IT Automation

Host group management・Menu creation【Tutorial】

※Exastro IT Automation is written as ITA in this document

Ver. 1.5

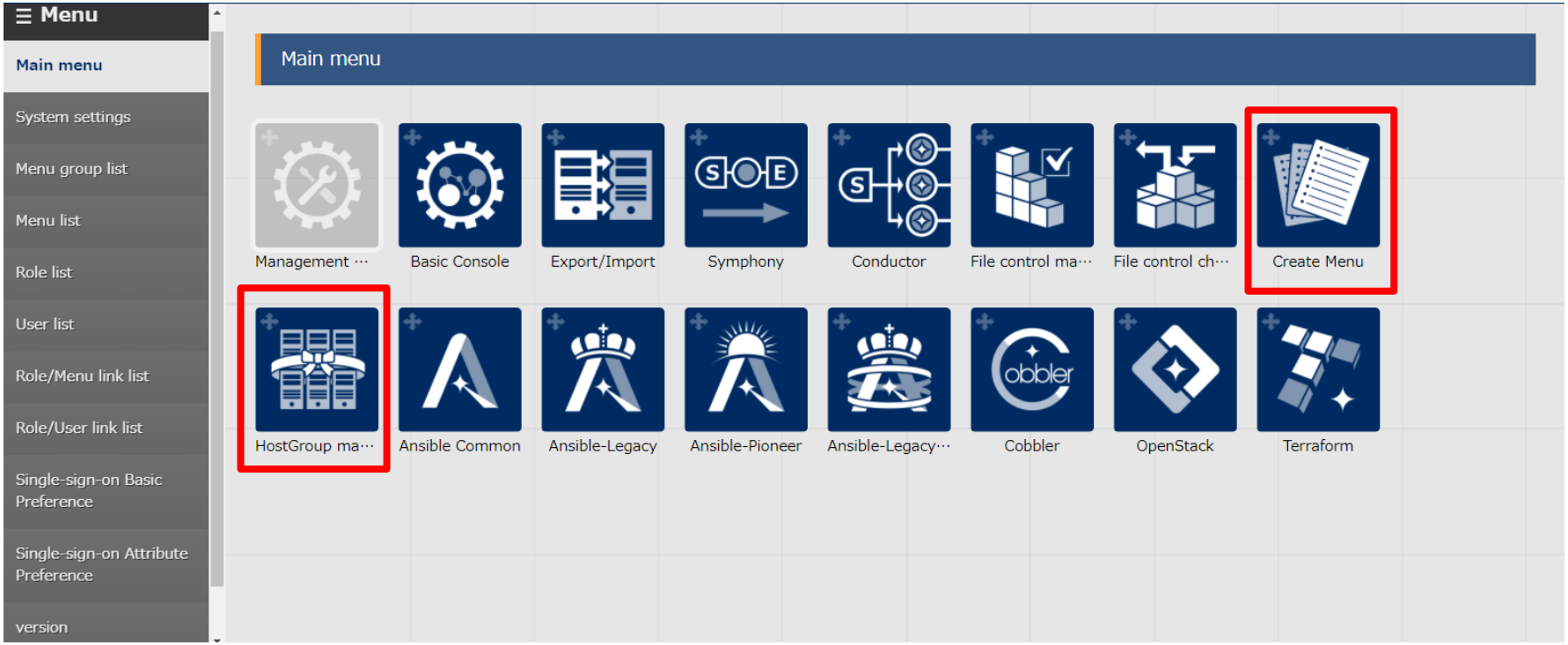
Exastro developer

Table of contents

1. Introduction

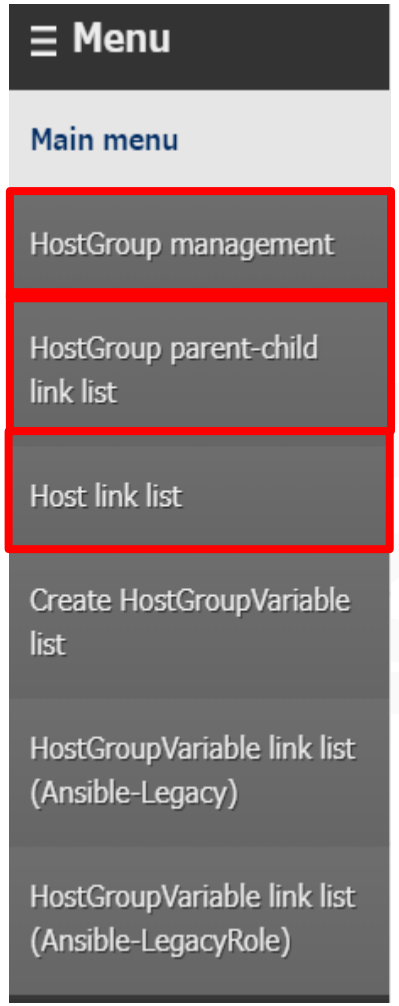
1.1 About this document

- This document describes “ Host menu Management” and “ Menu creation”.
- This document aims to explain the overview of Exastro IT Automation as well as introducing its functions.
- **The practice Document** uses pictures of the ITA screen to explain, so please look at both documents.
- Detailed specifications of each functions are written in their respective user manuals.



2. Host group management

2.1 Menu overview



① ② ③

●Main Menus used in this document

①Registering host groups/ Referencing menus

Update	Discard	Host Group ID	HostGroup name	Priority (larger value is higher)	Remarks	Last update date/time	Last updated by
Update	Discard	1	GroupA	5		2020/10/21 11:34:20	System Administrator
Update	Discard	2	GroupB	10		2020/10/21 11:39:12	System Administrator
Update	Discard	3	GroupC	147		2020/10/21 11:40:55	System Administrator

②Registering parent-child host to host menus

Update	Discard	Item No.	Loop alert	HostGroup		Remarks	Last update date/time	Last updated by
				Parent	Child			
Update	Discard	1		GroupA	GroupB		2020/10/21 11:43:46	System Administrator
Update	Discard	2		GroupA	GroupC		2020/10/21 11:44:17	System Administrator
Update	Discard	3		GroupC	GroupB		2020/10/21 11:46:54	System Administrator

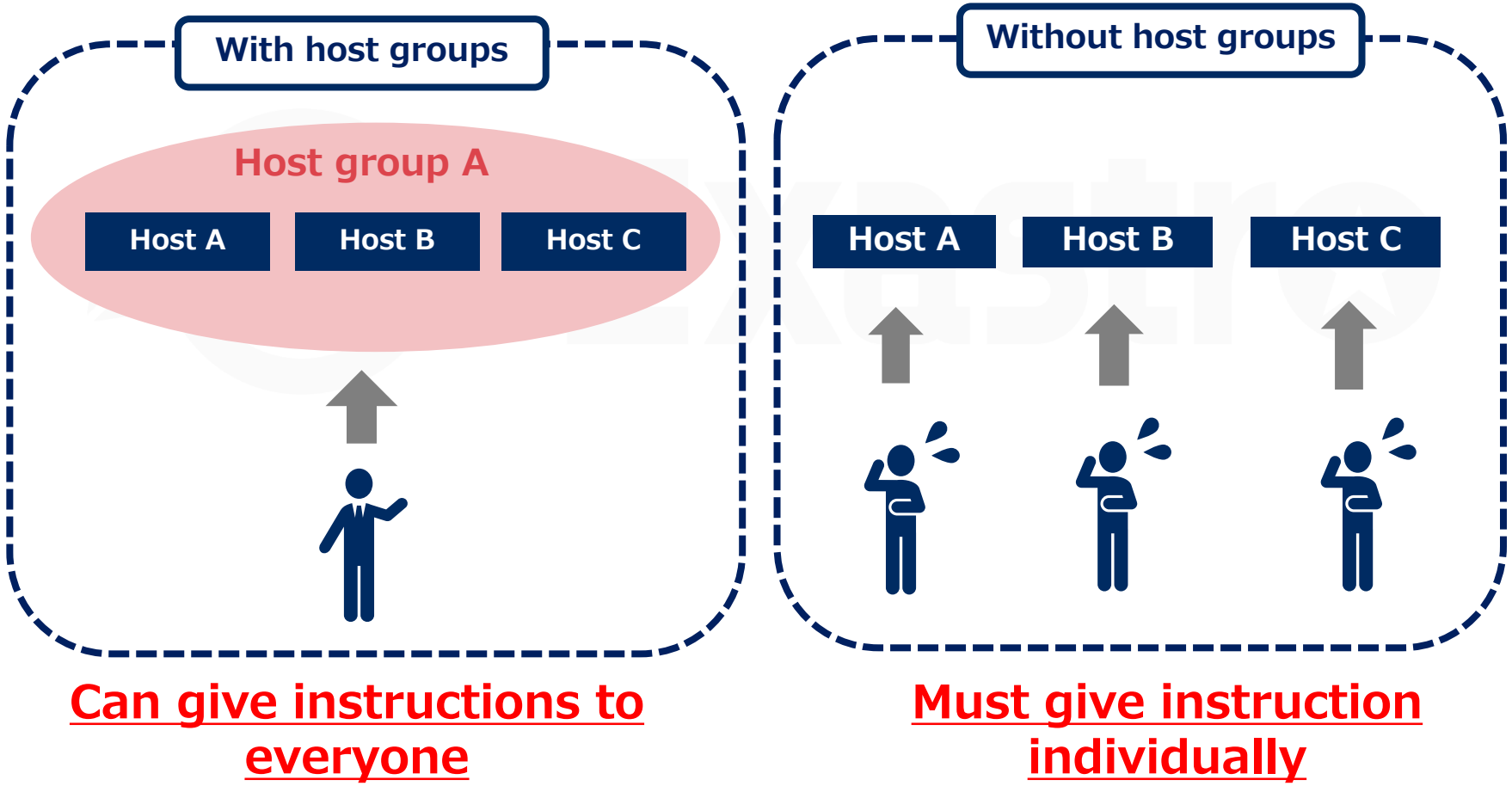
③Menu for registering links between Host, Operations and Groups names.

Update	Discard	Item No.	HostGroup name	Operation	Host name	Remark	Last update date/time	Last updated by
Update	Discard	1	GroupA	2020/08/27 16:15_1:Operation1	Tsai_test		2020/10/21 11:50:49	System Administrator
Update	Discard	2	GroupB	2020/10/08 10:00_2:Test Operation	Tsai_test		2020/10/21 11:55:35	System Administrator
Update	Discard	3	GroupC	2020/10/23 09:28_5:Operationtest	Tsai_test		2020/10/21 11:55:49	System Administrator

※For more information on menus other than ①②③
Please refer to
Exastro-ITA_User_Instruction_Manual_Host_group_Function

2.2 Host group management

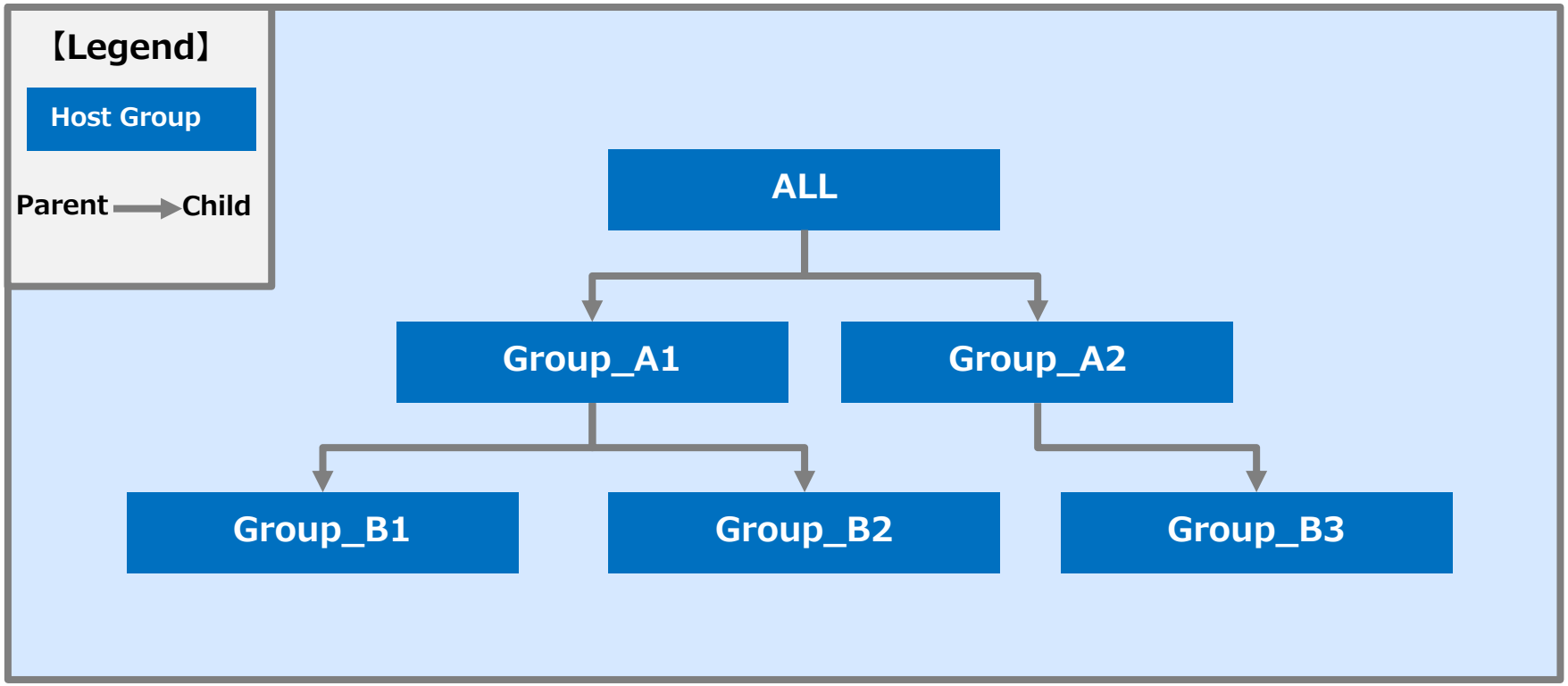
Users can group hosts together and instruct them simultaneously by using the group management function. This function is necessary to manage multiple hosts in a large scale system.



2.3 Host groups Parent-Child relationship

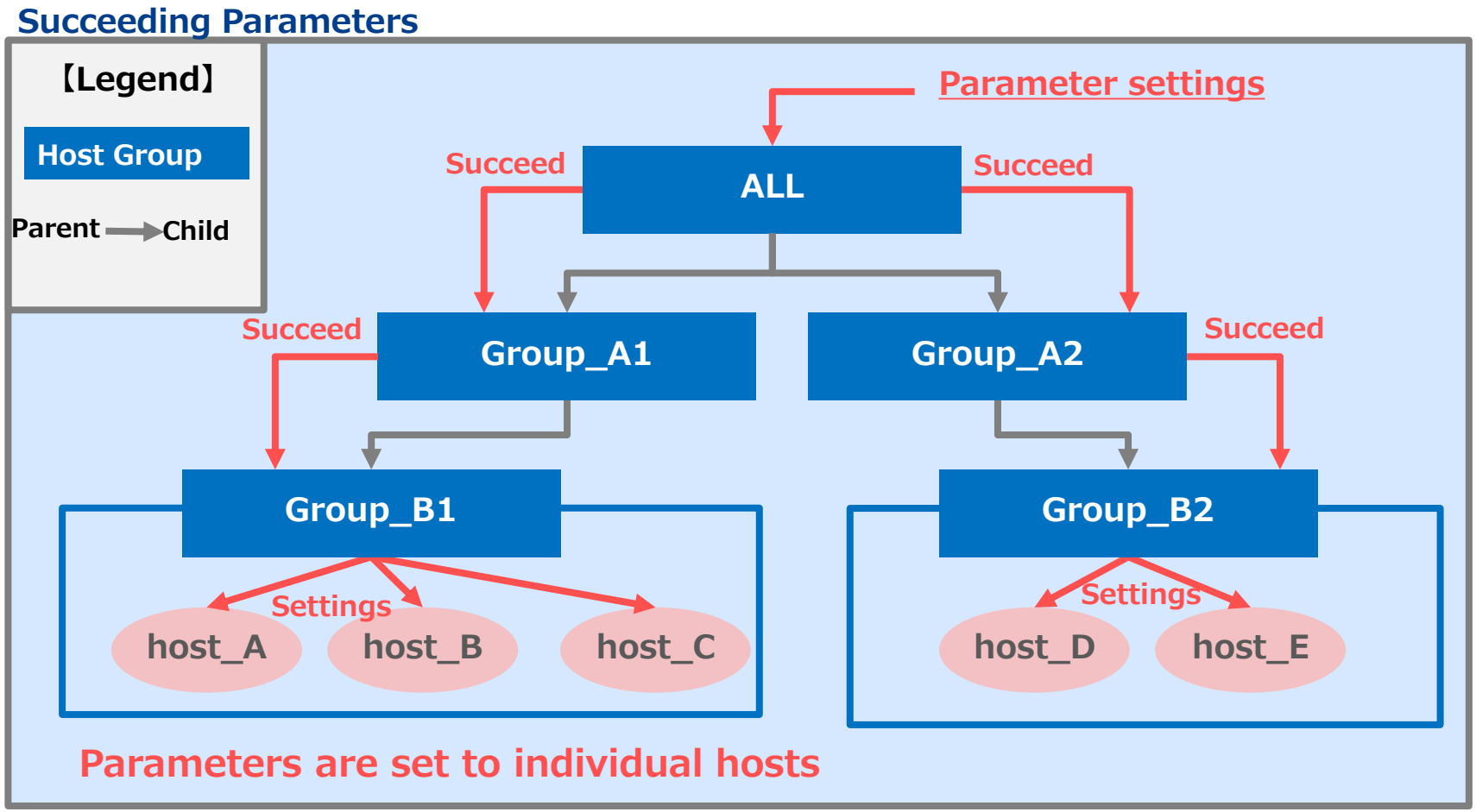
Users can define Parent-Child relationships between Host groups .By doing so, parameters can be succeeded and host management becomes easier.(→Next Page)

Host group Parent-Child relationship



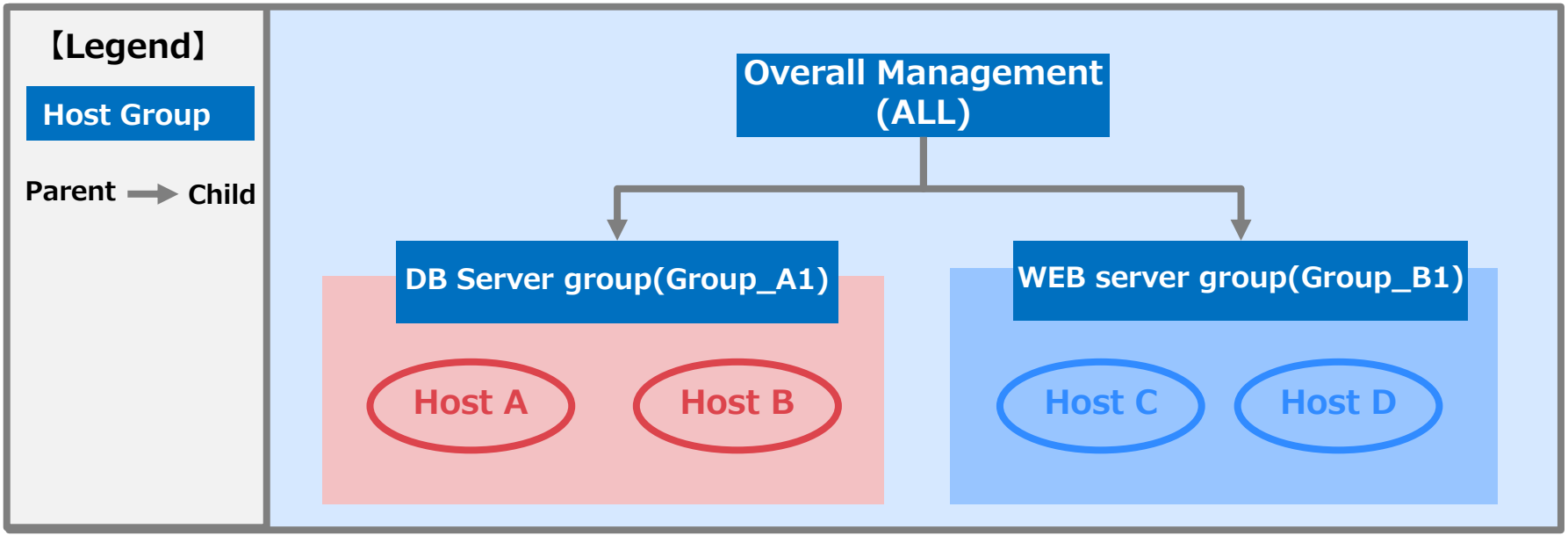
2.4 Succeeding Parameters.

By succeeding parameters from the Parent to the child, host groups can work more closely together. As a result, it is possible to handle Large scale systems.



2.5 Example of using host groups(1/4)

- There are 3 hosts groups. “Overall management”, “DB Server group” and “Web server groups”. They are all defined in a parent-child relationship. Right now, there is no value set to the parameters in Host A~D

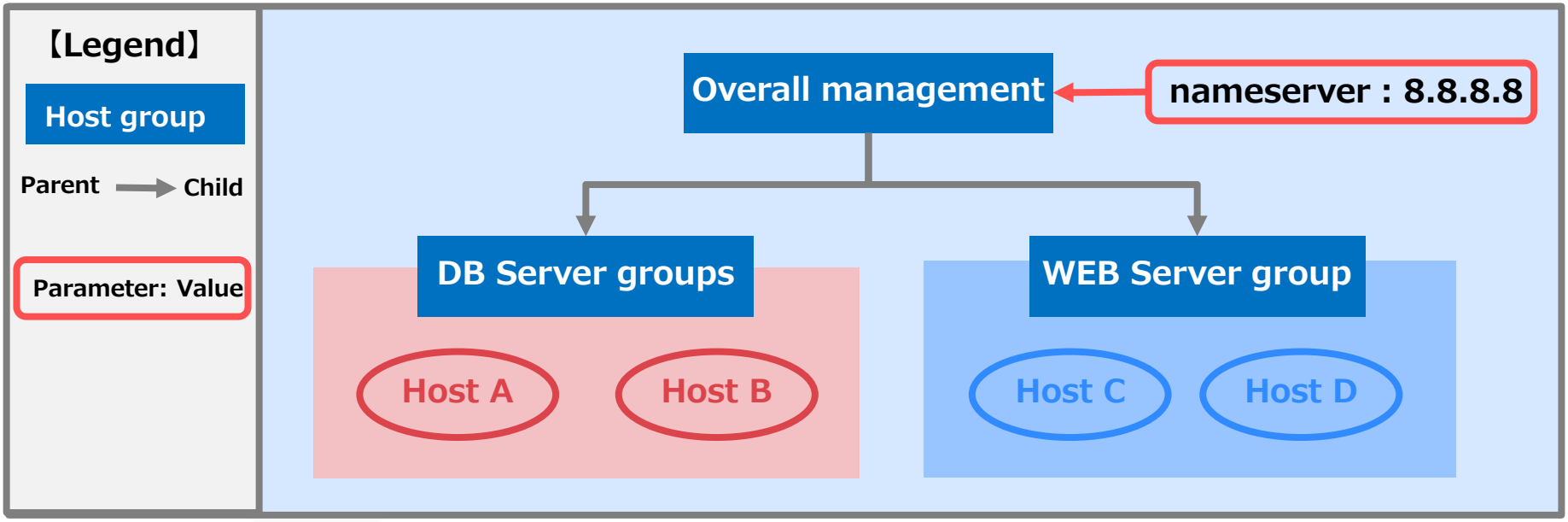


【Parameter for each host】

Host	hostname	nameserver	password	server-admin
Host A	-	-	-	-
Host B	-	-	-	-
Host C	-	-	-	-
Host D	-	-	-	-

2.5 Example of using host groups(2/4)

- Set the parameters for the “Overall Management” host group.

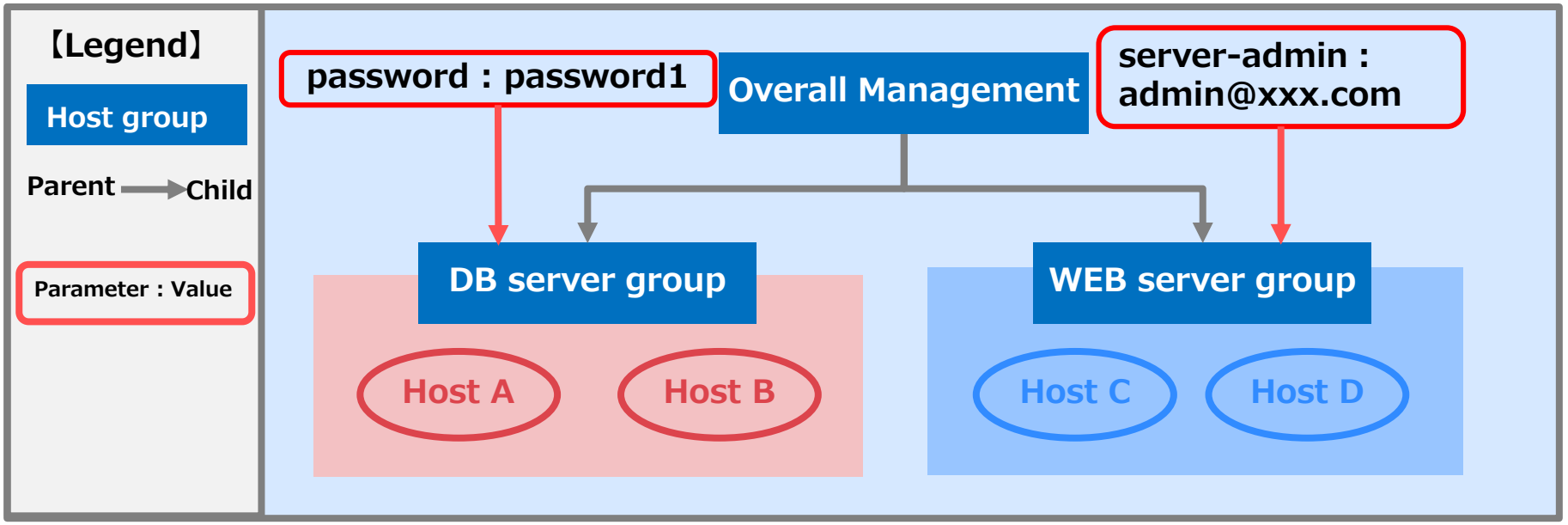


【Parameter for each host】

Host	hostname	nameserver	password	server-admin
Host A	-	8.8.8.8	-	-
Host B	-	8.8.8.8	-	-
Host C	-	8.8.8.8	-	-
Host D	-	8.8.8.8	-	-

2.5 Example of using host groups(3/4)

- Set the different parameters for Host groups “DB Server group” and “Web server group”.

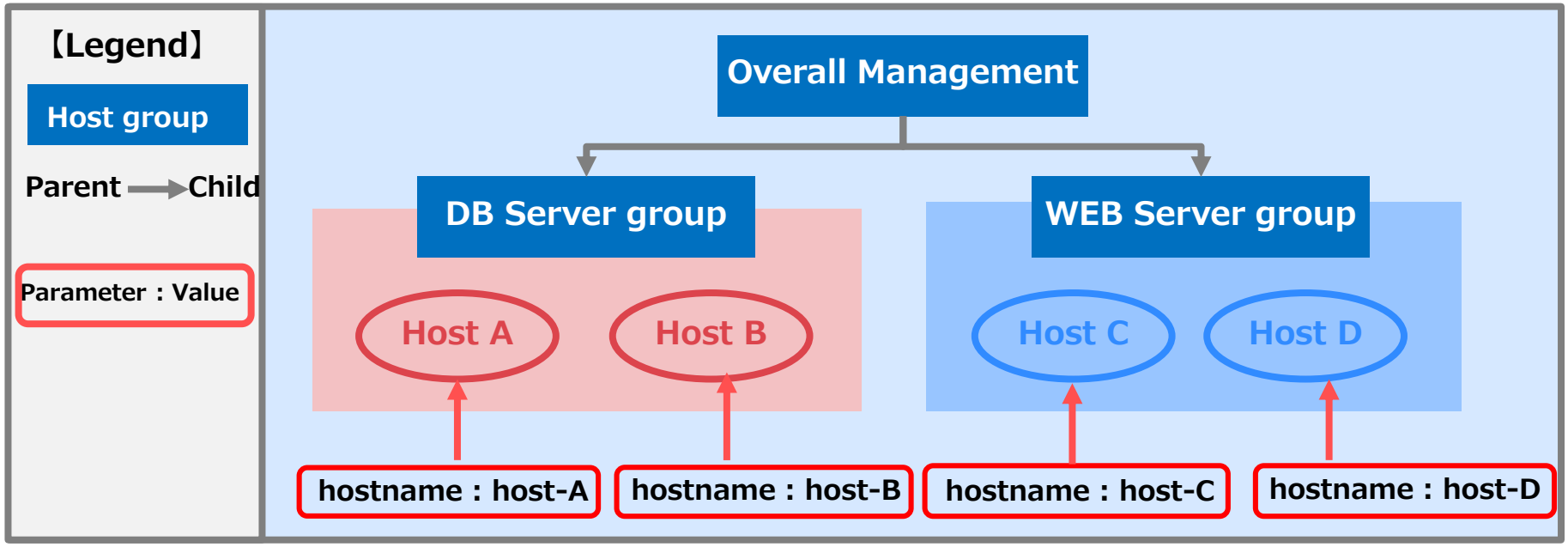


【Parameter for each host】

Host	hostname	nameserver	password	server-admin
Host A	-	8.8.8.8	password1	-
Host B	-	8.8.8.8	password1	-
Host C	-	8.8.8.8	-	admin@xxx.com
Host D	-	8.8.8.8	-	admin@xxx.com

2.5 Example of using host groups(4/4)

- **Set individual parameters for each host.**



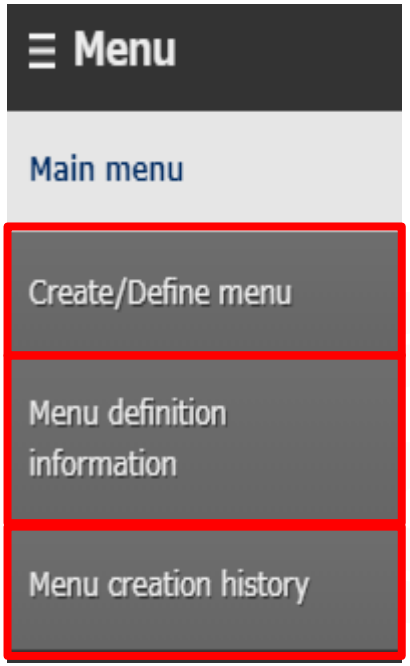
【Parameters for each host】

Host	hostname	nameserver	password	server-admin
Host A	host-A	8.8.8.8	password1	-
Host B	host-B	8.8.8.8	password1	-
Host C	host-C	8.8.8.8	-	admin@xxx.com
Host D	host-D	8.8.8.8	-	admin@xxx.com

3. Menu creation functions

3.1 Menu overview

●Main Menus used in this document

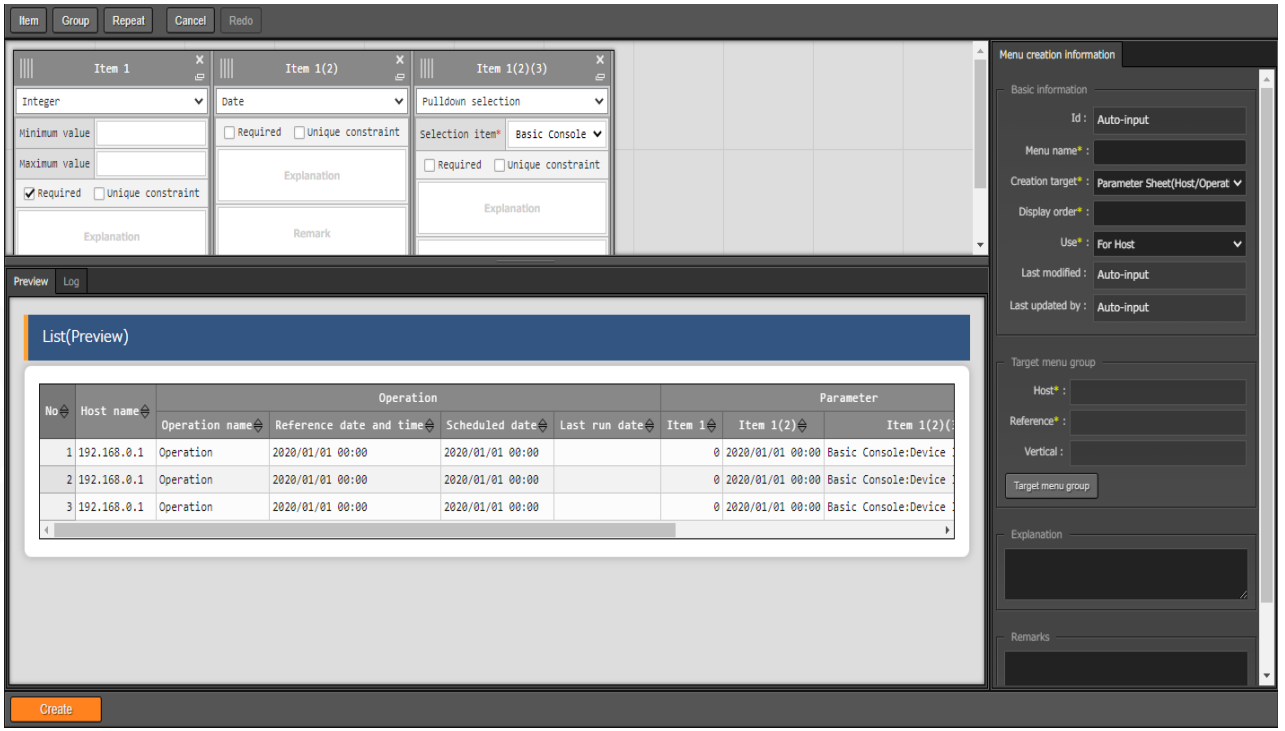


①

②

③

①Menu Create/Define Menu



②Referencing Menu

Update	Discard	Id	Menu name	Menu definition/creation	Creation target	Display order	Use	Menu	Last update date/time	Last updated by
Update	Discard	1	menuA	Menu definition/creation	Parameter Sheet(Host/Operation)	1	For Host		2020/10/14 11:21:26	System Administrator

③Creation history Menu

Id	Menu name	Status	Menu file	Created menu	Remarks	Last update date/time	Last updated by
1	menuA	Completed		Created menu		2020/10/14 11:21:31	Create Menu procedure

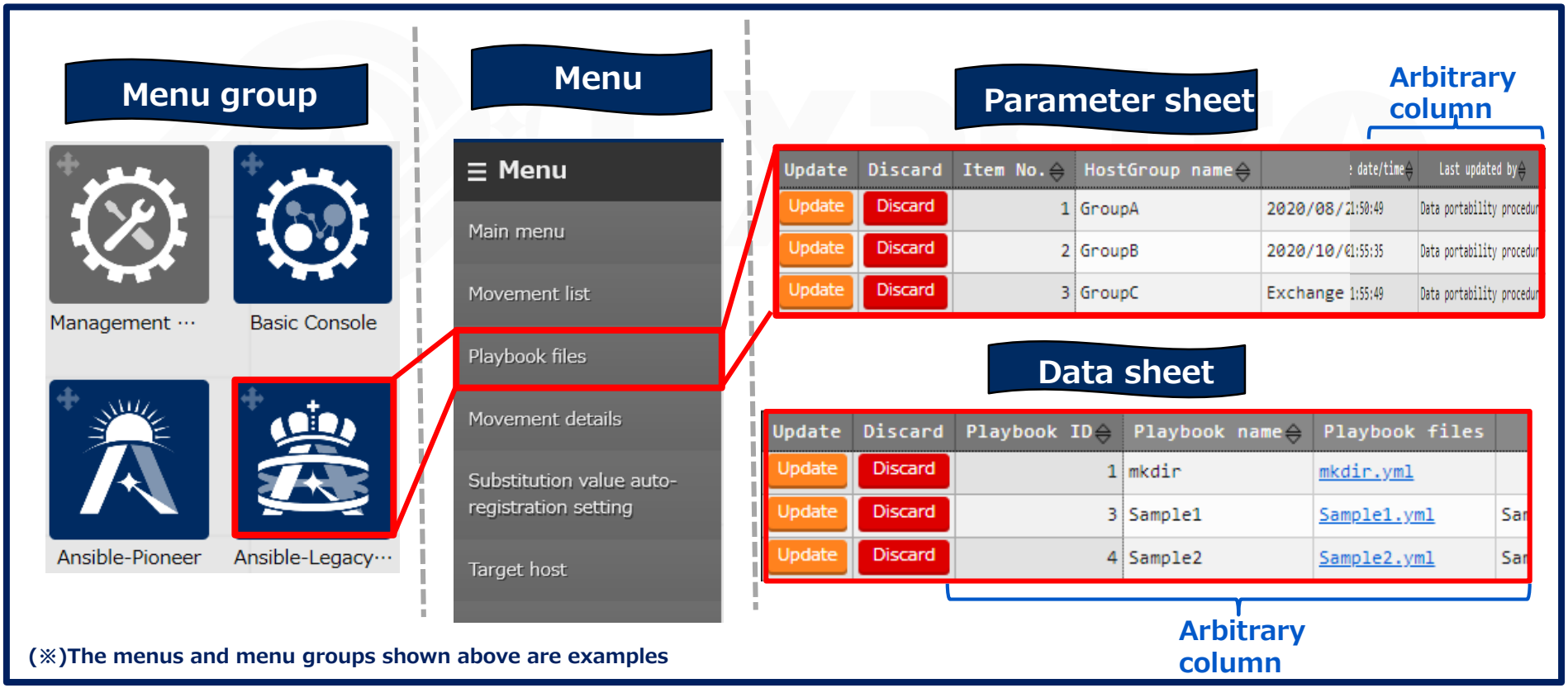
3.2 Menu construction

- The Menus that can be created with the Menu creation functions are as follows.

[Menu group >> Menu >> Parameter sheet or Data sheet]

- The following two types of menu sheets are creatable
  - Parameter sheets. Sheets that manages IaC variable values.
  - Data sheets. Sheets that does not link specific host and operations

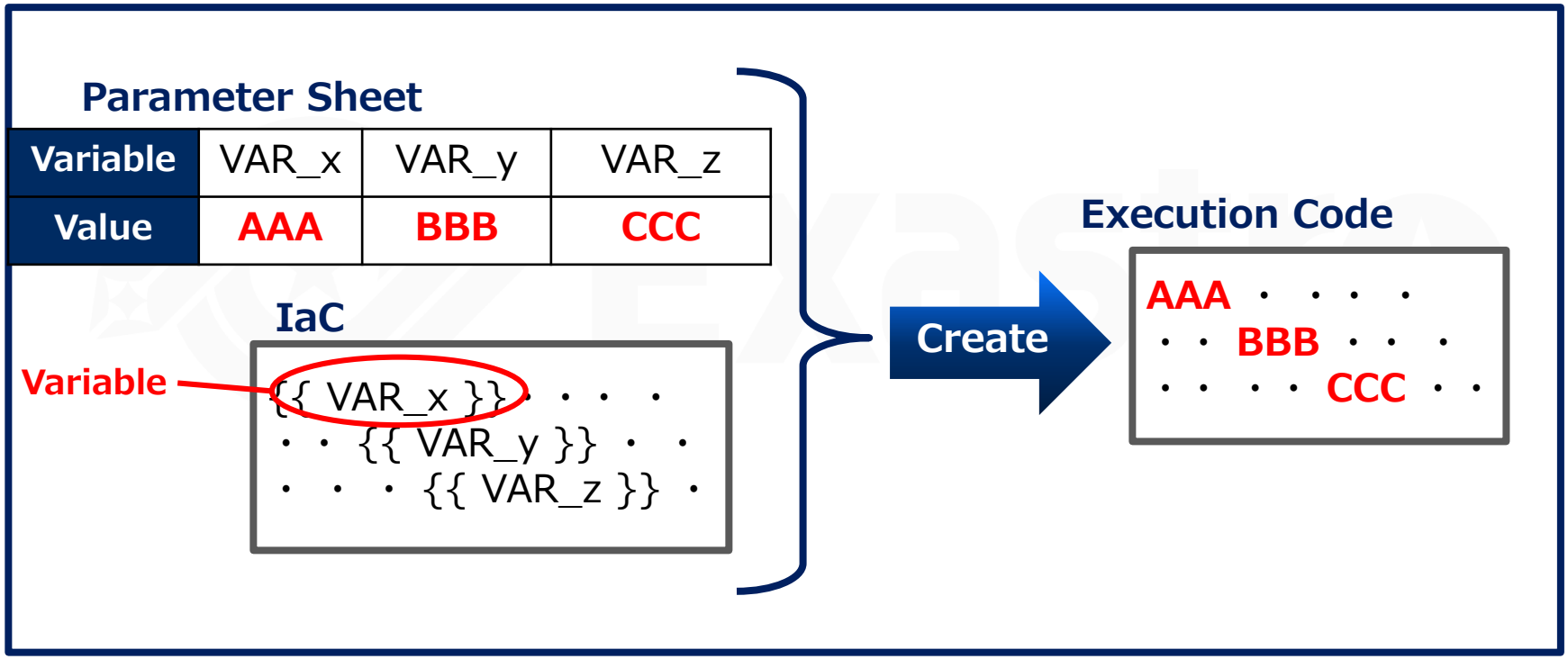
Menu structure



3.3 Parameter Sheet

In Parameter sheet, manage and register the variable substitute values used in IaC.
Create execution codes from Parameter sheets and IaC.

Image of creating an Execution code

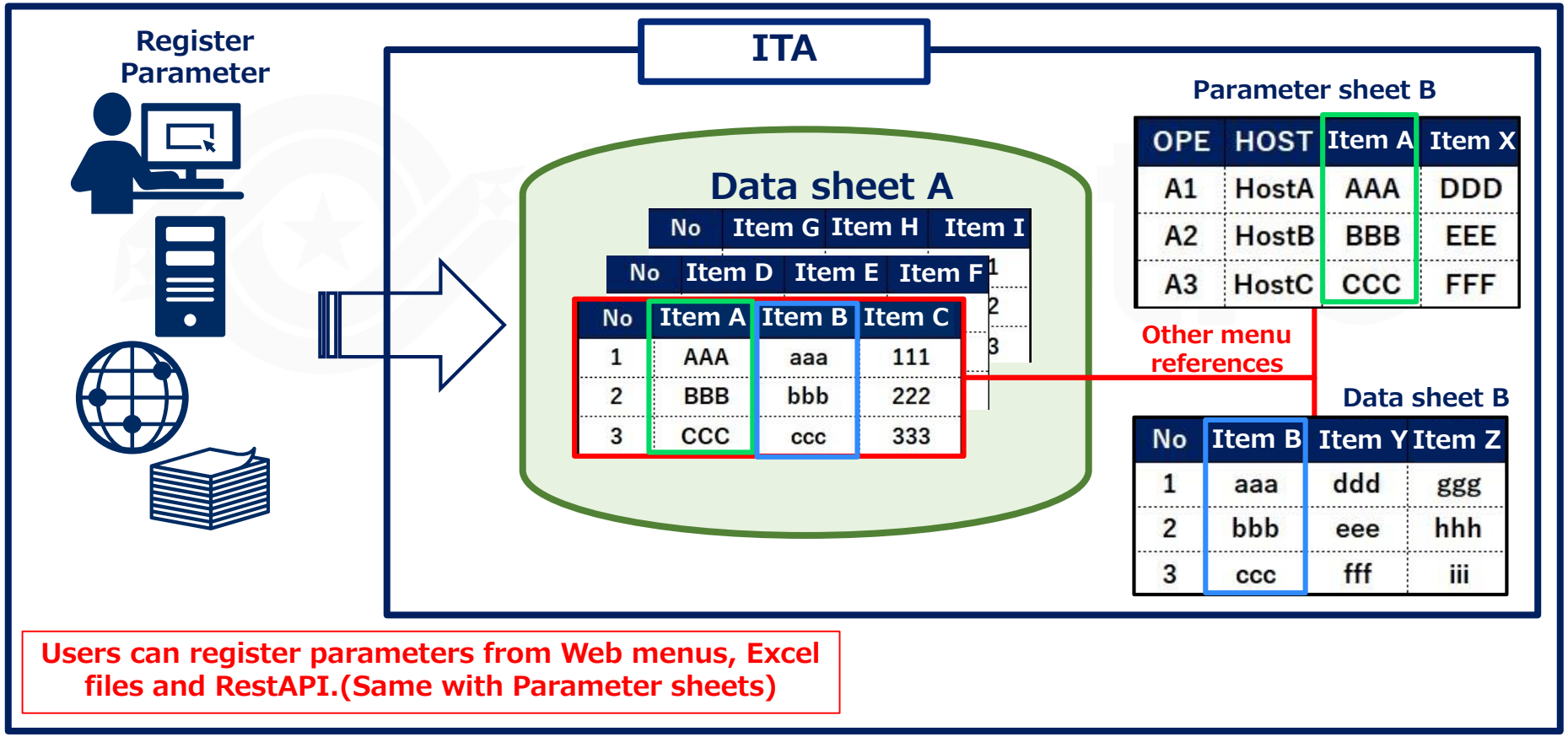


(※)For linking variables, please take a look at the “practice document”

Data sheet is managing data as CMDB(Configured Management Data Base).

- The figure below shows an example of linking data sheet A with other sheets in “other menu references”.

Operating data sheets



3.5 Menu creation flow

- The general flow when creating a menu is shown below. This document will describe it in a similar order.
- It is recommended to follow **the practice document** and operating the system after reading this slide.

Flow when creating a menu

	Explanation
Creating a menu group	・To learn about how to create Menu groups, please refer to the practice document.
Creating a menu	・From “Target creation”, choose “Parameter sheet” or “Data sheet” ・In the case of creating a parameter sheet, choose “Purpose”(More information in 3.6 Item registration in this document) ・Select the destination where the Menu group will be created
Creating an item	・Select the Item`s input method ・Create sheet item (more information in “3.9 Item registration” in this document)

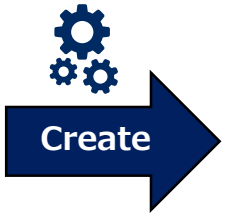
3.6 Purpose of parameter sheets and menu groups.

- Select either “For Host” or “For Host groups” for the parameter sheet ”Purpose”.
- After that, specify the Menu group that is going to be created

【Parameter sheet purposes and creatable menu groups】

Purpose: For host

Parameter sheet creation information

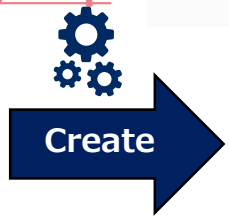


Menu group for host

Menu group For referencing

Purpose: For Host group

Parameter sheet Creation information



Menu group for Hostgroup

Menu group for host

Menu group for referencing

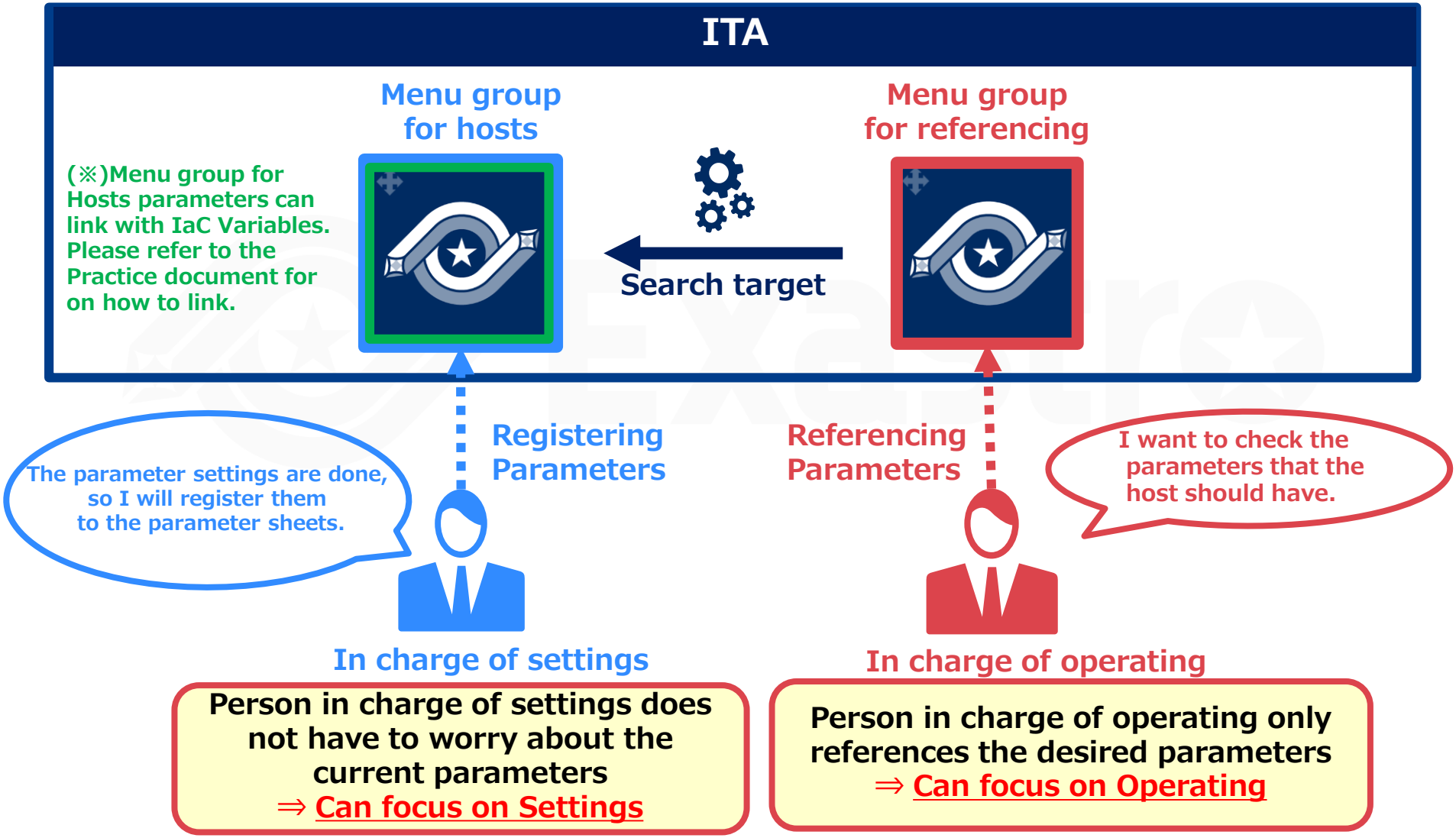
※The menus with red text are mandatory

(※)The parameter sheets shown above does not use vertical management tools.

For more information on Vertical Management Tools, please refer to
Exastro-ITA_User_Instruction_Manual_Menu_creation_function

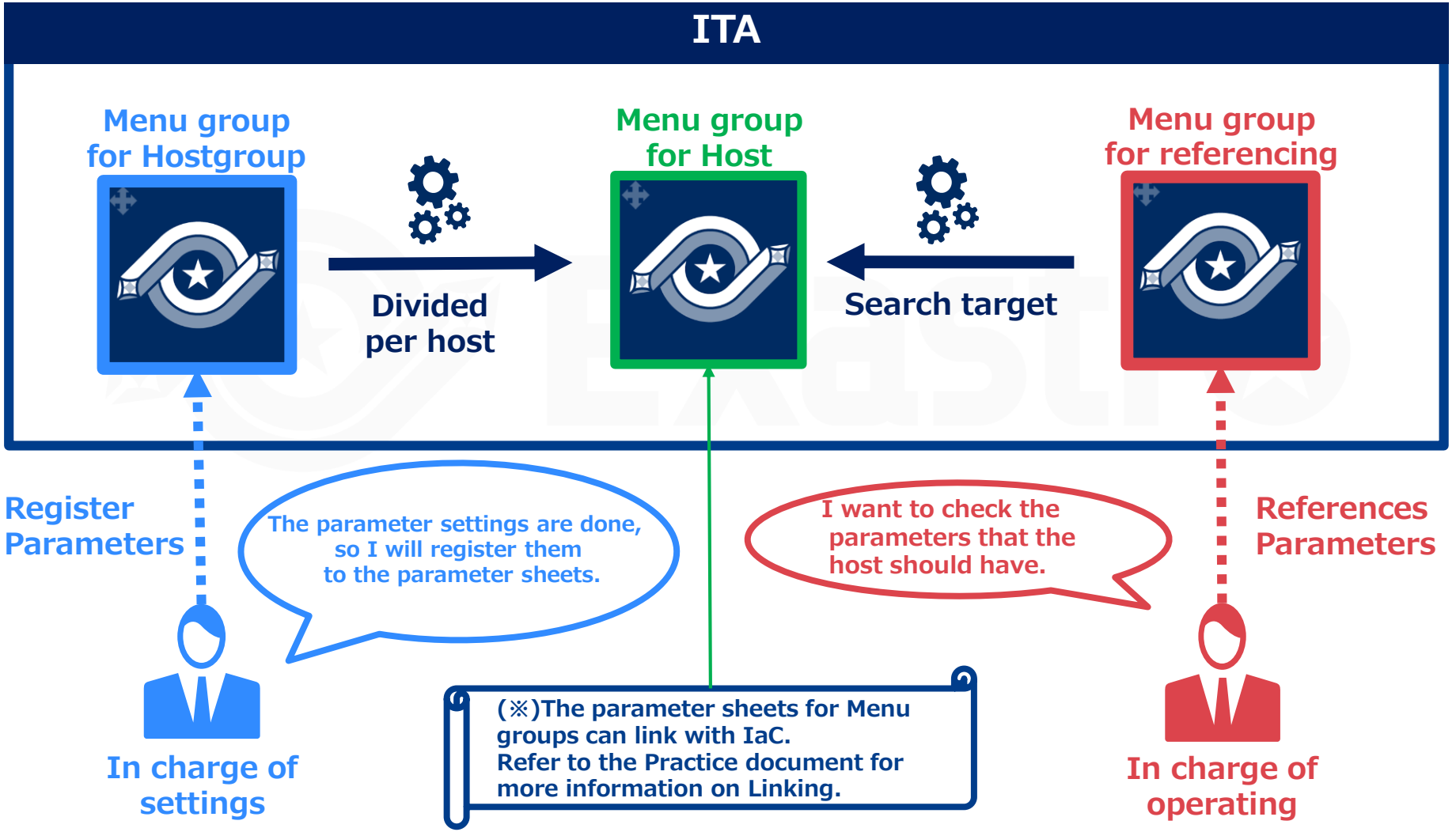
3.7 Menu groups in Parameter sheets)

- The relationship between “Menu group for hosts” and “Menu group for referencing” is shown in the figure below.



3.7 Menu groups in Parameter sheets(2/2)

- The relationship between the menu groups with Parameter sheets with "For Host groups" set as purpose, "Menu group for hosts", "Menu group for referencing" and "Menu group for Host groups" are as shown below



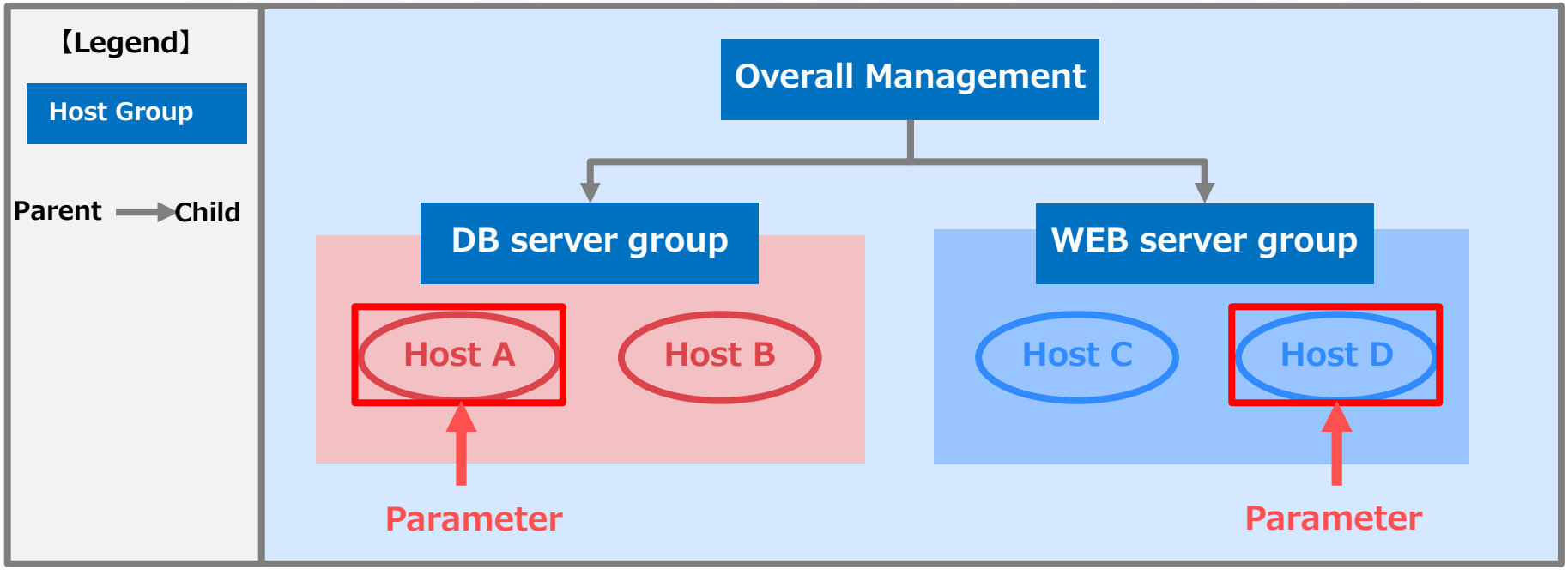
3.8 Operating the Parameters` Menu groups(1/2)

- Parameter sheets with "For host" purposes `Menu group for Host`s parameter will be set to separate hosts.

【Parameter sheets for Menu group for Hosts】

Host Name	Operation	Parameter 1	Parameter 2	Parameter 3
Host A	Operation A	AAA	CCC	EEE
Host D	Operation A	BBB	DDD	FFF

【Parameter settings】



3.8 Operating the Parameters` Menu groups(1/2)

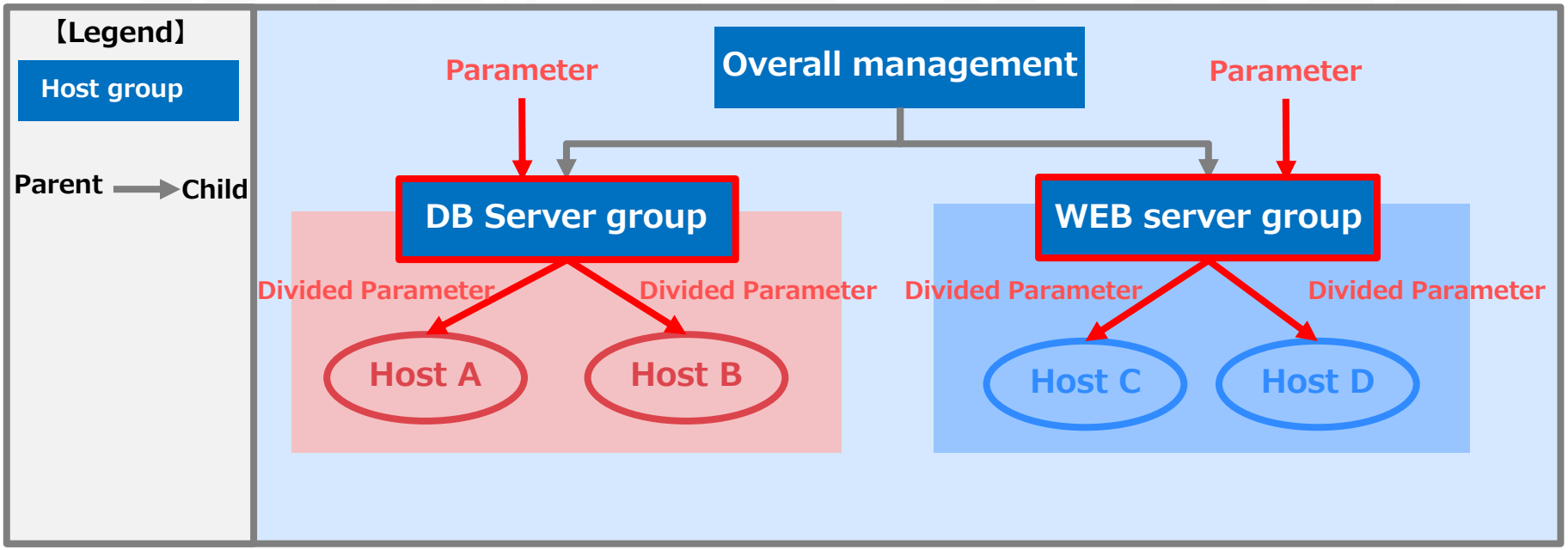
- The “for host group” parameters sheets in “ For Host group” purpose parameter sheets will be **divided** into parameter sheets “for hosts”.(More details on the next page)
  Parameters will be set to hosts in the host group.(Figure below)

【Parameter sheet for Menu group for Host groups】

Host group name(※)	Operation	Parameter 1	Parameter 2	Parameter 3
DB server group	Operation A	AAA	CCC	EEE
WEB server group	Operation A	BBB	DDD	FFF

※It is also possible to assign host name names

【Parameter settings】



3.8.1 Reference – Dividing Menu groups for Host groups

- Parameter sheets with "For host" purposes` Menu group for Host`s parameter will be divided per hosts and automatically registered to parameter sheets for hosts.

Dividing menu groups for host groups` parameter sheets

Parameter sheet for Menu group for Host groups

Host group name	Operation	Parameter 1	Parameter 2	Parameter 3
DB server group	Operation A	AAA	CCC	EEE
WEB server group	Operation A	BBB	DDD	FFF

Divide

Host A and B belongs to Host Group DB Server group.
Host C and D belongs to Host group Web Server group.

Parameter sheet after division

Host name	Operation	Parameter 1	Parameter 2	Parameter 3
Host A	Operation A	AAA	CCC	EEE
Host B	Operation A	AAA	CCC	EEE
Host C	Operation A	BBB	DDD	FFF
Host D	Operation A	BBB	DDD	FFF

Registration

Parameter sheet for Host

3.9 Other menu groups in Parameters

Menu group for vertical management

- For more information regarding Menu groups for vertical management, please refer to " Exastro-ITA_User_Instruction_Manual_Menu_creation_function"

Parameter sheets for referencing

- More information on " Parameter sheets for Referencing" can be found in “3.10 Parameter sheet for referencing” in this document

Functions that can be used when creating parameter sheets or data sheet items are as shown below.

【 Functions when creating menu items 】

Reference other menus

Users can choose sheet values found in other menus from a pulldown.

Necessary input items settings

Unique constraint settings

Biggest byte size settings

Input value check from regular expression settings

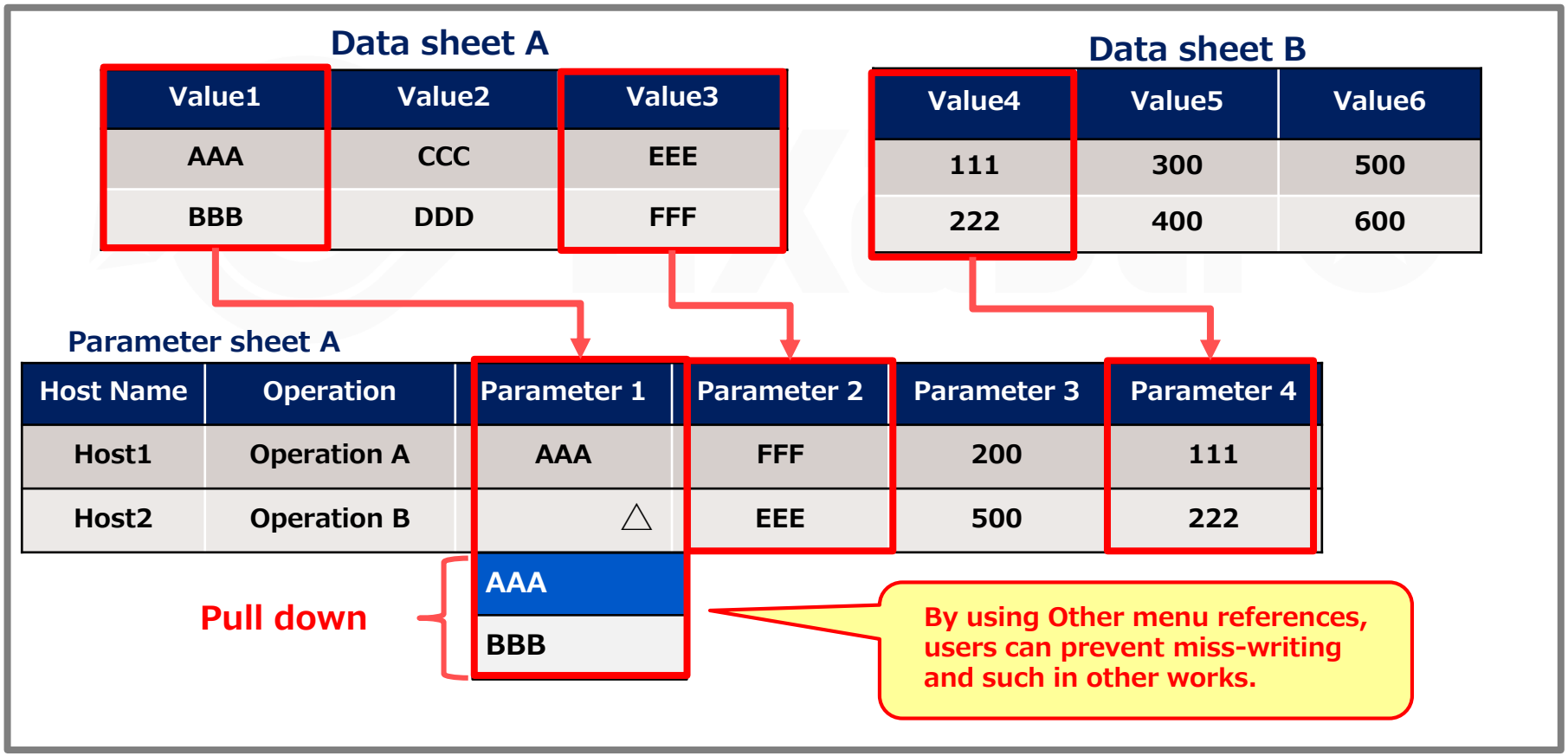
Please refer to
Exastro-ITA_User_Instruction_Manual_Menu_creation_function (P.16-17)

3.10.1 Referencing other menus

By specifying Parameter sheets or Data sheet items in " Other Menu references" (※) when creating menu items, users can select from a pulldown when entering parameters.

(※)For more information on referencing other menus, please refer to Exastro-ITA_User_Instruction_Manual_Menu_creation_function

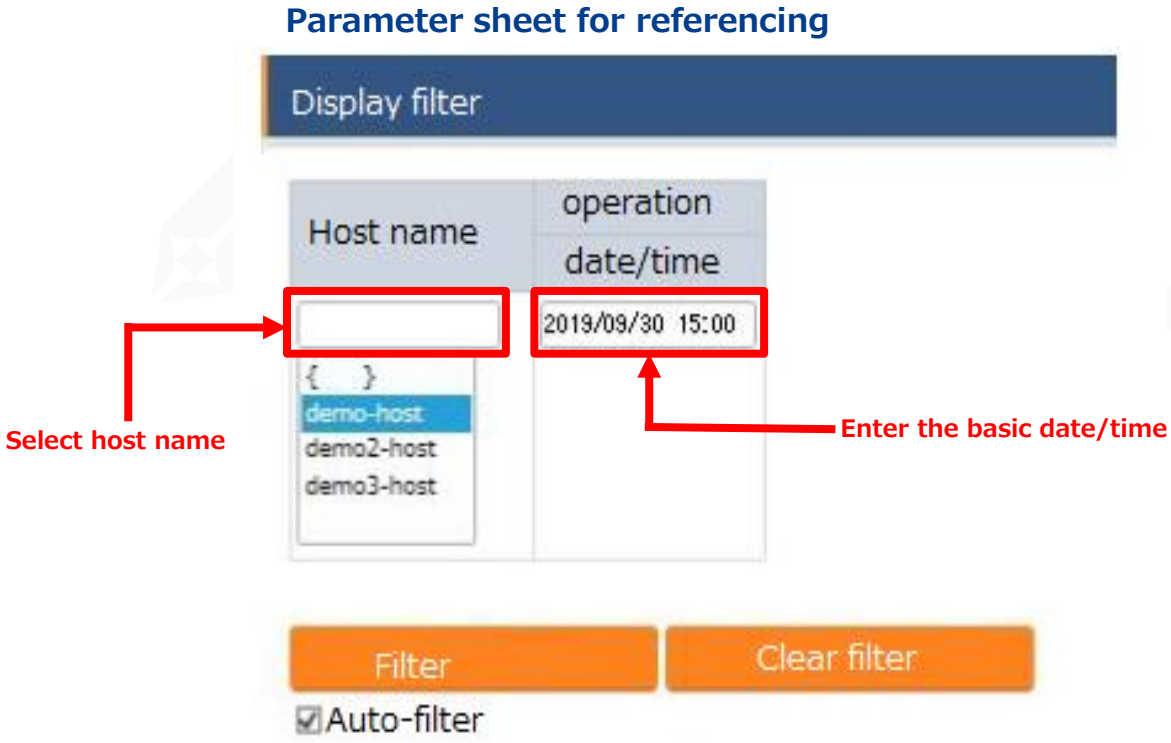
Referencing other menus



3.11 Parameter sheet for referencing（1/2）

Users can search for parameters from Menu groups for host parameter sheets by inputting the standard time and host name.

- if no date is entered when searching, the newest data will be displayed.



3.11 Parameter sheets for referencing（2/2）

●Standard time and date

⇒ If the corresponding operation has been executed before, the Standard date and time will be " last executed date". If not, the standard time and date will be " Scheduled execution date".

Example of standard time and date.

No	Target host	Operation name	Schedule execution date	Last executed date	Standard time/date
1	Host A	Operation 1	9/1 00:00:00	9/15 00:00:00	**9/15 00:00:00**
2	Host A	Operation 2	11/1 00:00:00		**11/1 00:00:00**
3	Host A	Operation 3	12/24 00:00:00		**12/24 00:00:00**

※Operation No.2 and No.3 has yet to be executed.

3.12 Example of using Parameter sheets for referencing(1/5)

Pre condition

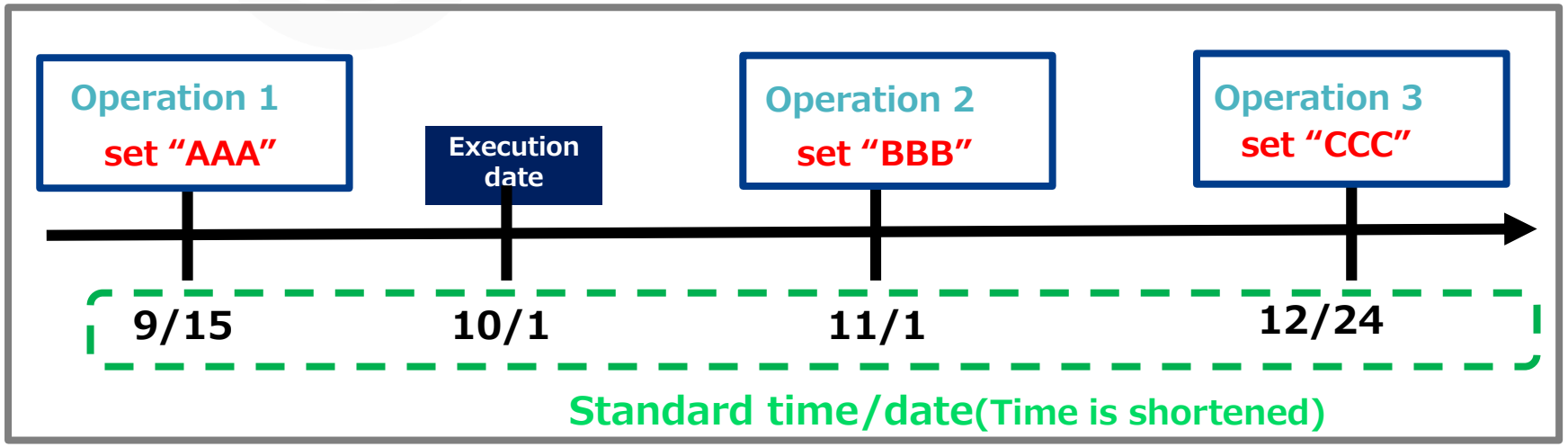
Case 1-4 will be executed on the 10/1(Execution date)

Parameter sheet

Host	Operation	Operation Standard Time/Date	Parameter A	・・・
Host A	Operation 1	9/15 00:00:00	AAA	・・・
Host A	Operation 2	11/1 00:00:00	BBB	・・・
Host A	Operation 3	12/24 00:00:00	CCC	・・・

Operation set to Parameter A as host.

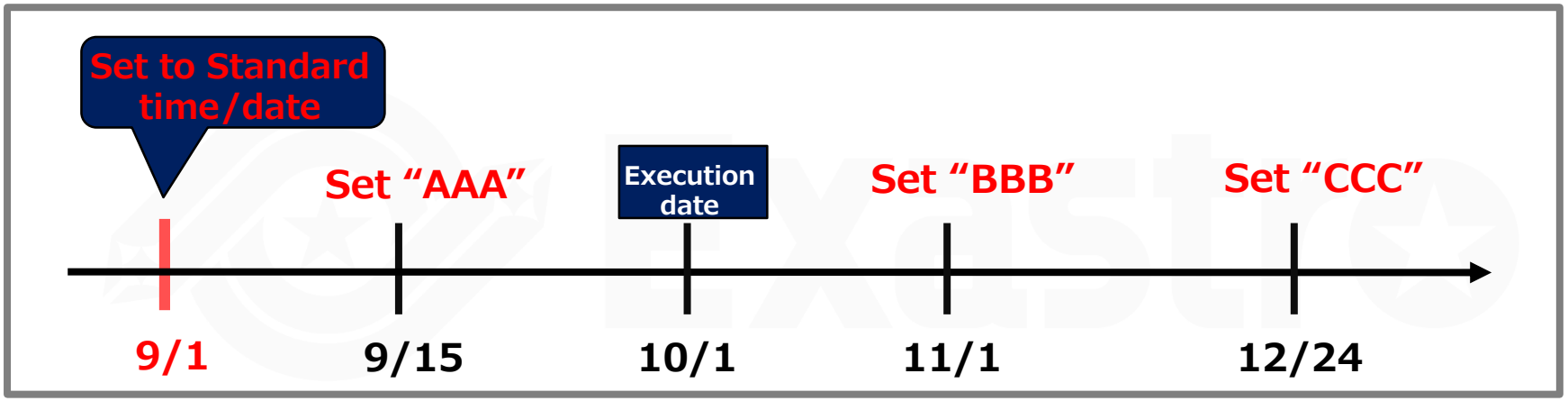
【Host A`s work schedule】



3.12 Example of using Parameter sheets for referencing(2/5)

Case① **Setting「9/1 00:00:00」and executing search.**

【Host A`s work schedule`s standard time and date.】



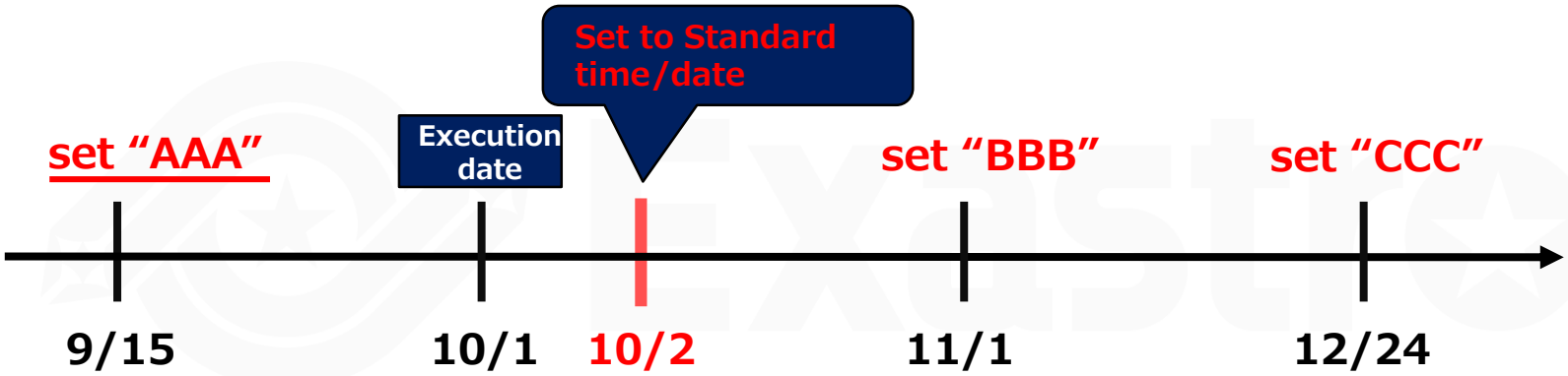
Host	Operation	Operation standard time/date	Parameter A	・・・
Host A	Operation 1	9/15 00:00:00	AAA	・・・
Host A	Operation 2	11/1 00:00:00	BBB	・・・
Host A	Operation 3	12/24 00:00:00	CCC	・・・

- **Since no parameter settings are set by now (9/1), there will be no corresponding search results**

3.12 Example of using Parameter sheets for referencing(3/5)

Case② Setting the standard time/date to「10/2 00:00:00」and executing search.

【Host A`s work schedule`s standard time and date.】



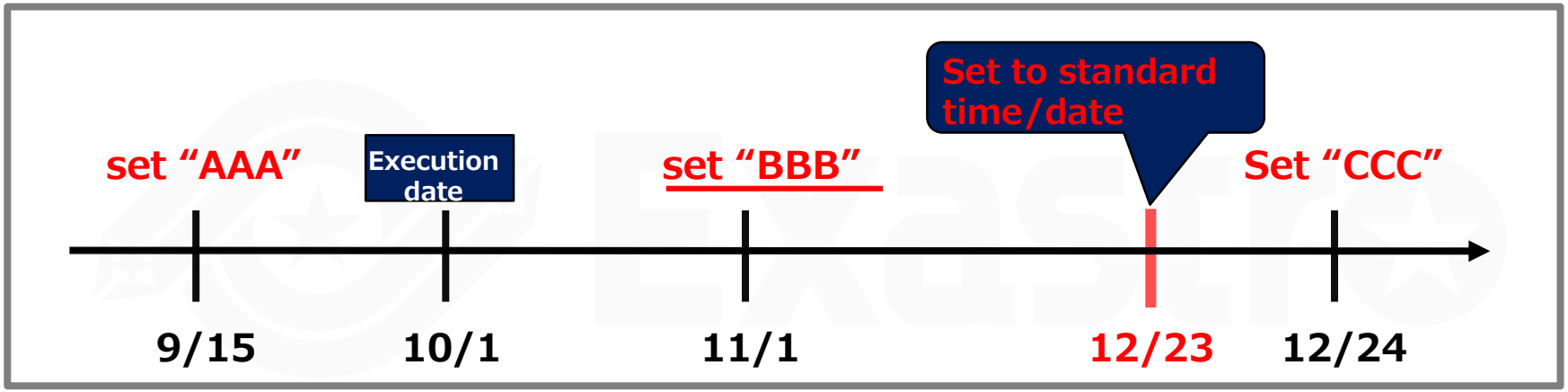
Host	Operation	Operation standard time/date	Parameter A	・・・
Host A	Operation 1	9/15 00:00:00	AAA	・・・
Host A	Operation 2	11/1 00:00:00	BBB	・・・
Host A	Operation 3	12/24 00:00:00	CCC	・・・

- **Since AAA is set to Parameter A now (1/2), AAA Will show up in the search results.**

3.12 Example of using Parameter sheets for referencing(4/5)

Case ③ **Setting the standard time/date to「12/23 00:00:00」and executing search.**

【Host A`s work schedule`s standard time and date.】



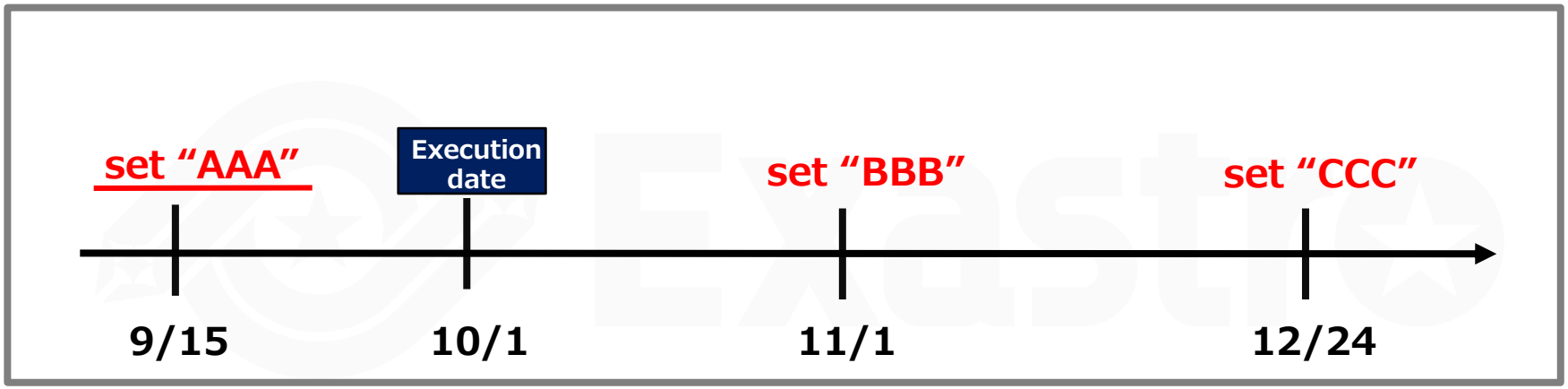
Host	Operation	Operation standard time/date	Parameter A	・・・
Host A	Operation 1	9/15 00:00:00	AAA	・・・
Host A	Operation 2	11/1 00:00:00	BBB	・・・
Host A	Operation 3	12/24 00:00:00	CCC	・・・

- **Since BBB is set to Parameter A by now (12/23), BBB will show up in the search results.**

3.12 Example of using Parameter sheets for referencing(5/5)

Case③ Leaving the standard time **blank** and executing a search.

【Host A`s work schedule`s standard time and date.】



Host	Operation	Operation standard time/date	ParameterA	・・・
Host A	Operation 1	9/15 00:00:00	AAA	・・・
Host A	Operation 2	11/1 00:00:00	BBB	・・・
Host A	Operation 3	12/24 00:00:00	CCC	・・・

- **Searching when the standard time is left blank will display the latest values from when the search was executed as search results. Therefore, AAA will be displayed in the search results.**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