IBM FlashSystem V840 1.3

Quick Start Guide

GI13-2877-01

Edition notice

This edition applies to IBM FlashSystem V840 and to all subsequent releases and modifications until otherwise indicated in new editions.

Safety and environmental notices

Review the safety notices, environmental notices, and electronic emission notices for IBM® FlashSystem™ V840 before you install and use the product.

Suitability for telecommunication environment: This product is not intended to connect directly or indirectly by any means whatsoever to interfaces of public telecommunications networks.

Here are examples of a caution and a danger notice:

CAUTION:
A caution notice indicates the presence of a hazard that has the potential of causing moderate or minor personal injury. (C001)

DANGER

A danger notice indicates the presence of a hazard that has the potential of causing death or serious personal injury. (D002)

To find the translated text for a caution or danger notice:

1. Look for the identification number at the end of each caution notice or each danger notice. In the preceding examples, the numbers (C001) and (D002) are the identification numbers.
2. Locate the *IBM Systems Safety Notices* with the user publications that were provided with the FlashSystem V840 hardware.
3. Find the matching identification number in the *IBM Systems Safety Notices*. Then review the topics concerning the safety notices to ensure that you are in compliance.
4. Optionally, read the multilingual safety instructions on the FlashSystem V840 website. Go to www.ibm.com/support/, search for FlashSystem V840, and click the documentation link.

Chapter 1. Overview

This guide provides a high-level roadmap to guide the customer, IBM service support representative (SSR), and IBM lab based services (if applicable) through the planning, installation, and initial configuration steps that are needed to set up a FlashSystem V840 1.3 (MTM 9846-AC1, 9848-AC1, 9846-AE1, 9848-AE1).

For detailed instructions, refer to FlashSystem V840 Knowledge Center (https://ibm.biz/fs_v840).

The FlashSystem V840 1.3 consists of two AC1 control enclosures, and one AE1 storage enclosure. These three enclosures form a 6-U *building block* (BB), as shown in the following figure.

Figure 1. FlashSystem V840 components (front view)

1. AC1 control enclosure 1
2. AC1 control enclosure 2
3. AE1 storage enclosure

There are two types of building blocks: *fixed building blocks* and *scalable building blocks*. The type of building block determines the particular planning and installation steps that must be followed.

- In a *fixed building block*, the AC1 control enclosures and AE1 storage enclosure are directly connected without the use of switches or a SAN fabric. A fixed building block is usable and self-reliant in system operation and management. It can be scaled later, but the scaling process for a fixed building block is physically disruptive.
- A *scalable building block* is designed so that the AC1 control enclosures and AE1 storage enclosure are connected through an internal Fibre Channel (FC) storage fabric by using dedicated FC switches. This internal FC switch fabric is not shared with hosts or server-side storage area networks (SANs). Management connections between the AC1 control enclosures are established through an Ethernet switch to create a private management LAN.

Additional scalable building blocks and flash expansion enclosures can be added by installing AC1 control enclosures and AE1 storage enclosures and connecting them to the dedicated FC switch fabric and the Ethernet switch.

Chapter 2. Planning

The customer should ensure that they complete the prerequisite planning tasks and worksheets, before the IBM service support representative (SSR) can proceed with the installation.

Prerequisites

The prerequisites that the customer must fulfill depend on the type of FlashSystem V840 building block being installed.

Important: For Technical and Delivery Assessment (TDA) checklists for account teams and business partners, see the Solution Assurance site and search for the FlashSystem V840 1.3 TDA checklist.

Prerequisites for a fixed building block

Before the IBM service support representative (SSR) installs the FlashSystem V840 hardware, the customer must prepare the installation site to meet the following requirements:

- Laptop with USB port for initial configuration.
- Supported web browser. For more information, see **Configuring** > **Configuration details** > **Initializing the system** > **Checking your web browser settings** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).
- Ethernet connection.
- Rack spaces for the AC1 control enclosures and AE1 storage enclosure.
- Appropriate power and environmental conditions. For more information, see **Planning** > **Planning for the hardware installation** > **Prerequisites for fixed building blocks** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).
- If the customer chooses to use a Power Distribution Unit (PDU), network and power provisions for the PDU must already be in place.
- Fibre Channel host connections.

Prerequisites for a scalable building block

In addition to the general requirements for a fixed building block, before the SSR and IBM lab based services installs the FlashSystem V840, the customer must prepare the site and the basic infrastructure for the installation, including the following items:

- Main power feeds in the environment for the scaled building block.
- Rack spaces for the components in the scaled building block.
- Power distribution units (PDUs) and power cables.
- Optional host patch panel in the specified rack location.
- Console or workstation to manage the scaled building block.

Note: In order for the SSR to install the Ethernet switch and Fibre Channel switches used in the scalable building block, the customer must establish prior arrangements such as a local contract or Racking Premium Service.

For detailed information on prerequisites for scalable building blocks, see **Planning** > **Planning for the hardware installation** > **Prerequisites for scalable building blocks** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).

Backing up customer data

Attention: To prevent data loss, the customer data must be backed up when using an existing fixed building block to create a scaled building block. IBM lab based services is responsible for backing up data in this instance.

See **Installing** > **Backing up data** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).

Planning worksheets

The customer should complete the planning worksheets for the building block to provide information to the IBM service support representative (SSR), and IBM lab based services, if applicable.

Worksheets for fixed building blocks

For detailed worksheets used in a fixed building block installation, the customer should see **Planning** > **Planning for the hardware installation** > **Planning worksheets for fixed building blocks** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).

When the planning worksheets are completed, the customer submits them to the SSR for use during the installation process.

Worksheets for scalable building blocks

For detailed worksheets used in a scalable building block installation, the customer should see **Planning** > **Planning for the hardware installation** > **Planning worksheets for scalable building blocks** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).

When the planning worksheets are completed, the customer submits them to the SSR and lab based services for use during the installation process.

Chapter 3. Installing the hardware

The IBM service support representative (SSR) is responsible for installing the FlashSystem V840 hardware in the rack.

In the case of a scalable building block, installing components in the specified rack locations allows the SSR to add additional building blocks without disrupting service to existing building blocks. The following figure shows component locations in an MTM 7014-T42 rack for up to four scalable building blocks. (Note that the number of Fibre Channel (FC) switches that are installed depends on the type of FC adapters that are installed in the AC1 control enclosures. 8 Gb FC adapters require 4 FC switches; 16 Gb adapters require only 2 FC switches.)

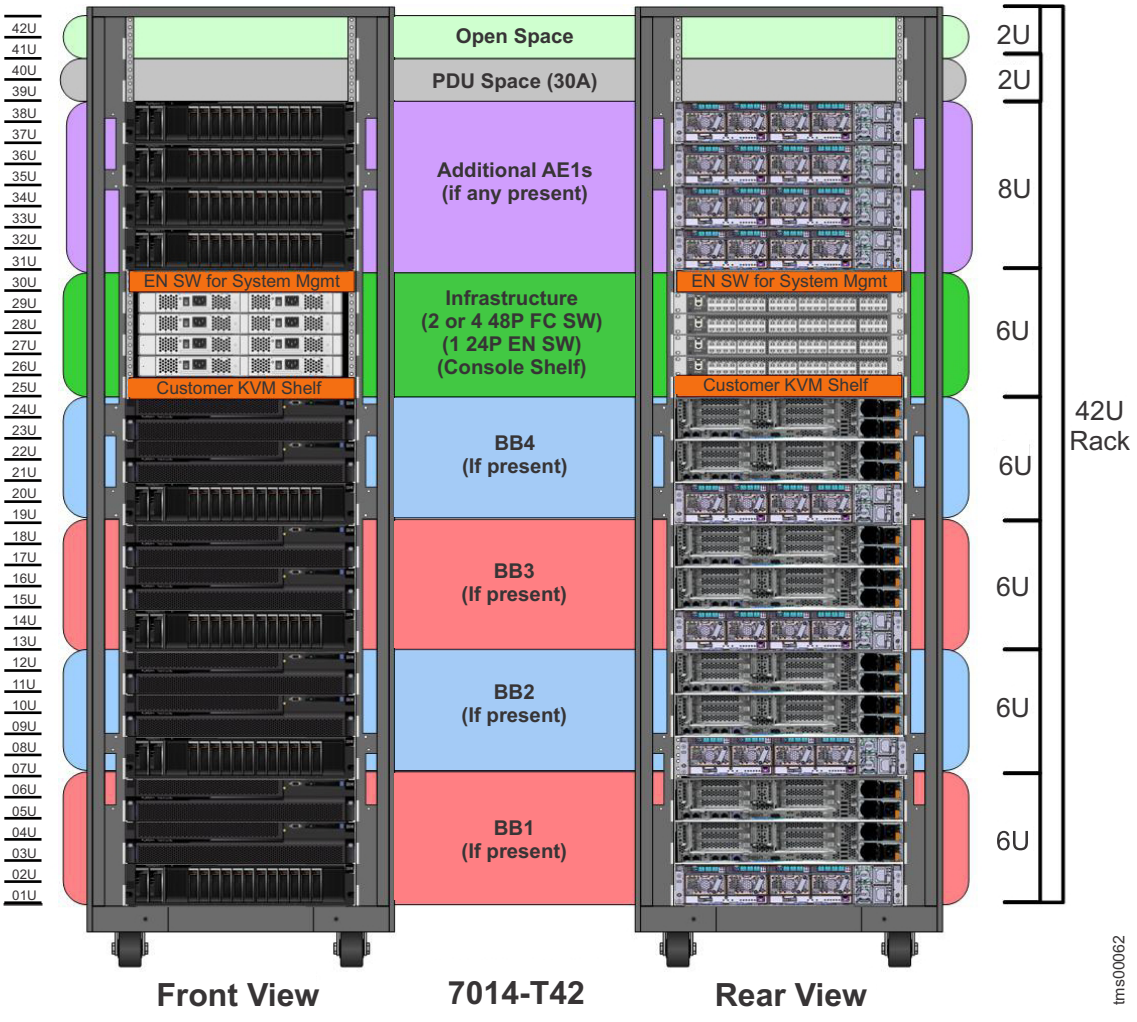

Figure 2. Locations for scalable building block components in an MTM 7014-T42 rack

Installing the FlashSystem V840 enclosures

Installing the FlashSystem V840 enclosures in a building block involves installing the two AC1 control enclosures and the AE1 storage enclosure.

To install the three enclosures, complete the following steps:

1. Install the rails for the AC1 control enclosures and the AE1 storage enclosure in the rack. See **Installing** > **Installing the hardware** > **Installing the support rails** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).
2. Install the two AC1 control enclosures in the rack. See **Installing** > **Installing the hardware** > **Installing the FlashSystem V840 AC1 control enclosure** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).
3. Install the AE1 storage enclosure in the rack. See **Installing** > **Installing the hardware** > **Installing the AE1 storage enclosure** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).

Installing the Fibre Channel switches (scalable building blocks only)

The IBM service support representative (SSR) is responsible for physically installing SAN48B-5 Fibre Channel (FC) switches in the specified rack locations.

Note: In order for the SSR to install the FC switches, the customer must establish prior arrangements such as a local contract or Racking Premium Service.

Note: The number of switches that are installed depends on the type of FC adapters that are installed in the AC1 control enclosures. 8 Gb FC adapters will require 4 FC switches; 16 Gb adapters will require only 2 FC switches.

Refer to the SAN48B-5 FC switch documentation for switch installation information. Refer to Chapter 3, “Installing the hardware,” on page 5 or the planning worksheets for component placement in the rack.

Installing the Ethernet switch (scalable building blocks only)

The IBM service support representative (SSR) is responsible for installing the G8052 Ethernet switch in the specified rack location.

Note: In order for the SSR to install the Ethernet switch, the customer must establish prior arrangements such as a local contract or Racking Premium Service.

Refer to the G8052 Ethernet switch documentation for installation information. Refer to Chapter 3, “Installing the hardware,” on page 5 or the planning worksheets for component placement in the rack.

Chapter 4. Connecting the FlashSystem V840 components

After installing the FlashSystem V840 hardware in the rack, the various components must be connected to each other, to power, to the Ethernet network, and to the hosts.

Connecting the components in a fixed building block

The IBM service support representative (SSR) is responsible for connecting the two AC1 control enclosures and the AE1 storage enclosure. See **Installing** > **Connecting the components in a fixed building block** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).

Connecting the components in a scalable building block

Lab based services is responsible for connecting (cabling) the AC1 control enclosures, AE1 storage enclosure, and the Fibre Channel switches and Ethernet switch in a scalable building block. There are many possible scalable building block cabling configurations, depending on the number of building blocks that are being installed, and the Fibre Channel adapters and host adapters that are installed in the AC1 control enclosures.

See **Installing** > **Connecting the components in a scalable building block** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840) for cabling details for your particular configuration.

Chapter 5. Initial configuration

After the FlashSystem V840 components are installed in the rack and connected, they must be initialized.

AE1 storage enclosure

- For a fixed building block, the IBM service support representative (SSR) is responsible for initial configuration of the AE1 storage enclosure.
- For a scalable building block, IBM lab based services is responsible for initial configuration of the AE1 storage enclosure.

1. First, initialize the AE1 storage enclosure. See **Installing** > **Initializing the components** > **Initializing an AE1 storage enclosure** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).
2. Next, complete the initial configuration of the AE1 storage enclosure. See **Installing** > **Initializing the components** > **Initializing an AE1 storage enclosure** > **Completing the AE1 storage enclosure setup** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).

AC1 control enclosures

- *For a fixed building block*, the SSR is responsible for the first phase of the initial configuration of the AC1 control enclosures.
- *For a scalable building block*, IBM lab based services is responsible for the first phase of the initial configuration of the AC1 control enclosures.

See **Installing** > **Initializing the components** > **Initial setup of the AC1 control enclosures** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).

Chapter 6. First customer tasks

After the FlashSystem V840 components have been installed in the rack, connected, and initialized, the customer completes the initial configuration and updates the system firmware and software.

1. First, the customer completes the initial configuration by entering a new password, licensing information and other site-specific information, and creating storage pools. See **Installing** > **Initializing the components** > **Initial customer configuration of the AC1 control enclosures and storage implementation** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).
2. Next, the customer should update the system with the latest firmware and software. See **Installing** > **Verify and update the system firmware and software** in FlashSystem V840 1.3 Knowledge Center (https://ibm.biz/fs_v840).

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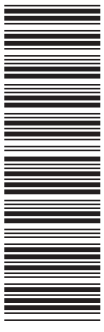

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