

Hitachi NAS Platform F1000 Series Cluster Getting Started Guide

FASTFIND LINKS

[Product Version](#)

[Getting Help](#)

[Contents](#)

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Contents

Preface.....	v
Intended audience.....	vi
Product version.....	vi
Release notes.....	vi
Organization of HNAS F manuals.....	vi
Document conventions.....	vii
Convention for storage capacity values.....	viii
Getting help.....	viii
Comments.....	viii
1 Introduction.....	1-1
Network configuration.....	1-2
2 Before you begin.....	2-1
Prerequisites.....	2-2
3 Getting started.....	3-1
Workflow for setting up a system.....	3-2
Before setting up a system.....	3-2
Installing Hitachi File Services Manager.....	3-2
Setting up an HNAS F environment.....	3-3

Acronyms



Preface

The Hitachi NAS Platform F (HNAS F) has two models: cluster and single. This guide is specifically for the configuration of the cluster model.

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- [Intended audience](#)
- [Product version](#)
- [Release notes](#)
- [Organization of HNAS F manuals](#)
- [Document conventions](#)
- [Convention for storage capacity values](#)
- [Getting help](#)
- [Comments](#)

Intended audience

This document is intended for system administrators who want to run an HNAS F cluster appliance model (integrated with the HUS100 series).

In addition, the user must have the following knowledge:

- A basic knowledge of HNAS F systems.
- Experience with setting up HNAS F systems.

Product version

This document revision applies to Hitachi NAS Platform F version 4.2.2-01 or later.

Release notes

Release notes can be found on the documentation CD. Release notes contain requirements and more recent product information that may not be fully described in this manual. Be sure to review the release notes before installation.

Organization of HNAS F manuals

HNAS F manuals are organized as shown below.

Note that whether HNAS F nodes can be set up in a redundant configuration depends on the HNAS F model. A configuration where nodes are made redundant is called a cluster configuration, and a configuration where a node is not made redundant with another node is called a single-node configuration. Which manuals you need to read depends on which configuration you are going to use.

Manual name	Description
<i>Hitachi NAS Platform F1000 Series Installation and Configuration Guide, MK-92NAS061</i>	You must read this manual first to use an HNAS F system. This manual contains the information that you must be aware of before starting HNAS F system operation, as well as the environment settings for an external server.
<i>Hitachi NAS Platform F1000 Series Cluster Getting Started Guide (This manual)</i>	This manual explains how to set up an HNAS F system in a cluster configuration. To operate HNAS F on a virtual server, see the <i>Cluster Getting Started Guide for Virtual NAS</i> .
<i>Hitachi NAS Platform F1000 Series Cluster Getting Started Guide for Virtual NAS, MK-92NAS073</i>	This manual explains how to set up virtual servers for HNAS F systems in a cluster configuration.

Manual name	Description
<i>Hitachi NAS Platform F1000 Series Cluster Administrator's Guide, MK-92NAS084</i>	This manual provides procedures for using HNAS F systems in a cluster configuration, as well as provides GUI references.
<i>Hitachi NAS Platform F1000 Series Cluster Troubleshooting Guide, MK-92NAS066</i>	This manual provides troubleshooting information for HNAS F systems in a cluster configuration.
<i>Hitachi NAS Platform F1000 Series Single Node Getting Started Guide, MK-92NAS079</i>	This manual explains how to set up an HNAS F system in a single-node configuration.
<i>Hitachi NAS Platform F1000 Series Single Node Administrator's Guide, MK-92NAS089</i>	This manual explains the procedures for using HNAS F systems in a single-node configuration, as well as provides GUI references.
<i>Hitachi NAS Platform F1000 Series Single Node Troubleshooting Guide, MK-92NAS078</i>	This manual provides troubleshooting information for HNAS F systems in a single-node configuration.
<i>Hitachi NAS Platform F1000 Series CLI Administrator's Guide, MK-92NAS085</i>	This manual describes the syntax of the commands that can be used for HNAS F systems in a cluster configuration or a single-node configuration.
<i>Hitachi NAS Platform F1000 Series API References, MK-92NAS064</i>	This manual explains how to use the API for HNAS F systems in a cluster configuration or a single-node configuration.
<i>Hitachi NAS Platform F1000 Series Error Codes, MK-92NAS065</i>	This manual contains messages for HNAS F systems in a cluster configuration or a single-node configuration.
<i>Hitachi NAS Platform F1000 Series File System Protocols (CIFS/NFS) Administrator's Guide, MK-92NAS086</i>	This manual contains the things to keep in mind before using the CIFS or NFS service of an HNAS F system in a cluster configuration or a single-node configuration from a CIFS or NFS client.

Document conventions

This document uses the following typographic conventions:

Convention	Description
Bold	Indicates text on a window, other than the window title, including menus, menu options, buttons, fields, and labels. Example: Click OK .

Convention	Description
<i>Italic</i>	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: <code>copy source-file target-file</code> <i>Note:</i> Angled brackets (< >) are also used to indicate variables.
screen/code	Indicates text that is displayed on screen or entered by the user. Example: <code># pairdisplay -g oradb</code>

Convention for storage capacity values

Storage capacity values (e.g., drive capacity) are calculated based on the following values:

Capacity Unit	Physical Value	Logical Value
1 KB	1,000 bytes	1,024 (2 ¹⁰) bytes
1 MB	1,000 KB or 1,000 ² bytes	1,024 KB or 1,024 ² bytes
1 GB	1,000 MB or 1,000 ³ bytes	1,024 MB or 1,024 ³ bytes
1 TB	1,000 GB or 1,000 ⁴ bytes	1,024 GB or 1,024 ⁴ bytes
1 PB	1,000 TB or 1,000 ⁵ bytes	1,024 TB or 1,024 ⁵ bytes
1 EB	1,000 PB or 1,000 ⁶ bytes	1,024 PB or 1,024 ⁶ bytes
1 block	-	512 bytes

Getting help

The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support, log on to the Hitachi Data Systems Portal for contact information: <https://portal.hds.com>

Comments

Please send us your comments on this document: doc.comments@hds.com. Include the document title, number, and revision, and refer to specific section(s) and paragraph(s) whenever possible.

Thank you! (All comments become the property of Hitachi Data Systems Corporation.)

Introduction

The Hitachi NAS Platform F (HNAS F) has two models: cluster and single. This guide provides information for configuring the cluster model and focuses on configuring a system for a Windows Active Directory environment with a single front-end network.

- [Network configuration](#)

Network configuration

The following figure is an example of the HNAS F network configuration.

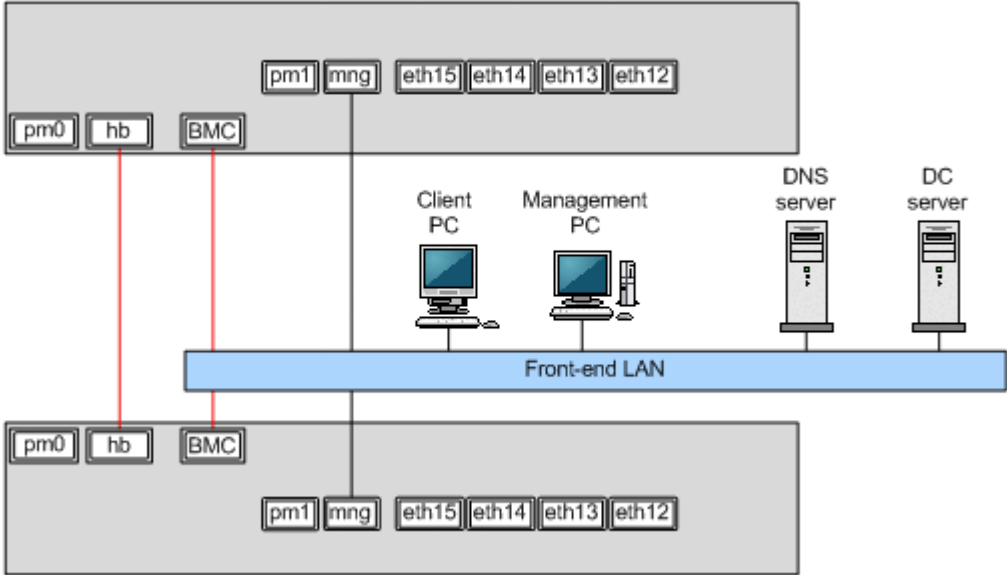


Figure 1-1 Network configuration

Before you begin

This chapter lists the prerequisites for setting up a system.

- [Prerequisites](#)

Prerequisites

The prerequisites for a system include:

- The Management IP address and baseboard management controller (BMC) IP address within the front-end network need to be assigned to both nodes. If not assigned, configure them in the HNAS F prompt through the directly-attached keyboard/monitor.
- A Windows PC is required for the management GUI. For the system requirement, 1 GB or more of memory and 4 GB or more of disk capacity is required. See the *Installation and Configuration Guide* for details.
- One 70 GB LU for the cluster management and LUs for user file system in storage should be created and assigned to both HNAS F nodes by way of FC connection up front.

For HNAS F, the cluster management should have been assigned at the distribution center. Otherwise, ask your storage administrator to assign and map these LUs to both nodes.

The following table lists the information that needs to be checked before beginning setup, provides space for recording those values, and describes where those values are used.

Table 2-1 Check all items before starting setup

Target	Item	Value	Procedure where used
HNAS F system	The management IP address and BMC IP address for both nodes.		Setting up an HNAS F environment on page 3-3
	License key files or license keys (whether to encrypt user LUs when using an encryption license)		
NTP server	IP address		Setting up an HNAS F environment on page 3-3
DNS server	Domain name		Setting up an HNAS F environment on page 3-3
	IP address		Setting up an HNAS F environment on page 3-3
Other than those above	Time zone		Setting up an HNAS F environment on page 3-3
AD DC joining and RID user mapping	AD Domain name		Setting up an HNAS F environment on page 3-3

Target	Item	Value	Procedure where used
	AD Domain name(NetBIOS)		Setting up an HNAS F environment on page 3-3
	DC server name(s)		Setting up an HNAS F environment on page 3-3
	Domain user account to join a domain		Setting up an HNAS F environment on page 3-3
	Password for the domain user		Setting up an HNAS F environment on page 3-3

Getting started

This chapter explains how to set up a system.

- [Workflow for setting up a system](#)
- [Before setting up a system](#)
- [Installing Hitachi File Services Manager](#)
- [Setting up an HNAS F environment](#)

Workflow for setting up a system

The following figure shows the workflow for setting up a system.

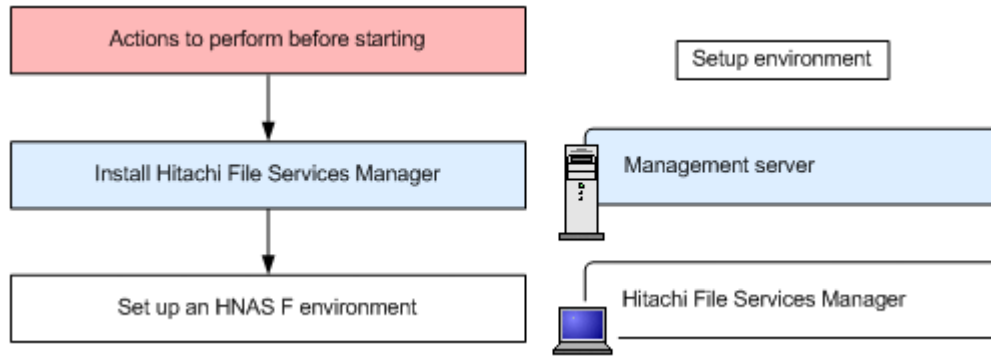


Figure 3-1 Workflow for setting up a system

Before setting up a system

The items in the following table must be checked before beginning setup. The table provides space for the items you need to specify during setup, and describes where the values are used.

Default values are used throughout the setup procedure unless otherwise indicated. In addition to the items that must be checked in advance and the default values, you can perform setup more efficiently by determining the values for the items that you need to specify.

Table 3-1 Specify values during setup

Item	Value	Procedure where used
Name of the cluster in the HNAS F system		Setting up an HNAS F environment on page 3-3
Test share name in the HNAS F system		

For details about information that must be verified before starting the system operation, see the *Installation and Configuration Guide*.

Installing Hitachi File Services Manager



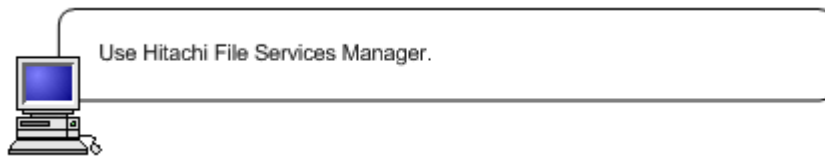
To use Hitachi File Services Manager as the HNAS F GUI, you need to install Hitachi File Services Manager on the management server.

This section describes how to install Hitachi File Services Manager. For details about the management server requirements and the browser settings required to use the GUI, such as pop-up block and security, see the *Installation and Configuration Guide*.

To install Hitachi File Services Manager

1. Insert the installation media into the management server optical drive, and then run the `HFSMinst.exe` file.
2. Follow the instructions in the dialog boxes.
Specify any required information, such as where to install the program and where to store database files.
If the installation is completed successfully, the **Installation Complete** dialog box is displayed.
3. Click **Finish** to finish the installation.

Setting up an HNAS F environment



This section describes how to set up an HNAS F environment from the Hitachi File Services Manager. For details about the operations and environment settings that are required before running an HNAS F system, see the *Cluster Administrator's Guide*.

CE (Customer Engineer) should assign Management IP address beforehand.

To set up an HNAS F environment

1. From a Web browser, specify the following URL:
`http://IP-address-or-host-name-of-management-server:23015/FileServicesManager/`
2. From the login window, enter the following user name and password to log in to the HNAS F GUI.
 - o User name: `system`
 - o Password: `manager`Change the default password as soon as possible.
The Configuration Wizard automatically starts the first time the system is logged in to.
3. In the **1. Introduction** dialog box, click **Next >**.
4. In the **2. Node settings** dialog box, enter the IP address in the ***Mgmt. IP address first node** box and in the **Mgmt. IP address second node** box. Enter the password `manager` in the ***Password** box, and then click **Next >**.
5. In the confirmation screen, click **Next >**.

6. In the **3. License settings** dialog box, click **Activate License**.
7. In the **Activate License** dialog box, specify the settings for the license and click **OK**.
 - o If you are using a license key file, specify the license key file path into the text box. If you want to browse and specify the file name, click the **Browse** button.
 - o If you want to enter a license key directly, enter the license key into the text box.
8. In the confirmation screen, select the check box and click the **Confirm** button.
9. In the **3. License settings** dialog box, click **Next >**.
10. In the **4. Cluster settings** dialog box, enter the cluster name in the ***Cluster name** box and the physical node host name in the **Physical node host name** box. Select the **Change** box, and then select an option from **Network address of the heartbeat port** menu. Make sure that your selection does not conflict with the front-end network as the **Network address of the heartbeat port**. Note that once configured, this value cannot be changed. Select the **Yes** check box to encrypt user LUs. You can use this if an encryption license is set. Click **Next >**.
11. In the **5. Network settings** dialog box, specify the **Virtual IP address**, and then click **Next >**.
12. In the **6. Optional settings** dialog box, make sure that **Custom setting**, **DNS settings**, **Time settings**, and **User authentication setting** are selected, and then click **Next >**.
13. In the **6-1. DNS setting** dialog box, click **DNS settings**. Enter the IP addresses in the ***Primary DNS server** box. The **Secondary DNS server** box is optional. The **Default domain** name is optional. Click **Next >**.
14. In the **6-2. Time setting** dialog box, specify the ***Region**, ***Time zone**, and **NTP server IP address** in the appropriate boxes, and then click **Next >**.
15. In the **6-4. User authentication settings** dialog box, click **Protocol** and the **CIFS** and **NFS** boxes, and then click **Next >**.
16. In the **6-4. User authentication settings** dialog box, select **Active Directory authentication** in CIFS user management methods, and then click **Next >**.
17. In the **6-4. User authentication settings** dialog box, specify the ***Domain name**, ***Domain name (NetBIOS)**, ***DC Server name(s)**, **Domain user name** and **Domain user password** in the appropriate boxes. Click **RIDs in User mapping**, and then click **Next >**.
18. In the **6-4. User authentication settings** dialog box, specify 70000 and 2000000* in the **Range of UIDs and GIDs** box. Specify the Domain name (Net BIOS) in the **Domain name (NetBIOS)** box, and then specify 70000 and 2000000 in the **Range of UIDs and GIDs** box. Click **Add**, and then click **Next >**.

19. In the **6-4. User authentication settings** dialog box, if you are using NIS or LDAP in your NFS environment, select the **External name-resolution server**, and then click **Next >**, Select and specify the appropriate setting for your environment, and then click **Next >**.
20. In the **7. Confirmation** dialog box, confirm the information, and click **Details**. Click the **Yes I have read the above warning and wish to execute the configuration wizard** box, and then click **< Back**. Click **Confirm**.

The AD user is accessible to HNAS F CIFS share. If it is not accessible, try to delete CIFS access cache from **Service Maintenance** on the CIFS service modify window.
21. In the **9. Completion** dialog box, click **Create and Share File System**.
22. In the **Create and Share File System** dialog box, specify the following information:
 - a. In the **Basic** tab, specify the CIFS share name. Click the **Select from existing LUs** option, and then select an LU name that you want to test from the from the list.
23. Click **Close** to complete the Configuration Wizard.
24. In the **Advanced** subtab of the **Settings** tab in the *physical-node* subwindow, click the **Backup Configuration**.
25. In the **Save All System Settings** page of the Backup Configuration dialog box, click the **Save and Download** button to download the system configuration information to storage media outside the system.



Acronyms

This section lists the acronyms used in this manual.

C

CIFS

Common Internet File System

CLI

command line interface

D

DNS

Domain Name System

G

GUI

graphical user interface

H

HNAS F

Hitachi NAS Platform F

#	A	B	<u>C</u>	<u>D</u>	E	F	<u>G</u>	<u>H</u>	<u>I</u>	J	K	<u>L</u>	M	<u>N</u>	O	P	Q	R	S	T	<u>U</u>	V	W	X	Y	Z
---	---	---	----------	----------	---	---	----------	----------	----------	---	---	----------	---	----------	---	---	---	---	---	---	----------	---	---	---	---	---

I

IP

Internet Protocol

L

LAN

local area network

LDAP

Lightweight Directory Access Protocol

LU

logical unit

N

NIS

Network Information Service

NTP

Network Time Protocol

U

URL

Uniform Resource Locator

#	A	B	<u>C</u>	<u>D</u>	E	F	<u>G</u>	<u>H</u>	<u>I</u>	J	K	<u>L</u>	M	<u>N</u>	O	P	Q	R	S	T	<u>U</u>	V	W	X	Y	Z
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