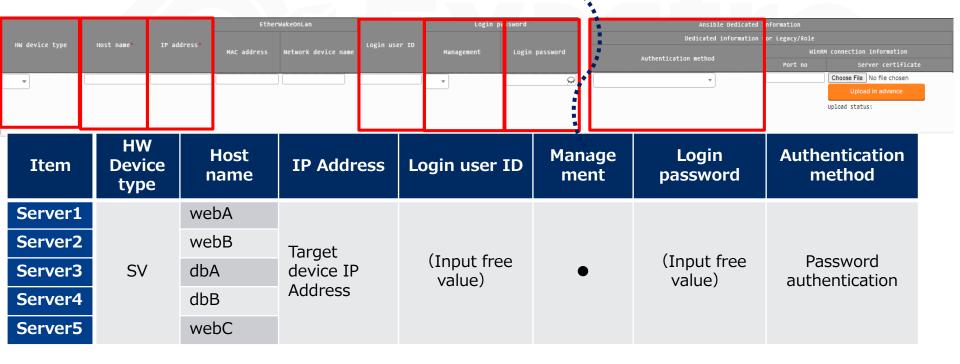
Register host to execute the work in ITA.

This time, we will register 5 servers.

* webC is used in scenario 2.

Menu: Basic Console > Device list

- Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



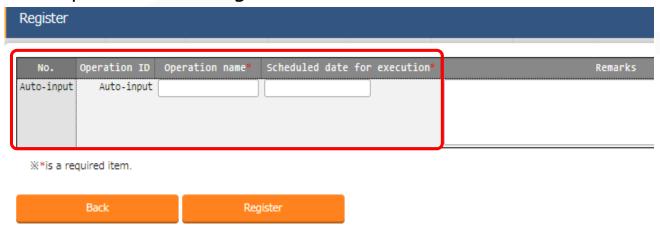
2.2 Operation registration

Register new operation

Create operation

Menu : Basic Console > Operation list

- ① Click Register > Start Registration.
- 2 Input the following information for each item and click "Register".



Operation name	Scheduled date for execution
Basic settings all	(Enter free value)

* "Scheduled date for execution" is just an item for management. It will not be executed automatically.

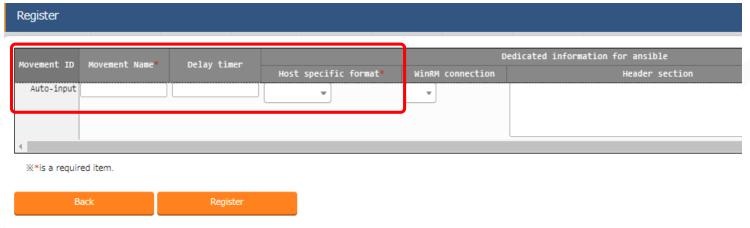
2.3 Movement configuration (1/3)

Create Movement

Register the Movements that is going to be associated with the playbooks.

Menu: Ansible-Legacy > Movement list

- ① Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



Movement name	Host specification format
Set Timezone	IP
Set Hostname	IP
Add Nameserver	IP

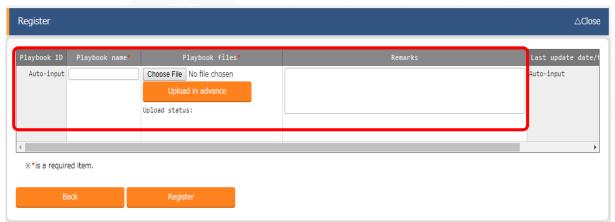
2.3 Movement configuration (2/3)

Register playbook

Register the created playbook in ITA.

Menu : Ansible-Legacy > playbook files

- ① Click Register > Start Registration.
- ② Select a playbook from "Browser" and click "Upload in advance".
- ③ Input the following information for each item and click "Register".



Playbook file name	Playbook file
set_timezone	1-set_timezone.yml
add_nameserver	2set_nameserver.yml
set_hostname	3-set_hostname.yml

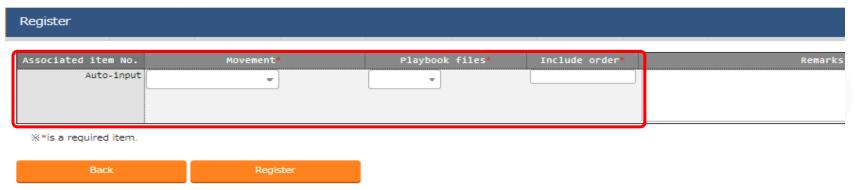
2.3 Movement configuration (3/3)

Register the playbook to Movement.

Link the created Movement and Playbook files.

Menu : Ansible-Legacy > Movement details

- Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



Related table

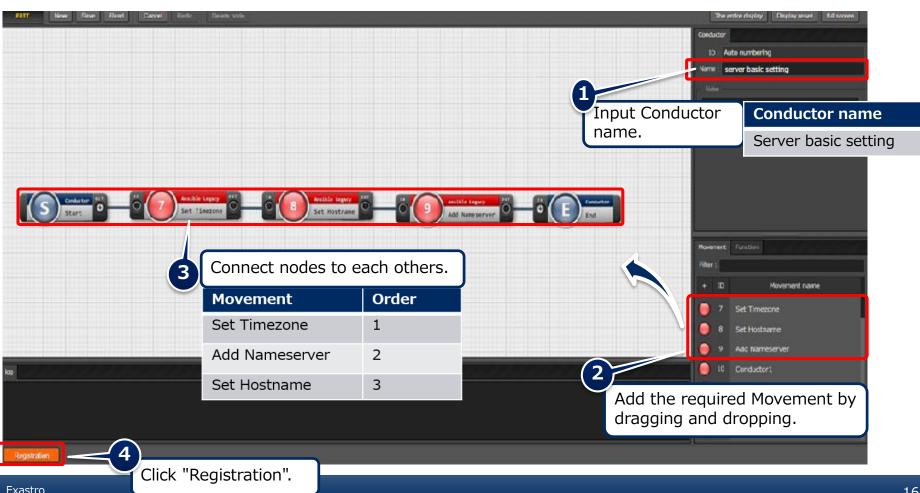
Movement	Playbook file	Include order
Set Timezone	set_timezone	1
Add Nameserver	add_nameserver	1
Set Hostname	set_hostname	1

2.4 Conductor creation

Create Conductor

Create a Conductor that collects the defined Movements.

Menu: Conductor > Conductor class edit



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2.5 Host group setting (1/4)

Define host groups

First, create the host groups to which the host belongs.

Menu: Host group management > Host group management

- ① Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



%*is a required item.



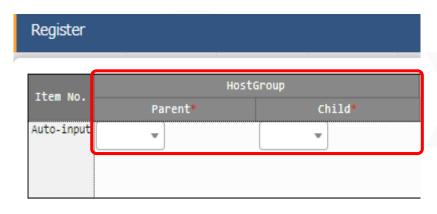
Host group name	Priority order
All_SV	1
web_SV	2
db_SV	3

2.5 Host group setting (2/4)

Define the parent-child relationship of host groupsDefine the parent-child relationship in host groups.

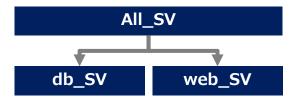
Menu: Host group management > Host group parent-child link list

- ① Click Register > Start Registration.
- ② Select the following information for each item and click "Register".



Host group parent	Host group child
All_SV	web_SV
All_SV	db_SV





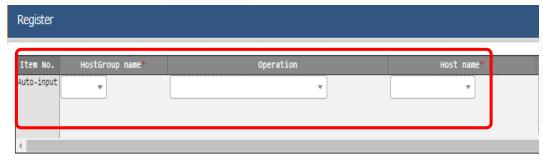
2.5 Host group setting (3/4)

Register the host to host group

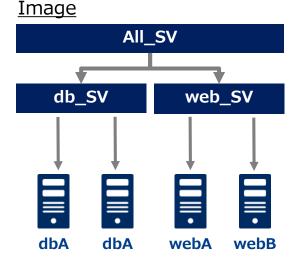
Link the target host with the created host group.

Menu: Host group management > Host link list

- ① Click Register > Start Registration.
- ② Select the following information for each item and click "Register".



Host group name	Operation	Host name
web_SV	Basic settings all	webA
web_SV	Basic settings all	webB
db_SV	Basic settings all	dbA
db_SV	Basic settings all	dbB



2.6 Menu list(1/6)

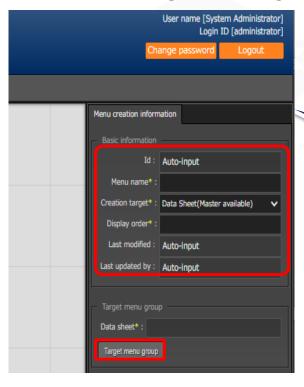
Create data sheet

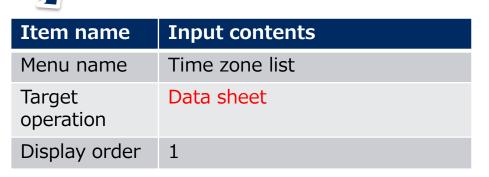
Create data sheet.

The value registered here will later be selectable from a pull-down menu.

Menu : Create menu > Create/Define menu

- 1 Input the following information for each item.
- ② Click "Target menu group" and then select "Input".





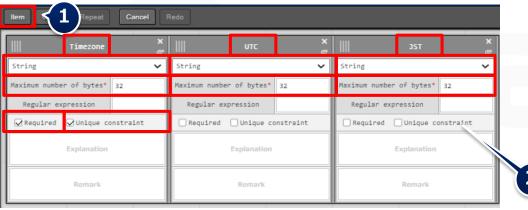
2.6 Menu list(2/6)

Define the item name of the data sheet

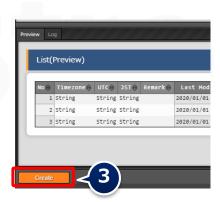
Continuing from the previous section, define the items on the sheet.

Menu : Create menu > Create/Define menu

- Click "Item" and add a new item.
- ② Input the following for each of the items.
- 3 Click "Create" at the bottom of the screen.



Item name	Input method	Maximum no. of bytes	Required	Unique constraint
Timezone	string	32	V	V
UTC	string	32	-	-
JST	String	32	-	-



2.6 Menu list(3/6)

Create the menu for the host group

Create a parameter sheet for the host group and manage the parameters that apply to your host group.

Menu : Create menu > Create/Define menu

1 "Basic information" Input the following information for each item.

2 Leave the Target Menu group as it is with its default values. (Input, Substitution

value and Reference)

	Login ID [administrator]
	Change password Logout
Menu creatio	n information
Basic infor	
	Id : Auto-input
Menu	name* : Parameter for server
Creation	target : Parameter Sheet(Host/Operatio
Display	order* : 1
	Create as hostgroup menu : 🗸 Yes
•	reate as vertical menu 🕝 : 📉 165
Last mo	dified:: Auto-input
Last update	ed by : : Auto-input
Target me	
	Input* : Input
Substitutio	n value* : Substitution value
Ret	erence* : Reference
Target mer	nu group

Item name	Input content
Manu name	Parameter for server
Creation target	Parameter sheet (Host/Operation)
Display order	1
Create as Hostgroup menu	✓

2.6 Menu list(4/6)

Define the item name of the parameters sheet

Continuing from the previous section, define the items on the sheet.

Menu : Create menu > Create/Define menu

- Click "Item" and add a new item.
- ② Input the following for each of the items.





Item name	Input method	Select item	Reference item
Timezone	Pulldown selection	Basic server settings: Timezone list: Parameter/Timezone	UTC,JST

Item name	Input method	Maximum no. of bytes
Nameserver	String	32

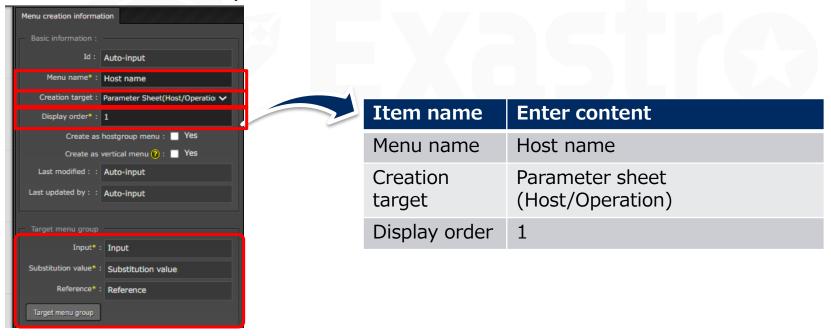
2.6 Menu list(5/6)

Create menu without host group

Create a parameter sheet for the host group and manage the parameters that apply to your host group.

Menu : Create menu > Create/Define menu

- 1 "Basic information" Input the following information for each item.
- 2 Leave the Target Menu group as it is with its default values. (Input, Substitution value and Reference)

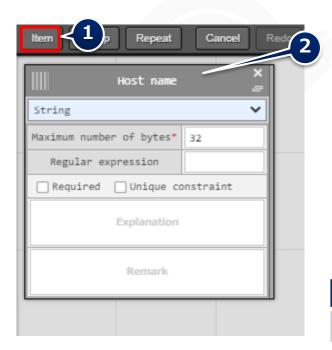


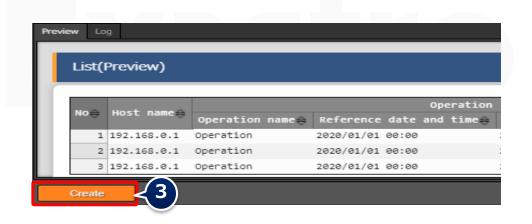
2.6 Menu list(6/6)

Define the item name of the parameters sheet

Continuing from the previous section, define the items on the sheet.

- Click "Item" and add a new item.
- 2 Input the following for each of the items.
- 3 Click "Create" at the bottom of the screen.





Item name	Input method	Maximum number of bytes
Hostname	String	32

2.7 Data registration(1/3)

Register data to the data sheet.

The Data and Parameter sheet are now created. Move to the created menu and input the data.

Menu: Input> Time zone list

- Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



Timezone	UTC	JST
Asia/Tokyo	+9	0
America/New_York	-4	-13

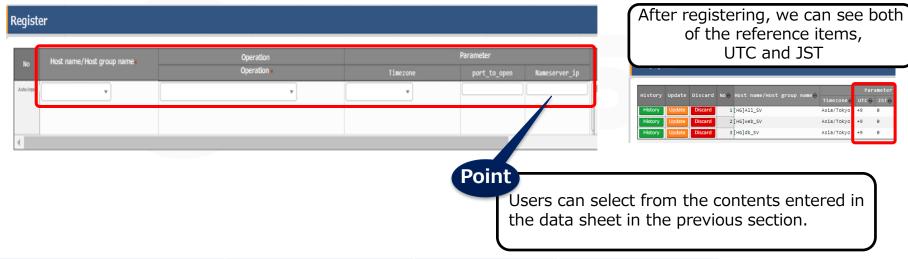
2.7 Data registration(2/3)

Register data to the parameter sheet

Move to the created menu and input the data.

Menu: Input> Parameter for server

- Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



Host name/Host group name	Operation	Timezone	Nameserver
[HG]AII_SV	Basic settings all	Asia/Tokyo	10.15.1.30
[HG]web_SV	Basic settings all	Asia/Tokyo	10.15.1.62
[HG]db_SV	Basic settings all	Asia/Tokyo	10.15.1.30

2.7 Data registration(3/3)

Register data to the parameter sheet

Next, register the data from the menu created in the menu group for the host.

Menu: Input> Host name

- Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



Host name	Operation	Hostname
webA	Basic settings all	webA
webB	Basic settings all	webB
dbA	Basic settings all	dbA
dbB	Basic settings all	dbB

2.8 Substitution Value Automatic Registration setting

Set Substitute Value Automatic Registration settings

Connect the variables to each item after entering the data in the parameter sheet.

Menu: Ansible-Legacy > Substitution value automatic registration setting

- Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



Parameter sheet (from) -Menu group:Menu	Parameter sheet (from) -Item	Registration method	IaC Variable (to) -Movement	IaC variable (to) - Value variable -Variable name
Parameter for server	Timezone	Value type	Set Timezone	VAR_locale_timezone
Parameter for server	Nameserver_ip	Value type	Add Nameserver	VAR_nameserver_ip
Host name	Hostname	Value type	Set Hostname	VAR_hostname

2.9 Check Substitution value · Target host

Check Substitution value and Target host

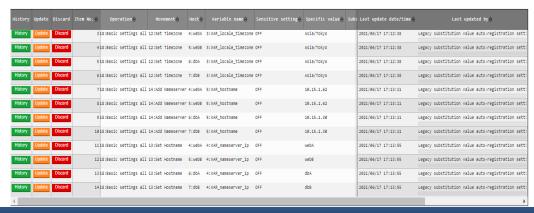
Check the value specified by the substituted value automatic registration and the target host.

Menu: Ansible-Legacy > Target host/Substitution value list

- Click "Filter".
- ② Check that the correct value is specified by "legacy substitution value automatic registration setting procedure".



Target host



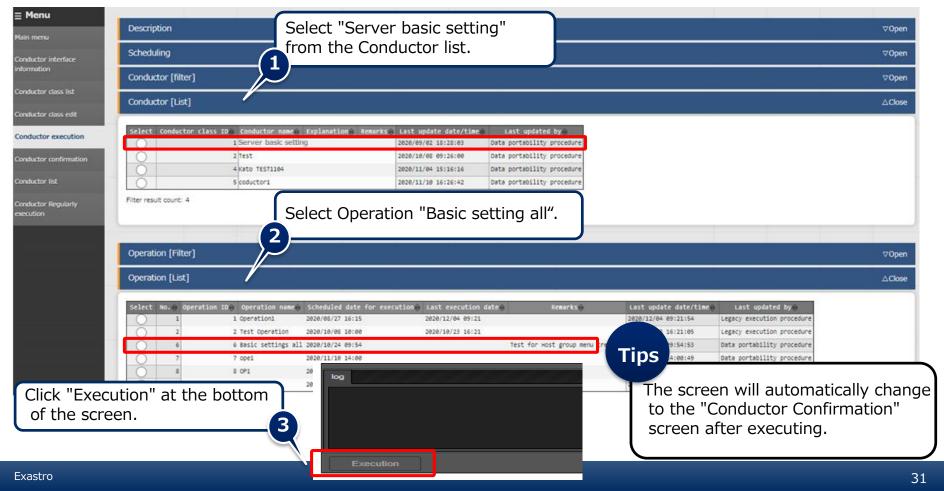
Substitution value list

2.10 Conductor execution(1/2)

Execute Conductor

If you finished the operations in the previous section, the Conductor should be created and the substitute values should be registered. Finally, execute Conductor and check the result on the target host.

Menu: Conductor > Conductor execution



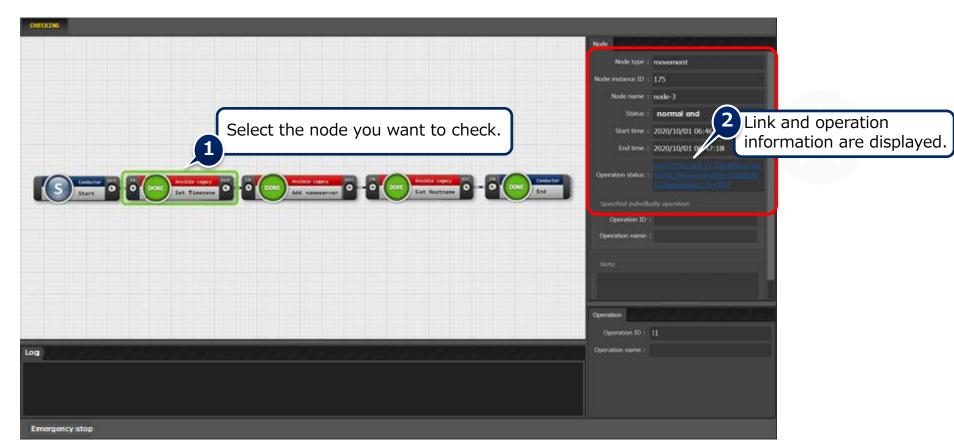
2.10 Conductor execution(2/2)

Check the Conductor Execution results

In the work confirmation screen, you can check the results of the whole execution or execution per node.

Selecting an inputted Movement will show a link to a more detailed result screen.

Menu: Conductor > Conductor confirmation



2.11 Reference parameter sheet confirmation

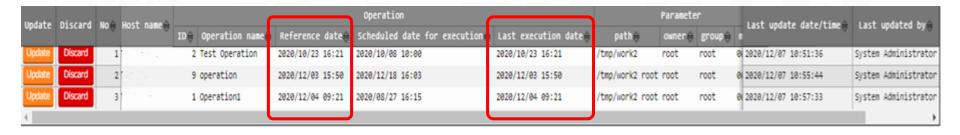
Check contents of the reference parameter sheet

By completing the operation in the previous section, the set parameters have now been applied to the target host.

Finally, check the reference parameter sheet and confirm that the update date and time etc. are recorded.

Menu: Basic server setting(Reference)

- Click "Filter".
- ② Confirm that the "Reference date/time" and "Last update date/time" are updated.

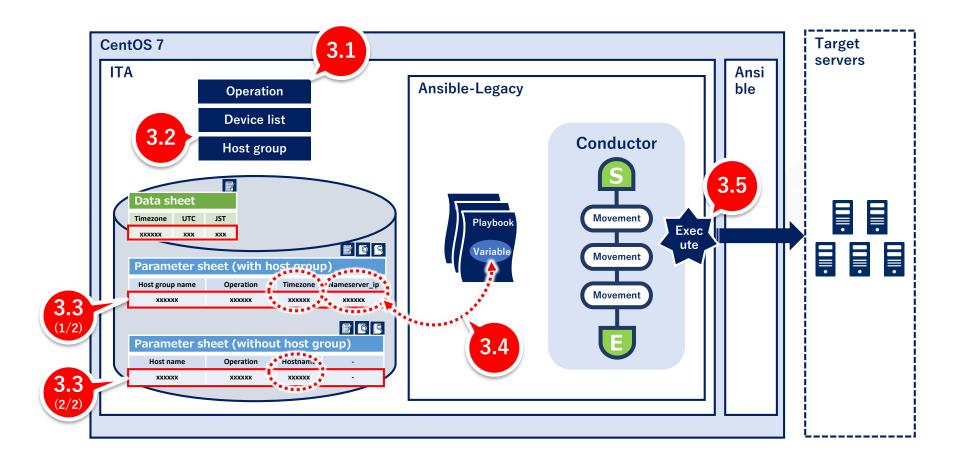


3. Practice Scenario 2



Scenario 2 - Overview

The diagram below displays Scenario 1's procedure.



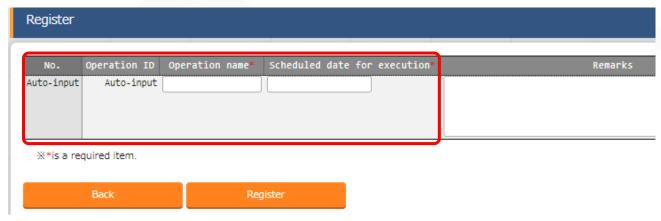
3.1 Operation registration

Register new operation

Create an additional operation.

Menu : Basic Console > Operation list

- ① Click Register > Start Registration.
- ② Input the following information for each item and click "Register".



•	Scheduled date for execution
Basic setting Additional server only	(Enter arbitrary value)

* "Scheduled date for execution" is just an item for management. It will not be executed automatically.

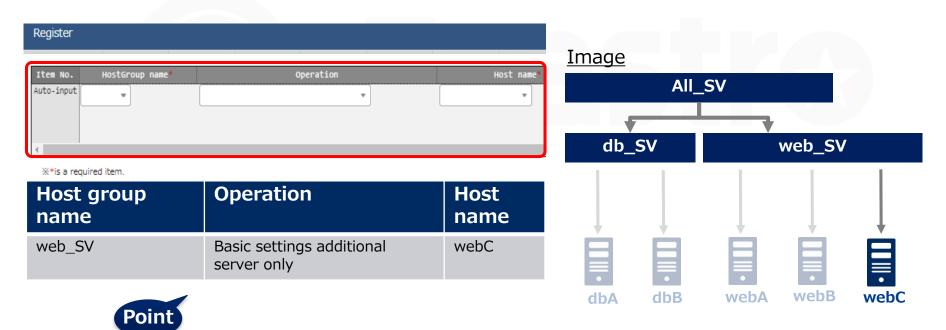
3.2 Add host to host group

Register host to host group

Register additional hosts in the host group.

Menu: Host group management > Host link list

- ① Click "New register "Register > Start Registration.
- ② Select the following information for each item and click "Register".



The host group, "web_SV" is used for "Basic settings all servers", but this time, we are only adding the operation "Basic settings additional server only". That is why when we are executing the operation, only webC will be applicable.

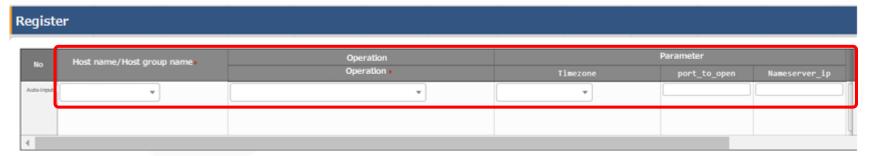
3.3 Data registration(1/2)

Register data in the parameter sheet

Move to the menu created in scenario 1 and input the following data.

Menu: Input>Parameter for server

- Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



Users can select from the contents entered in the data sheet in the previous section.

Host name/Host group name	Operation	Timezone	Nameserver_ip
[HG]web_SV	Basic settings additional server only	Asia/Tokyo	10.15.1.62

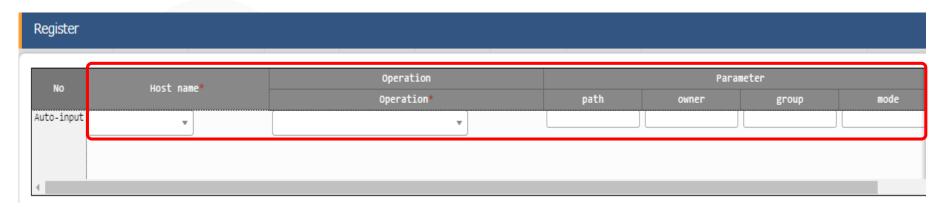
3.3 Data registration(2/2)

Register data in the parameter sheet

Next, register the data from the menu created in the menu group for the host.

Menu: **Input > Host name**

- Click Register > Start Registration.
- ② Select or input the following information for each item and click "Register".



Host name	Operation	Hostname
webC	Basic settings additional server only	webC

3.4 Check Substitution value · Target host

Check Substitution value and Target host

Check the value specified by the substituted value automatic registration and the target host.

Menu: Ansible-Legacy > Target host /Substitution value list

- ① Click "Filter".
- 2 Check that only the data of "webC" is added by the "legacy substitution value automatic registration setting procedure".

Target host



Substitution value list



3.5 Conductor execution

Execute Conductor

Execute Conductor again. Ensure that the work is reflected only on the host "webC".

Menu: Conductor > Conductor execution

