FUJITSU

FUJITSU Software Infrastructure Manager for PRIMEFLEX V2.4

Cluster Creation and Cluster Expansion Parameter List

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Preface

Purpose

This manual describes of the parameters to be set for each function of FUJITSU Software Infrastructure Manager for PRIMEFLEX (hereafter referred to as "ISM for PRIMEFLEX"), which adds functions for expanding virtualized platforms to FUJITSU Software Infrastructure Manager (hereafter referred to as "ISM"). ISM is operation and management software that manages and operates ICT devices, such as servers and storages, and facility devices, such as PDUs, comprehensively.

Note

"Infrastructure Manager for PRIMEFLEX" is available only in Japan, APAC, and North America.

Product Manuals

Manual Name	Description
FUJITSU Software Infrastructure Manager V2.4 Infrastructure Manager for PRIMEFLEX V2.4 First Step Guide	This manual is for those using this product for the first time. This manual summarizes the procedures for the use of this product, the product system, and licensing. In this manual, it is referred to as "First Step Guide."
FUJITSU Software Infrastructure Manager V2.4 Infrastructure Manager for PRIMEFLEX V2.4 User's Guide	This manual describes the functions of this product, the installation procedure, and procedures for operation. It allows you to quickly grasp all functions and all operations of this product. In this manual, it is referred to as "User's Guide."
FUJITSU Software Infrastructure Manager V2.4 Infrastructure Manager for PRIMEFLEX V2.4 Operating Procedures	This manual describes the installation procedure and usages for the operations of this product. In this manual, it is referred to as "Operating Procedures."
FUJITSU Software Infrastructure Manager V2.4 Infrastructure Manager for PRIMEFLEX V2.4 REST API Reference Manual	This manual describes how to use the required APIs and provides samples and parameter information for using user-created applications that integrate with this product. In this manual, it is referred to as "REST API Reference Manual."
FUJITSU Software Infrastructure Manager V2.4 Infrastructure Manager for PRIMEFLEX V2.4 Messages	This manual describes the messages that are output when using ISM or ISM for PRIMEFLEX and the actions to take for these messages. In this manual, it is referred to as "ISM Messages."
FUJITSU Software Infrastructure Manager for PRIMEFLEX V2.4 Messages	This manual describes the messages that are output when using ISM for PRIMEFLEX and the actions to take for these messages. In this manual, it is referred to as "ISM for PRIMEFLEX Messages."
FUJITSU Software Infrastructure Manager V2.4 Infrastructure Manager for PRIMEFLEX V2.4 Items for Profile Settings (for Profile Management)	This manual describes detailed information for the items set when creating profiles for managed devices. In this manual, it is referred to as "Items for Profile Settings (for Profile Management)."
FUJITSU Software Infrastructure Manager for PRIMEFLEX V2.4 Cluster Creation and Cluster Expansion Parameter List	This manual describes Cluster Definition Parameters that are used for the automatic settings in Cluster Creation and Cluster Expansion when using ISM for PRIMEFLEX. In this manual, it is referred to as "ISM for PRIMEFLEX Parameter List."

Manual Name	Description
FUJITSU Software Infrastructure Manager V2.4 Infrastructure Manager for PRIMEFLEX V2.4 Glossary	This document defines the terms that you need to understand in order to use this product. In this manual, it is referred to as "Glossary."
FUJITSU Software Infrastructure Manager V2.4 Infrastructure Manager for PRIMEFLEX V2.4 Plug-in and Management Pack Setup Guide	This manual describes the procedures, from installation to operation as well as precautions and reference information, for the following features of Infrastructure Manager Plug-in. - Infrastructure Manager Plug-in for Microsoft System Center Operations Manager - Infrastructure Manager Plug-in for Microsoft System Center Virtual Machine Manager - Infrastructure Manager Plug-in for VMware vCenter Server - Infrastructure Manager Plug-in for VMware vCenter Server Appliance - Infrastructure Manager Management Pack for VMware vRealize Operations - Infrastructure Manager Plug-in for VMware vRealize Orchestrator In this manual, it is referred to as "ISM Plug-in/MP Setup Guide."

Together with the manuals mentioned above, you can also refer to the latest information about ISM by contacting your local Fujitsu customer service partner.

For the information about managed hardware products, refer to the manuals of the relevant hardware.

For PRIMERGY, refer to "ServerView Suite ServerBooks" or the manual pages for PRIMERGY.

http://manuals.ts.fujitsu.com

Intended Readers

This manual is intended for readers who consider using the product for comprehensive management and operation of such ICT devices and possess basic knowledge about hardware, operating systems, and software.

Notation in this Manual

Notation

Keyboard

Keystrokes that represent nonprintable characters are displayed as key icons such as [Enter] or [F1]. For example, [Enter] means press the key labeled "Enter." [Ctrl]+[B] means hold down the key labeled "Ctrl" or "Control" and then press the B key.

Symbols

Items that require particular attention are indicated by the following symbols.

Point

Describes the content of an important point.

Note

Describes an item that requires your attention.

Variables: <xxx>

Represents variables that require replacement by numerical values or text strings in accordance with your usage environment.

Example: <IP address>

Abbreviation

This document may use the following abbreviations.

Official name	Abbreviation	
Microsoft(R) Windows Server(R) 2019 Datacenter	Windows Server 2019 Datacenter	Windows Server 2019
Microsoft(R) Windows Server(R) 2019 Standard	Windows Server 2019 Standard	
Microsoft(R) Windows Server(R) 2019 Essentials	Windows Server 2019 Essentials	
Microsoft(R) Windows Server(R) 2016 Datacenter	Windows Server 2016 Datacenter	Windows Server 2016
Microsoft(R) Windows Server(R) 2016 Standard	Windows Server 2016 Standard	
Microsoft(R) Windows Server(R) 2016 Essentials	Windows Server 2016 Essentials	
Microsoft(R) Windows Server(R) 2012 R2 Datacenter	Windows Server 2012 R2 Datacenter	Windows Server 2012 R2
Microsoft(R) Windows Server(R) 2012 R2 Standard	Windows Server 2012 R2 Standard	
Microsoft(R) Windows Server(R) 2012 R2 Essentials	Windows Server 2012 R2 Essentials	
Microsoft(R) Windows Server(R) 2012 Datacenter	Windows Server 2012 Datacenter	Windows Server 2012
Microsoft(R) Windows Server(R) 2012 Standard	Windows Server 2012 Standard	
Microsoft(R) Windows Server(R) 2012 Essentials	Windows Server 2012 Essentials	
Microsoft(R) Windows Server(R) 2008 R2 Datacenter	Windows Server 2008 R2 Datacenter	Windows Server 2008 R2
Microsoft(R) Windows Server(R) 2008 R2 Enterprise	Windows Server 2008 R2 Enterprise	
Microsoft(R) Windows Server(R) 2008 R2 Standard	Windows Server 2008 R2 Standard	
Red Hat Enterprise Linux 8.0 (for Intel64)	RHEL 8.0	Red Hat Enterprise Linux Or Linux
Red Hat Enterprise Linux 7.6 (for Intel64)	RHEL 7.6	
Red Hat Enterprise Linux 7.5 (for Intel64)	RHEL 7.5	
Red Hat Enterprise Linux 7.4 (for Intel64)	RHEL 7.4	
Red Hat Enterprise Linux 7.3 (for Intel64)	RHEL 7.3	
Red Hat Enterprise Linux 7.2 (for Intel64)	RHEL 7.2	
Red Hat Enterprise Linux 7.1 (for Intel64)	RHEL 7.1	
Red Hat Enterprise Linux 6.10 (for Intel64)	RHEL 6.10(Intel64)	

Official name	Abbreviation	
Red Hat Enterprise Linux 6.10 (for x86)	RHEL 6.10(x86)	
Red Hat Enterprise Linux 6.9 (for Intel64)	RHEL 6.9(Intel64)	
Red Hat Enterprise Linux 6.9 (for x86)	RHEL 6.9(x86)	
Red Hat Enterprise Linux 6.8 (for Intel64)	RHEL 6.8(Intel64)	
Red Hat Enterprise Linux 6.8 (for x86)	RHEL 6.8(x86)	
Red Hat Enterprise Linux 6.7 (for Intel64)	RHEL 6.7(Intel64)	
Red Hat Enterprise Linux 6.7 (for x86)	RHEL 6.7(x86)	
Red Hat Enterprise Linux 6.6 (for Intel64)	RHEL 6.6(Intel64)	
Red Hat Enterprise Linux 6.6 (for x86)	RHEL 6.6(x86)	
SUSE Linux Enterprise Server 15 (for AMD64 & Intel64)	SUSE 15(AMD64) SUSE 15(Intel64) or SLES 15(AMD64) SLES 15(Intel64)	SUSE Linux Enterprise Server Or Linux
SUSE Linux Enterprise Server 12 SP4 (for AMD64 & Intel64)	SUSE 12 SP4(AMD64) SUSE 12 SP4(Intel64) or SLES 12 SP4(AMD64) SLES 12 SP4(Intel64)	
SUSE Linux Enterprise Server 12 SP3 (for AMD64 & Intel64)	SUSE 12 SP3(AMD64) SUSE 12 SP3(Intel64) or SLES 12 SP3(AMD64) SLES 12 SP3(Intel64)	
SUSE Linux Enterprise Server 12 SP2 (for AMD64 & Intel64)	SUSE 12 SP2(AMD64) SUSE 12 SP2(Intel64) or SLES 12 SP2(AMD64) SLES 12 SP2(Intel64)	
SUSE Linux Enterprise Server 12 SP1 (for AMD64 & Intel64)	SUSE 12 SP1(AMD64) SUSE 12 SP1(Intel64) or SLES 12 SP1(AMD64) SLES 12 SP1(Intel64)	
SUSE Linux Enterprise Server 12 (for AMD64 & Intel64)	SUSE 12(AMD64) SUSE 12(Intel64) or SLES 12(AMD64) SLES 12(Intel64)	
SUSE Linux Enterprise Server 11 SP4 (for AMD64 & Intel64)	SUSE 11 SP4(AMD64) SUSE 11 SP4(Intel64) or SLES 11 SP4(AMD64) SLES 11 SP4(Intel64)	
SUSE Linux Enterprise Server 11 SP4 (for x86)	SUSE 11 SP4(x86) or SLES 11 SP4(x86)	
VMware(R) vSphere(TM) ESXi 6.7	VMware ESXi 6.7	VMware ESXi

Official name	Abbreviation	
VMware(R) vSphere(TM) ESXi 6.5	VMware ESXi 6.5	
VMware(R) vSphere(TM) ESXi 6.0	VMware ESXi 6.0	
VMware(R) vSphere(TM) ESXi 5.5	VMware ESXi 5.5	
VMware Virtual SAN	vSAN	

Terms

For the major terms and abbreviations used in this manual, refer to "Glossary."

High Risk Activity

The Customer acknowledges and agrees that the Product is designed, developed and manufactured as contemplated for general use, including without limitation, general office use, personal use, household use, and ordinary industrial use, but is not designed, developed and manufactured as contemplated for use accompanying fatal risks or dangers that, unless extremely high safety is secured, could lead directly to death, personal injury, severe physical damage or other loss (hereinafter "High Safety Required Use"), including without limitation, nuclear reaction control in nuclear facility, aircraft flight control, air traffic control, mass transport control, medical life support system, missile launch control in weapon system. The Customer shall not use the Product without securing the sufficient safety required for the High Safety Required Use. In addition, Fujitsu (or other affiliate's name) shall not be liable against the Customer and/or any third party for any claims or damages arising in connection with the High Safety Required Use of the Product.

To Use This Product Safely

This document contains important information required for using this product safely and correctly. Read this manual carefully before using the product. In addition, to use the product safely, the customer must understand the related products (hardware and software) before using the product. Be sure to use the product by following the precautions on the related products. Be sure to keep this manual in a safe and convenient location for quick reference during use of the product.

Modifications

The customer may not modify this software or perform reverse engineering through decompiling or disassembly.

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Modification History

Edition	Publication Date	Section		Modification Overview
01	February 2019	-	-	First edition
02	April 2019	1.1 PRIMEFLEX for VMware vSAN Automatic Setting Values List	[Note]	Modified the notes of the following parameters - Setting for hosts for creating a new cluster vCSA in the configuration of PRIMERGY RX series - Setting for hosts for creating a new cluster vCSA in the configuration of PRIMERGY CX series
		1.2 PRIMEFLEX for Microsoft Storage Spaces Direct Automatic Setting Values List	[Note]	Added the notes on the following parameter - LDAP configuration for iRMC of servers for creating a new cluster
		2.1 PRIMEFLEX HS/ PRIMEFLEX for VMware vSAN Automatic Setting Values List	[Note]	Modified the notes of the following parameters - Setting for hosts for expanding a cluster vCSA in the configuration of PRIMERGY RX series - Setting for hosts for expanding a cluster vCSA in the configuration of PRIMERGY CX series
		2.2 PRIMEFLEX for Microsoft Storage Spaces Direct Automatic Setting Values List	[Note]	Added the notes on the following parameter - LDAP configuration for iRMC of servers for expanding a cluster
		3.1 Setting Items Lists for Cluster Definition Parameters for PRIMEFLEX for VMware vSAN (Cluster Creation)	Setting item	Modified the description for the following parameter - Cluster Details - [LDAP] tab
		3.2 Setting Items Lists for Cluster Definition Parameters for PRIMEFLEX for Microsoft Storage Spaces Direct (Cluster Creation)	Setting item	Added a setting item for the following parameter - Cluster Details - [LDAP] tab
			[Note]	Added the notes on the following parameter - Cluster Details - [LDAP] tab
		3.3 Setting Items Lists for Cluster Definition Parameters for PRIMEFLEX HS/PRIMEFLEX for VMware vSAN (Cluster Expansion)	Setting item	Modified the description for the following parameter - Cluster Details - [LDAP] tab

Edition	Publication Date	Section		Modification Overview
		3.4 Setting Items Lists for Cluster Definition Parameters for PRIMEFLEX for Microsoft Storage Spaces Direct (Cluster Expansion)	Setting item	Added a setting item for the following parameter - Cluster Details - [LDAP] tab
			[Note]	Added the notes on the following parameter - Cluster Details - [LDAP] tab
		4.1 PRIMEFLEX HS/ PRIMEFLEX for VMware vSAN Profile Setting Items List	Note	Added Note
			Setting item	Modified the table for the following setting items - Details - [BIOS] tab for PRIMEFLEX for VMware vSAN - Details - [iRMC] tab - Details - [OS] tab - Details - [OS (for each node)] tab
		4.2 PRIMEFLEX for Microsoft Storage Spaces Direct Profile Setting Items List	Note	Added Note
			Setting item	Modified the table for the following setting items - General Information - Details - [BIOS] tab - Details - [iRMC] tab - Details - [OS] tab
03	May 2019	Related sections throughout the manual	-	Added an article on the PRIMERGY M5 series
		1.1 PRIMEFLEX for VMware vSAN Automatic Setting Values List	Setting item	Modified the table for the following setting items - iRMC S5 of servers for creating a new cluster - [Settings]-[User Management] - Setting for ESXi of servers for creating a new cluster - Setting for hosts for creating a new cluster vCSA in the configuration of PRIMERGY RX series - Setting for hosts for creating a new cluster vCSA in the configuration of PRIMERGY CX series
			[Note]	Added the notes on the following parameter - Setting for ESXi of servers for creating a new cluster
		1.2 PRIMEFLEX for Microsoft Storage Spaces Direct Automatic Setting Values List	Setting item	Modified the table for the following setting items - iRMC S5 of servers for creating a new cluster - [Settings]-[User Management] - Settings for Windows Server Failover Cluster
		2.1 PRIMEFLEX HS/ PRIMEFLEX for VMware vSAN Automatic Setting Values List	Setting item	Modified the table for the following setting items - User management for iRMC S4 of servers for expanding a cluster

Edition	Publication Date	Section		Modification Overview
				- iRMC S5 of servers for expanding a cluster - [Settings]-[User Management] - Setting for ESXi of servers for expanding a cluster - Setting for hosts for expanding a cluster vCSA in the configuration of PRIMERGY RX series - Setting for hosts for expanding a cluster vCSA in the configuration of PRIMERGY CX series
			[Note]	Added the notes on the following parameter - Setting for ESXi of servers for expanding a cluster
		2.2 PRIMEFLEX for Microsoft Storage Spaces Direct Automatic Setting Values List	Setting item	Modified the table for the following setting items - iRMC S5 of servers for expanding a cluster - [Settings]-[User Management]

Contents

Chapter 1 Automatic Setting Values Lists for Cluster Creation

This chapter describes the setting values automatically set by executing the Cluster Creation.

1.1 PRIMEFLEX for VMware vSAN Automatic Setting Values List

This section describes the automatic setting values for PRIMEFLEX for VMware vSAN.

The notation in the "Modification" column of the following table shows whether Cluster Creation can be executed if the setting values of the existing cluster have been changed from the settings of the PRIMEFLEX configuration. (Y: Changeable, N: Not changeable)

Note

- Description of "Setting Value"
  - For setting values followed by *, the value is set by the value entered in the "Create Cluster" wizard.
  - In some "Setting Value," not values but setting locations are described. For actual values, check the relevant setting locations.
- PRIMERGY M5 series is available in ISM 2.4.0.c or later.

ISM-[Management]-[Nodes]-[<Node name for creating a new cluster>]-[Node List]

Setting Item	Setting Value	Modification
[Communication methods] of [Edit] Wizard		
Password	[Node Details] - [iRMC] tab - [Local User Settings] - ['admin' user] - [New Password]*	-
[Properties] tab		
Web i/f URL	https://<IP address of iRMC>/	-
[Log Collection Settings] tab		
Retention Period		
Event Log (days)	7	-
Operation Log (days)	7	-
Security Log (days)	7	-
Archived Log (generations)	7	-
Log Collection Target		
Hardware Log	Enable	-
Operating System Log	Enable	-
Schedule		
Enable schedule execution	Enable	-
Schedule Type	Specify day of the week	-
Day of the week	Every week	-
Day of the week	Saturday	-
Time	0:00	-

ISM-[Management]-[Cluster]

Setting Item	Setting Value	Modification
Virtual Resource		
VMware Virtual SAN	Add information of the created cluster	-
Other		
Cluster Information	Add information of the created cluster	-

ISM-[Settings]-[General]

Setting Item	Setting Value	Modification
Cloud Management Software		
Cloud Management Software	Add information of the created cluster	-

ISM-[Structuring]-[Profiles]-[Profile Settings]-[<Node name for creating a new cluster>]

Setting Item	Setting Value	Modification
[OS] tab		
Execute Script after Installation		
Execute Script after Installation	Enable	-
The directory of Script	kickstart	-
Script to Execute	ESXi_Setting.sh	-

ADVM of PRIMEFLEX for VMware vSAN configuration

Setting Item	Setting Value	Modification
[DNS Manager]-[<Domain name>]		
Host record for forward lookup zones [Note 1]	[Cluster Nodes Selection] - [Target nodes selection] - [Node Name]*	-
Host code for reverse lookup zones [Note 1]	ESXi IP address of servers for creating a new cluster [Note 2]	-

[Note 1]: It is not registered if not using an ADVM configured for PRIMEFLEX. When using an Active Directory currently configured in your environment, register it in "6.7.1.2 Register host records in DNS" in "Operating Procedures."

[Note 2]: For ESXi IP address of servers for creating a new cluster, the value which is specified in the "Node List" screen - [<Name of node configuring a new cluster>] - [OS] tab - [Basic Info] - [Registered IP Address] is set.

iRMC S5 of servers for creating a new cluster - [Settings]-[User Management]

Setting Item	Setting Value	Modification
[iRMC Local User Accounts]-[User with adimistrator privileges]		
User Information		
User Enabled	Enable	-
Name	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [User Name]*	-
Password	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [Password]*	-
Access Configuration		
Redfish/WebUI Permissions		

Setting Item	Setting Value	Modification
Redfish / Web UI User	Enable	-
Redfish Role	Administrator	-
IPMI Privileges		
LAN Channel Privilege	OEM	-
Serial Channel Privilege	OEM	-
Enable User Account Configuration	Enable	-
Enable iRMC Setting Configuration	Enable	-
AVR Permissions		
Enable Video Redirection	Enable	-
Enable Remote Storage	Enable	-
Other		
User Shell (Text Access)	Remote Manager	-
[iRMC Local User Accounts]-['admin' user]		
User Information		
Password	[Node Details] - [iRMC] tab - [Local User Settings] - ['admin' User] - [New Password]*	-

LDAP configuration for iRMC of servers for creating a new cluster

Setting Item	Setting Value	Modification
[User management]-[LDAP configuration] [Note 1]		
Enable LDAP	true	-
Enable LDAP SSL connection	false	-
Forbid log in for local users	[Cluster Details] - [LDAP] tab - [Local User Login]*	-
Always use SSL Login false	[Cluster Details] - [LDAP] tab - [Always use TLS/SSL Login]*	-
Directory Server Type	Active Directory [Cluster Details] - [LDAP] tab - [Directory Server Type]*	-
Domain name	[Cluster Details] - [LDAP] tab - [Domain Name]*	-
Department name	[Cluster Details] - [LDAP] tab - [Division]*	-
Primary		
LDAP Server	[Cluster Details] - [LDAP] tab - [Host Name or IP Address (Primary Host)]*	-
LDAP Port	[Cluster Details] - [LDAP] tab - [Port (Primary Host)]*	-
LDAP SSL Port	[Cluster Details] - [LDAP] tab - [TLS/SSL Port (Primary Host)]*	-
Backup		
LDAP Server	[Cluster Details] - [LDAP] tab - [Host Name or IP Address (Backup Host)]*	-
LDAP Port	[Cluster Details] - [LDAP] tab - [Port (Backup Host)]*	-
LDAP SSL Port	[Cluster Details] - [LDAP] tab - [TLS/SSL Port (Backup Host)]*	-

[Note 1]: Not set if the check was removed for [Cluster Details] - [LDAP] tab - [Activate LDAP Settings] of Cluster Definition Parameters.

Setting for ESXi of servers for creating a new cluster

Setting Item		Setting Value	Modification
OS			
	VMware ESXi	Install	-
	ESXi Patch	Apply if a file is uploaded to ISM	-
SMI-S Provider			
	VMware SMIS Provider	Apply if a file is uploaded to ISM [Note 1]	-
Driver			
	ixgben driver	Enable	-
[Host Client]-[Management]-[System]-[Date and Time]			
	Current date and time	UTC (Coordinated Universal Time)	-
	NTP server	1. [Cluster Details] - [NTP] tab - [NTP Server1 (Host Name or Host IP Address)]* 2. [Cluster Details] - [NTP] tab - [NTP Server2 (Host Name or Host IP Address)]*	-
[Host Client]-[Management]-[Service]			
	TSM	Start / Stop [Note 2]	-
	TSM-SSH	Start / Stop [Note 2]	-
	lwsmd	Start [Note 3]	-
	ntpd	Start	-
[Host Client]-[Management]-[Security and user]			
	User Name	[Node Details] - [OS] tab - [Local User Settings] - [Administrator User ID]*	-
	Password	[Node Details] - [OS] tab - [Local User Settings] - [Password]*	-
	Authentication Join domain [Note 4]	Enable	-
[Host Client]-[Manage]-[Hardware]-[Power Management]			
	Active Policy	High performance	-
[Host Client]-[Storage]-[Datastore]			
	Renaming the local datastore	LacalDatastore_<Host Name> [Note 5]	-
[Host Client]-[Network]-[TCP/IP stack]-[Default TCP/IP stack]-[DNS Configuration]			
	Addresses	IP Address of DNS server specified in the ISM profile [Cluster Details] - [DNS] tab - [IP Address (Secondary DNS Server)]*	-
	Search Domains	[Cluster Details] - [DNS] tab - [Domain Name]*	-
[Host Client]-[Network]-[Firewall rules]			
	NTP Client	Start	-
[Host Client]-[Host]-[Action]-[Privilege]-[Addition of user]			
	Role settings	Adding Admin privilege for Host/virtual machine	-
Other			

Setting Item		Setting Value	Modification
	FQDN settings	[Cluster Nodes Selection] - [Target nodes selection] - [Node Name]. [Cluster Details] - [DNS] tab - [Domain Name]*	-
	IPv6	Disable	-
	Existing VM Network port group	Delete	-
	SSL v3	Enable	-
	tos maxdist [Note 6]	[Cluster Details] - [NTP] tab - [Max Interval between NTP Peer]*	-

[Note 1]: Setting value set if you are using VMware ESXi 6.5.0.5310538.

[Note 2]: Set to "Start" during the execution of Cluster Creation.

[Note 3]: Not started if the check was removed for [Cluster Details] - [LDAP] tab - [Activate LDAP Settings] of Cluster Definition Parameters.

[Note 4]: Not set if the check was removed for [Cluster Details] - [LDAP] tab - [Activate LDAP Settings] of Cluster Definition Parameters.

[Note 5]: Rename from datastore1. For <Host name>, the value which is specified in the "Node List" screen - [<Name of node configuring a new cluster>] - [OS] tab - [Information from OS] - [Host Name] is set.

[Note 6]: Setting value to be set in "tos maxdist" in the "/etc/ntp.conf" file.

Setting for the cluster vCSA

Setting Item		Setting Value	Modification
Clusters			
	Data Center Name	[Basic Information] - [Data Center Name]*	-
	Cluster Name	[Basic Information] - [Cluster Name]*	-
	vSphere DRS	Disable	-
	VMware EVC	Disable	-
vSphere HA			
	vSphere HA	Enable	-
	Host failure response	Restart the virtual machine	-
	Action for host quarantine	Power off the virtual machine then restart it	-
	Host failure response for the datastore in PDL (Permanent Device Loss)	Disable	-
	Host failure response for APD (All Paths Down)	Disable	-
	Monitor the virtual machine	Enable	-
	Monitor an application	Disable	-
	Detailed option das.registerRestartDisabledVMs	false	-
	Detailed option das.useDefaultIsolationAddress	false	-
	Detailed option das.isolationAddress0	[Cluster Details] - [Function] tab - [vSphere HA Settings] - [Isolation Response Address 1]*	-
	Detailed option das.isolationAddress1	[Cluster Details] - [Function] tab - [vSphere HA Settings] - [Isolation Response Address 2]*	-
Virtual SAN			
	Virtual SAN	Enable	-

Setting Item		Setting Value	Modification
	Add disk to storage	[Cluster Details] - [Function] tab - [vSAN Settings] - [Add Disks to Storage]*	-
	Deduplication or compression	[Cluster Details] - [Function] tab - [vSAN Settings] - [Deduplication and Compression]*	-
vDS Settings [Note 1]			
	Number of vDS	Number of vDS specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings]*	-
	vDS Name	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [vDS Name]*	-
	Version	6.5.0	-
	NIOC	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [NIOC]*	-
	MTU	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [MTU]*	-
	Multicast Filtering Mode	Basic	-
	Switch Discovery Protocol Type	LLDP	-
	Switch Discovery Protocol Operation	Standby	-
	Number of uplink	Number of uplink names specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Uplink Settings] - [Uplink Name]*	-
	Uplink name	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Uplink Settings] - [Uplink Name]*	-
vDS Settings - Port Group [Note 1]			
	Number of port groups	Number of port groups specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Port Group]*	-
	Port Group Name	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Port Group] - [Port Group Name]*	-
	Type	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Port Group] - [Type]*	-
	Port bindings	Static binding	-
	Port allocation	Elastic	-
	Number of Ports	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Port Group] - [Number of Ports]*	-
	Network resource pools	Default	-
	VLAN Type	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Port Group] - [VLAN Type]*	-
	VLAN ID	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Port Group] - [VLAN ID]*	-
	NIOC Traffic	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [NIOC Settings] - [Traffic]*	-
	NIOC Shares	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [NIOC Settings] - [Shares]*	-

Setting Item	Setting Value	Modification
NIOC Reservation	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [NIOC Settings] - [Reservation]*	-
NIOC Limit	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [NIOC Settings] - [Limit]*	-
Failover Priority Uplink Name	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Uplink Settings] - [Uplink Name]*	-
Failover Priority How to Distribute	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Uplink Settings] - [Failover Priority] - [How to Distribute]*	-
Failover Priority	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Uplink Settings] - [Failover Priority Settings] - [Priority Order]*	-
Policy Settings Security Promiscuous mode	Reject	-
Policy Settings Security MAC address change	Reject	-
Policy Settings Security Forged Transmits	Reject	-
Policy Settings Traffic shaping Status	Disable	-
Policy Settings Traffic shaping Average Bandwidth	-	-
Policy Settings Traffic shaping Peak Bandwidth	-	-
Policy Settings Traffic shaping Burst size	-	-
Policy Settings Failover and load balancing Load balancing	Root based on the virtual port source	-
Policy Settings Failover and load balancing Network fault detection	Link status only	-
Policy Settings Failover and load balancing Notification to switch	Yes	-
Policy Settings Failover and load balancing Failback	Enable	-
Datastore		
Datastore name	[Cluster Details] - [Storage Pool] tab - [Storage Pool Name]*	-
Type	vsan	-

Setting Item		Setting Value	Modification
	Default Storage Policy	Virtual SAN Default Storage Policy	-

[Note 1]: Not set if vDS of the existing cluster was set.

Setting for hosts for creating a new cluster vCSA in the configuration of PRIMERGY RX series

Setting Item		Setting Value	Modification
Virtual Standard Switch (vSS) - vSwitch0 (Built-in Virtual Switch)			
	vSwitch0	Delete	-
	All vmnic	Delete	-
	Management Network	Delete	-
Virtual Distribution Switch (vDS) - Virtual switch for workload			
	Management traffic	-	-
	VLANID	-	-
	MTU	-	-
	Management IP address	-	-
	subnet mask	-	-
	Failback	-	-
	uplink1	-	-
	uplink2	-	-
	vmk0	-	-
Virtual Distribution Switch (vDS) - Virtual switch for management			
	uplink1	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink1>] - [vmnic name<vmnic2>]*	-
	uplink2	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink2>]- [vmnic name<vmnic4>]*	-
	vmk0	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings]-[vDS-2] - [Port Group<Network Port Group for Management>] - [Port Group Name]*	-
	vmk1	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vSAN>] - [Port Group Name]*	-
	vmk2	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group< Network Port Group for vMotion >] - [Port Group Name]*	-
	IP address of vSAN network	[Node Details] - [vDS] tab - [vDS] - [Port Group<Network Port Group for vSAN>] - [IPv4 Address]*	-
	Subnet mask of vSAN network	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vSAN>] - [IPv4 Subnet Mask]*	-
	IP address of vMotion network	[Node Details] - [vDS] tab - [vDS] - [Port Group<Network Port Group for vMotion>] - [IPv4 Address]*	-
	Subnet mask of vMotion network	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vMotion>] - [IPv4 Subnet Mask]*	-

Setting Item	Setting Value	Modification
[Network] - [Distributed Switch] - [Virtual switch for management] - [Settings] - [System traffic] - [Management traffic]		
Share	30	-
Reserve	500	-
Disk		
Hard disk Mark as local	true	-
SSD Mark as SSD capacity other than for cache (When using an All Flash configuration)	True [Note 1]	-
Datacenter		
Add nodes for creating a new cluster to the virtual network <Name of Virtual Distributed Switch for Workload>	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1] -[vDS Name]*	-
Add nodes for creating a new cluster to the virtual network <Name of Virtual Distributed Switch for Management>	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [vDS Name]*	-
Add hosts for creating a new cluster to datacenter	[Basic Information] - [Data Center Name]*	-
Cluster		
Fault domain or stretch cluster	fd_<Host Name> [Note 2]	-
Add nodes for creating a new cluster to the cluster	[Basic Information] - [Cluster Name]*	-

[Note 1]: Among the two types of SSD, the one with fewer number of units (if the number of units of SSD is the same, it is the one with less capacity) will be set as the SSD for cache.

[Note 2]: For <Host name>, the value which is specified in the "Node List" screen - [<Name of node configuring a new cluster>] - [OS] tab - [Information from OS] - [Host Name] is set.

Setting for hosts for creating a new cluster vCSA in the configuration of PRIMERGY CX series

Setting Item	Setting Value	Modification
Virtual Standard Switch (vSS) - vSwitch0 (Built-in Virtual Switch)		
vSwitch0	Delete	-
All vmnic	Delete	-
Management Network	Delete	-
Virtual Distribution Switch (vDS) - Virtual switch for workload		
Management traffic	-	-
VLANID	-	-
MTU	-	-
Management IP address	-	-
subnet mask	-	-
Failback	-	-
uplink1	-	-

Setting Item	Setting Value	Modification
uplink2	-	-
vmk0	-	-
Virtual Distribution Switch (vDS) - Virtual switch for management		
uplink1	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink1>] - [vmnic name<vmnic1>]*	-
uplink2	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink2>] - [vmnic name<vmnic3>]*	-
vmk0	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for Management>] - [Port Group Name]*	-
vmk1	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vSAN>] - [Port Group Name]*	-
vmk2	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vMotion>] - [Port Group Name]*	-
IP address of vSAN network	[Node Details] - [vDS] tab - [vDS] - [Port Group<Network Port Group for vSAN>] - [IPv4 Address]*	-
Subnet mask of vSAN network	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vSAN>] - [IPv4 Subnet Mask]*	-
IP address of vMotion network	[Node Details] - [vDS] tab - [vDS] - [Port Group<Network Port Group for vMotion>] - [IPv4 Address]*	-
Subnet mask of vMotion network	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vMotion>] - [IPv4 Subnet Mask]*	-
[Network] - [Distributed Switch] - [Virtual switch for management] - [Settings] - [System traffic] - [Management traffic]		
Share	30	-
Reserve	500	-
Disk		
Hard disk Mark as local	true	-
SSD Mark as SSD capacity other than for cache (When using an All Flash configuration)	True [Note 1]	-
Datacenter		
Add nodes for creating a new cluster to the virtual network <Name of Virtual Distributed Switch for Workload>	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1] -[vDS Name]*	-
Add nodes for creating a new cluster to the virtual network <Name of Virtual Distributed Switch for Management>	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [vDS Name]*	-
Add hosts for creating a new cluster to the cluster	[Basic Information] - [Data Center Name]*	-
Cluster		

Setting Item		Setting Value	Modification
	Fault domain or stretch cluster	fd_<Host Name> [Note 2]	-
	Add nodes for creating a new cluster to the cluster	[Basic Information] - [Cluster Name]*	-

[Note 1]: Among the two types of SSD, the one with fewer number of units (if the number of units of SSD is the same, it is the one with less capacity) will be set as the SSD for cache.

[Note 2]: For <Host name>, the value which is specified in the "Node List" screen - [<Name of node configuring a new cluster>] - [OS] tab - [Information from OS] - [Host Name] is set.

Table 1.1 Automatic setting values of vmnic name and uplink name

Setting Item	Setting Value	
	PRIMERGY RX M4 series / PRIMERGY RX M5 series	PRIMERGY CX M4 series / PRIMERGY CX M5 series
vmnic name	- vDS-1 (Virtual distributed switch for workload) Workload port#1: vmnic1 Workload port#2: vmnic3 [Note 1] - vDS-2 (Virtual distributed switch for management) - Network Port Group for Management Active: vmnic2 Standby: vmnic4 [Note 1] - Network Port Group for vMotion Active: vmnic2 Standby: vmnic4 [Note 1] - Network Port Group for vSAN Active: vmnic4 [Note 1] Standby: vmnic2	- vDS-1 (Virtual distributed switch for workload) Workload port#1: vmnic2 Workload port#2: vmnic4 [Note 1] - vDS-2 (Virtual distributed switch for management) - Network Port Group for Management Active: vmnic1 Standby: vmnic3 - Network Port Group for vMotion Active: vmnic1 Standby: vmnic3 - Network Port Group for vSAN Active: vmnic3 Standby: vmnic1
Uplink name	- vDS-1 (Virtual distributed switch for workload) Workload port#1: Uplink2 Workload port#2: Uplink4 - vDS-2 (Virtual distributed switch for management) - Network Port Group for Management Active: Uplink1 Standby: Uplink3 - Network Port Group for vMotion Active: Uplink1 Standby: Uplink3 - Network Port Group for vSAN Active: Uplink3 Standby: Uplink1	- vDS-1 (Virtual distributed switch for workload) Workload port#1: Uplink2 Workload port#2: Uplink4 - vDS-2 (Virtual distributed switch for management) - Network Port Group for Management Active: Uplink1 Standby: Uplink3 - Network Port Group for vMotion Active: Uplink1 Standby: Uplink3 - Network Port Group for vSAN Active: Uplink3 Standby: Uplink1

[Note 1]: If you purchased multiple expansion cards, enter a vmnic name that is appropriate for your environment for the second expansion card.

1.2 PRIMEFLEX for Microsoft Storage Spaces Direct Automatic Setting Values List

This section describes the automatic setting values for PRIMEFLEX for Microsoft Storage Spaces Direct.

The notation in the "Modification" column of the following table shows whether Cluster Creation can be executed if the setting values of the existing cluster have been changed from the settings of the PRIMEFLEX configuration. (Y: Changeable, N: Not changeable)

Note

Description of "Setting Value"

- For setting values followed by *, the value is set by the value entered in the "Create Cluster" wizard.
- In some "Setting Value," not values but setting locations are described. For actual values, check the relevant setting locations.

ISM-[Management]-[Nodes]-[<Node name for creating a new cluster>]-[Node List]

Setting Item	Setting Value	Modification
[Communication methods] of [Edit] Wizard		
Password	[Node Details] - [iRMC] tab - [Local User Settings] - ['admin' User] - [New Password]*	-
[Properties] tab		
Web i/f URL	https://<IP address of iRMC>/	-
[OS] tab		
Account	pflocaladmin	-
[Log Collection Settings] tab		
Retention Period		
Event Log (days)	7	-
Operation Log (days)	7	-
Security Log (days)	7	-
Archived Log (generations)	7	-
Log Collection Target		
Hardware Log	Enable	-
Operating System Log	Enable	-
Schedule		
Enable schedule execution	Enable	-
Schedule Type	Specify day of the week	-
Day of the week	Every week	-
Day of the week	Saturday	-
Time	0:00	-

ISM-[Management]-[Cluster]

Setting Item	Setting Value	Modification
Virtual Resource		
Microsoft Failover Cluster	Add information of the created cluster	-
Other		
Cluster Information	Add information of the created cluster	-

ISM-[Settings]-[General]

Setting Item	Setting Value	Modification
Cloud Management Software		
Cloud Management Software	Add information of the created cluster	-

ISM-[Structuring]-[Profiles]-[Profile Settings]-[<Node name for creating a new cluster>]

Setting Item	Setting Value	Modification
[OS] tab		
Execute Script after Installation		
Execute Script after Installation	Enable	-
Directory Forwarded to the OS	postscript_ClusterOperation	-
Script to Execute	WinSvr_Setting.bat	-

iRMC S5 of servers for creating a new cluster - [Settings]-[User Management]

Setting Item	Setting Value	Modification
[iRMC Local User Accounts]-[User with adimistrator privileges]		
User Information		
User Enabled	Enable	-
Name	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [User Name]*	-
Password	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [Password]*	-
Access Configuration		
Redfish/WebUI Permissions		
Redfish / Web UI User	Enable	-
Redfish Role	Administrator	-
IPMI Privileges		
LAN Channel Privilege	OEM	-
Serial Channel Privilege	OEM	-
Enable User Account Configuration	Enable	-
Enable iRMC Setting Configuration	Enable	-
AVR Permissions		
Enable Video Redirection	Enable	-
Enable Remote Storage	Enable	-
Other		
User Shell (Text Access)	Remote Manager	-
[iRMC Local User Accounts]-['admin' user]		
User Information		
Password	[Node Details] - [iRMC] tab - [Local User Settings] - ['admin' User] - [New Password]*	-

LDAP configuration for iRMC of servers for creating a new cluster

Setting Item	Setting Value	Modification
[User management]-[LDAP configuration] [Note 1]		
Enable LDAP	true	-
Enable LDAP SSL connection	false	-
Forbid log in for local users	[Cluster Details] - [LDAP] tab - [Local User Login]*	-
Always use SSL Login false	[Cluster Details] - [LDAP] tab - [Always use TLS/SSL Login]*	-
Directory Server Type	Active Directory [Cluster Details] - [LDAP] tab - [Directory Server Type]*	-
Domain name	[Cluster Details] - [LDAP] tab - [Domain Name]*	-
Department name	[Cluster Details] - [LDAP] tab - [Division]*	-
Primary		
LDAP Server	[Cluster Details] - [LDAP] tab - [Host Name or IP Address (Primary Host)]*	-
LDAP Port	[Cluster Details] - [LDAP] tab - [Port (Primary Host)]*	-
LDAP SSL Port	[Cluster Details] - [LDAP] tab - [TLS/SSL Port (Primary Host)]*	-
Backup		
LDAP Server	[Cluster Details] - [LDAP] tab - [Host Name or IP Address (Backup Host)]*	-
LDAP Port	[Cluster Details] - [LDAP] tab - [Port (Backup Host)]*	-
LDAP SSL Port	[Cluster Details] - [LDAP] tab - [TLS/SSL Port (Backup Host)]*	-

[Note 1]: In ISM 2.4.0.b or later, not set if the check was removed for [Cluster Details] - [LDAP] tab - [Activate LDAP Settings] of Cluster Definition Parameters.

Settings for Windows Server Failover Cluster

Setting Item	Setting Value	Modification
Create Cluster		
Cluster Name	[Basic Information] - [Cluster Name]*	-
Create Cluster Network		
Number of cluster networks to create	Number of cluster networks specified in [Cluster Details] - [Network] tab - [Management Virtual Switch]*	-
Network Name	[Cluster Details] - [Network] tab - [Management Virtual Switch] - [Network Name]*	-
Role Settings	[Cluster Details] - [Network] tab - [Management Virtual Switch] - [Role Settings]*	-
IP Address	[Cluster Details] - [Network] tab - [Management Virtual Switch] - [IPv4 Network Address]*	-
Subnet Mask	[Cluster Details] - [Network] tab - [Management Virtual Switch] - [IPv4 Subnet Mask]*	-
Networks for Live Migration		
Priority Order	Setting value specified in [Cluster Details] - [Network] tab - [Management Virtual Switch] - [Network Name]*	-

Setting Item	Setting Value	Modification
Storage Pool		
Friendly Name of Storage Pool	S2D on <Cluster Name>	-
Journal Settings		
Media Type	[Cluster Details] - [Storage Pool] tab - [Journal Settings] - [Media Type]*	-
Bus Type	[Cluster Details] - [Storage Pool] tab - [Journal Settings] - [Bus Type]*	-
Storage Tier Settings		
Storage Tier Name	[Cluster Details] - [Storage Pool] tab - [Storage Tier Settings] - [Storage Tier Name]*	-
Media Type	[Cluster Details] - [Storage Pool] tab - [Storage Tier Settings] - [Media Type]*	-
Recovery	[Cluster Details] - [Storage Pool] tab - [Storage Tier Settings] - [Recovery]*	-
Redundancy	[Cluster Details] - [Storage Pool] tab - [Storage Tier Settings] - [Redundancy]*	-
Number of data copies	[Cluster Details] - [Storage Pool] tab - [Storage Tier Settings] - [Number of data copies]*	-

Settings for Windows Server of servers for a new cluster

Setting Item	Setting Value	Modification
WinRM		
Basic authentication	true	-
Enable service		
CredSSP	Enable	-
CredSSP		
Server roll	Enable	-
Client roll	Enable	-
Certificate		
<File in ISM>.cer	Register	-
<File in ISM>.pfx	Register	-
Firewall		
5986	Open	-
HTTPS		
Listener	Create	-
Hyper-V Host		
MAC address range	1st to 3rd octet: Vendor ID (0x00155D) fixed 4th octet: 3rd octet of the IPv4 IP address of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* 5th octet: 4th octet of the IPv4 IP address of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* 6th octet: 0x00-0xFF	-

Setting Item		Setting Value	Modification
Creation of local user			
	User Name	[Node Details] - [OS] tab - [Local User Settings] - [Administrator User ID]*	-
	Password	[Node Details] - [OS] tab - [Local User Settings] - [Password]*	-
Add functions and roles			
	Hyper-V management tool	Install	-
	Windows Server back up	Install	-
	Management of failover cluster	Install	-
Creating virtual switch			
	Virtual switch name	[Node Details] - [Virtual Switch] tab - [Workload Virtual Switch or Management Virtual Switch] - [Virtual Switch Settings] - [Virtual Switch Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	Teaming	Enable [Node Details] - [Virtual Switch] tab - [Workload Virtual Switch or Management Virtual Switch] - [Virtual Switch Settings] - [Embedded Teaming]*	-
VM net adapter - Setting network name			
	Network name	[Node Details] - [Virtual Switch] tab - [Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter for management or Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct or Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct>] - [Adapter Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
VM network settings - Network 1 for live migration, Microsoft Storage Spaces Direct			
	VLANID	[Cluster Details] - [Network] tab - [Management Virtual Switch <Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct>] - [VLAN ID]*	-
	IP Address	[Node Details] - [Virtual Switch] tab - [Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct>] - [IPv4 Address]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	Length of subnet mask	[Node Details] - [Virtual Switch] tab - [Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct>] - [IPv4 Subnet Mask]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	Type of IP address	IPv4	-
VM network settings - Network 2 for live migration, Microsoft Storage Spaces Direct			
	VLANID	[Cluster Details] - [Network] tab - [Management Virtual Switch <Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct>] - [VLAN ID]*	-
	IP Address	[Node Details] - [Virtual Switch] tab - [Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter 2	-

Setting Item		Setting Value	Modification
		for live migration, Microsoft Storage Spaces Direct>] - [IPv4 Address]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	
	Length of subnet mask	[Node Details] - [Virtual Switch] tab - [Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct>] - [IPv4 Subnet Mask]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	Type of IP address	IPv4	-
Network settings			
	IPv6	Disable	-
Network settings - IPv4			
	IP Address	IPv4 IP address of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	Length of subnet mask	IPv4 Length of subnet mask of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	Type of IP address	IPv4	-
	Default Gateway	Default Gateway of Network at OS Individual specified in the ISM profile [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	IP Address	IPv4 IP address of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
Network settings - Prioritized DNS server			
	DNS name	Mgmt	-
	IP Address	IP address of the DNS server specified in the ISM profile	-
	Primary DNS suffix	register=primary	-
	Authentication of DNS server settings	validate=no	-
Network settings - Alternative DNS server			
	DNS name	Mgmt	-
	IP Address	[Cluster Details] - [DNS] tab - [IP Address (Secondary DNS Server)]*	-
	Order	index=2	-
	Authentication of DNS server settings	validate=no	-
Network settings - VMQ for Management Port			
	Enable	True [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	MaxProcessors	(X - 1) / M [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	BaseProcessorNumber	(1 + ((X - 1) / M) * (N - 1)) * Y [Note 1]	-

Setting Item		Setting Value	Modification
		[Node Details] - [Virtual Switch] tab - [Slot Numbers]*	
	MaxProcessorNumber	((X - 1) / M) * N * Y [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
Network settings - VMQ for Workload Port			
	Enable	True [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	MaxProcessors	(X - 1) / M [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	BaseProcessorNumber	(1 + ((X - 1) / M) * (N - 1)) * Y [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	MaxProcessorNumber	((X - 1) / M) * N * Y [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
Network settings - LAN driver			
	VMQ	Enable [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	SR-IOV	Disable [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	QoS(Workload port)	Disable [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	QoS(Management port)	Disable [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-

[Note 1]: Each symbol represents the following value.

X : Number of processor cores

Y : Number of logical processors per core

M : Number of physical network ports for setting VMQ

N : Sequence number (1 to M) of physical network ports for setting VMQ

Chapter 2 Automatic Setting Values Lists for Cluster Expansion

This section describes the setting values automatically set by executing the Cluster Expansion.

2.1 PRIMEFLEX HS/PRIMEFLEX for VMware vSAN Automatic Setting Values List

This section describes the automatic setting values for PRIMEFLEX HS/PRIMEFLEX for VMware vSAN.

The notation in the "Modification" column of the following table shows whether Cluster Expansion can be executed if the setting values of the existing cluster have been changed from the settings of PRIMEFLEX configuration. (Y: Changeable, N: Not changeable)

Note

- Description of "Setting Value"
  - For setting values followed by *, the value is set by the value entered in the "Expand Cluster" wizard.
  - In some "Setting Value," not values but setting locations are described. For actual values, check the relevant setting locations.
- PRIMERGY M5 series is available in ISM 2.4.0.c or later.

ISM - [Management] - [Nodes] - [<Node name for expanding a cluster>] - [Node List]

Setting Item			Setting Value	Modification
[Communication methods] of [Edit] Wizard				
	Password		[Node Details] - [iRMC] tab - [Local User Settings] - ['admin' user] - [New Password]*	N
[Properties] tab				
	Web i/f URL		https://<IP address of iRMC>/	N
[Log Collection Settings] tab				
	Retention Period			
		Event Log (days)	7	Y
		Operation Log (days)	7	Y
		Security Log (days)	7	Y
		Archived Log (generations)	7	Y
	Log Collection Target			
		Hardware Log	Enable	Y
		Operating System Log	Enable	Y
	Schedule			
		Enable schedule execution	Enable	N
		Schedule Type	Specify day of the week	Y
		Day of the week	Every week	Y
		Day of the week	Saturday	Y
		Time	0:00	Y

ISM-[Structuring]-[Profiles]-[Profile Settings]-[<Node name for expanding a cluster>]

Setting Item	Setting Value	Modification
[OS] tab		
Execute Script after Installation		
Execute Script after Installation	Enable	N
The directory of Script	kickstart	N
Script to Execute	ESXi_Setting.sh	N

ADVM of PRIMEFLEX HS/PRIMEFLEX for VMware vSAN configuration

Setting Item	Setting Value	Modification
[DNS Manager]-[<Domain name>]		
Host record for forward lookup zones [Note 1]	[Cluster Nodes Selection] - [Target nodes selection] - [Node Name]*	N
Host code for reverse lookup zones [Note 1]	ESXi IP address of servers for expanding a cluster [Note 2]	N

[Note 1]: It is not registered if not using an ADVM configured for PRIMEFLEX. If not using an ADVM configured for PRIMEFLEX, register it in "6.9.1.3 Register host records in DNS" in "Operating Procedures."

[Note 2] For ESXi IP address of servers for expanding a cluster, the value which is specified in the "Node List" screen - [<Node name for expanding a cluster>] - [OS] tab - [Basic Info] - [Registered IP Address] is set.

User management for iRMC S4 of servers for expanding a cluster

Setting Item	Setting Value	Modification
[iRMC S4 user information]-[Create new user]		
Name	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [User Name]*	Y
Password	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [Password]*	Y
IPMI User Enabled	true	N
LAN Access Privilege	OEM	N
Serial Access Privilege	OEM	N
Privilege to Change User Accounts	true	N
Privilege to Change iRMC S4 Settings	true	N
AVR Use Privilege	true	N
Remote Storage Use Privilege	true	N
User Shell (Text Access)	RemoteManger	N
[iRMC S4 user information]-['admin' user]		
Password	[Node Details] - [iRMC] tab - [Local User Settings] - ['admin' user] - [New Password]	N

iRMC S5 of servers for expanding a cluster - [Settings]-[User Management]

Setting Item	Setting Value	Modification
[iRMC Local User Accounts]-[User with adimistrator privileges]		

Setting Item	Setting Value	Modification
User Information		
User Enabled	Enable	N
Name	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [User Name]*	Y
Password	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [Password]*	Y
Access Configuration		
Redfish/WebUI Permissions		
Redfish / Web UI User	Enable	N
Redfish Role	Administrator	N
IPMI Privileges		
LAN Channel Privilege	OEM	N
Serial Channel Privilege	OEM	N
Enable User Account Configuration	Enable	N
Enable iRMC Setting Configuration	Enable	N
AVR Permissions		
Enable Video Redirection	Enable	N
Enable Remote Storage	Enable	N
Other		
User Shell (Text Access)	Remote Manager	N
[iRMC Local User Accounts]-['admin' user]		
User Information		
Password	[Node Details] - [iRMC] tab - [Local User Settings] - ['admin' User] - [New Password]*	N

LDAP configuration for iRMC of servers for expanding a cluster

Setting Item	Setting Value	Modification
[User management]-[LDAP configuration] [Note 1]		
Enable LDAP	true	N
Enable LDAP SSL connection	false	N
Forbid log in for local users	[Cluster Details] - [LDAP] tab - [Local User Login]*	N
Always use SSL Login false	[Cluster Details] - [LDAP] tab - [Always use TLS/SSL Login]*	N
Directory Server Type	Active Directory	N
Domain name	[Cluster Details] - [LDAP] tab - [Domain Name]*	N
Department name	[Cluster Details] - [LDAP] tab - [Division]*	N
Primary		
LDAP Server	[Cluster Details] - [LDAP] tab - [Host Name or IP Address (Primary Host)]*	Y
LDAP Port	[Cluster Details] - [LDAP] tab - [Port (Primary Host)]*	Y

Setting Item			Setting Value	Modification
		LDAP SSL Port	[Cluster Details] - [LDAP] tab - [TLS/SSL Port (Primary Host)]*	Y
	Backup			
		LDAP Server	[Cluster Details] - [LDAP] tab - [Host Name or IP Address (Backup Host)]*	Y
		LDAP Port	[Cluster Details] - [LDAP] tab - [Port (Backup Host)]*	Y
		LDAP SSL Port	[Cluster Details] - [LDAP] tab - [TLS/SSL Port (Backup Host)]*	Y

[Note 1]: Not set if the check was removed for [Cluster Details] - [LDAP] tab - [Activate LDAP Settings] of Cluster Definition Parameters.

Setting for ESXi of servers for expanding a cluster

Setting Item		Setting Value	Modification
OS			
	VMware ESXi	Install	-
	ESXi Patch	Apply if a file is uploaded to ISM	-
SMI-S Provider			
	VMware SMIS Provider	Apply if a file is uploaded to ISM [Note 1] [Note 2] - [Note 1] [Note 3]	-
Driver			
	ixgben driver	Enable [Note 1]	-
[Host Client]-[Management]-[System]-[Date and Time]			
	Current date and time	UTC (Coordinated Universal Time)	-
	NTP server	1. [Cluster Details] - [NTP] tab - [NTP Server1 (Host Name or Host IP Address)]* 2. [Cluster Details] - [NTP] tab - [NTP Server2 (Host Name or Host IP Address)]*	-
[Host Client]-[Management]-[Service]			
	TSM	Start / Stop [Note 4]	-
	TSM-SSH	Start / Stop [Note 4]	-
	lwsmd	Start [Note 5]	-
	ntpd	Start	-
[Host Client]-[Management]-[Security and user]			
	User Name	[Node Details] - [OS] tab - [Local User Settings] - [Administrator User ID]*	-
	Password	[Node Details] - [OS] tab - [Local User Settings] - [Password]*	-
	Authentication Join domain [Note 6]	Enable	-
[Host Client]-[Manage]-[Hardware]-[Power Management]			
	Active Policy	High performance	-
[Host Client]-[Storage]-[Datastore]			
	Renaming the local datastore	LocalDatastore_<Host name> [Note 7]	-
[Host Client]-[Network]-[TCP/IP stack]-[Default TCP/IP stack]-[DNS Configuration]			

Setting Item		Setting Value	Modification
	Addresses	IP Address of DNS server specified in the ISM profile [Cluster Details] - [DNS] tab - [IP Address (Secondary DNS server)]*	-
	Search Domains	[Cluster Details] - [DNS] tab - [Domain Name]*	-
[Host Client]-[Network]-[Firewall rules]			
	NTP Client	Start	-
[Host Client]-[Host]-[Action]-[Privilege]-[Addition of user]			
	Role settings	Adding Admin privilege for Host/virtual machine	-
Other			
	FQDN settings	[Cluster Nodes Selection] - [Target nodes selection] - [Node Name]. [Cluster Details] - [DNS] tab - [Domain Name]*	-
	IPv6	Disable	-
	Existing VM Network port group	Delete	-
	SSL v3	Enable	-
	tos maxdist [Note 8]	[Cluster Details] - [NTP] tab - [Max Interval between NTP Peer]*	-

[Note 1]: Setting value set if you are using PRIMEFLEX for VMware vSAN.

[Note 2]: Setting value set if you are using VMware ESXi 6.5.0.5310538.

[Note 3]: Setting value set if you are using VMware ESXi 6.5 Update 1.

[Note 4]: Set to "Start" during the execution of Cluster Expansion.

[Note 5]: Not started if the check was removed for [Cluster Details] - [LDAP] tab - [Activate LDAP Settings] of Cluster Definition Parameters.

[Note 6]: Not set if the check was removed for [Cluster Details] - [LDAP] tab - [Activate LDAP Settings] of Cluster Definition Parameters.

[Note 7]: Rename from datastore1. For <Host name>, the value which is specified in the "Node List" screen - [<Node name for expanding a cluster>] - [OS] tab - [Information from OS] - [Host Name] is set.

[Note 8]: Setting value to be set in "tos maxdist" in the "/etc/ntp.conf" file.

Setting for hosts for expanding a cluster vCSA in the configuration of PRIMERGY RX series

Setting Item		Setting Value	Modification
Virtual Standard Switch (vSS) - vSwitch0 (Built-in Virtual Switch)			
	vSwitch0	Delete	N
	All vmnic	Delete	N
	Management Network	Delete	N
Virtual Distribution Switch (vDS) - Virtual switch for workload			
	Management traffic	-	-
	VLANID	-	-
	MTU	-	-
	Management IP address	-	-
	subnet mask	-	-
	Failback	-	-
	uplink1	-	-

Setting Item	Setting Value	Modification
uplink2	-	-
vmk0	-	-
Virtual Distribution Switch (vDS) - Virtual switch for management		
uplink1	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink1>] - [vmnic name<vmnic0>]* [Note 1] [Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink1>] - [vmnic name<vmnic2>]* [Note 2]	N
uplink2	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink2>] - [vmnic name<vmnic2>]* [Note 1] [Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink2>] - [vmnic name<vmnic4>]* [Note 2]	N
vmk0	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings]-[vDS-2] - [Port Group<Network Port Group for Management>] - [Port Group Name]*	N
vmk1	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vSAN>] - [Port Group Name]*	N
vmk2	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vMotion>] - [Port Group Name]*	N
IP address of vSAN network	[Node Details] - [vDS] tab - [vDS] - [Port Group<Network Port Group for vSAN>] - [IPv4 Address]*	Y
Subnet mask of vSAN network	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vSAN>] - [IPv4 Subnet Mask]*	Y
IP address of vMotion network	[Node Details] - [vDS] tab - [vDS] - [Port Group<Network Port Group for vMotion>] - [IPv4 Address]*	Y
Subnet mask of vMotion network	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vMotion>] - [IPv4 Subnet Mask]*	Y
[Network] - [Distributed Switch] - [Virtual switch for management] - [Settings] - [System traffic] - [Management traffic]		
Share	30	Y
Reserve	500	Y
Disk		
Hard disk Mark as local	true	-
SSD Mark as SSD capacity other than for cache (When using an All Flash configuration)	True [Note 3]	-
Datacenter		
Add hosts for expanding a cluster to the virtual network	-	-
Add hosts for expanding a cluster to datacenter	[Basic Information]- [Data Center Name]*	Y

Setting Item		Setting Value	Modification
Cluster			
	Fault domain or stretch cluster	fd_<Host Name> [Note 4]	-
	Add nodes for expanding a cluster to the cluster	Selected cluster name	Y

[Note 1]: Setting value set if you are using PRIMEFLEX HS.

[Note 2]: Setting value set if you are using PRIMEFLEX for VMware vSAN.

[Note 3]: SSDs that meet the following conditions are set as the SSD for cache.

PRIMEFLEX HS: The capacity is 160 - 210 GB, 320 - 420 GB

PRIMEFLEX for VMware vSAN: Among the two types of SSD, the one with fewer number of units (if the number of units of SSD is the same, it is the one with less capacity)

[Note 4]: For <Host name>, the value which is specified in the "Node List" screen - [<Node name for expanding a cluster>] - [OS] tab - [Information from OS] - [Host Name] is set.

Setting for hosts for expanding a cluster vCSA in the configuration of PRIMERGY CX series

Setting Item		Setting Value	Modification
Virtual Standard Switch (vSS) - vSwitch0 (Built-in Virtual Switch)			
	vSwitch0	- [Note 1] Delete [Note 2]	N
	All vmnic	- [Note 1] Delete [Note 2]	N
	Management Network	- [Note 1] Delete [Note 2]	N
Virtual Distribution Switch (vDS) - Virtual switch for workload			
	Management traffic	Check [Note 1] - [Note 2]	N
	VLANID	0 [Note 1] - [Note 2]	N
	MTU	1500 [Note 1] - [Note 2]	N
	Management IP address	[Node Details] - [vDS] tab - [vDS] - [Port Group<Network Port Group for Management>] - [IPv4 Address]* [Note 1] - [Note 2]	N
	subnet mask	[Node Details] - [vDS] tab - [vDS] - [Port Group <Network Port Group for Management>] - [IPv4 Subnet mask]* [Note 1] - [Note 2]	N
	Failback	True [Note 1] - [Note 2]	N
	uplink1	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink1>] - [vmnic name<vmnic0>]* [Note 1] - [Note 2]	N

Setting Item	Setting Value	Modification
uplink2	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink2>] - [vmnic name<vmnic1>]* [Note 1] - [Note 2]	N
vmk0	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings]- [vDS-2] - [Port Group<Network Port Group for Management>] - [Port Group Name]* [Note 1] [Note 3] - [Note 2]	N
Virtual Distribution Switch (vDS) - Virtual switch for management		
uplink1	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink1>] - [vmnic name<vmnic2>]* [Note 1] [Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink1>] - [vmnic name<vmnic1>]* [Note 2]	N
uplink2	[Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink2>] - [vmnic name<vmnic3>]* [Note 1] [Node Details] - [vDS] tab - [vDS] - [Physical NIC<uplink2>] - [vmnic name<vmnic3>]* [Note 2]	N
vmk0	- [Note 1] [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for Management>] - [Port Group Name]* [Note 2]	N
vmk1	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vSAN>] - [Port Group Name]*	N
vmk2	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vMotion>] - [Port Group Name]*	N
IP address of vSAN network	[Node Details] - [vDS] tab - [vDS] - [Port Group<Network Port Group for vSAN>] - [IPv4 Address]*	Y
Subnet mask of vSAN network	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vSAN>] - [IPv4 Subnet Mask]*	Y
IP address of vMotion network	[Node Details] - [vDS] tab - [vDS] - [Port Group<Network Port Group for vMotion>] - [IPv4 Address]*	Y
Subnet mask of vMotion network	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network Port Group for vMotion>] - [IPv4 Subnet Mask]*	Y
[Network] - [Distributed Switch] - [Virtual switch for management] - [Settings] - [System traffic] - [Management traffic]		
Share	- [Note 1] 30 [Note 2]	Y
Reserve	- [Note 1] 500 [Note 2]	Y
Disk		
Hard disk Mark as local	true	-
SSD Mark as SSD capacity other than for	True [Note 4]	-

Setting Item		Setting Value	Modification
	cache (When using an All Flash configuration)		
Datacenter			
	Add hosts for expanding a cluster to the virtual network	[Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1] - [vDS Name]* [Note 1] - [Note 2]	N
	Add hosts for expanding a cluster to datacenter	[Basic Information] - [Data Center Name]*	Y
Cluster			
	Fault domain or stretch cluster	fd_<Host Name> [Note 5]	-
	Add nodes for expanding a cluster to the cluster	Selected cluster name	Y

[Note 1]: Setting value set if you are using PRIMEFLEX HS.

[Note 2]: Setting value set if you are using PRIMEFLEX for VMware vSAN.

[Note 3]: Transfer from vSS to vDS.

[Note 4]: SSDs that meet the following conditions are set as the SSD for cache.

PRIMEFLEX HS: The capacity is 160 - 210 GB, 320 - 420 GB

PRIMEFLEX for VMware vSAN: Among the two types of SSD, the one with fewer number of units (if the number of units of SSD is the same, it is the one with less capacity)

[Note 5]: For <Host name>, the value which is specified in the "Node List" screen - [<Node name for expanding a cluster>] - [OS] tab - [Information from OS] - [Host Name] is set.

Table 2.1 Automatic setting values of vmnic name and uplink name

Setting Item	Setting Value	
	If PRIMERGY CX M2 series are not included in the current cluster	If PRIMERGY CX M2 series are included in the current cluster
vmnic name	If the case is PRIMEFLEX HS - vDS-1 (Virtual distributed switch for workload) Workload port#1: vmnic1 Workload port#2: vmnic3 [Note 1] - vDS-2 (Virtual distributed switch for management) - Network Port Group for Management Active: vmnic0 Standby: vmnic2 [Note 1] - Network Port Group for vMotion Active: vmnic0 Standby: vmnic2 [Note 1] - Network Port Group for vSAN Active: vmnic2 [Note 1] Standby: vmnic0 If the case is PRIMEFLEX for VMware vSAN [Note 2]	If the case is PRIMEFLEX HS [PRIMERGY CX M2 series] - vDS-1 (Virtual distributed switch for management) - Network Port Group for Management Active: vmnic0 Active: vmnic1 - vDS-2 (Virtual distributed switch for management and workload) - Network Port Group for vMotion Active: vmnic2 Standby: vmnic3 - Network Port Group for vSAN Active: vmnic3 Standby: vmnic2 [PRIMERGY CX M4 series / PRIMERGY CX M5 series] - vDS-1 (Virtual distributed switch for management)

Setting Item	Setting Value	
	If PRIMERGY CX M2 series are not included in the current cluster	If PRIMERGY CX M2 series are included in the current cluster
	[PRIMERGY RX M4 series / PRIMERGY RX M5 series] - vDS-1 (Virtual distributed switch for workload) Workload port#1: vmnic1 Workload port#2: vmnic3 [Note 1] - vDS-2 (Virtual distributed switch for management) - Network Port Group for Management Active: vmnic2 Standby: vmnic4 [Note 1] - Network Port Group for vMotion Active: vmnic2 Standby: vmnic4 [Note 1] - Network Port Group for vSAN Active: vmnic4 [Note 1] Standby: vmnic2 [PRIMERGY CX M4 series / PRIMERGY CX M5 series] - vDS-1 (Virtual distributed switch for workload) Workload port#1: vmnic2 Workload port#2: vmnic4 [Note 1] - vDS-2 (Virtual distributed switch for management) - Network Port Group for Management Active: vmnic1 Standby: vmnic3 - Network Port Group for vMotion Active: vmnic1 Standby: vmnic3 - Network Port Group for vSAN Active: vmnic3 Standby: vmnic1	- Network Port Group for Management Active: vmnic1 Active: vmnic2 - vDS-2 (Virtual distributed switch for management and workload) - Network Port Group for vMotion Active: vmnic3 Standby: vmnic4 - Network Port Group for vSAN Active: vmnic3 Standby: vmnic4
Uplink name	If the case is PRIMEFLEX HS /PRIMEFLEX for VMware vSAN - vDS-1 (Virtual distributed switch for workload) Workload port#1: Uplink2 Workload port#2: Uplink4 - vDS-2 (Virtual distributed switch for management) - Network Port Group for Management Active: Uplink1 Standby: Uplink3	If the case is PRIMEFLEX HS - vDS-1 (Virtual distributed switch for management) - Network Port Group for Management Active: Uplink1 Active: Uplink2 - vDS-2 (Virtual distributed switch for management/ workload) - Network Port Group for vMotion Active: Uplink3 Standby: Uplink4

Setting Item	Setting Value	
	If PRIMERGY CX M2 series are not included in the current cluster	If PRIMERGY CX M2 series are included in the current cluster
	- Network Port Group for vMotion Active: Uplink1 Standby: Uplink3 - Network Port Group for vSAN Active: Uplink3 Standby: Uplink1	- Network Port Group for vSAN Active: Uplink4 Standby: Uplink3

[Note 1]: If you purchased multiple expansion cards, enter a vmnic name that is appropriate for your environment for the second expansion card.

[Note 2]: The same as if expanding PRIMERGY M4 series / PRIMERGY M5 series in PRIMEFLEX HS.

2.2 PRIMEFLEX for Microsoft Storage Spaces Direct Automatic Setting Values List

This section describes the automatic setting values for PRIMEFLEX for Microsoft Storage Spaces Direct.

The notation in the "Modification" column of the following table shows whether Cluster Expansion can be executed if the setting values of the existing cluster have been changed from the settings of the PRIMEFLEX configuration. (Y: Changeable, N: Not changeable)

Note

Description of "Setting Value"

- For setting values followed by *, the value is set by the value entered in the "Expand Cluster" wizard.
- In some "Setting Value," not values but setting locations are described. For actual values, check the relevant setting locations.

ISM - [Management] - [Nodes] - [<Node name for expanding a cluster>] - [Node List]

Setting Item	Setting Value	Modification
[Communication methods] of [Edit] Wizard		
Password	[Node Details] - [iRMC] tab - [Local User Settings] - ['admin' user] - [New Password]*	N
[Properties] tab		
Web i/f URL	https://<IP address of iRMC>/	N
[OS] tab		
Account	pflocaladmin	N
[Log Collection Settings] tab		
Retention Period		
Event Log (days)	7	Y
Operation Log (days)	7	Y
Security Log (days)	7	Y
Archived Log (generations)	7	Y
Log Collection Target		
Hardware Log	Enable	Y

Setting Item	Setting Value	Modification
Operating System Log	Enable	Y
Schedule		
Enable schedule execution	Enable	N
Schedule Type	Specify day of the week	Y
Day of the week	Every week	Y
Day of the week	Saturday	Y
Time	0:00	Y

ISM-[Structuring]-[Profiles]-[Profile Settings]-[<Node name for expanding a cluster>]

Setting Item	Setting Value	Modification
[OS] tab		
Execute Script after Installation		
Execute Script after Installation	Enable	N
Directory Forwarded to the OS	postscript_ClusterOperation	N
Script to Execute	WinSvr_Setting.bat	N

iRMC S5 of servers for expanding a cluster - [Settings]-[User Management]

Setting Item	Setting Value	Modification
[iRMC Local User Accounts]-[User with adimistrator privileges]		
User Information		
User Enabled	Enable	N
Name	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [User Name]*	Y
Password	[Node Details] - [iRMC] tab - [Local User Settings] - [Administrator User] - [Password]*	Y
Access Configuration		
Redfish/WebUI Permissions		
Redfish / Web UI User	Enable	N
Redfish Role	Administrator	N
IPMI Privileges		
LAN Channel Privilege	OEM	N
Serial Channel Privilege	OEM	N
Enable User Account Configuration	Enable	N
Enable iRMC Setting Configuration	Enable	N
AVR Permissions		
Enable Video Redirection	Enable	N
Enable Remote Storage	Enable	N
Other		

Setting Item	Setting Value	Modification
User Shell (Text Access)	Remote Manager	N
[iRMC Local User Accounts]-['admin' user]		
User Information		
Password	[Node Details] - [iRMC] tab - [Local User Settings] - ['admin' User] - [New Password]*	N

LDAP configuration for iRMC of servers for expanding a cluster

Setting Item	Setting Value	Modification
[User management]-[LDAP configuration] [Note 1]		
Enable LDAP	true	N
Enable LDAP SSL connection	false	N
Forbid log in for local users	[Cluster Details] - [LDAP] tab - [Local user login]*	N
Always use SSL Login	[Cluster Details] - [LDAP] tab - [Always use TLS/SSL Login]*	N
Directory Server Type	Active Directory	N
Domain name	[Cluster Details] - [LDAP] tab - [Domain Name]*	N
Department name	[Cluster Details] - [LDAP] tab - [Division]*	N
Primary		
LDAP Server	[Cluster Details] - [LDAP] tab - [Host Name or IP Address (Primary Host)]*	Y
LDAP Port	[Cluster Details] - [LDAP] tab - [Port (Primary Host)]*	Y
LDAP SSL Port	[Cluster Details] - [LDAP] tab - [TLS/SSL Port (Primary Host)]*	Y
Backup		
LDAP Server	[Cluster Details] - [LDAP] tab - [Host Name or IP Address (Backup Host)]*	Y
LDAP Port	[Cluster Details] - [LDAP] tab - [Port (Backup Host)]*	Y
LDAP SSL Port	[Cluster Details] - [LDAP] tab - [TLS/SSL Port (Backup Host)]*	Y

[Note 1]: In ISM 2.4.0.b or later, not set if the check was removed for [Cluster Details] - [LDAP] tab - [Activate LDAP Settings] of Cluster Definition Parameters.

Settings for Windows Server of servers for expanding a cluster

Setting Item	Setting Value	Modification
WinRM		
Basic authentication	true	-
Enable service		
CredSSP	Enable	-
CredSSP		
Server roll	Enable	-
Client roll	Enable	-
Certificate		
<File in ISM>.cer	Register	-

Setting Item		Setting Value	Modification
	<File in ISM>.pfx	Register	-
Firewall			
	5986	Open	-
HTTPS			
	Listener	Create	-
Hyper-V Host			
	MAC address range	1st to 3rd octet: Vendor ID (0x00155D) fixed 4th octet: 3rd octet of the IPv4 IP address of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* 5th octet: 4th octet of the IPv4 IP address of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* 6th octet: 0x00-0xFF	-
Creation of local user			
	User Name	[Node Details] - [OS] tab - [Local User Settings] - [Administrator User ID]*	-
	Password	[Node Details] - [OS] tab - [Local User Settings] - [Password]*	-
Add functions and roles			
	Hyper-V management tool	Install	-
	Windows Server back up	Install	-
	Management of failover cluster	Install	-
Creating virtual switch			
	Virtual switch name	[Node Details] - [Virtual Switch] tab - [Workload Virtual Switch or Management Virtual Switch] - [Virtual Switch Settings] - [Virtual Switch Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	N
	Teaming	[Node Details] - [Virtual Switch] tab - [Workload Virtual Switch or Management Virtual Switch] - [Virtual Switch Settings] - [Embedded Teaming]*	-
VM net adapter - Setting network name			
	Network name	[Node Details] - [Virtual Switch] tab - [Workload Virtual Switch or Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter for management or Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct or Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct>] - [Adapter Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	N
VM network settings - Network 1 for live migration, Microsoft Storage Spaces Direct			
	VLANID	The VLAN ID set for live migration, Microsoft Storage Spaces Direct network 1 for the current servers configured in the cluster	Y
	IP Address	[Node Details] - [Virtual Switch] tab - [Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct>] - [IPv4 Address]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	Y

Setting Item		Setting Value	Modification
	Length of subnet mask	[Node Details] - [Virtual Switch] tab - [Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct>] - [IPv4 Subnet Mask]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	Y
	Type of IP address	IPv4	N
VM network settings - Network 2 for live migration, Microsoft Storage Spaces Direct			
	VLANID	The VLAN ID set for live migration, Microsoft Storage Spaces Direct network 2 for the current servers configured in the cluster	Y
	IP Address	[Node Details] - [Virtual Switch] tab - [Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct>] - [IPv4 Address]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	Y
	Length of subnet mask	[Node Details] - [Virtual Switch] tab - [Management Virtual Switch] - [Virtual Network Adapter <Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct>] - [IPv4 Subnet Mask]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	Y
	Type of IP address	IPv4	N
Network settings			
	IPv6	Disable	-
Network settings - IPv4			
	IP Address	IPv4 IP address of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	Y
	Length of subnet mask	IPv4 Length of subnet mask of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	Y
	Type of IP address	IPv4	N
	Default Gateway	Default Gateway of Network at OS Individual specified in the ISM profile [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	Y
	IP Address	IPv4 IP address of [Cluster Nodes Selection] - [Target nodes selection] - [Node Name]* [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	Y
Network settings - Prioritized DNS server			
	DNS name	Mgmt	N
	IP Address	IP address of the DNS server specified in the ISM profile	Y
	Primary DNS suffix	register=primary	-
	Authentication of DNS server settings	validate=no	-
Network settings - Alternative DNS server			
	DNS name	Mgmt	N

Setting Item		Setting Value	Modification
	IP Address	[Cluster Details] - [DNS] tab - [IP Address (Secondary DNS server)]*	Y
	Order	index=2	-
	Authentication of DNS server settings	validate=no	-
Network settings - VMQ for Management Port			
	Enable	True [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	MaxProcessors	(X - 1) / M [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	BaseProcessorNumber	(1 + ((X - 1) / M) * (N - 1)) * Y [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	MaxProcessorNumber	((X - 1) / M) * N * Y [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
Network settings - VMQ for Workload Port			
	Enable	True [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	MaxProcessors	(X - 1) / M [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	BaseProcessorNumber	(1 + ((X - 1) / M) * (N - 1)) * Y [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	MaxProcessorNumber	((X - 1) / M) * N * Y [Note 1] [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
Network settings - LAN driver			
	VMQ	Enable [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	SR-IOV	Disable [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	QoS(Workload port)	Disable [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-
	QoS(Management port)	Disable [Node Details] - [Virtual Switch] tab - [Slot Numbers]*	-

[Note 1]: Each symbol represents the following value.

X : Number of processor cores

Y : Number of logical processors per core

M : Number of physical network ports for setting VMQ

N : Sequence number (1 to M) of physical network ports for setting VMQ

Chapter 3 Setting Items Lists for Cluster Definition Parameters

This chapter describes the setting items for Cluster Definition Parameters when executing Cluster Creation and Cluster Expansion.

3.1 Setting Items Lists for Cluster Definition Parameters for PRIMEFLEX for VMware vSAN (Cluster Creation)

This section describes the cluster definition parameter setting values of the Cluster Creation of PRIMEFLEX HS/PRIMEFLEX for VMware vSAN.

Note

- If you are using Cluster Creation of PRIMEFLEX HS/PRIMEFLEX for VMware vSAN, set the following Cluster Definition Parameter setting values with the "Create Cluster" wizard.
- When using Export/Import of Cluster Definition Parameters, edit Cluster Definition Parameters to set them appropriately according to your environment.
- PRIMERGY M5 series is available in ISM 2.4.0.c or later.

CMS Information [Note 1]

Setting Item	Description	Setting Value
Cluster Type	Cluster Type - VMware vSAN Cluster - Microsoft Failover Cluster	VMware vSAN Cluster
Cloud Management Software Name	Cloud Management Software Name	Arbitrary value

[Note 1]: This item is required to be specified when you create Cluster Definition Parameters. This parameter is not displayed when editing Cluster Definition Parameters.

Basic Information

Setting Item	Description	Setting Value
Cloud Management Software Name [Note 1]	Cloud Management Software Name	Setting value specified in [CMS Information] - [Cloud Management Software Name]
Type [Note 1]	Cluster Type	VMware vSAN Cluster
Data Center Name	Name of the datacenter that the cluster belongs to	Name of the datacenter that the cluster belongs to
Cluster Name [Note 1]	Cluster Name	Name of the cluster that the cluster creates
Storage Configuration	Storage Configuration - Hybrid - All Flash Default: Hybrid	Hybrid or All Flash
Network Configuration	Type of network configuration - Type I	Type I

[Note 1]: This parameter can not be set.

Cluster Details - [DNS] tab

Setting Item	Description	Setting Value
Domain Name	DNS domain name	DNS domain name
IP Address (Secondary DNS Server)	IP address of secondary DNS server [Note 1]	- If you are using the Active Directory currently configured in your environment: IP address of the customers' AD2 - If you are using the ADVM configured as dedicated to PRIMEFLEX HS/ PRIMEFLEX for VMware vSAN: IP address of ADVM2
DNS Record Registration [Note 2]	Specify whether to automatically register the host (A/PTR) records of servers for creating a new cluster. If you set it to "Enable" it will be registered automatically. - Enable - Disable Default: Disable	- If you are using the Active Directory currently configured in your environment or using the configuration without AD links: Disable - If you are using the ADVM configured as dedicated to PRIMEFLEX HS/ PRIMEFLEX for VMware vSAN: Enable
WinRM Service Port [Note 2]	Specify the communication system and the port number of the WinRM service of the DNS server. - Communication system - HTTPS - HTTP Default: HTTPS - Port Number - For HTTPS Port number of the WinRM service (SSL) of the DNS server If you specified this item, communication with the DNS server will be encrypted (SSL). It is required to register a TLS/SSL communication authentication certificate in the DNS server in advance. Default: 5986 - For HTTP Port number of the WinRM service (non SSL) of the DNS server Specify if communicating with the DNS server in plain text. Default: 5985	- Communication system HTTPS or HTTP - Port Number - For HTTPS: 5986 - For HTTP: 5985
User Name [Note 2]	User name used when connecting to the DNS server	pfadmin

Setting Item	Description	Setting Value
Password [Note 2] [Note 3]	Password used when connecting to the DNS server	Password of pfadmin
Password (Confirmation) [Note 2] [Note 3]	Password used when connecting to the DNS server (Confirmation)	Password of pfadmin

[Note 1]: The IP address of the primary DNS server is specified in the ISM profile.

[Note 2]: DNS server is only enabled when using Windows Server. If you are not using the PRIMEFLEX configuration ADVM or the link with Active Directory using AD servers in your environment, set [DNS Record Registration] to "Disable." In addition, [WinRM Service Port], [WinRM Service (SSL) Port], [User Name] and [Password] are not required to be specified.

[Note 3]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Cluster Details - [NTP] tab

Setting Item	Description	Setting Value
NTP Server1 (Host Name or IP Address)	Host name or IP address of NTP server1	Host name or IP address of NTP server1
NTP Server2 (Host Name or IP Address)	Host name or IP address of NTP server2	Host name or IP address of NTP server2
Max Interval between NTP Peer	Maximum interval to peer for NTP time source setting (Seconds) Default: 30 (Seconds)	30

Cluster Details - [LDAP] tab [Note 1]

Setting Item	Description	Setting Value
Activate LDAP Settings	Specify whether to enable LDAP settings. ☑: Enable ☐: Disable Default: Disable	Arbitrary value
Domain Name	Domain name of LDAP server	Domain name of LDAP server
User Name	User name used when connecting to the LDAP server	pfadmin
Password [Note 2]	Password used when connecting to the LDAP server	Password of pfadmin
Password (Confirmation) [Note 2]	Password used when connecting to the LDAP server (Confirmation)	Password of pfadmin
Directory Server Type	The type of the directory server - Active Directory	Active Directory
Host Name or IP Address (Primary Host)	Host name or IP address of the primary LDAP server	Host name or IP address of the primary LDAP server
Port (Primary Host)	Port number of the LDAP service (non TLS/SSL) of the primary LDAP server Default: 389	389
TLS/SSL Port (Primary Host)	Port number of the LDAP service (TLS/SSL) of the primary LDAP server Default: 636	636

Setting Item	Description	Setting Value
Host Name or IP Address (Backup Host)	Host name or IP address of the backup LDAP server	Host name or IP address of the backup LDAP server
Port (Backup Host)	Port number of the LDAP service (non TLS/SSL) of the backup LDAP server Default: 389	389
TLS/SSL Port (Backup Host)	Port number of the LDAP service (TLS/SSL) of the backup LDAP server Default: 636	636
Division	LDAP division name	PF_Dept_1
Local User Login	Specify whether to enable log in for local users. - Enable - Disable Default: Disable	Enable
Always use TLS/SSL Login	Specify whether to always use TLS/SSL for login. - Yes - No Default: No	No

[Note 1]: This setting is not required if you are not using the PRIMEFLEX configuration ADVM or the link with Active Directory using AD servers in your environment (Remove the check for [LDAP] tab - [Activate LDAP Settings]).

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Cluster Details - [Function] tab

Setting Item		Description	Setting Value
vSphere HA Settings			
	Isolation Response Address 1	Isolation Response Address (IP Address) 1 Note) Normally the IP address of the Virtual SAN Network of the first node configuring the cluster is set.	Isolation Response Address 1
	Isolation Response Address 2	Isolation Response Address (IP Address) 2 Note) Normally the IP address of the Virtual SAN Network of the second node configuring the cluster is set.	Isolation Response Address 2
vSAN Settings			
	Add Disks to Storage	Specify whether to add disks to the storage automatically. - Automatic - Manual Default: Automatic	Arbitrary value
	Deduplication and Compression	Specify whether to enable deduplication and compression.	Arbitrary value

Setting Item	Description	Setting Value
	- Enable - Disable Default: Disable	

Cluster Details - [Network] tab

Setting Item	Description	Setting Value
Default Gateway	IPv4 address of the default gateway	Arbitrary value
vSAN Distributed Switch Settings		
vDS-1 or vDS-2		
vDS Name [Note 1]	Name of the vDS (vSphere Distributed Switch)	Arbitrary value - Name of the workload virtual distributed switch - Name of the management virtual distributed switch * vDS setting information lists are two
NIOC	Specify whether to enable NIOC. - Enable - Disable Default: Enable	vDS-1: Disable (can not be set) vDS-2: Enable or Disable
NIOC Settings (multiple can be set) [Note 2]		
Traffic [Note 3]	System Traffic Type - Management - vSAN - vMotion	Management, vSAN, vMotion
Shares	Relative priority of System Traffic Types 1-100 Default: 50(Management), 70(vMotion), 100(vSAN)	Arbitrary value
Reservation (Mbps) [Note 4]	Minimum band width required to be maintained on a single physical adapter (Mbps) Default: 500(Management), 500(vMotion), 1000(vSAN)	Arbitrary value
Limit (Mbps) [Note 4]	Maximum bandwidth that can be used by system traffic on a single physical adapter (Mbps) Default: 0	Arbitrary value
MTU	Size of the Maximum Transfer Unit (MTU) (Number of bytes) Default: 1500 Maximum: 9000	Arbitrary value

Setting Item	Description	Setting Value
Port Group (multiple can be set)		
Port Group Name [Note 5]	Name of the vDS port group (network label)	Arbitrary value
Type	Type of the vDS port group - VMkernel - Virtual Machine	vDS-1 - Virtual Machine port group for workload: Virtual Machine vDS-2 - Network port group for management: VMkernel - Network port group for vSAN:VMkernel - Network port group for vMotion:VMkernel - Virtual Machine port group for management: Virtual Machine
Number of Ports	Port number of the distributed port group Default: 8 Maximum: 8192	Arbitrary value
VLAN Type	The type of the VLAN - None (Do not use VLAN) - VLAN Default: VLAN	Arbitrary value
VLAN ID	VLAN ID to use for vDS port group Default: No setting	Arbitrary value
IPv4 Network Address	IPv4 Network address of the VMkernel adapter	Arbitrary value
IPv4 Subnet Mask	IPv4 subnet mask of the VMkernel adapter	Arbitrary value
Traffic	Traffic - Management - vSAN - vMotion	vDS-1 - - vDS-2 - Network port group for management: Management - Network port group for vSAN: vSAN - Network port group for vMotion: vMotion
Uplink Settings (multiple can be set)		
Uplink Name	Distinguished name of uplink - Uplink 1 - Uplink 2 - Uplink 3 - Uplink 4	Refer to "Setting values for vmnic name and uplink name when creating a cluster"

Setting Item					Description	Setting Value
			Failover Priority Settings [Note 6]			
				How to Distribute	Distribution method for uplink workload - Active - Stand-by	Arbitrary value
				Priority Order	Specify the uplink priority with a decimal number starting with 0.	Arbitrary value

[Note 1]: If you specify the same [vDS Name] as that of the existing cluster, it will be set to the existing cluster. The same [vDS Name] as that of the existing cluster specify the vDS name created for PRIMEFLEX for VMware vSAN. If you specify a [vDS Name] different from the existing cluster, a new vDS will be created.

[Note 2]: If you specify "Enabled" in [NIOC], you can specify [Traffic], [Shares], [Reservation] and [Limit] by selecting the [Set] button.

[Note 3]: This parameter can not be set.

[Note 4]: For the value to be specified in [Limit], specify the value as same as or larger than the value specified in [Reservation].

[Note 5]: If you specify the [Port Group Name] of the same [vDS Name] as of the existing cluster, it will be set to the [Port Group Name] of the existing cluster.

- When using the existing vDS

  If you specify the same [Port Group Name] as that of the existing cluster, the Port Group of the existing vDS will be used.

  If you specify the different [Port Group Name] as that of the existing cluster, a new Port Group will be created.

- When creating a new vDS

  A new Port Group will be created. Specify a name different from the [Port Group Name] of the existing cluster.

[Note 6]: If you specify [Port Group Name], you can specify [How to Distribute] and [Priority Order] by selecting the [Set] button.

Cluster Details - [Storage Pool] tab

Setting Item	Description	Setting Value
Storage Pool Name	vSAN data store name	Arbitrary value [Note 1]

[Note 1]: Specify a storage pool name different from that of the existing cluster.

Cluster Nodes Selection

Setting Item		Description	Setting Value
Target nodes selection (multiple can be set)			
	Node Name	Select the node name managed by ISM.	Node name managed by ISM [Note 1]
	Profile	Select the profile name managed by ISM.	Arbitrary value

[Note 1]: Specify the node name that is the server for creating a new cluster.

Node Details - [iRMC] tab [Note 1]

Setting Item			Description	Setting Value
Local User Settings				
	'admin' User			
		New Password [Note 2]	New password to be set for the iRMC admin user	Arbitrary value

Setting Item	Description	Setting Value
	When doing cluster creation, update it along with the password set for the admin user registered in ISM.	
New Password (Confirmation) [Note 2]	New password to be set for the iRMC admin user (Confirmation)	Arbitrary value
Administrator User		
User Name	Administrator user name created in iRMC	pflocaladmin
Password [Note 2]	Password set for the iRMC administrator user	Arbitrary value
Password (Confirmation) [Note 2]	Password set for the iRMC administrator user (Confirmation)	Arbitrary value

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Node Details - [OS] tab [Note 1]

Setting Item	Description	Setting Value
Local User Settings		
Administrator User ID	Administrator user name created in the OS	Arbitrary value Example: pflocaladmin
Password [Note 2]	Password set for the OS administrator user	Arbitrary value
Password (Confirmation) [Note 2]	Password set for the OS administrator user (Confirmation)	Arbitrary value

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Node Details - [vDS] tab [Note 1]

Setting Item	Description	Setting Value
vDS-1 or vDS-2		
Physical NIC (multiple can be set)		
vmnic Name [Note 2]	Name of the physical network adapter Example: vmnic2 * Only specify numbers that start with "vmnic."	Refer to "Setting values for vmnic name and uplink name when creating a cluster"
Uplink Name [Note 3]	Distinguished name of uplink - Uplink 1 - Uplink 2 - Uplink 3 - Uplink 4	Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Uplink Settings] - [Uplink Name]
Port Group (multiple can be set)		

Setting Item	Description	Setting Value
Port Group Name [Note 3]	Name of the vDS port group (network label)	Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Port Group] - [Port Group Name]
Type [Note 3]	Type of the vDS port group - VMkernel - Virtual Machine	vDS-1 - Virtual Machine port group for workload: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1] - [Port Group<Virtual Machine port group for workload>] - [Type] vDS-2 - Network port group for management: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for management>] - [Type] - Network port group for vSAN: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vSAN>] - [Type] - Network port group for vMotion: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vMotion>] - [Type] - Virtual Machine port group for management: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Virtual Machine port group for management>] - [Type]
Traffic [Note 3]	Traffic - Management - vSAN - vMotion	vDS-1 - - vDS-2 - Network port group for management: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for management>] - [Traffic]

Setting Item			Description	Setting Value
				- Network port group for vSAN: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vSAN>] - [Traffic] - Network port group for vMotion: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vMotion>] - [Traffic]
		IPv4 Address	IPv4 address of the VMkernel adapter	Arbitrary value

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: Specify the physical NIC set in the profile settings ([Details] - [OS] tab - [Management network port settings] - [Network port specification]) first.

[Note 3]: This parameter can not be set.

Setting values for vmnic name and uplink name when creating a cluster

Table 3.1 When creating clusters for PRIMEFLEX for VMware vSAN PRIMERGY CX M4 series/PRIMERGY CX M5 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for workload [Note 1])	Expansion option #1	vmnic2	Uplink2
	PCI card #1	vmnic4	Uplink4
vDS-2(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic1	Uplink1
	PCI card #0	vmnic3	Uplink3

[Note 1]: This is the default setting value.

Table 3.2 When creating clusters for PRIMEFLEX for VMware vSAN PRIMERGY RX M4 series/PRIMERGY RX M5 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for workload [Note 1])	Expansion option #1	vmnic3	Uplink2
	PCI card #1	vmnic5 [Note 2]	Uplink4
vDS-2(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic2	Uplink1
	PCI card #0	vmnic4 [Note 2]	Uplink3

[Note 1]: This is the default setting value.

[Note 2]: If you purchased multiple expansion cards, enter a vmnic name that is appropriate for your environment for the second expansion card.

Note

"Setting values for vmnic name and uplink name when creating a cluster" is only set if expansion cards are used for this product. If you are using the PRIMERGY RX series servers, and purchased multiple expansion cards, enter a vmnic name that is appropriate for your environment for the part in [Note 2]. The vmnic number is allocated from onboard to the PCI slots in ascending order.

If you purchased two expansion cards and installed them in PCI slots 2 and 3 (PCI slot 1 is the SAS array controller card), the vmnic number is allocated as follows.

Table 3.3 Example of vmnic numbers if expansion cards were installed

Target server	Port location	vmnic number
PRIMERGY RX M2 series	Expansion option port 0	vmnic0
	Expansion option port 1	vmnic1
	Port 0 on PCI slot 2	vmnic2
	Port 1 on PCI slot 2	vmnic3
	Port 0 on PCI slot 3	vmnic4
	Port 1 on PCI slot 3	vmnic5
PRIMERGY RX M4 series/ PRIMERGY RX M5 series	Onboard port 0	vmnic0
	Onboard port 1	vmnic1
	Expansion option port 0	vmnic2
	Expansion option port 1	vmnic3
	Port 0 on PCI slot 2	vmnic4
	Port 1 on PCI slot 2	vmnic5
	Port 0 on PCI slot 3	vmnic6
	Port 1 on PCI slot 3	vmnic7

3.2 Setting Items Lists for Cluster Definition Parameters for PRIMEFLEX for Microsoft Storage Spaces Direct (Cluster Creation)

This section describes the cluster definition parameter setting values of the Cluster Creation of PRIMEFLEX for Microsoft Storage Spaces Direct.

Note

- If you are using Cluster Creation of PRIMEFLEX for Microsoft Storage Spaces Direct, set the following Cluster Definition Parameter setting values with the "Create Cluster" wizard.
- When using Export/Import of Cluster Definition Parameters, edit Cluster Definition Parameters to set them appropriately according to your environment.

CMS Information

Setting Item	Description	Setting Value
Cluster Type	Cluster Type - VMware vSAN Cluster	Microsoft Failover Cluster

Setting Item	Description	Setting Value
	- Microsoft Failover Cluster	
Cloud Management Software Name [Note 1]	Cloud Management Software Name	Arbitrary value
IPv4 IP Address [Note 1]	IPv4 IP address of the CMS	IPv4 IP address of the CMS
Domain Name	Domain name of the CMS	Domain name of the CMS
User Name	User name used when connecting to the CMS	pfadmin
Password [Note 2]	Password used when connecting to the CMS	Password of pfadmin
Password (Confirmation) [Note 2]	Password used when connecting to the CMS (Confirmation)	Password of pfadmin
WinRM Service (SSL) Port [Note 3]	WinRM service port number of the CMS	5986

[Note 1]: Specify a setting value different from the value of the existing cluster.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

[Note 3]: This parameter can not be set.

Basic Information

Setting Item	Description	Setting Value
Cloud Management Software Name [Note 1]	Name of the cloud management software	Arbitrary value
Type [Note 1]	Cluster Type - VMware vSAN Cluster - Microsoft Failover Cluster	Microsoft Failover Cluster
Cluster Name	Cluster Name	Name of the cluster to be created
Number of Composing Nodes	The number of nodes configuring the cluster - 2 - 3 or more Default: 3 or more	Arbitrary value

[Note 1]: This parameter can not be set.

Cluster Details - [DNS] tab

Setting Item	Description	Setting Value
IP Address (Secondary DNS Server)	IP address of secondary DNS server [Note 1]	- If you are using the Active Directory currently configured in your environment: IP address of the customers' AD2 - If you are using an ADVM configured as dedicated to PRIMEFLEX for Microsoft Storage Spaces Direct: IP address of ADVM2

[Note 1]: The IP address of the primary DNS server is specified in the ISM profile.

Cluster Details - [LDAP] tab

Setting Item	Description	Setting Value
Activate LDAP Settings [Note 1]	Specify whether to enable LDAP settings. ☑: Enable ☐: Disable Default: Disable	Arbitrary value
Domain Name	Domain name of LDAP server	Domain name of LDAP server
User Name	User name used when connecting to the LDAP server	pfadmin
Password [Note 2]	Password used when connecting to the LDAP server	Password used when connecting to the LDAP server (Password of pfadmin)
Password (Confirmation) [Note 2]	Password used when connecting to the LDAP server (Confirmation)	Password used when connecting to the LDAP server (Password of pfadmin)
Directory Server Type	The type of the directory server - Active Directory	Active Directory
Host Name or IP Address (Primary Host)	Host name or IP address of the primary LDAP server	Host name or IP address of the primary LDAP server
Port (Primary Host)	Port number of the LDAP service (non TLS/SSL) of the primary LDAP server Default: 389	389
TLS/SSL Port (Primary Host)	Port number of the LDAP service (TLS/SSL) of the primary LDAP server Default: 636	636
Host Name or IP Address (Backup Host)	Host name or IP address of the backup LDAP server	Host name or IP address of the backup LDAP server
Port (Backup Host)	Port number of the LDAP service (non TLS/SSL) of the backup LDAP server Default: 389	389
TLS/SSL Port (Backup Host)	Port number of the LDAP service (TLS/SSL) of the backup LDAP server Default: 636	636
Division	LDAP division name	PF_Dept_1
Local User Login	Specify whether to enable log in for local users. - Enable - Disable Default: Disable	Enable
Always use TLS/SSL Login	Specify whether to always use TLS/SSL for login. - Yes - No Default: No	No

[Note 1]: This parameter is for the settings in ISM 2.4.0.b or later.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Cluster Details - [Network] tab

Setting Item		Description	Setting Value
Default Gateway		IPv4 address of the default gateway	Arbitrary value
Workload Virtual Switch			
	Virtual Switch Name	Name of the virtual switch	Name of Workload Virtual Switch
	Embedded Teaming	Specify whether to enable embedded teaming. - Enable - Disable Default: Disable	Enable
Management Virtual Switch (multiple can be set)			
	Virtual Switch Name	Name of the virtual switch	Name of Management Virtual Switch
	Embedded Teaming	Specify whether to enable embedded teaming. - Enable - Disable Default: Disable	Enable
	Network Name [Note 1]	Name of the virtual network	The three of the following - Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct - Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct - Name of network adapter for management
	Role Settings	Values to be set to Role - Do not allow cluster network communication - Allow only cluster network communication - Allow both cluster network communication and connections between the clients Default: - For network adapter for management: Allow both cluster network communication and connections between the clients - For network adapter 1 for live migration, Microsoft Storage Spaces Direct or network adapter 2 for live	Arbitrary value

Setting Item		Description	Setting Value
		migration, Microsoft Storage Spaces Direct : Allow only cluster network communication	
	VLAN Type	The type of the VLAN - None (Do not use VLAN) - VLAN Default: VLAN	Arbitrary value
	VLAN ID	VLAN ID to use for vDS port group Default: No setting	Arbitrary value
	IPv4 Network Address	IPv4 Network address of the cluster network	Arbitrary value
	IPv4 Subnet Mask	IPv4 subnet mask of the cluster network	Arbitrary value

[Note 1]: In ISM 2.4.0.c or later, set the priority of the network for live migration in the specified order for this parameter.

Cluster Details - [Storage Pool] tab

Setting Item		Description	Setting Value
Journal Settings			
	Media Type	Media Type of disks used for Journal - SSD	SSD
	Bus Type	Bus Type of disks used for Journal - SAS	SAS
Storage Tier Settings			
	Storage Tier Name	Friendly Name of Storage Tier	Arbitrary value
	Media Type	Media Type of Storage Tier - HDD	HDD
	Recovery	Type of Recovery method (allocation method) - 2-Way or 3-Way Mirror Storage	2-Way or 3-Way Mirror Storage
	Redundancy	Redundancy of disks - 2 - 3 or more Default: The number of nodes specified in [Basic Information]-[Number of Composing Nodes]	"2" or "3 or more"
	Number of data copies	Number of data copies - 2-way Mirror - 3-way Mirror Default: - When Redundancy is 2 nodes: 2-way Mirror	"2-way Mirror" or "3-way Mirror"

Setting Item		Description	Setting Value
		- When Redundancy is 3 or more: 3-way Mirror	

Cluster Nodes Selection

Setting Item		Description	Setting Value
Target nodes selection (multiple can be set) [Note 1]			
	Node Name	Select the node name managed by ISM.	Node name managed by ISM [Note 2]
	Profile	Select the profile name managed by ISM.	Arbitrary value

[Note 1]: Specify the number of nodes set in [Basic Information]-[Number of Composing Nodes]

[Note 2]: Specify the Node Name of the server configuring the new cluster.

Node Details - [iRMC] tab [Note 1]

Setting Item			Description	Setting Value
Local User Settings				
	'admin' User			
		New Password [Note 2]	New password to be set for the iRMC admin user When doing cluster creation, update it along with the password set for the admin user registered in ISM.	Arbitrary value
		New Password (Confirmation) [Note 2]	New password to be set for the iRMC admin user (Confirmation)	Arbitrary value
	Administrator User			
		User Name	Administrator user name created in iRMC	pflocaladmin
		Password [Note 2]	Password set for the iRMC administrator user	Arbitrary value
		Password (Confirmation) [Note 2]	Password set for the iRMC administrator user (Confirmation)	Arbitrary value

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Node Details - [OS] tab [Note 1]

Setting Item		Description	Setting Value
Local User Settings			
	Administrator User ID	Administrator user name created in the OS	Arbitrary value Example: pflocaladmin
	Password [Note 2]	Password set for the OS administrator user	Arbitrary value
	Password (Confirmation) [Note 2]	Password set for the OS administrator user	Arbitrary value (Confirmation)

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Node Details - [Virtual Switch] tab [Note 1]

Setting Item	Description	Setting Value
Slot Number Settings		
Slot Numbers (multiple can be set)	Number of the PCI slot where the physical network adapter binding the virtual switch is installed. Example: 2	Number of the PCI slot where the physical network adapter binding the virtual switch is installed.
Workload Virtual Switch		
Virtual Switch Settings		
Virtual Switch Name	Name of the virtual switch	Name of Workload Virtual Switch
Slot Number - Port Number (multiple can be set)	Number of the PCI slot and port where the physical network adapter binding the virtual switch is installed Example: 2-1	Number of the PCI slot and port where the physical network adapter binding the virtual switch is installed * Slot Number is the value set in [Slot Number Settings] - [Slot Number] and Port Number is "1."
Embedded Teaming	Specify whether to enable embedded teaming. - Enable - Disable Default: Enable	Enable
Management Virtual Switch		
Virtual Switch Settings		
Virtual Switch Name	Name of the virtual switch	Name of Management Virtual Switch
Slot Number - Port Number (multiple can be set)	Number of the PCI slot and port where the physical network adapter binding the virtual switch is installed Example: 2-0	Number of the PCI slot and port where the physical network adapter binding the virtual switch is installed * Slot Number is the value set in [Slot Number Settings] - [Slot Number] and Port Number is "0."
Embedded Teaming	Specify whether to enable embedded teaming. - Enable - Disable Default: Enable	Enable
Virtual Network Adapter (multiple can be set)		
Adapter Name	Name of the virtual network adapter	The three of the following - Name of network adapter for management - Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct

Setting Item			Description	Setting Value
				- Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct
		Management OS	Specify whether it is the virtual network adapter for the management OS. - Yes - No Default: Yes	Specify the following - Name of network adapter for management: Yes - Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct: Yes - Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct: Yes
		IPv4 Address	IPv4 Address	Arbitrary value
Network Adapter (multiple can be set)				
	Slot Number		Number of the PCI slot where the physical network adapter binding the virtual switch is installed Example: 2	Number of the PCI slot where the physical network adapter binding the virtual switch is installed
	Virtual Machine Queue		Specify whether to enable virtual machine queue. - Enable - Disable Default: Enable	PCI adapter: Enable
	SR/IOV		Specify whether to enable SR/IOV. - Enable - Disable Default: Disable	PCI adapter: Disable
	vRSS		Specify whether to enable vRSS. - Enable - Disable Default: Enable	PCI adapter: Enable

[Note 1]: Specify it for each node configured in the selected cluster.

3.3 Setting Items Lists for Cluster Definition Parameters for PRIMEFLEX HS/PRIMEFLEX for VMware vSAN (Cluster Expansion)

This section describes the cluster definition parameter setting values of the Cluster Expansion of PRIMEFLEX HS/PRIMEFLEX for VMware vSAN.

Note

- If you are using Cluster Expansion of PRIMEFLEX HS/PRIMEFLEX for VMware vSAN, set the following Cluster Definition Parameter setting values with the "Expand Cluster" wizard.
- When using Export/Import of Cluster Definition Parameters, edit Cluster Definition Parameters to set them appropriately according to your environment.
- PRIMERGY M5 series is available in ISM 2.4.0.c or later.

Basic Information for PRIMERGY RX Series Configuration [Note 1]

Setting Item	Description	Setting Value
Cloud Management Software Name [Note 2]	Name of the cloud management software	Arbitrary value
Type [Note 2]	Cluster Type	VMware vSAN Cluster
Data Center Name	Name of the datacenter that the cluster belongs to	Name of the datacenter that the cluster belongs to
Cluster Name [Note 2]	Cluster Name	Name of the cluster that the cluster expands
Storage Configuration	Storage Configuration - Hybrid - All-Flash Default : Hybrid	Hybrid or All-Flash
Network Configuration [Note 3]	Type of network configuration - Type I - Type II Default: Type I	Type I

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

[Note 2]: This parameter can not be set.

[Note 3]: This item is required to be specified when you create Cluster Definition Parameters. This parameter is not displayed when editing Cluster Definition Parameters.

Basic Information for PRIMERGY CX Series Configuration [Note 1]

Setting Item	Description	Setting Value
Cloud Management Software Name [Note 2]	Name of the cloud management software	Arbitrary value
Type [Note 2]	Cluster Type	VMware vSAN Cluster
Data Center Name	Name of the datacenter that the cluster belongs to	Name of the datacenter that the cluster belongs to
Cluster Name [Note 2]	Cluster Name	Name of the cluster that the cluster expands
Storage Configuration	Storage Configuration - Hybrid - All Flash Default: Hybrid	Hybrid or All Flash [Note 4] Hybrid [Note 5]
Network Configuration [Note 3]	Type of network configuration	Type I [Note 4]

Setting Item	Description	Setting Value
	- Type I - Type II Default: Type I	Type II [Note 5]

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters. This parameter can not be set.

[Note 2]: This parameter can not be set.

[Note 3]: This item is required to be specified when you create Cluster Definition Parameters. This parameter is not displayed when editing Cluster Definition Parameters.

[Note 4]: Specify the type for PRIMERGY CX M4 series/PRIMERGY CX M5 series.

[Note 5]: Specify the type for PRIMERGY CX M2 series.

Cluster Details - [DNS] tab [Note 1]

Setting Item	Description	Setting Value
Domain Name	DNS domain name	DNS domain name
IP Address (Secondary DNS server)	IP address of secondary DNS server [Note 2]	- If you are using the Active Directory currently configured in your environment: IP address of the customers' AD2 - If you are using the ADVM configured as dedicated to PRIMEFLEX HS/ PRIMEFLEX for VMware vSAN: IP address of ADVM2
DNS Record Registration [Note 3]	Specify whether to automatically register the host (A/PTR) records of servers for expanding a cluster. If you set it to "Enable" it will be registered automatically. - Enable - Disable Default: Disable	- If you are using the Active Directory currently configured in your environment or using the configuration without AD links: Disable - If you are using the ADVM configured as dedicated to PRIMEFLEX HS/ PRIMEFLEX for VMware vSAN: Enable
WinRM Service Port [Note 3]	Specify the communication system and the port number of the WinRM service of the DNS server. - Communication system - HTTPS - HTTP Default: HTTPS - Port Number - For HTTPS Port number of the WinRM service (SSL) of the DNS server If you specified this item, communication with the DNS server will be encrypted (SSL). It is required to register a TLS/ SSL	- Communication system HTTPS or HTTP - Port Number - For HTTPS: 5986 - For HTTP: 5985

Setting Item	Description	Setting Value
	communication authentication certificate in the DNS server in advance. Default: 5986 - For HTTP Port number of the WinRM service (non SSL) of the DNS server Specify if communicating with the DNS server in plain text. Default: 5985	
User Name [Note 3]	User name used when connecting to the DNS server	pfadmin
Password [Note 3] [Note 4]	Password used when connecting to the DNS server	Password of pfadmin
Password (Confirmation) [Note 3] [Note 4]	Password used when connecting to the DNS server (Confirmation)	Password of pfadmin

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

[Note 2]: The IP address of the primary DNS server is specified in the ISM profile.

[Note 3]: DNS server is only enabled when using Windows Server. If you are not using the PRIMEFLEX configuration ADVM or the link with Active Directory using AD servers in your environment, set [DNS Record Registration] to "Disable." In addition, [WinRM Service Port], [WinRM Service (SSL) Port], [User Name] and [Password] are not required to be specified.

[Note 4]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Cluster Details - [NTP] tab [Note 1]

Setting Item	Description	Setting Value
NTP Server1 (Host Name or IP Address)	Host name or IP address of NTP server1	Host name or IP address of NTP server1
NTP Server2 (Host Name or IP Address)	Host name or IP address of NTP server2	Host name or IP address of NTP server2
Max Interval between NTP Peer	Maximum interval to peer for NTP time source setting (Seconds) Default: 30 (Seconds)	30

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

Cluster Details - [LDAP] tab [Note 1] [Note 2]

Setting Item	Description	Setting Value
Activate LDAP Settings	Specify whether to enable LDAP settings. ☑: Enable ☐: Disable Default: Disable	Arbitrary value
Domain Name	Domain name of LDAP server	Domain name of LDAP server
User Name	User name used when connecting to the LDAP server	pfadmin
Password [Note 3]	Password used when connecting to the LDAP server	Password of pfadmin

Setting Item	Description	Setting Value
Password (Confirmation) [Note 3]	Password used when connecting to the LDAP server (Confirmation)	Password of pfadmin
Directory Server Type	The type of the directory server - Active Directory	Active Directory
Host Name or IP Address (Primary Host)	Host name or IP address of the primary LDAP server	Host name or IP address of the primary LDAP server
Port (Primary Host)	Port number of the LDAP service (non TLS/SSL) of the primary LDAP server Default: 389	389
TLS/SSL Port (Primary Host)	Port number of the LDAP service (TLS/SSL) of the primary LDAP server Default: 636	636
Host Name or IP Address (Backup Host)	Host name or IP address of the backup LDAP server	Host name or IP address of the backup LDAP server
Port (Backup Host)	Port number of the LDAP service (non TLS/SSL) of the backup LDAP server Default: 389	389
TLS/SSL Port (Backup Host)	Port number of the LDAP service (TLS/SSL) of the backup LDAP server Default: 636	636
Division	LDAP division name	PF_Dept_1
Local User Login	Specify whether to enable log in for local users. - Enable - Disable Default: Disable	Enable
Always use TLS/SSL Login	Specify whether to always use TLS/SSL for login. - Yes - No Default: No	No

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

[Note 2]: This setting is not required if you are not using the PRIMEFLEX configuration ADVM or the link with Active Directory using AD servers in your environment (Remove the check for [LDAP] tab - [Activate LDAP Settings]).

[Note 3]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Cluster Details - [Function] tab [Note 1]

Setting Item	Description	Setting Value
vSphere HA Settings		
Isolation Response Address 1	Isolation Response Address (IP Address) 1	Isolation Response Address 1

Setting Item	Description	Setting Value
	Note) Normally the IP address of the Virtual SAN Network of the first node configuring the cluster is set.	
Isolation Response Address 2	Isolation Response Address (IP Address) 2 Note) Normally the IP address of the Virtual SAN Network of the second node configuring the cluster is set.	Isolation Response Address 2
vSAN Settings		
Add Disks to Storage	Specify whether to add disks to the storage automatically. - Automatic - Manual Default: Automatic	Arbitrary value
Deduplication and Compression	Specify whether to enable deduplication and compression. - Enable - Disable Default: Disable	Arbitrary value

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

Cluster Details - [Network] tab [Note 1]

Setting Item	Description	Setting Value
Default Gateway	IPv4 address of the default gateway	Arbitrary value
vSAN Distributed Switch Settings		
vDS-1 or vDS-2		
vDS Name [Note 2]	Name of the vDS (vSphere Distributed Switch)	Arbitrary value - Name of the workload virtual distributed switch - Name of the management virtual distributed switch * vDS setting information lists are two
NIOC	Specify whether to enable NIOC. - Enable - Disable Default: Enable	vDS-1: Disable (can not be set) vDS-2: Enable or Disable
NIOC Settings (multiple can be set) [Note 3]		
Traffic [Note 4]	System Traffic Type - Management - vSAN - vMotion	Management, vSAN, vMotion
Shares	Relative priority of System Traffic Types	Arbitrary value

Setting Item	Description	Setting Value
	1-100 Default: 50(Management), 70(vMotion), 100(vSAN)	
Reservation (Mbps) [Note 5]	Minimum band width required to be maintained on a single physical adapter (Mbps) Default: 500(Management), 500(vMotion), 1000(vSAN)	Arbitrary value
Limit (Mbps) [Note 5]	Maximum bandwidth that can be used by system traffic on a single physical adapter (Mbps) Default: 0	Arbitrary value
MTU	Size of the Maximum Transfer Unit (MTU) (Number of bytes) Default: 1500 Maximum: 9000	Arbitrary value
Port Group (multiple can be set)		
Port Group Name [Note 6]	Name of the vDS port group (network label)	Arbitrary value

Type	Type of the vDS port group
	- VMkernel
	- Virtual Machine
		Network Configuration: Type I
		- vDS-1
		  - Virtual machine port group for workload: Virtual Machine
		- vDS-2
		  - Network port group for management: VMkernel
		  - Network port group for vSAN: VMkernel
		  - Network port group for vMotion: VMkernel
		  - Virtual machine port group for management: Virtual Machine
		Network Configuration: Type II
		- vDS-1
		  - Network port group for management: VMkernel
		  - Virtual machine port group for workload: Virtual Machine
		- vDS-2
		  - Network port group for vSAN: VMkernel
		  - Network port group for vMotion: VMkernel

Setting Item	Description	Setting Value
		- Virtual machine port group for management: Virtual Machine
Number of Ports	Port number of the distributed port group Default: 8 Maximum: 8192	Arbitrary value
VLAN Type	The type of the VLAN - None (Do not use VLAN) - VLAN Default: VLAN	Arbitrary value
VLAN ID	VLAN ID to use for vDS port group Default: No setting	Arbitrary value
IPv4 Network Address	IPv4 Network address of the VMkernel adapter	Arbitrary value
IPv4 Subnet Mask	IPv4 subnet mask of the VMkernel adapter	Arbitrary value
Traffic [Note 7]	Traffic - Management - vSAN traffic - vMotion	Network Configuration: Type I - vDS-1 - - - vDS-2 - Network port group for management: Management - Network port group for vSAN: vSAN - Network port group for vMotion: vMotion Network Configuration: Type II - vDS-1 - Network port group for management: Management - vDS-2 - Network port group for vSAN: vSAN - Network port group for vMotion: vMotion
Uplink Settings (multiple can be set)		
Uplink Name	Distinguished name of uplink - Uplink 1 - Uplink 2 - Uplink 3 - Uplink 4	Refer to "Setting values for vmnic name and uplink name when expanding a cluster"
Failover Priority Settings [Note 8]		

Setting Item	Description	Setting Value
How to Distribute	Distribution method for uplink workload - Active - Stand-by	Arbitrary value
Priority Order	Specify the uplink priority with a decimal number starting with 0.	Arbitrary value

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

[Note 2]: For vDS names, specify the adequate vDS name according to your environment.

[Note 3]: If you select the [Set] button, you can specify [Traffic], [Shares], [Reservation] and [Limit].

[Note 4]: This parameter can not be set.

[Note 5]: For the value to be specified in [Limit], specify the value as same as or larger than the value specified in [Reservation].[Note 6]: For vDS port group names, specify the adequate port group name according to your environment.

[Note 7]: This is only enabled when the vDS port group is a "VMkernel" type.

[Note 8]: If you specify [Port Group Name], you can specify [How to Distribute] and [Priority Order] by selecting the [Set] button.

Cluster Details - [Storage Pool] tab [Note 1]

Setting Item	Description	Setting Value
Storage Pool Name	vSAN data store name	Arbitrary value

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

Cluster Nodes Selection

Setting Item	Description	Setting Value
Target nodes selection (multiple can be set)		
Node Name	Select the node name managed by ISM.	Node name managed by ISM [Note 1]
Profile	Select the profile name managed by ISM.	Arbitrary value

[Note 1]: Specify the node name that is the server for expanding a cluster when doing cluster expansion.

Node Details - [iRMC] tab [Note 1]

Setting Item	Description	Setting Value
Local User Settings		
'admin' user		
New Password [Note 2]	New password to be set for the iRMC admin user When doing cluster expansion, update it along with the password set for the admin user registered in ISM.	Arbitrary value
New Password (Confirmation) [Note 2]	New password to be set for the iRMC admin user (Confirmation)	Arbitrary value
Administrator user		
User Name	Administrator user name created in iRMC	pflocaladmin
Password [Note 2]	Password set for the iRMC administrator user	Arbitrary value

Setting Item	Description	Setting Value
Password (Confirmation) [Note 2]	Password set for the iRMC administrator user (Confirmation)	Arbitrary value

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Node Details - [OS] tab [Note 1]

Setting Item	Description	Setting Value
Local User Settings		
Administrator User ID	Administrator user name created in the OS	Arbitrary value Example: pflocaladmin
Password [Note 2]	Password set for the OS administrator user	Arbitrary value
Password (Confirmation) [Note 2]	Password set for the OS administrator user (Confirmation)	Arbitrary value

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Node Details - [vDS] tab [Note 1]

Setting Item	Description	Setting Value
vDS-1 or vDS-2		
Physical NIC (multiple can be set)		
vmnic Name	Name of the physical network adapter Example: vmnic2 * Only specify numbers that start with "vmnic."	Refer to "Setting values for vmnic name and uplink name when expanding a cluster"
Uplink Name [Note 2]	Distinguished name of uplink - Uplink 1 - Uplink 2 - Uplink 3 - Uplink 4	Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Uplink Settings] - [Uplink Name]
Port Group (multiple can be set)		
Port Group Name [Note 2]	Name of the vDS port group (network label)	Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1 or vDS-2] - [Port Group] - [Port Group Name]
Type [Note 2]	Type of the vDS port group - VMkernel - Virtual Machine	Network Configuration: Type I - vDS-1 - Virtual Machine port group for workload: Setting value specified in [Cluster Details] -

Setting Item	Description	Setting Value
		[Network] tab - [vSAN Distributed Switch Settings] - [vDS-1] - [Port Group<Virtual Machine port group for workload>] - [Type] - vDS-2 - Network port group for management: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for management>] - [Type] - Network port group for vSAN: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vSAN>] - [Type] - Network port group for vMotion: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vMotion>] - [Type] - Virtual Machine port group for management: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Virtual Machine port group for management>] - [Type] Network Configuration: Type II - vDS-1 - Network port group for management: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for management>] - [Type] - Virtual Machine port group for workload: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-1] - [Port Group<Virtual

Setting Item	Description	Setting Value
		Machine port group for workload>] - [Type] - vDS-2 - Network port group for vSAN: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vSAN>] - [Type] - Network port group for vMotion: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vMotion>] - [Type] - Virtual Machine port group for management: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Virtual Machine port group for management>] - [Type]
Traffic [Note 2]	Traffic - Management traffic - vMotion traffic - vSAN traffic	Network Configuration: Type I - vDS-1 - - - vDS-2 - Network port group for management: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for management>] - [Traffic] - Network port group for vSAN: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vSAN>] - [Traffic] - Network port group for vMotion: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vMotion>] - [Traffic]

Setting Item			Description	Setting Value
				Network Configuration: Type II - vDS-1 - Network port group for management: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for management>] - [Traffic] - vDS-2 - Network port group for vSAN: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vSAN>] - [Traffic] - Network port group for vMotion: Setting value specified in [Cluster Details] - [Network] tab - [vSAN Distributed Switch Settings] - [vDS-2] - [Port Group<Network port group for vMotion>] - [Traffic]
		IPv4 Address	IPv4 address of the VMkernel adapter	Arbitrary value

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: This parameter can not be set.

Setting values for vmnic name and uplink name when expanding a cluster

Table 3.4 When adding PRIMERGY CX M2 series to PRIMEFLEX HS PRIMERGY CX M2 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic0	Uplink1
	Expansion option #1	vmnic1	Uplink2
vDS-2(Virtual distributed switch for management and workload [Note 1])	PCI card #0	vmnic2	Uplink3
	PCI card #1	vmnic3	Uplink4

[Note 1]: This is the default setting value.

Table 3.5 When adding PRIMERGY RX M2 series to PRIMEFLEX HS PRIMERGY RX M2 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for workload [Note 1])	Expansion option #1	vmnic1	Uplink2
	PCI card #1	vmnic3 [Note 2]	Uplink4
vDS-2(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic0	Uplink1

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
	PCI card #0	vmnic2 [Note 2]	Uplink3

[Note 1]: This is the default setting value.

[Note 2]: If you purchased multiple expansion cards, enter a vmnic name that is appropriate for your environment for the second expansion card.

Table 3.6 When adding PRIMERGY CX M4 series/PRIMERGY CX M5 series to PRIMEFLEX HS PRIMERGY CX M2 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic1	Uplink1
	Expansion option #1	vmnic2	Uplink2
vDS-2(Virtual distributed switch for management and workload [Note 1])	PCI card #0	vmnic3	Uplink3
	PCI card #1	vmnic4	Uplink4

[Note 1]: This is the default setting value.

Table 3.7 When adding PRIMERGY RX M4 series/PRIMERGY RX M5 series to PRIMEFLEX HS PRIMERGY RX M2 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for workload [Note 1])	Expansion option #1	vmnic3	Uplink2
	PCI card #1	vmnic5 [Note 2]	Uplink4
vDS-2(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic2	Uplink1
	PCI card #0	vmnic4 [Note 2]	Uplink3

[Note 1]: This is the default setting value.

[Note 2]: If you purchased multiple expansion cards, enter a vmnic name that is appropriate for your environment for the second expansion card.

Table 3.8 When adding PRIMERGY CX M4 series/PRIMERGY CX M5 series to PRIMEFLEX for VMware vSAN PRIMERGY CX M4 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for workload [Note 1])	Expansion option #1	vmnic2	Uplink2
	PCI card #1	vmnic4	Uplink4
vDS-2(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic1	Uplink1
	PCI card #0	vmnic3	Uplink3

[Note 1]: This is the default setting value.

Table 3.9 When adding PRIMERGY RX M4 series/PRIMERGY RX M5 series to PRIMEFLEX for VMware vSAN PRIMERGY RX M4 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for workload [Note 1])	Expansion option #1	vmnic3	Uplink2
	PCI card #1	vmnic5 [Note 2]	Uplink4
vDS-2(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic2	Uplink1
	PCI card #0	vmnic4 [Note 2]	Uplink3

[Note 1]: This is the default setting value.

[Note 2]: If you purchased multiple expansion cards, enter a vmnic name that is appropriate for your environment for the second expansion card.

Table 3.10 When adding PRIMERGY CX M5 series to PRIMEFLEX for VMware vSAN PRIMERGY CX M5 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for workload [Note 1])	Expansion option #1	vmnic2	Uplink2
	PCI card #1	vmnic4	Uplink4
vDS-2(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic1	Uplink1
	PCI card #0	vmnic3	Uplink3

[Note 1]: This is the default setting value.

Table 3.11 When adding PRIMERGY RX M5 series to PRIMEFLEX for VMware vSAN PRIMERGY RX M5 series

Setting Item	Setting Value		
	Physical port	vmnic name	uplink name
vDS-1(Virtual distributed switch for workload [Note 1])	Expansion option #1	vmnic3	Uplink2
	PCI card #1	vmnic5 [Note 2]	Uplink4
vDS-2(Virtual distributed switch for management [Note 1])	Expansion option #0	vmnic2	Uplink1
	PCI card #0	vmnic4 [Note 2]	Uplink3

[Note 1]: This is the default setting value.

[Note 2]: If you purchased multiple expansion cards, enter a vmnic name that is appropriate for your environment for the second expansion card.

Note

"Setting values for vmnic name and uplink name when expanding a cluster" is only set if expansion cards are used for this product. If you are using the PRIMERGY RX series servers, and purchased multiple expansion cards, enter a vmnic name that is appropriate for your environment for the part in [Note 2]. The vmnic number is allocated from onboard to the PCI slots in ascending order.

If you purchased two expansion cards and installed them in PCI slots 2 and 3 (PCI slot 1 is the SAS array controller card), the vmnic number is allocated as follows.

Table 3.12 Example of vmnic numbers if expansion cards were installed

Target server	Port location	vmnic number
PRIMERGY RX M2 series	Expansion option port 0	vmnic0

Target server	Port location	vmnic number
	Expansion option port 1	vmnic1
	Port 0 on PCI slot 2	vmnic2
	Port 1 on PCI slot 2	vmnic3
	Port 0 on PCI slot 3	vmnic4
	Port 1 on PCI slot 3	vmnic5
PRIMERGY RX M4 series/ PRIMERGY RX M5 series	Onboard port 0	vmnic0
	Onboard port 1	vmnic1
	Expansion option port 0	vmnic2
	Expansion option port 1	vmnic3
	Port 0 on PCI slot 2	vmnic4
	Port 1 on PCI slot 2	vmnic5
	Port 0 on PCI slot 3	vmnic6
	Port 1 on PCI slot 3	vmnic7

3.4 Setting Items Lists for Cluster Definition Parameters for PRIMEFLEX for Microsoft Storage Spaces Direct (Cluster Expansion)

This section describes the cluster definition parameter setting values of the Cluster Expansion of PRIMEFLEX for Microsoft Storage Spaces Direct.

Note

- If you are using Cluster Expansion of PRIMEFLEX for Microsoft Storage Spaces Direct, set the following Cluster Definition Parameter setting values with the "Expand Cluster" wizard.
- When using Export/Import of Cluster Definition Parameters, edit Cluster Definition Parameters to set them appropriately according to your environment.

Basic Information [Note 1]

Setting Item	Description	Setting Value
Cloud Management Software Name [Note 2]	Name of the cloud management software	Arbitrary value
Type [Note 2]	Cluster Type	Microsoft Failover Cluster
Cluster Name [Note 2]	Cluster Name	Name of the cluster to be expanded

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

[Note 2]: This parameter can not be set.

Cluster Details - [DNS] tab [Note 1]

Setting Item	Description	Setting Value
IP Address (Secondary DNS server)	IP address of secondary DNS server [Note 2]	- If you are using the Active Directory currently configured in your

Setting Item	Description	Setting Value
		environment: IP address of the customers' AD2 - If you are using an ADVM configured as dedicated to PRIMEFLEX for Microsoft Storage Spaces Direct: IP address of ADVM2

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

[Note 2]: The IP address of the primary DNS server is specified in the ISM profile.

Cluster Details - [LDAP] tab [Note 1]

Setting Item	Description	Setting Value
Activate LDAP Settings [Note 2]	Specify whether to enable LDAP settings. ☑: Enable ☐: Disable Default: Disable	Arbitrary value
Domain Name	Domain name of LDAP server	Domain name of LDAP server
User Name	User name used when connecting to the LDAP server	pfadmin
Password [Note 3]	Password used when connecting to the LDAP server	Password of pfadmin
Password (Confirmation) [Note 3]	Password used when connecting to the LDAP server (Confirmation)	Password of pfadmin
Directory Server Type	The type of the directory server - Active Directory	Active Directory
Host Name or IP Address (Primary Host)	Host name or IP address of the primary LDAP server	Host name or IP address of the primary LDAP server
Port (Primary Host)	Port number of the LDAP service (non TLS/SSL) of the primary LDAP server Default: 389	389
TLS/SSL Port (Primary Host)	Port number of the LDAP service (TLS/SSL) of the primary LDAP server Default: 636	636
Host Name or IP Address (Backup Host)	Host name or IP address of the backup LDAP server	Host name or IP address of the backup LDAP server
Port (Backup Host)	Port number of the LDAP service (non TLS/SSL) of the backup LDAP server Default: 389	389
TLS/SSL Port (Backup Host)	Port number of the LDAP service (TLS/SSL) of the backup LDAP server Default: 636	636
Division	LDAP division name	PF_Dept_1
Local User Login	Specify whether to enable log in for local users.	Enable

Setting Item	Description	Setting Value
	- Enable - Disable Default: Disable	
Always use TLS/SSL Login	Specify whether to always use TLS/SSL for login. - Yes - No Default: No	No

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

[Note 2]: This parameter is for the settings in ISM 2.4.0.b or later.

[Note 3]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Cluster Details - [Network] tab [Note 1]

Setting Item		Description	Setting Value
Default Gateway		IPv4 address of the default gateway	Arbitrary value
Workload Virtual Switch (multiple can be set)			
	Virtual Switch Name	Name of the virtual switch	Name of Workload Virtual Switch
	Embedded Teaming	Specify whether to enable embedded teaming. - Enable - Disable Default: Enable	Enable
Management Virtual Switch			
	Virtual Switch Name	Name of the virtual switch	Name of Management Virtual Switch
	Embedded Teaming	Specify whether to enable embedded teaming. - Enable - Disable Default: Enable	Enable
	Network Name	Name of the virtual network	The three of the following - Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct - Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct - Name of network adapter for management
	Role Settings	The value to be set to Role	Arbitrary value

Setting Item		Description	Setting Value
		- Do not allow cluster network communication - Allow only cluster network communication - Allow both cluster network communication and connections between the clients Default: - For network adapter for Management: Allow both cluster network communication and connections between the clients - For network adapter 1 for live migration, Microsoft Storage Spaces Direct or network adapter 2 for live migration, Microsoft Storage Spaces Direct: Allow only cluster network communication	
	VLAN Type	The type of the VLAN - None (Do not use VLAN) - VLAN Default: VLAN	Arbitrary value
	VLAN ID	VLAN ID to use for vDS port group Default: No setting	Arbitrary value
	IPv4 Network Address	IPv4 Network address of the cluster network	Arbitrary value
	IPv4 Subnet Mask	IPv4 subnet mask of the cluster network	Arbitrary value

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

Cluster Details - [Storage Pool] tab [Note 1]

Setting Item		Description	Setting Value
Journal Settings			
	Media Type	Media Type of disks used for Journal Default: SSD	SSD
	Bus Type	Bus Type of disks used for Journal Default: SAS	SAS
Storage Tier Settings			
	Storage Tier Name	Friendly Name of Storage Tier	Arbitrary value
	Media Type	Media Type of Storage Tie Default: HDD	HDD
	Recovery	Type of Recovery method (allocation method)	2-Way or 3-Way Mirror Storage

Setting Item	Description	Setting Value
	Default: 2-Way or 3-Way Mirror Storage	
Redundancy	Redundancy of disks - 2 - 3 or more Default: The number of nodes specified in [Basic Information]-[Number of Composing Nodes]	"2" or "3 or more"
Number of data copies	Number of data copies - 2-way Mirror - 3-way Mirror Default: - When Redundancy is 2 nodes: 2-way Mirror - When Redundancy is 3 or more: 3-way Mirror	"2-way Mirror" or "3-way Mirror"

[Note 1]: This item is required to be specified when you create and edit Cluster Definition Parameters.

Cluster Nodes Selection

Setting Item	Description	Setting Value
Target nodes selection (multiple can be set)		
Node Name	Select the node name managed by ISM.	Node name managed by ISM [Note 1]
Profile	Select the profile name managed by ISM.	Arbitrary value

[Note 1]: Specify the node name that is the server for expanding a cluster when doing cluster expansion.

Node Details - [iRMC] tab [Note 1]

Setting Item	Description	Setting Value
Local User Settings		
'admin' User		
New Password [Note 2]	New password to be set for the iRMC admin user When doing cluster expansion, update it along with the password set for the admin user registered in ISM.	Arbitrary value
New Password (Confirmation) [Note 2]	New password to be set for the iRMC admin user (Confirmation)	Arbitrary value
Administrator User		
User Name	Administrator user name created in iRMC	pflocaladmin
Password [Note 2]	Password set for the iRMC administrator user	Arbitrary value
Password (Confirmation) [Note 2]	Password set for the iRMC administrator user (Confirmation)	Arbitrary value

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Node Details - [OS] tab [Note 1]

Setting Item	Description	Setting Value
Local User Settings		
Administrator User ID	Administrator user name created in the OS	Arbitrary value Example: pflocaladmin
Password [Note 2]	Password set for the OS administrator user	Arbitrary value
Password (Confirmation) [Note 2]	Password set for the OS administrator user (Confirmation)	Arbitrary value

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: This parameter is not included in Export/Import of Cluster Definition Parameters. You must set the item by editing Cluster Definition Parameters.

Node Details - [Virtual Switch] tab [Note 1]

Setting Item	Description	Setting Value
Slot Number Settings		
Slot Numbers (multiple can be set)	Number of the PCI slot where the physical network adapter binding the virtual switch is installed. Example: 2	Number of the PCI slot where the physical network adapter binding the virtual switch is installed.
Workload Virtual Switch		
Virtual Switch Settings		
Virtual Switch Name	Name of the virtual switch	Name of Workload Virtual Switch
Slot Number - Port Number (multiple can be set)	Number of the PCI slot and port where the physical network adapter binding the virtual switch is installed Example: 2-1	Number of the PCI slot and port where the physical network adapter binding the virtual switch is installed * Slot Number is the value set in [Slot Number Settings] - [Slot Number] and Port Number is "1."
Embedded Teaming	Specify whether to enable embedded teaming. - Enable - Disable Default: Enable	Enable
Management Virtual Switch		
Virtual Switch Settings		
Virtual Switch Name	Name of the virtual switch	Name of Management Virtual Switch
Slot Number - Port Number (multiple can be set)	Number of the PCI slot and port where the physical network adapter binding the virtual switch is installed Example: 2-0	Number of the PCI slot and port where the physical network adapter binding the virtual switch is installed

Setting Item	Description	Setting Value
		* Slot Number is the value set in [Slot Number Settings] - [Slot Number] and Port Number is "0."
Embedded Teaming	Specify whether to enable embedded teaming. - Enable - Disable Default: Enable	Enable
Virtual Network Adapter (multiple can be set)		
Adapter Name [Note 2]	Name of the virtual network adapter	The three of the following - Name of network adapter for management - Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct - Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct
Management OS	Specify whether it is the virtual network adapter for the management OS. - Yes - No Default: Yes	Specify the following - Name of network adapter for management: Yes - Name of network adapter 1 for live migration, Microsoft Storage Spaces Direct: Yes - Name of network adapter 2 for live migration, Microsoft Storage Spaces Direct: Yes
IPv4 Address [Note 3]	IPv4 Address	Arbitrary value
Network Adapter (multiple can be set)		
Slot Number	Number of the PCI slot where the physical network adapter binding the virtual switch is installed Example: 2	Number of the PCI slot where the physical network adapter binding the virtual switch is installed
Virtual Machine Queue	Specify whether to enable virtual machine queue. - Enable - Disable Default: Enable	PCI adapter: Enable
SR/IOV	Specify whether to enable SR/IOV. - Enable - Disable Default: Disable	PCI adapter: Disable
vRSS	Specify whether to enable vRSS.	PCI adapter: Enable

Setting Item		Description	Setting Value
		- Enable - Disable Default: Enable	

[Note 1]: Specify it for each node configured in the selected cluster.

[Note 2]: If a virtual network adapter with the name specified for the servers currently configured in the cluster does not exist, Cluster Expansion ends with an error.

[Note 3]: Specify the same IP address as of the virtual network adapter with the same name on the server currently configured in the cluster.

Chapter 4 Profile Setting List

This chapter describes the profile setting values.

4.1 PRIMEFLEX HS/PRIMEFLEX for VMware vSAN Profile Setting Items List

This section describes the profile setting values for PRIMEFLEX HS/PRIMEFLEX for VMware vSAN.

Note

- For PRIMEFLEX HS/PRIMEFLEX for VMware vSAN, set the following values for profile setting values. You do not need to set values other than the values shown in the following tables.
- Set the setting items for each policy below.
  - BIOS Policy
  - iRMC Policy
  - OS Policy (ISM 2.4.0.c or later)

General Information

Setting Item	Setting Value
Affiliation Group Path	/ProfileGroup/Administrator Forward Match
Profile Name	<Any profile name>
Category	<Select the model of the expansion target server>
BIOS Policy	<BIOS policy referred to>
iRMC Policy	<iRMC policy referred to>
OS Type	<Select the type of the OS to install from the list>
OS Policy [Note 1]	<OS policy referred to>
Description	<Optional description>

[Note 1]: Specify OS Policy in ISM 2.4.0.c or later.

Details - [BIOS] tab for PRIMEFLEX HS

Setting Item	Setting Value
CPU Configuration	
Execute Disable Bit	☑: Enabled
Hyper-Threading	☑: Enabled
Intel Virtualization Technology	☑: Enabled
Intel(R) Vt-d	☑: Enabled
Power Technology	☑: Customize
Enhanced Speed Step	☑: Enabled

Setting Item	Setting Value
Turbo Mode	☑: Enabled
Memory Configuration	
DDR Performance	☑: Performance optimized
Numa	☑: Enabled
Onboard Device Configuration	
Onboard SAS/SATA (SCU)	☑: Enabled
SAS/SATA OpROM	☑: Enabled
SAS/SATA Driver	☑: LSI MegaRAID
Option ROM Configuration (Exclude slot numbers that do not exist on the servers.)	
Launch Slot 1 OpROM	[Note 1]
Launch Slot 2 OpROM	[Note 1]
Launch Slot 3 OpROM	[Note 1]
Launch Slot 4 OpROM	[Note 1]
Launch Slot 5 OpROM	[Note 1]
Launch Slot 6 OpROM	[Note 1]
Launch Slot 7 OpROM	[Note 1]
Launch Slot 8 OpROM	[Note 1]
Launch Slot 9 OpROM	[Note 1]
Launch Slot 10 OpROM	[Note 1]
Launch Slot 11 OpROM	[Note 1]
Launch Slot 12 OpROM	[Note 1]
CSM Configuration	
Launch CSM	☑: Enabled
Boot Option Filter	☑: Legacy only
Launch Pxe OpRomPolicy	☑: Legacy only
Launch Storage OpRomPolicy	☑: Legacy only
Other PCI Device Rom Priority	☑: Legacy only

[Note 1]: For the Slot where the Ethernet adapter is installed, specify "☑: Enabled." For other Slots, specify "☐: -."

Details - [BIOS] tab for PRIMEFLEX for VMware vSAN

Setting Item	Setting Value
CPU Configuration	
Hyper-Threading	☑: Enabled
Intel Virtualization Technology	☑: Enabled
Intel(R) Vt-d	☑: Enabled

Setting Item	Setting Value
Memory Configuration	
NUMA	☑: Enabled
DDR Performance	☑: Performance optimized
Onboard Device Configuration	
Onboard SAS/SATA (SCU)	☑: Enabled
SAS/SATA OpROM	☑: Enabled
SAS/SATA Driver	☑: LSI MegaRAID
CSM Configuration	
Launch CSM	☑: Disabled

Details - [iRMC] tab

Setting Item	Setting Value
iRMC GUI	
Default Language	☑: <Any default language>
Power Management	
POST Error Halt	☑: Continue
Power Restore Policy	☑: Restore to powered state prior to power loss
Power Control Mode	☑: OS Controlled
Fan Test	
Fan Check Time	☑: 23:00
Disable Fan Test	☑: ☐
Software Watchdog	
Software Watchdog	☑: Disabled
Behavior	☑: Continue
After Timeout Delay	☑: 5 Minutes
Boot Watchdog	
Boot Watchdog	☑: Disabled
Behavior	☑: Continue
After Timeout Delay	☑: 100 Minutes
Time	
Time Mode	☑: System RTC
RTC Time Mode	☑: UTC
Time Zone	☑: <Any time zone>

Setting Item	Setting Value
Ports and Network Services Settings	
Telnet Enabled	☑: Enabled
Telnet Port (Default: 3173)	☑: 3172
SSH Enabled	☑: Enabled
SSH Port (Default: 22)	☑: 22
SNMP Generic Configuration	
SNMP Enabled	☑: Enabled
SNMP Port (Default: 161)	☑: 161
SNMP Service Protocol	☑: All(SNMPv1/v2c/v3)
SNMPv1/v2c Community Name	☑: <Any community name>
SNMP Trap Destination	
SNMP Trap Community Name	☑: <Any community name>
Destination SNMP Server 1	☑: <IP address of destination SNMP server1>
Protocol	☑: <Select the protocol from the list>

Details - [OS] tab

Setting Item	Setting Value
Installation Image	
Type of Installation Media	<Select the type of OS installation media from the list>
ServerViewSuiteDVD	<Optional selection>
Management LAN network port settings	
Network port specification	☐ [Note 1] ☑ [Note 2]
Method to specify	MAC address [Note 2]
MAC address	Any MAC address [Note 2]
RAID & Disk Configuration	
RAID & Disk Setting	
Do not use Array Controller	☑: <Optional selection>
Basic Settings	
Keyboard	<Any keyboard>
Network	
VLAN ID to Use	0
Execute Script after Installation [Note 3]	
Execute Script after Installation	☑
The directory of Script	kickstart

Setting Item	Setting Value
Script to Execute	ESXi_Setting.sh

[Note 1]: Setting value set for PRIMEFLEX HS.

[Note 2]: Setting value set for PRIMEFLEX for VMware vSAN.

[Note 3]: This setting item is automatically set by Cluster Creation and Cluster Expansion. Do not set this manually (do not check).

Details - [OS (for each node)] tab

Setting Item	Setting Value
License Agreement	☑
Type of Installation Media	<Any type of installation media>
Root Password	<Any root password>
Root Password (for confirmation)	<Any root password>
Network	
DHCP	
Enable	☐
IP Address	<Any IP address>
Subnet mask	<Any subnet mask>
Default Gateway	<Any default gateway>
DNS Server	☑: <IP address of any DNS server>
Get Computer Name via DNS Server	☐
Computer Name	<Any computer name>

4.2 PRIMEFLEX for Microsoft Storage Spaces Direct Profile Setting Items List

This section describes the profile setting values for PRIMEFLEX for Microsoft Storage Spaces Direct.

Note

- For PRIMEFLEX for Microsoft Storage Spaces Direct, set the following values for profile setting values. You do not need to set values other than the values shown in the following tables.
- Set the setting items for each policy below.
  - BIOS Policy
  - iRMC Policy
  - OS Policy (ISM 2.4.0.c or later)

General Information

Setting Item	Setting Value
Affiliation Group Path	/ProfileGroup/Administrator
Profile Name	<Any profile name>

Setting Item	Setting Value
Category	<Select the model of the expansion target server>
BIOS Policy	<BIOS policy referred to>
iRMC Policy	<iRMC policy referred to>
OS Type	<Select the type of the OS to install from the list>
OS Policy [Note 1]	<OS policy referred to>
Description	<Optional description>

[Note 1]: Specify OS Policy in ISM 2.4.0.c or later.

Details - [BIOS] tab

Setting Item	Setting Value
CPU Configuration	
Hyper-Threading	☑: Enabled
Intel Virtualization Technology	☑: Enabled
Intel(R) Vt-d	☑: Enabled
Memory Configuration	
NUMA	☑: Enabled
Onboard Device Configuration	
Onboard SAS/SATA (SCU)	☑: Enabled
SAS/SATA OpROM	☑: Enabled
SAS/SATA Driver	☑: LSI MegaRAID
CSM Configuration	
Launch CSM	☑: Disabled

Details - [iRMC] tab

Setting Item	Setting Value
iRMC GUI	
Default Language	☑: <Any default language>
Power Management	
POST Error Halt	☑: Continue
Power Restore Policy	☑: Restore to powered state prior to power loss
Power Control Mode	☑: OS Controlled
Fan Test	
Fan Check Time	☑: 23:00
Disable Fan Test	☑: ☑
Software Watchdog	

Setting Item	Setting Value
Software Watchdog	☑: Enabled
Behavior	☑: Continue
After Timeout Delay	☑: 5 Minutes
Time	
Time Mode	☑: System RTC
RTC Time Mode	☑: Local Time
Time Zone	☑: <Any time zone>
Ports and Network Services Settings	
Telnet Enabled	☑: Enabled
Telnet Port (Default: 3173)	☑: 3172
SSH Enabled	☑: Enabled
SSH Port (Default: 22)	☑: 22
SNMP Generic Configuration	
SNMP Enabled	☑: Enabled
SNMP Port (Default: 161)	☑: 161
SNMP Service Protocol	☑: All(SNMPv1/v2c/v3)
SNMPv1/v2c Community Name	☑: <Any community name>
SNMP Trap Destination	
SNMP Trap Community Name	☑: <Any community name>
Destination SNMP Server 1	☑: <IP address of ISM-VA>
Protocol	☑: SNMPv1

Details - [OS] tab

Setting Item	Setting Value
Installation Image	
Type of Installation	Full
Type of Installation Media	<Select the type of OS installation media from the list>
ServerViewSuiteDVD	<Optional selection>
Management LAN network port settings	
Network port specification	☑
Method to specify	Port Number
Network Card	PCI card: <Any slot number>
Port Number	0
RAID & Disk Configuration	

Setting Item	Setting Value
Use Array Controller	☑: Use existing RAID Volume
Volume1	
Volume Label	system
File System	NTFS
Partition Size (Automatic/Manual)	Automatic
Quick Format	Yes
Usage	Boot,OS
Basic Settings	
Time Zone	<Any time zone>
Region and Language	<Any region and language>
Keyboard	<Any keyboard>
System Settings	
Display Resolution [px]	1024x768
Refresh Rate [Hz]	75
# of Colors [bit]	24
Adding Role and Features	
Install SNMP Service	Install
SNMP Trap Setting	
Community Name	fis
Trap Destination	<Any IP address>
Send Authentication Trap	Send
Acceptation of SNMP Packets	Accept SNMP Packets from Default Host (LocalHost)
Service	☑: Application ☑: End-To-End ☑: Ethernet
Remote Desktop	☑: Enable
Additional Application	☑: Java Runtime Environment [Note 1] ☑: Software Support Guide ☑: ServerViewRAIDManager
Execute Script after Installation [Note 2]	
Execute Script after Installation	☑
Directory Forwarded to the OS	postscript_ClusterOperation
Script to Execute	WinSvr_Setting.bat

[Note 1]: If using SVIM V13.18.12 or later, Java can't be installed. Remove the check for "Java Runtime Environment."

[Note 2]: This setting item is automatically set by Cluster Creation and Cluster Expansion. Do not set this manually (do not check).

Details - [OS (for each node)] tab

Setting Item	Setting Value
Type of Installation Media	* The same items as [OS] - [Installation specifications] - [Installation media] displays automatically
User Name	PRIMEFLEX
Organization	FUJITSU
Computer Name	<Any computer name>
Administrator Password	<Any password>
Administrator Password (for confirmation)	<Any password>
Work Group / Domain	
Work Group / Domain Name	<Domain that it currently belongs to>
Domain User	<User of the domain it currently belongs to>
Domain Password	<Password of the user of the domain it currently belongs to>
Domain Password (for confirmation)	<Password of the user of the domain it currently belongs to>
Network - DHCP	
Enable	☐
IP Address	<Any IP address>
Subnet mask	<Any subnet mask>
Default Gateway	<Any default gateway>
DNS Server1	☑: <Any DNS server IP address>
DNS Domain Name	☑: <Domain name of DNS>