

Dell PowerEdge R520 And
PowerEdge R420 Systems

Second Processor Installation—Information Update



Notes, Cautions, and Warnings



NOTE: A NOTE indicates important information that helps you make better use of your computer.



CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Information in this document is subject to change without notice.

© 2012 Dell Inc. All rights reserved.

Reproduction of these materials in any manner whatsoever without the written permission of Dell Inc. is strictly forbidden.

Trademarks used in this text: Dell™, the DELL logo, and PowerEdge™, are trademarks of Dell Inc.

Other trademarks and trade names may be used in this publication to refer to either the entities claiming the marks and names or their products. Dell Inc. disclaims any proprietary interest in trademarks and trade names other than its own.

Overview

This document provides important information for installing the second processor in Dell PowerEdge R520 and PowerEdge R420 systems.

Before You Begin

To install a second processor in your system, you must ensure that you have:

- Replaced the dummy fan in the FAN 6 slot with a cooling fan.
For more information on replacing the fan, see "Removing a Cooling Fan" and "Installing a Cooling Fan" in the relevant Owner's Manual on support.dell.com.
- Upgraded the riser cards as indicated in the table below:

Table 1-1. Riser Upgrade Information


PowerEdge System	Upgrade	
	From	To
R520	Riser1_1P: One half-height, half-length x4 link	Riser1_2P: One half-height, half-length x16 link
	Riser2_1P: <ul style="list-style-type: none">• One full-height, full-length x8 link• Two full-height, half-length x4 link	Riser2_2P: <ul style="list-style-type: none">• One full-height, full-length x8 link• Two full-height, half-length x8 link
R420	Riser1_1P: One half-height, half-length x4 link	Riser1_2P: One half-height, half-length x16 link
	Riser2_1P: One full-height, half-length x16 link	Same as Riser2_1P

For more information on replacing the riser cards, see "Expansion Cards and Expansion-Card Risers" and "Technical Specifications" in the Owner's Manual at support.dell.com.




NOTE: When selecting or upgrading your system configuration, verify the system power consumption with the Dell Energy Smart Solution Advisor at dell.com/ESSA to ensure optimum power utilization.


Removing a Processor Blank

 **CAUTION:** Many repairs may only be done by a certified service technician. You should only perform troubleshooting and simple repairs as authorized in your product documentation, or as directed by the online or telephone service and support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow the safety instructions that came with the product.

- 1 Before upgrading your system, download the latest system BIOS version from support.dell.com and follow the instructions included in the compressed download file to install the update on your system.

 **NOTE:** You can update the system BIOS using the Dell Lifecycle Controller.

- 2 Turn off the system, including any attached peripherals, and disconnect the system from the electrical outlet. When disconnected from AC power, press and hold the power button for 10 seconds to fully drain the system of stored power prior to removing the cover.

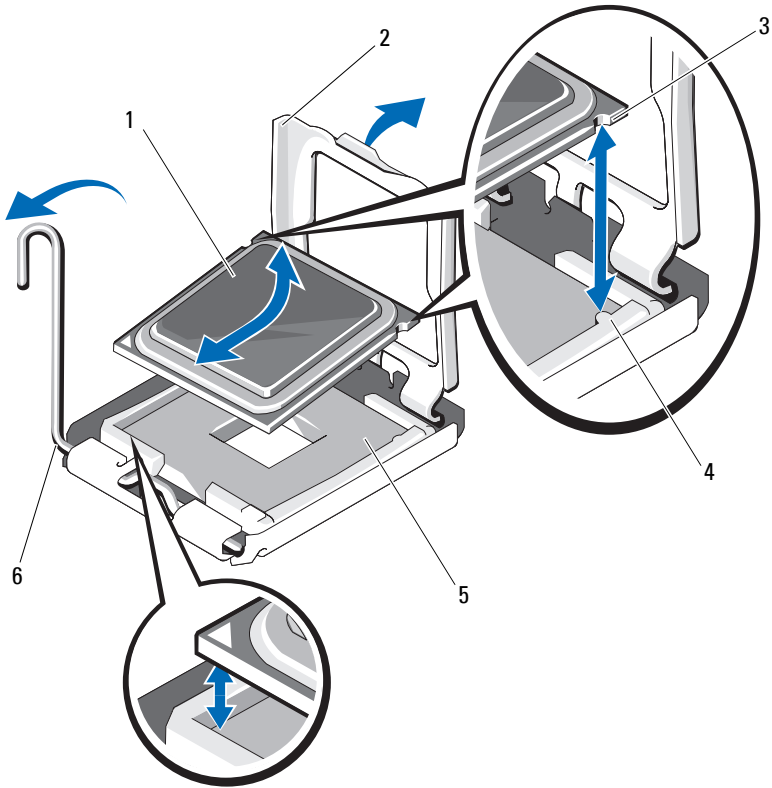
 **NOTE:** It is recommended that you always use a static mat and static strap while working on components in the interior of the system.

- 3 Open the system. See "Opening the System" in the Owner's Manual.
- 4 Remove the cooling shroud. See "Removing the Cooling Shroud" in the Owner's Manual.

 **CAUTION:** The processor blank is held in its socket under strong pressure. Be aware that the release lever can spring up suddenly if not firmly grasped.

- 5 Position your thumb firmly over the processor-blank socket-release lever and release the lever from the locked position by pushing down and out from under the tab. Rotate the lever upward.
- 6 Rotate the processor shield upward and out of the way.
- 7 Lift the processor blank out of the socket and leave the release lever up so that the socket is ready for the new processor. See Figure 1-1.

Figure 1-1. Removing and Installing a Processor Blank/Processor



- 1 processor blank/processor
- 3 notches in processor (2)
- 5 ZIF socket

- 2 processor shield
- 4 socket keys (2)
- 6 socket-release lever

Installing the Second Processor

△ CAUTION: Only trained service technicians are authorized to remove the system cover and access any of the components inside the system. Before you begin this procedure, review the safety instructions that came with the system.

- 1 Ensure that you have followed the steps mentioned in "Before You Begin" on page 3.
- 2 Unpack the new processor.

△ CAUTION: Positioning the processor incorrectly can permanently damage the system board or the processor. Be careful not to bend the pins in the socket.

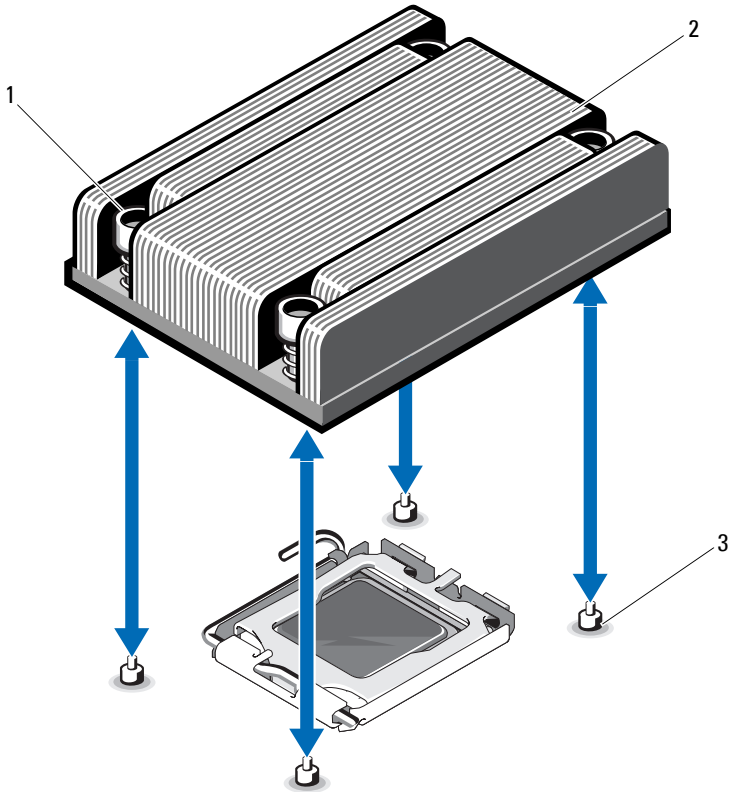
△ CAUTION: Do not use force to seat the processor. When the processor is positioned correctly, it engages easily into the socket.

- 3 Align the notches in the processor with the socket keys on the ZIF socket and set the processor lightly in the ZIF socket. See Figure 1-1.
- 4 Close the processor shield.
- 5 Using a clean lint-free cloth, remove the thermal grease from the heat sink.

△ CAUTION: Applying too much thermal grease can result in excess grease coming in contact with and contaminating the processor socket.

- 6 Open the grease applicator included with your processor kit and apply all of the thermal grease in the applicator to the center of the topside of the new processor.
- 7 Place the heat sink on the processor.
- 8 Tighten the heat-sink retention sockets. See Figure 1-2.

Figure 1-2. Installing the Heat Sink



- 1 retention sockets (4)
- 3 retention screws (4)

- 2 heat sink

- 9 Install the cooling shroud. For more information, see "Installing the Cooling Shroud" in the Owner's Manual.
- 10 Close the system.

- 11** Reconnect your system and peripherals to their electrical outlets, and turn on the system.
- 12** Press <F2> to enter the System Setup and check that the processor information matches the new system configuration.
- 13** Run the system diagnostics to verify that the new processor operates correctly.