

Inspiron 3250

Service Manual

Computer Model: Inspiron 3250
Regulatory Model: D13S
Regulatory Type: D13S001



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.

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Before working inside your computer



NOTE: The images in this document may differ from your computer depending on the configuration you ordered.

Before you begin

- 1 Save and close all open files and exit all open applications.
- 2 Shut down your computer.

The shut-down instruction varies depending on the operating system installed on your computer.

- Windows 10: Click **Start** →  **Power** → **Shut down**.
- Windows 8.1: On the **Start** screen, click the power icon  → **Shut down**.
- Windows 7: Click **Start** → **Shut down**.











NOTE: If you are using a different operating system, see the documentation of your operating system for shut-down instructions.

- 3 Disconnect your computer and all attached devices from their electrical outlets.
- 4 Disconnect all cables such as telephone cables, network cables, and so on, from your computer.
- 5 Disconnect all attached devices and peripherals, such as keyboard, mouse, monitor, and so on, from your computer.
- 6 Remove any media card and optical disc from your computer, if applicable.
- 7 After the computer is unplugged, press and hold the power button for 5 seconds to ground the system board.

Safety instructions

Use the following safety guidelines to protect your computer from potential damage and ensure your personal safety.



-  **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.
-  **WARNING:** Disconnect all power sources before opening the computer cover or panels. After you finish working inside the computer, replace all covers, panels, and screws before connecting to the electrical outlet.
-  **CAUTION:** To avoid damaging the computer, ensure that the work surface is flat and clean.
-  **CAUTION:** To avoid damaging the components and cards, handle them by their edges, and avoid touching pins and contacts.
-  **CAUTION:** You should only perform troubleshooting and repairs as authorized or directed by the Dell technical assistance team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. See the safety instructions that shipped with the product or at www.dell.com/regulatory_compliance.
-  **CAUTION:** Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity, which could harm internal components.
-  **CAUTION:** When you disconnect a cable, pull on its connector or on its pull tab, not on the cable itself. Some cables have connectors with locking tabs or thumb-screws that you must disengage before disconnecting the cable. When disconnecting cables, keep them evenly aligned to avoid bending any connector pins. When connecting cables, ensure that the ports and connectors are correctly oriented and aligned.
-  **CAUTION:** Press and eject any installed card from the media-card reader.

Recommended tools

The procedures in this document may require the following tools:

- Philips screwdriver

- Flat-head screwdriver
- Plastic scribe



After working inside your computer



CAUTION: Leaving stray or loose screws inside your computer may severely damage your computer.

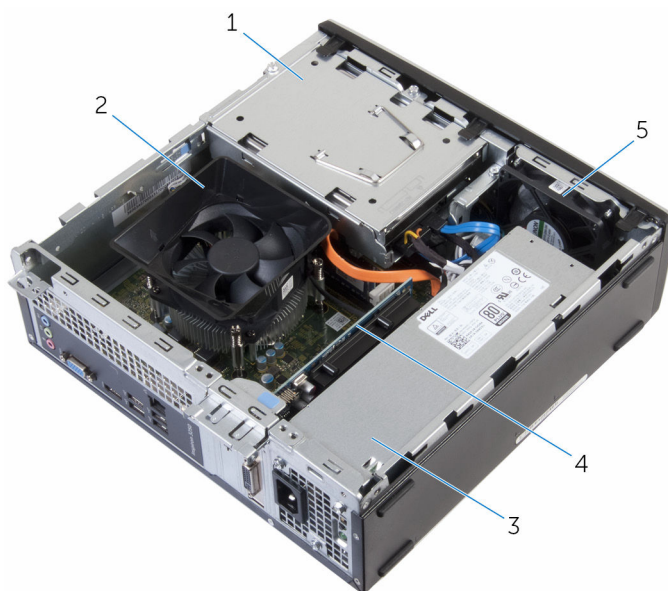
- 1** Replace all screws and ensure that no stray screws remain inside your computer.
- 2** Connect any external devices, peripherals, or cables you removed before working on your computer.
- 3** Replace any media cards, discs, or any other parts that you removed before working on your computer.
- 4** Connect your computer and all attached devices to their electrical outlets.
- 5** Turn on your computer.

Technical overview



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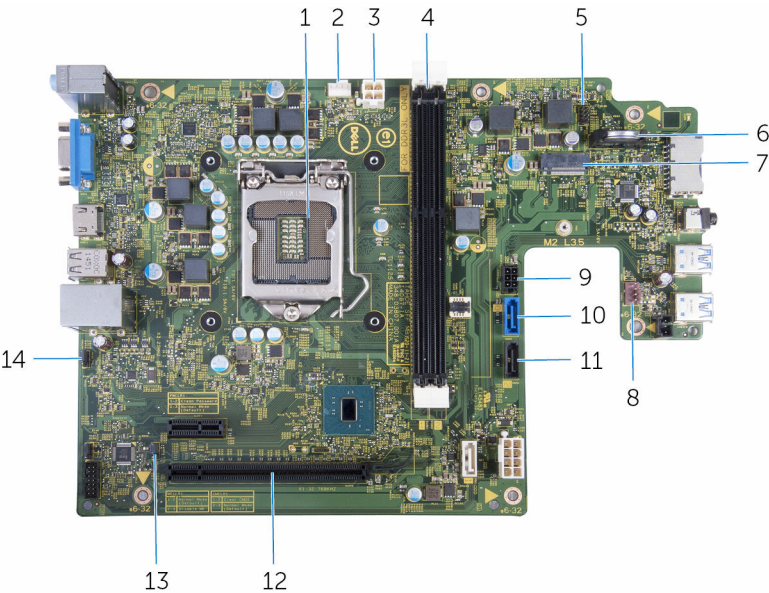
Inside view of your computer



- | | | | |
|---|-------------------|---|---------------|
| 1 | drive cage | 2 | processor fan |
| 3 | power-supply unit | 4 | graphics card |
| 5 | chassis fan | | |



System board components



- | | | | |
|----|--|----|---|
| 1 | processor | 2 | processor-fan cable connector |
| 3 | power-cable connector | 4 | memory-module slots |
| 5 | power-button cable connector | 6 | coin-cell battery |
| 7 | wireless-card slot | 8 | chassis-fan cable connector |
| 9 | drive power-cable connector | 10 | primary hard-drive data cable connector |
| 11 | optical-drive data-cable/secondary hard-drive data-cable connector | 12 | graphics-card slot |
| 13 | CMOS jumper | 14 | password jumper |



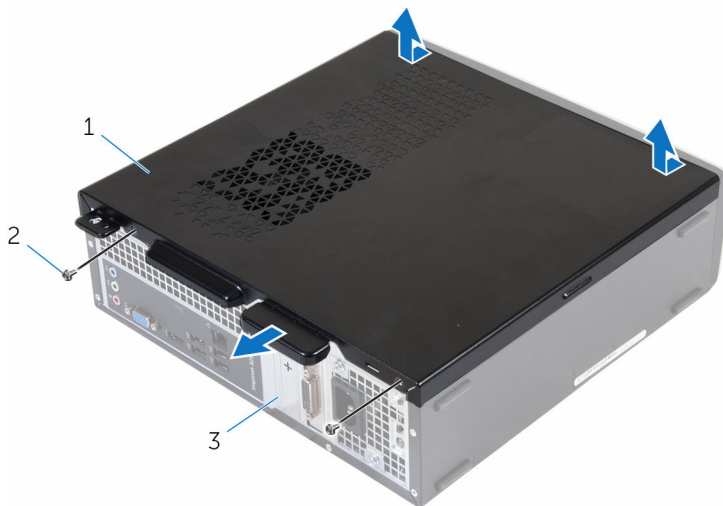
Removing the computer cover



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Procedure

- 1 Place the computer on its side with the vents facing up.
- 2 Remove the screws that secure the computer cover to the chassis.
- 3 Release the computer cover by sliding it toward the back of the computer.
- 4 Lift the computer cover away from the chassis.



- 1 computer cover
3 chassis

- 2 screws (2)



Replacing the computer cover



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Procedure

- 1 Align the tabs on the computer cover with the slots on the chassis and slide it toward the front of the computer.
- 2 Replace the screws that secure the computer cover to the chassis.
- 3 Place the computer in an upright position.

Removing the front bezel



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Prerequisites

Remove the [computer cover](#).

Procedure

- 1 Place the computer in an upright position.
- 2 Release the front-bezel tabs by moving them outward.



3 Gently rotate and pull the front bezel away from the chassis.



- 1 tabs (6)
- 3 slots (3)

- 2 chassis
- 4 front bezel



Replacing the front bezel



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Procedure

- 1 Align and insert the tabs on the front bezel into the slots on the front panel.
- 2 Rotate the front bezel toward the chassis until the front-bezel tabs snap into place.
- 3 Place on the computer on its side.

Post-requisites

Replace the [computer cover](#).



Removing the 3.5-inch hard drive



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Prerequisites

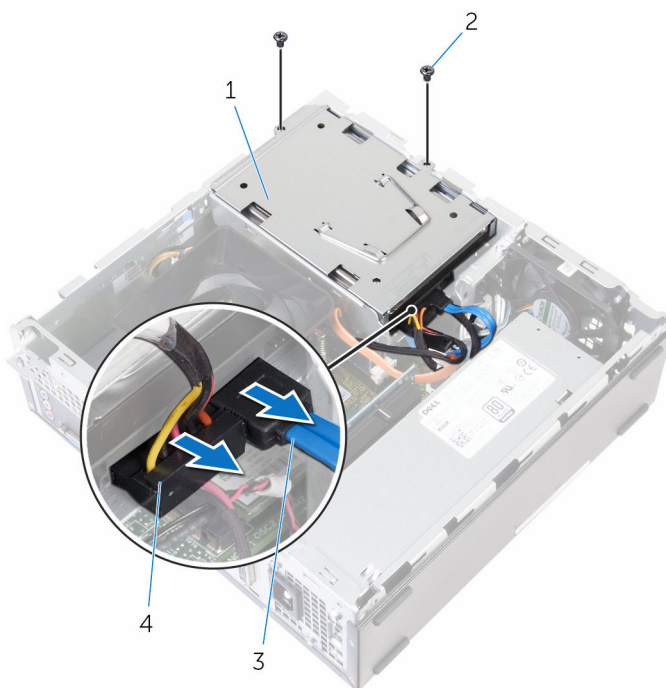
- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).

Procedure

- 1 Disconnect the power cable and the data cable from the hard drive.



- 2** Remove the screw that secures the hard-drive assembly to the drive cage.



1 hard-drive assembly

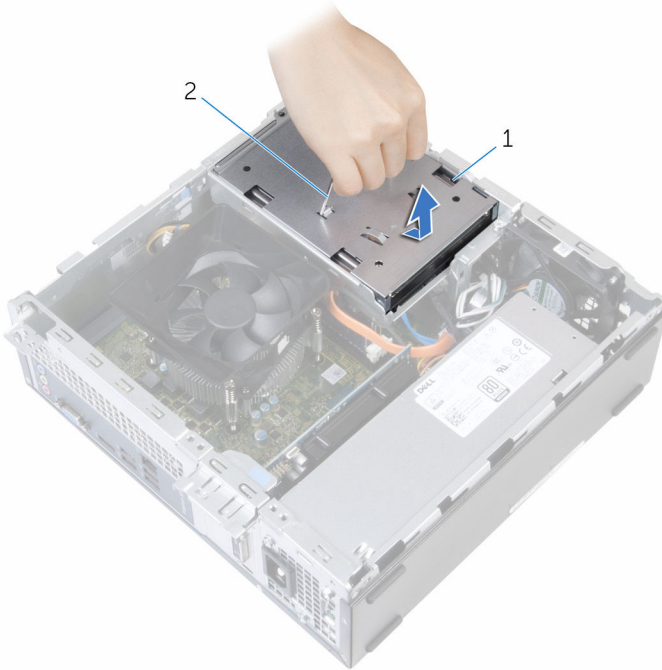
3 data cable

2 screws (2)

4 power cable



- 3** Using the pull-tab, slide the hard-drive assembly toward the inside of the computer and lift it off the drive cage.

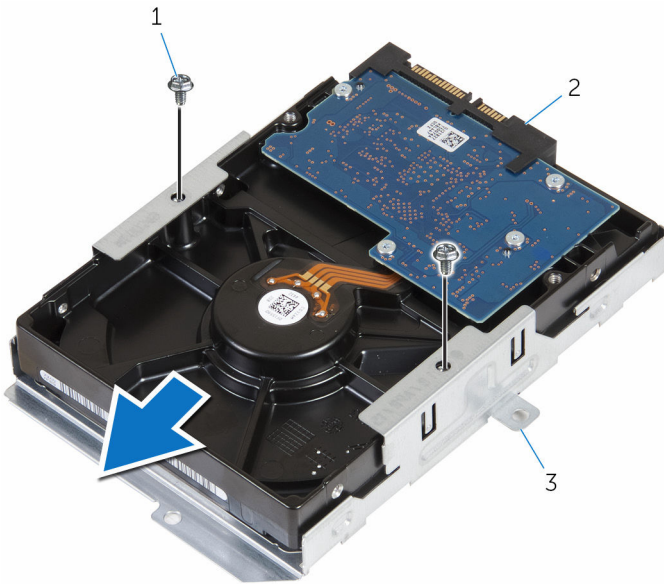


1 hard-drive assembly

2 pull-tab

- 4** Turn the hard-drive assembly over.
- 5** Remove the screws that secure the hard-drive bracket to the hard-drive assembly.

- 6** Slide the hard drive out of the hard-drive bracket.



1 screws (2)

2 hard drive

3 hard-drive bracket

Replacing the 3.5-inch hard drive



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Procedure

- 1 Slide the hard drive into the hard-drive bracket.
- 2 Align the screw holes on the hard drive with the screw holes on the hard-drive bracket.
- 3 Replace the screws that secure the hard-drive bracket to the hard drive.
- 4 Turn over the hard-drive assembly.
- 5 Slide and place the hard-drive assembly into the drive cage.
- 6 Replace the screws that secure the hard-drive assembly to the drive cage.
- 7 Connect the power cable and data cable to the hard-drive assembly.

Post-requisites

- 1 Replace the [front bezel](#).
- 2 Replace the [computer cover](#).



Removing the 2.5-inch hard drives



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Prerequisites

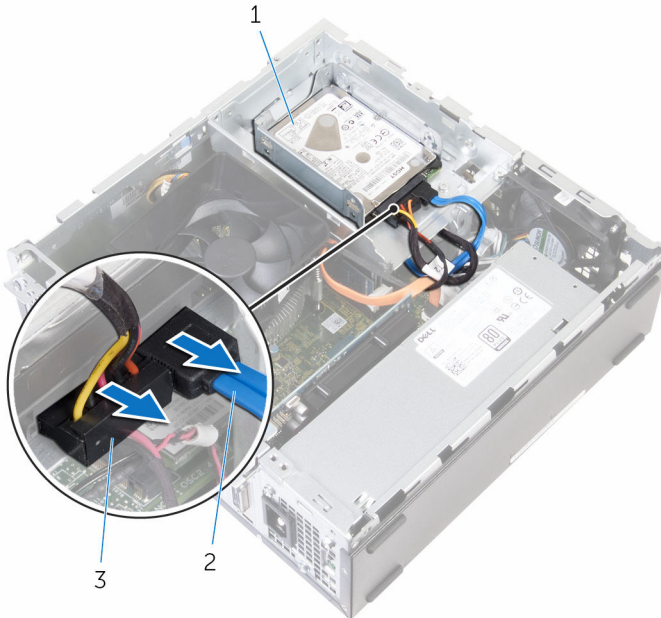
Remove the [computer cover](#).



Procedure

- 1 Disconnect the power cable and the data cable from the hard drive.

 **NOTE: Disconnect the cables from the second hard drive, if installed.**



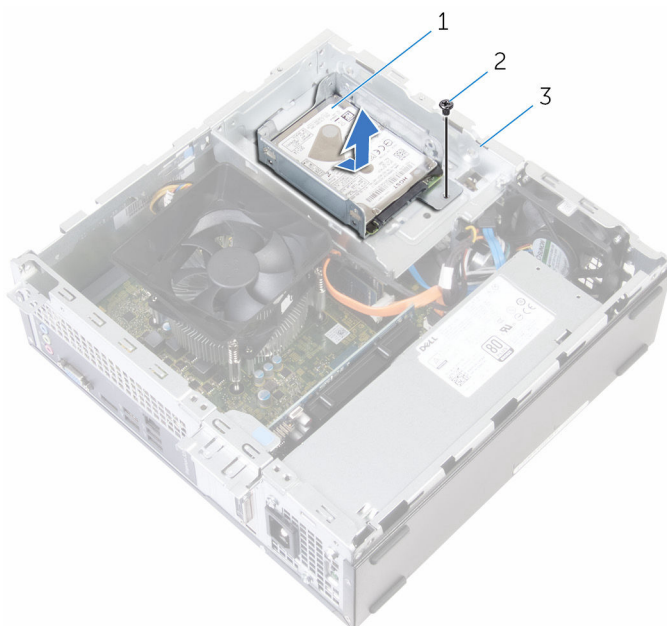
1 hard-drive assembly

2 data cable

3 power cable

- 2 Remove the screw that secures the hard-drive bracket to the drive cage.

- 3** Slide and lift the hard-drive assembly off the drive cage.



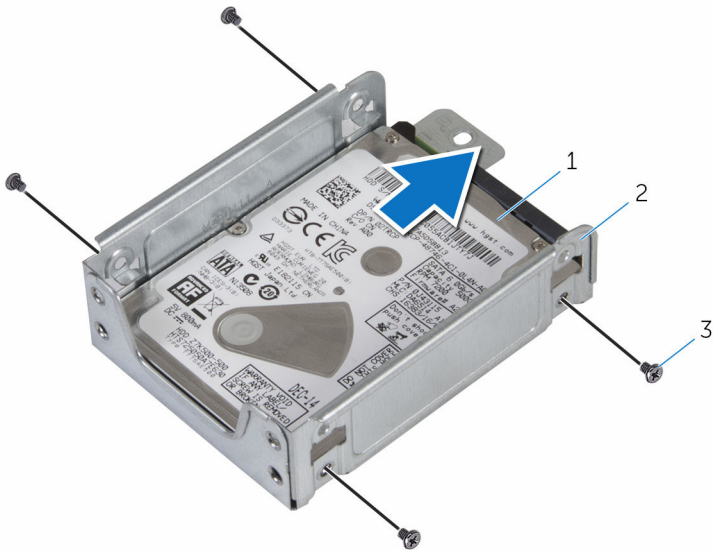
1 hard-drive assembly

2 screw

3 drive cage

- 4** Remove the screws that secure the hard drive to the hard-drive bracket.

- 5 Slide the hard drive out of the hard-drive bracket.



1 hard drive

2 hard-drive bracket

3 screws (4)



NOTE: Follow step 4 to step 5 to remove the second hard drive, if installed.

Replacing the 2.5-inch hard drives



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Procedure

- 1 Slide the hard drive into the hard-drive bracket.
- 2 Align the screw holes on the hard drive with the screw holes on the hard-drive bracket.
- 3 Replace the screws that secure the hard drive to the hard-drive bracket.



NOTE: Follow step 1 to step 3 to replace the second hard drive, if installed.

- 4 Slide and place the hard-drive assembly into the drive cage.
- 5 Replace the screw that secures the hard-drive bracket to the drive cage.
- 6 Connect the power cable and data cable to the hard drive.



NOTE: Connect the cables to the second hard drive, if installed.

Post-requisites

Replace the [computer cover](#).



Removing the heat-sink assembly



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WARNING: The heat sink may become hot during normal operation. Allow sufficient time for the heat sink to cool before you touch it.



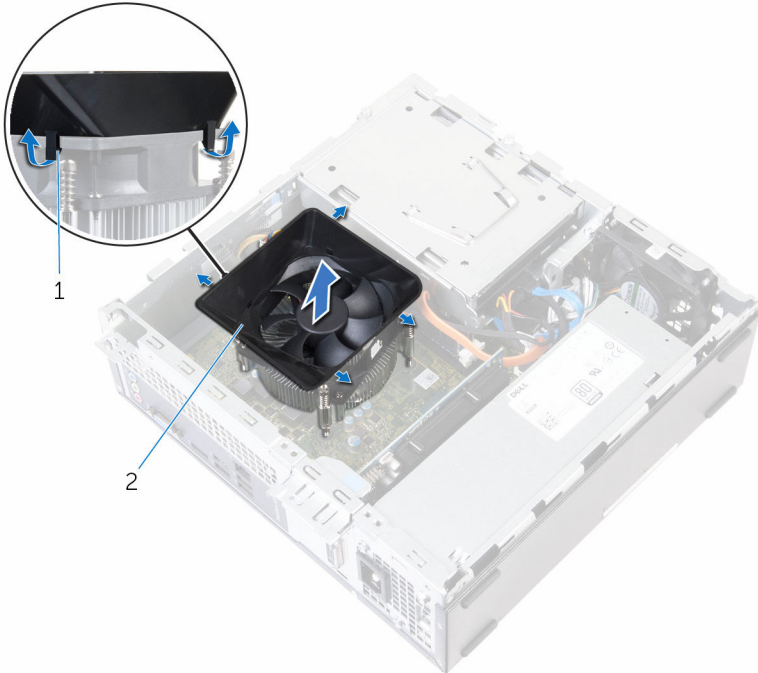
CAUTION: For maximum cooling of the processor, do not touch the heat transfer areas on the heat sink. The oils in your skin can reduce the heat transfer capability of the thermal grease.

Prerequisites

Remove the [computer cover](#).

Procedure

- 1 Pull the tabs outward and release the fan-shroud from the processor fan.



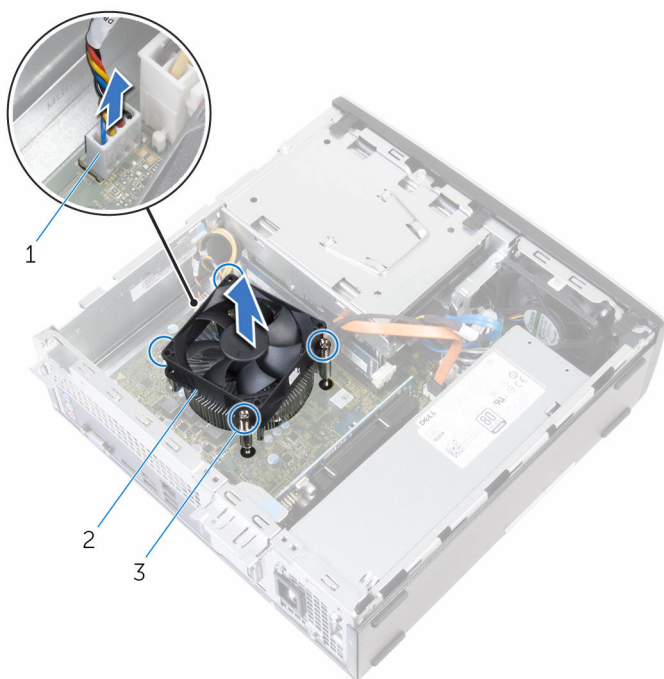
1 tabs (4)

2 fan-shroud

- 2 Disconnect the processor-fan cable from the system board.
- 3 In sequential order (indicated on the heat-sink assembly), loosen the captive screws that secure the heat-sink assembly to the system board.



- 4 Lift the heat-sink assembly along with its cable off the system board.



- 1 processor-fan cable
3 captive screws (4)

- 2 heat-sink assembly

Replacing the heat-sink assembly



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CAUTION: Incorrect alignment of the heat sink can damage the system board and processor.



NOTE: The original thermal grease can be reused if the original system board and fan are reinstalled together. If either the system board or the fan is replaced, use the thermal pad provided in the kit to ensure that thermal conductivity is achieved.

Procedure

- 1 Place the heat-sink assembly on the system board.
- 2 Align the captive screws on the heat-sink assembly with the screw holes on the system board.
- 3 Tighten the captive screws to secure the heat-sink assembly to the system board.
- 4 Connect the processor-fan cable to the system board.
- 5 Align the tabs according to the direction indicated on the fan-shroud with the slots on the processor fan and snap it into place.

Post-requisites

Replace the [computer cover](#).



Removing the memory module



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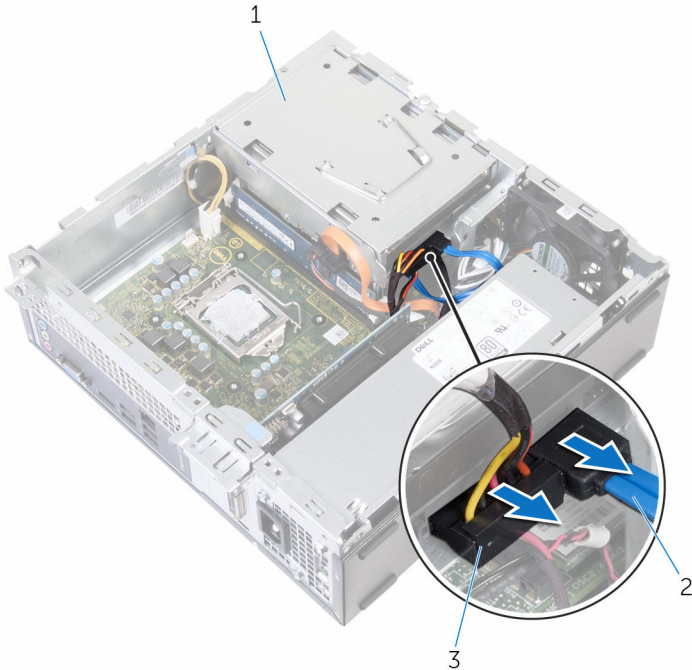
Prerequisites

- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).



Procedure

- 1 Disconnect the power cable and the data cable from the hard drive.

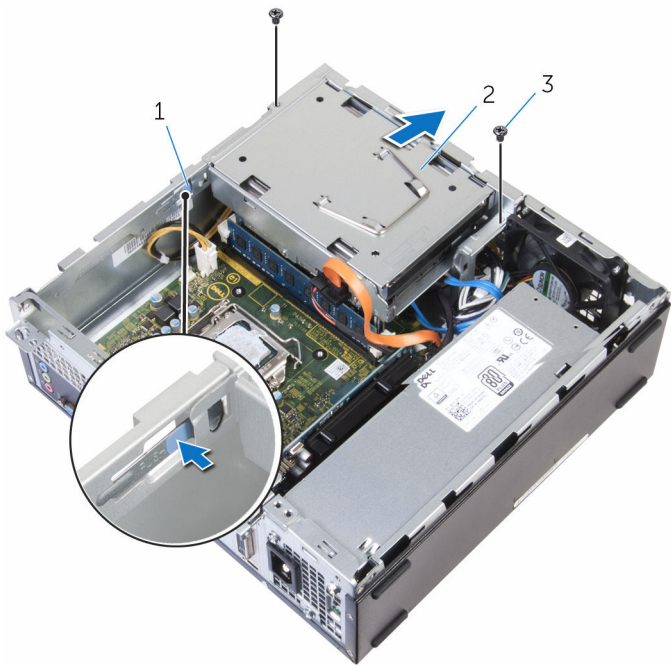


- 1 hard-drive assembly
- 3 power cable

- 2 data cable

- 2 Remove the screws that secure the drive cage to the chassis.


3 Press the tab and slide the drive cage outward.

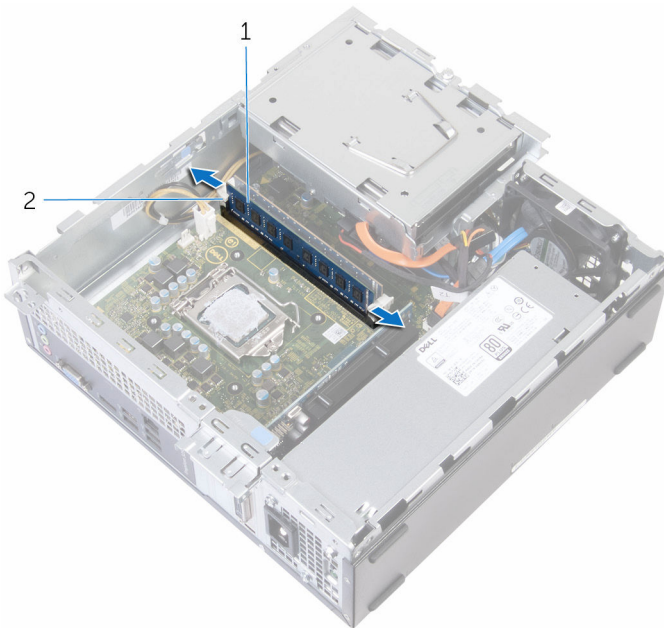


- | | | | |
|---|------------|---|------------|
| 1 | tab | 2 | drive cage |
| 3 | screws (2) | | |



- 4 Using your fingertips, spread apart the securing clips at each end of the memory-module slot until the memory module pops up.

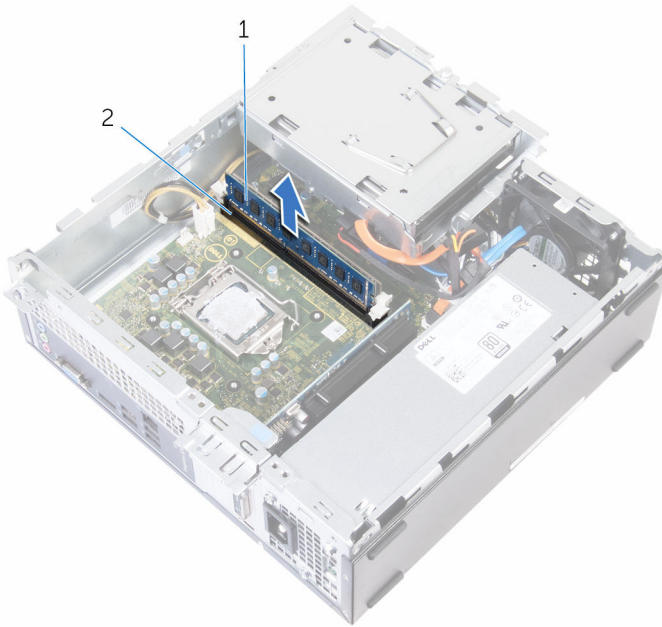
 **CAUTION: To prevent damage to the memory module, hold the memory module by the edges only. Do not touch the components on the memory module.**



1 memory module

2 securing clips (2)

- 5** Slide and remove the memory module from the memory-module slot.



1 memory module

2 memory-module slot

Replacing the memory module



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Procedure

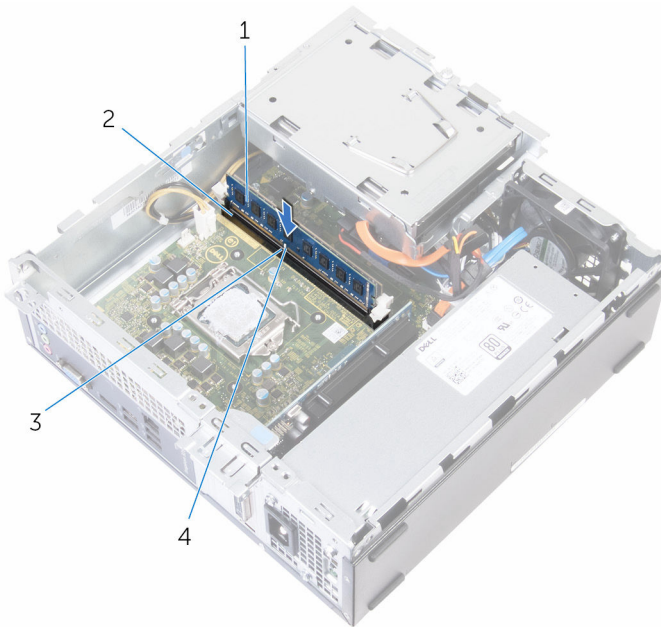
- 1 Align the notch on the memory module with the tab on the memory-module slot.



- 2 Insert the memory module into the memory-module slot and press the memory module down until it clicks into place.



NOTE: If you do not hear the click, remove the memory module and reinstall it.



- | | | | |
|---|---------------|---|--------------------|
| 1 | memory module | 2 | memory-module slot |
| 3 | tab | 4 | notch |

- 3 Slide the drive cage into the chassis.
- 4 Align the screw holes on the drive cage with screw holes on the chassis.
- 5 Replace the screws that secure the drive cage to the chassis.
- 6 Connect the power cable and the data cable to the hard drive.

Post-requisites

- 1 Replace the [heat-sink assembly](#).
- 2 Replace the [front bezel](#).
- 3 Replace the [computer cover](#).

Removing the graphics card



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Prerequisites

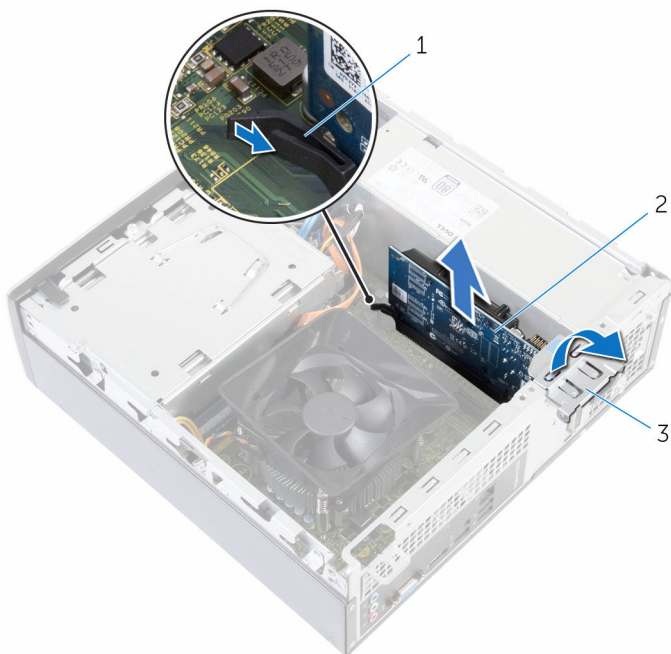
Remove the [computer cover](#).

Procedure

- 1 Open and release the card-retention bracket from the chassis.



- 2** Pushing the securing tab away from the graphics card, grasp the card by its top corners and ease it out of the slot.



1 tab

2 graphics card

3 card-retention bracket

Replacing the graphics card



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Procedure

- 1 Align the graphics card with the slot on the system board.
- 2 Place the card in the slot and press down firmly. Ensure that the card is firmly seated in the slot.
- 3 Rotate the card retention bracket towards the computer until it snaps into place.
- 4 Close the side-chassis.

Post-requisites

- 1 Replace the [front bezel](#).
- 2 Replace the [computer cover](#).



Removing the drive cage




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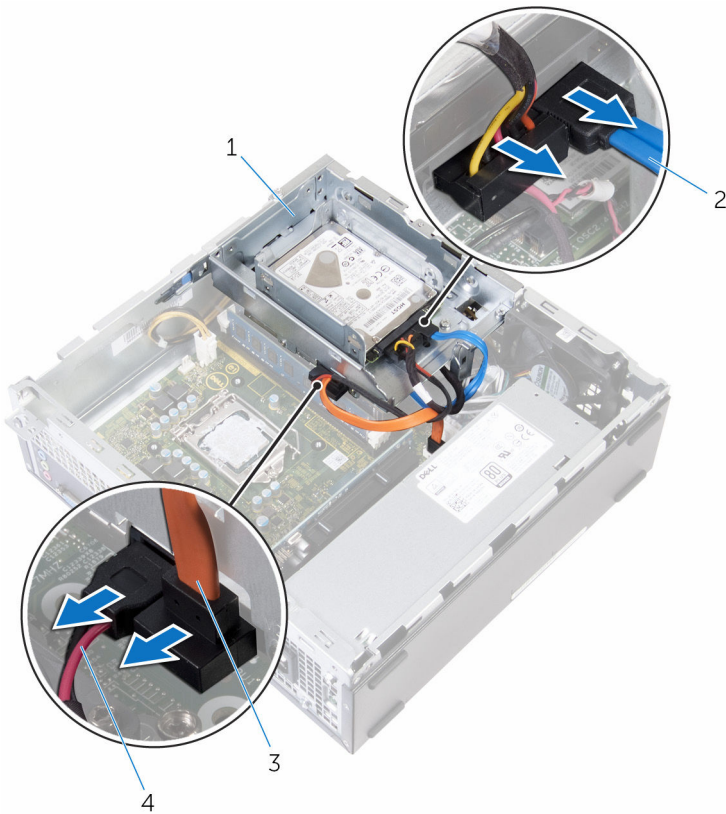
Prerequisites

- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).

Procedure for removing drive cage with 2.5 inch hard drive

- 1 Disconnect the power cables and data cables from all the drives.

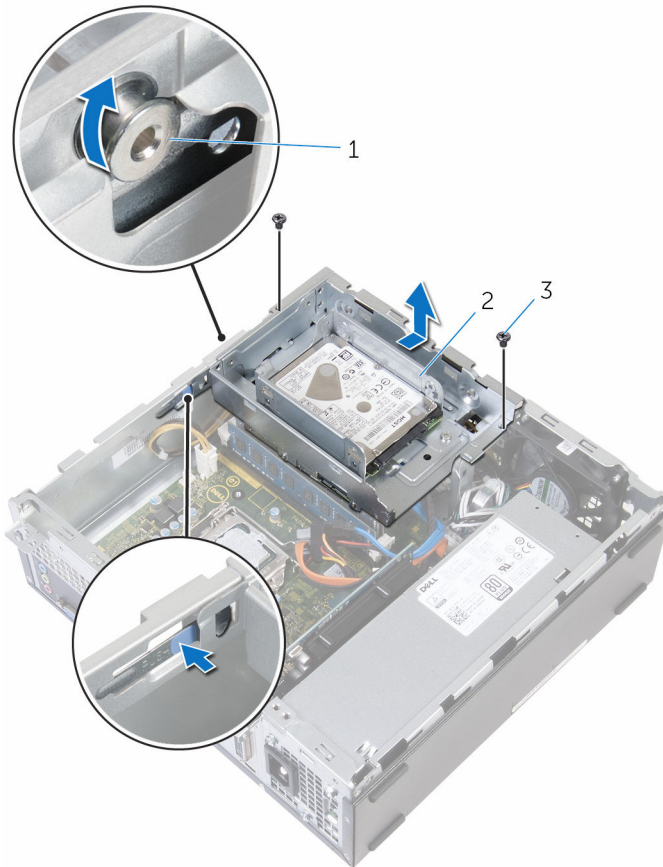
 **NOTE: The number and type of drives varies depending on the configuration you ordered.**



- | | | | |
|---|---------------------|---|------------------|
| 1 | drive cage | 2 | hard-drive cable |
| 3 | optical-drive cable | 4 | power cable |



- 2** Remove the screws that secure the drive cage to the chassis, then press the tab and slide the drive cage outward.
- 3** Turn the drive cage at an angle to release the tab on the drive cage from the slot on the chassis.



1 tab


2 2.5-inch hard drive assembly

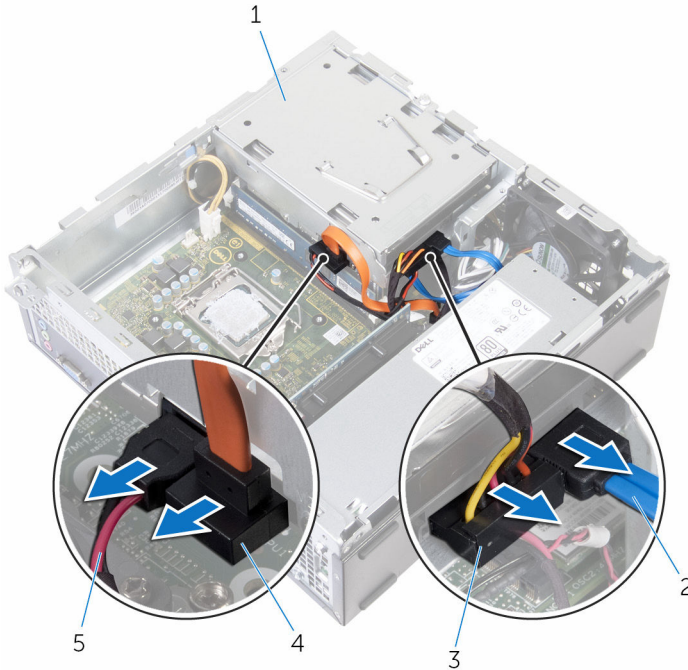
3 screws (2)

- 4** Lift the drive cage off the chassis.
- 5** Follow procedure from step 2 to step 5 in "[Removing the hard drive](#)".
- 6** Remove the [optical drive](#), if applicable.

Procedure for removing drive cage with 3.5–inch hard drive

- 1 Disconnect the power cables and data cables from all the drives.

 **NOTE: The number and type of drives varies depending on the configuration you ordered.**

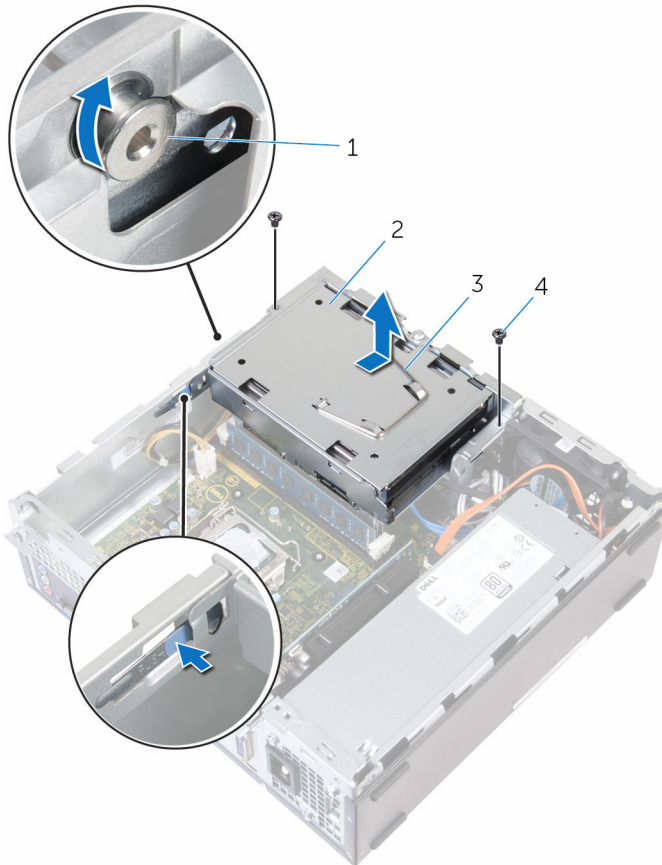


- | | | | |
|---|---------------------------|---|--------------------------|
| 1 | drive cage | 2 | hard-drive data cable |
| 3 | hard-drive power cable | 4 | optical-drive data cable |
| 5 | optical-drive power cable | | |

- 2 Remove the screws that secure the drive cage to the chassis, then press the tab and slide the drive cage outward.
- 3 Turn the drive cage at an angle to release the tab on the drive cage from the slot on the chassis.



- 4 Lift the drive cage off the chassis.
- 5 Using the pull-tab, slide the hard-drive assembly toward the inside of the computer and lift it.



1 tab (2)

3 pull-tab

2 hard drive assembly

4 screws (2)

- 6 Remove the [optical drive](#), if applicable.

Replacing the drive cage



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Procedure

- 1 Replace the [optical drive](#), if applicable.
- 2 Replace the [2.5-inch hard drive](#).
or
Slide and place the 3.5 inch hard-drive assembly into the drive cage, if installed.
- 3 Align the tab on the drive cage to the slot on the chassis.
- 4 Slide the drive cage into the chassis.
- 5 Replace the screws that secure the drive cage to the chassis.
- 6 Connect the power cables and data cables to all the drives.



NOTE: The number and type of drives varies depending on the configuration you ordered.

Post-requisites

- 1 Replace the [heat-sink assembly](#).
- 2 Replace the [front bezel](#).
- 3 Replace the [computer cover](#).



Removing the processor



WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Prerequisites

- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).

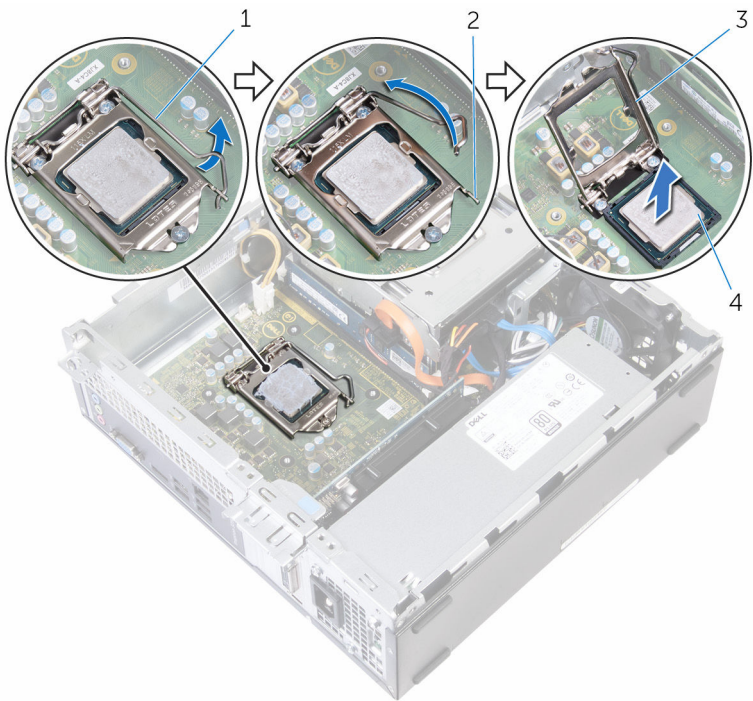
Procedure



NOTE: To avoid damaging the processor, handle the processor only by the edges.

- 1 Press the release lever down and then pull it outwards to release it from the securing tab.
- 2 Extend the release lever completely to open the processor cover.

3 Gently lift the processor off the processor socket.



1 release lever

2 securing tab

3 processor cover

4 processor



Replacing the processor



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CAUTION: If either the processor or the heat sink is replaced, use the thermal grease provided in the kit to ensure that thermal conductivity is achieved.



NOTE: A new processor ships with a thermal pad in the package. In some cases, the processor may ship with the thermal pad attached to it.

Procedure



NOTE: The original thermal grease can be reused, if the original processor and heat sink are reinstalled together. If either the processor or the heat sink is replaced, use the thermal pad provided in the kit to ensure that thermal conductivity is achieved.



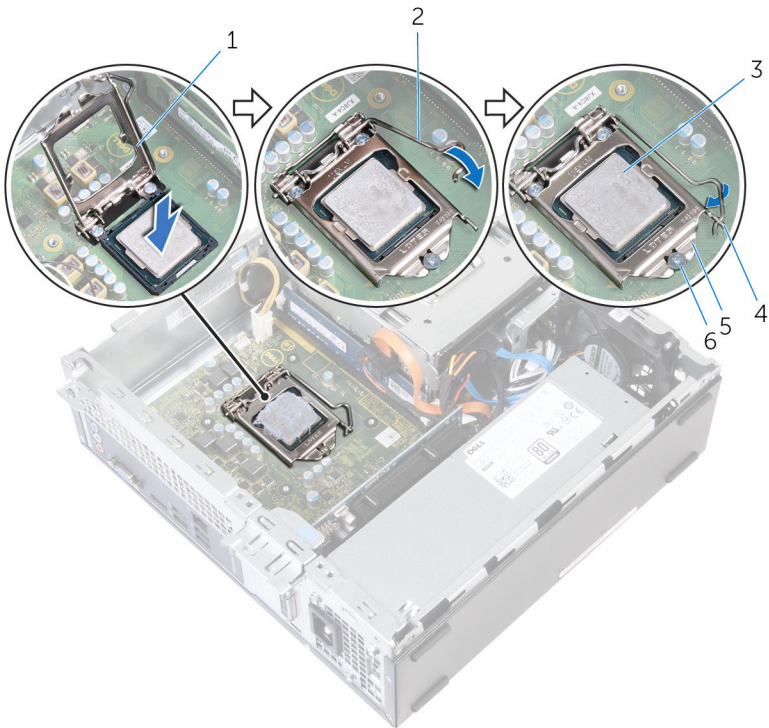
CAUTION: You must position the processor correctly in the processor socket to avoid permanent damage to the processor.

- 1 Ensure that the processor cover is fully open.
- 2 Orient the alignment notches on the processor with the alignment tabs on the processor socket.
- 3 Align the pin-1 corner on the processor with the pin-1 corner on the processor socket and place the processor in the processor socket.
- 4 After the processor is fully seated in the socket, close the processor cover while keeping the release lever fully extended..



CAUTION: Ensure that the processor-cover notch is positioned underneath the alignment post.

- 5** Pivot the release lever down and place it under the tab on the processor cover.



- | | | | |
|---|-----------------|---|----------------|
| 1 | processor cover | 2 | release lever |
| 3 | processor | 4 | tab |
| 5 | processor cover | 6 | alignment post |

Post-requisites

- 1 Replace the [heat-sink assembly](#).
- 2 Replace the [front bezel](#).
- 3 Replace the [computer cover](#).



Replacing the optical drive



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Prerequisites

- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).
- 4 Remove the [drive cage](#).

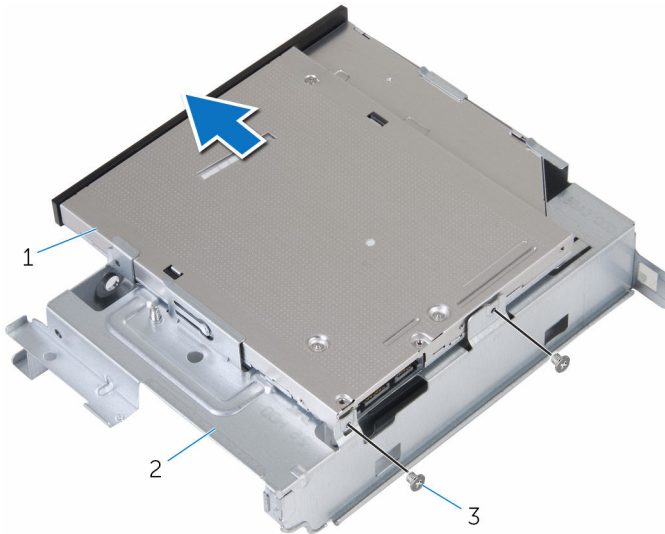
Procedure

- 1 Turn the drive cage over.
- 2 Remove the screws that secure the optical-drive assembly to the drive cage.

- 3 Slide the optical-drive assembly out of the drive cage.



NOTE: Note the orientation of the optical drive so that you can replace it correctly.

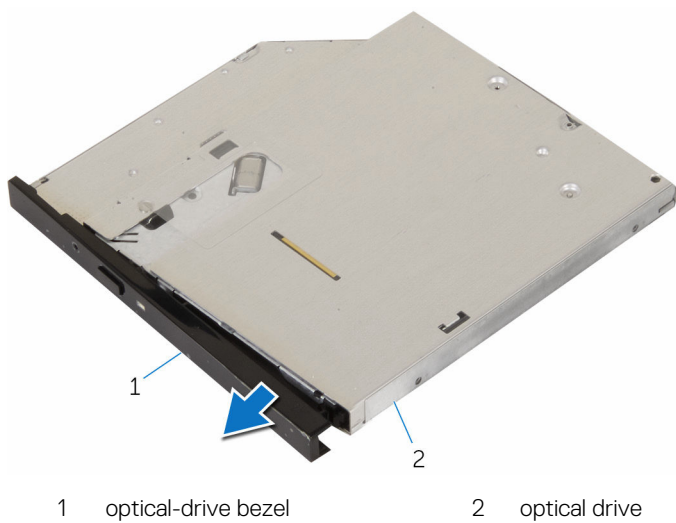


1 optical-drive assembly

2 drive cage

3 screws (2)

- 4 Carefully pull the optical-drive bezel and remove it from the optical drive.



Removing the optical drive



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Procedure

- 1 Align the tabs on the optical-drive bezel with the slots on the optical drive and snap the optical-drive bezel into place.
- 2 Slide the optical-drive assembly into the drive cage.
- 3 Replace the screws that secure the optical-drive assembly to the drive cage.

Post-requisites

- 1 Replace the [drive cage](#).
- 2 Replace the [heat-sink assembly](#).
- 3 Replace the [front bezel](#).
- 4 Replace the [computer cover](#).



Removing the coin-cell battery



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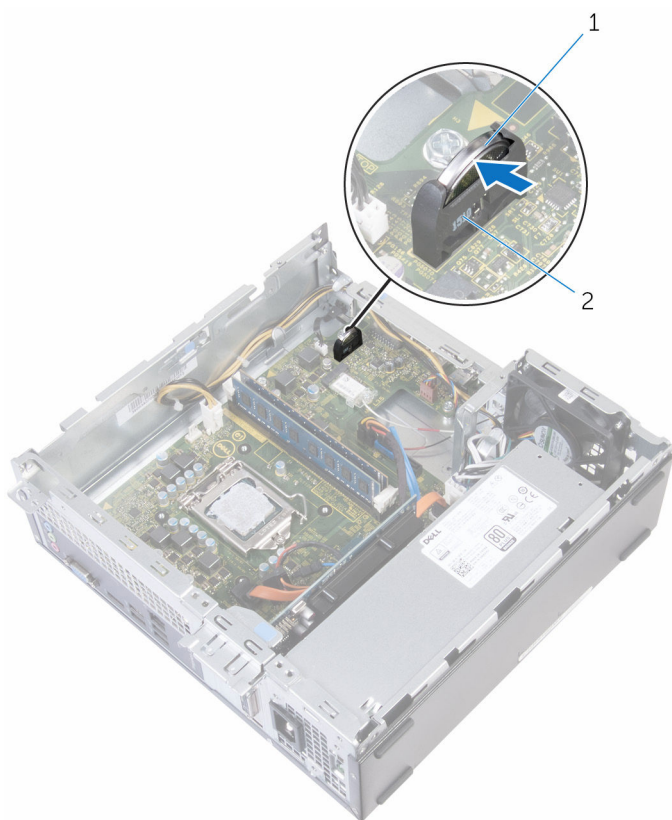
CAUTION: Removing the coin-cell battery resets the BIOS setup program's settings to default. It is recommended that you note the BIOS setup program's settings before removing the coin-cell battery.

Prerequisites

- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).
- 4 Remove the [drive cage](#).

Procedure

Using your fingertips, gently push the coin-cell battery to release it from the coin-cell battery socket.



1 coin-cell battery

2 battery socket



Replacing the coin-cell battery



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Procedure

Insert the coin-cell battery into the battery socket sideways and snap it into place.

Post-requisites

- 1 Replace the [drive cage](#).
- 2 Replace the [heat-sink assembly](#).
- 3 Replace the [front bezel](#).
- 4 Replace the [computer cover](#).

Removing the wireless card



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Prerequisites

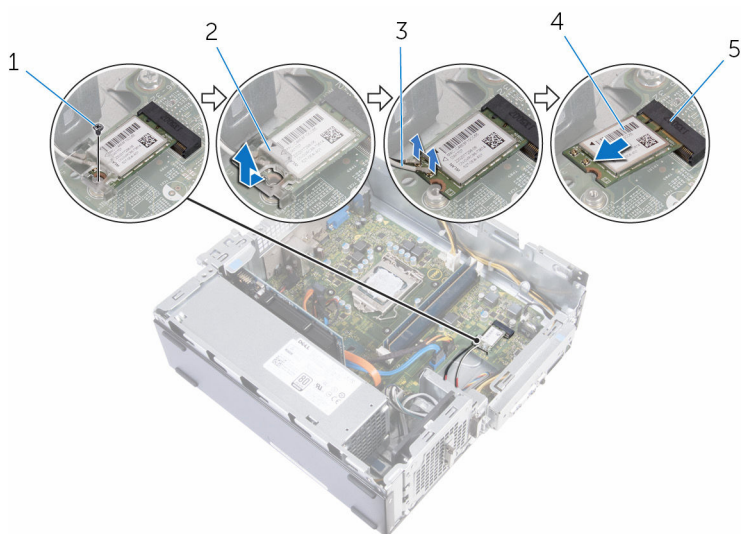
- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).
- 4 Remove the [drive cage](#).

Procedure

- 1 Remove the screw that secures the wireless-card bracket to the system board.
- 2 Slide and lift the wireless-card bracket off the wireless card.
- 3 Disconnect the antenna cables from the wireless card.



- 4 Slide the wireless card out of the wireless-card slot.



- | | | | |
|---|--------------------|---|-----------------------|
| 1 | screw | 2 | wireless-card bracket |
| 3 | antenna cables (2) | 4 | wireless card |
| 5 | wireless-card slot | | |

Replacing the wireless card



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Procedure



CAUTION: To avoid damage to the wireless card, do not place any cables under it.

- 1 Align the notch on the wireless card with the tab on the wireless-card slot.
- 2 Slide the wireless card into the wireless-card slot.
- 3 Connect the antenna cables to the wireless card.

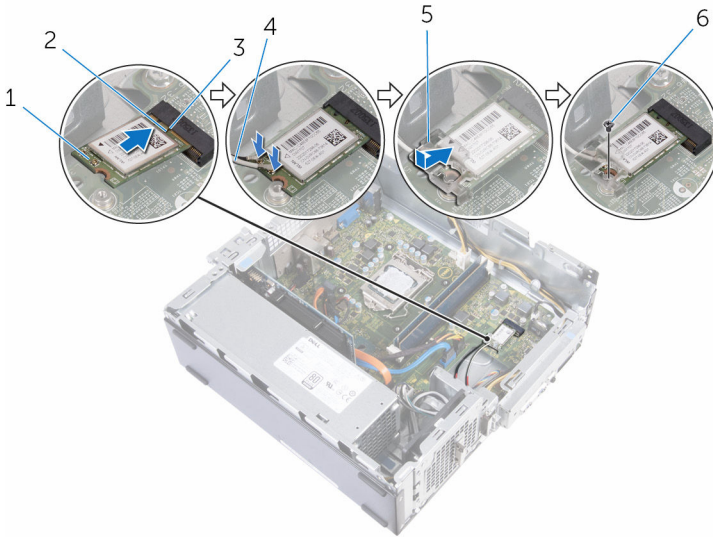
The following table provides the antenna-cable color scheme for the wireless card supported by your computer.

Connectors on the wireless card	Antenna-cable color
Main (white triangle)	White
Auxiliary (black triangle)	Black

- 4 Place the wireless-card bracket on the wireless card and align the screw hole on the wireless-card bracket with the screw hole on the system board.



- 5** Replace the screw that secures the wireless card to the system board.



1 wireless card

3 tab

5 wireless-card bracket

2 notch

4 antenna cables (2)

6 screw

Post-requisites

- 1** Replace the [drive cage](#).
- 2** Replace the [heat-sink assembly](#).
- 3** Replace the [front bezel](#).
- 4** Replace the [computer cover](#).

Removing the chassis fan



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Prerequisites

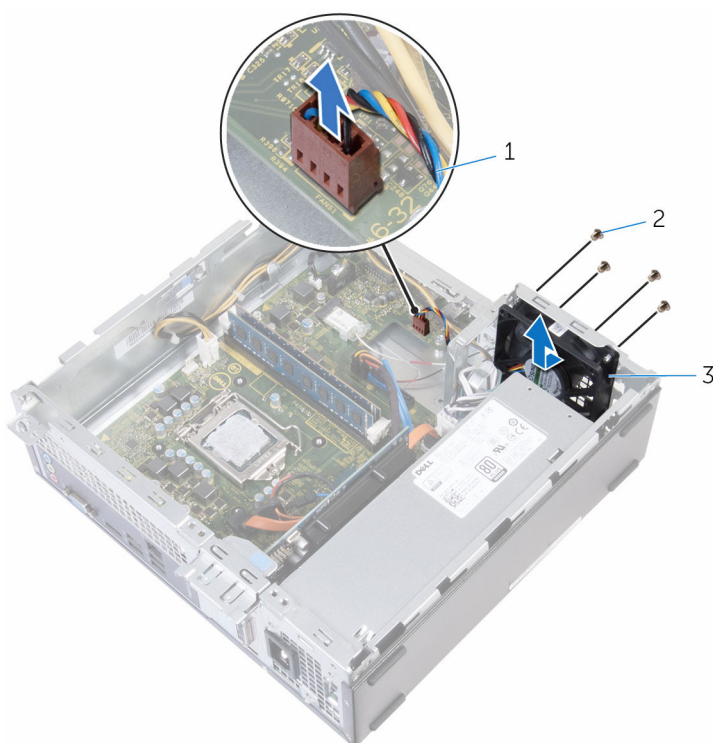
- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).
- 4 Remove the [drive cage](#).

Procedure

- 1 Remove the screws that secure the chassis fan to the chassis.
- 2 Disconnect the chassis-fan cable from the system board.



- 3** Remove the chassis fan from the chassis.



1 chassis-fan cable

2 screws (4)

3 chassis fan

Replacing the chassis fan



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Procedure

- 1 Align the screw holes on the chassis fan with the screw holes on the chassis.
- 2 Replace the screws that secure the chassis fan to the chassis.
- 3 Connect the chassis fan cable to the system board.

Post-requisites

- 1 Replace the [drive cage](#).
- 2 Replace the [heat-sink assembly](#).
- 3 Replace the [front bezel](#).
- 4 Replace the [computer cover](#).



Removing the antenna modules



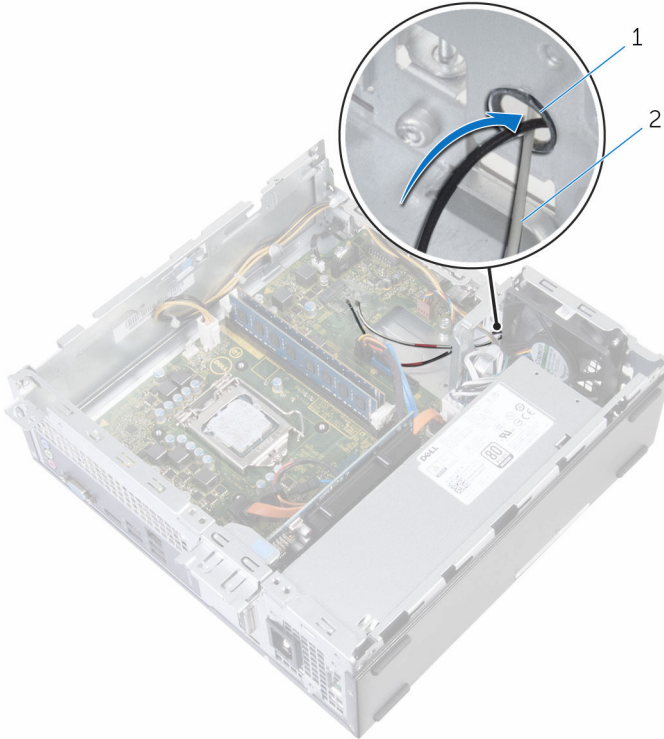
WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Prerequisites

- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).
- 4 Remove the [drive cage](#).
- 5 Remove the [wireless card](#).

Procedure

- 1 Gently slide the antenna cables through the routing hole on the chassis.



1 routing hole

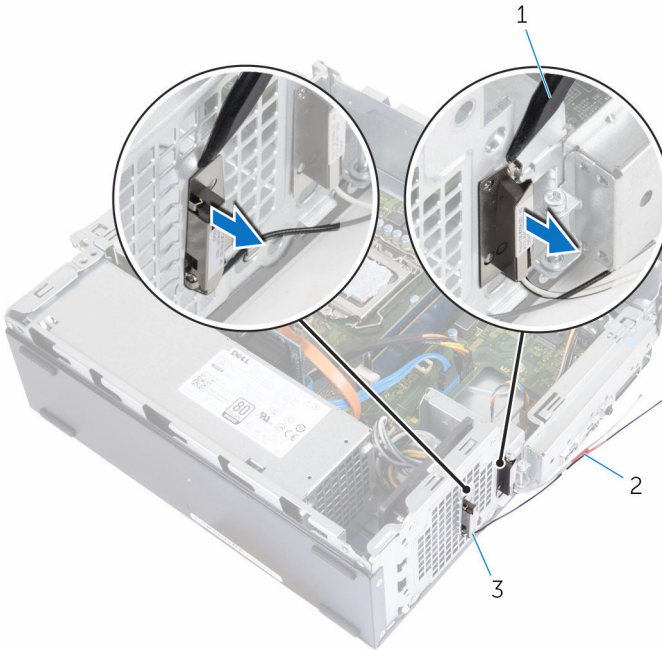
2 antenna cables (2)



- 2 Using a plastic scribe, gently pry the antenna modules off the chassis.



NOTE: Note the location of the antenna modules so that you can replace them correctly.



1 plastic scribe

2 antenna cables (2)

3 antenna modules (2)

Replacing the antenna modules



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Procedure

- 1 Adhere the antenna modules to the chassis.
- 2 Slide the antenna cables through the routing hole on the chassis.

Post-requisites

- 1 Replace the [wireless card](#).
- 2 Replace the [drive cage](#).
- 3 Replace the [heat-sink assembly](#).
- 4 Replace the [front bezel](#).
- 5 Replace the [computer cover](#).



Removing the power-button module



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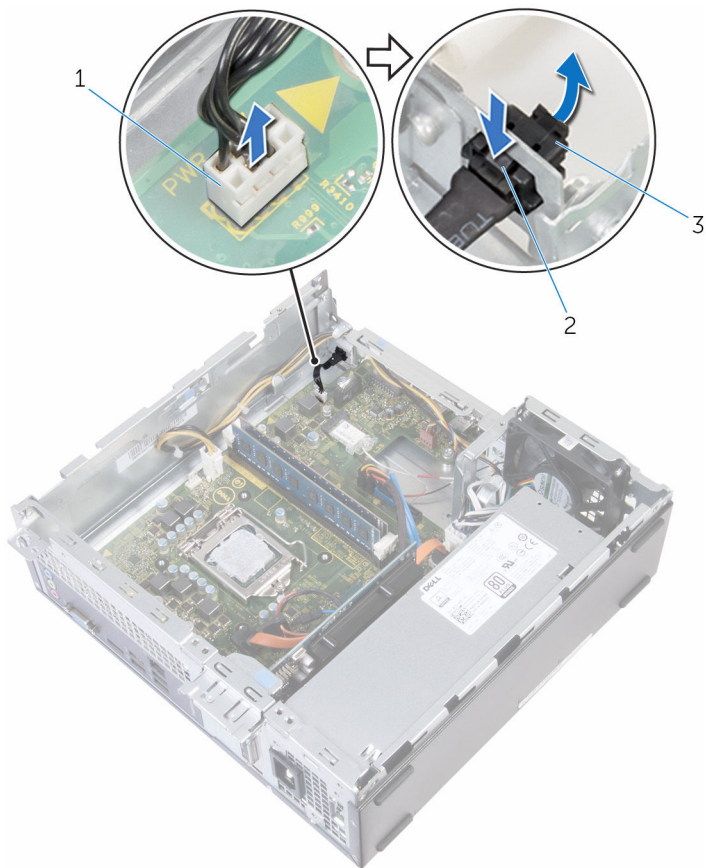
Prerequisites

- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).
- 4 Remove the [drive cage](#).

Procedure

- 1 Disconnect the power-button cable from the system board.
- 2 Using a plastic scribe, press down the clip on top of the power-button module to release it from the chassis.
- 3 Using a plastic scribe, press the clip at the bottom of the power-button module upward.

- 4 Slide the power-button module, along with its cable, through the slot on the front panel.



1 power-button cable

2 tabs (2)

3 power-button module



Replacing the power-button module



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Procedure

- 1 Slide the power-button cable through the slot on the chassis.
- 2 Align and push the power-button module into the slot on the front panel till the clips on the module snap in place.
- 3 Connect the power-button cable to the system board.

Post-requisites

- 1 Replace the [drive cage](#).
- 2 Replace the [heat-sink assembly](#).
- 3 Replace the [front bezel](#).
- 4 Replace the [computer cover](#).

Removing the power-supply unit



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Prerequisites

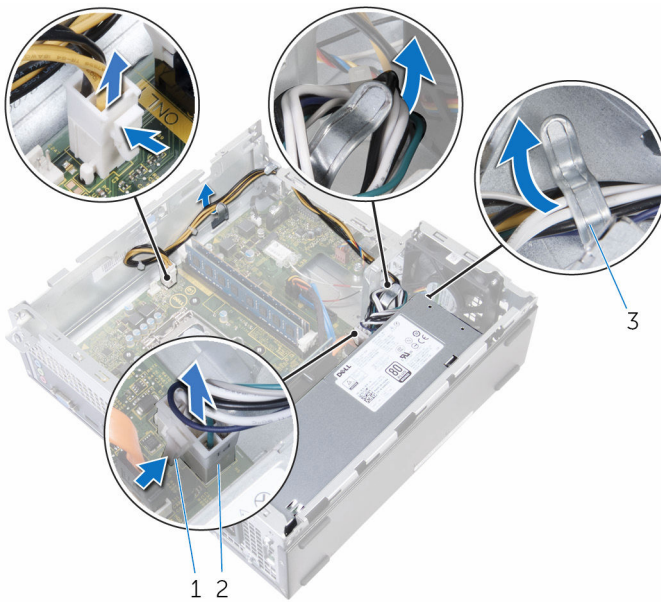
- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).
- 4 Remove the [drive cage](#).

Procedure

- 1 Press the securing clips and disconnect the power cables from the system board.



- 2** Note the routing and remove the power cables from the routing guides.



1 securing clips (2)

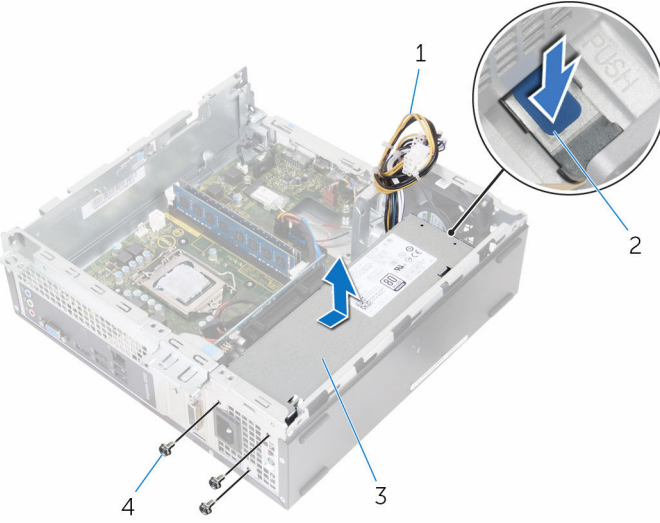
2 power cable

3 routing guides

- 3** Remove the screws that secure the power-supply unit to the chassis.

- 4** Press the clamp and release the power-supply unit from the chassis.

5 Slide and lift the power-supply unit off the chassis.



- | | | | |
|---|-------------------|---|------------|
| 1 | power cables | 2 | clamp |
| 3 | power-supply unit | 4 | screws (3) |



Replacing the power-supply unit



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Procedure

- 1 Slide the power supply towards the back of the chassis.
- 2 Align the screw holes on the power-supply unit with the screw holes on the chassis.
- 3 Replace the screws that secure the power-supply unit to the chassis.
- 4 Route the power cables through the routing guide and connect the power cables the system board.
- 5 Close the side-chassis.

Postrequisites

- 1 Replace the [drive cage](#).
- 2 Replace the [heat-sink assembly](#).
- 3 Replace the [front bezel](#).
- 4 Replace the [computer cover](#).

Removing the system board



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NOTE: Your computer's Service Tag is stored in the system board. You must enter the Service Tag in the BIOS setup program after you replace the system board.



NOTE: Replacing the system board removes any changes you have made to the BIOS using the BIOS setup program. You must make the appropriate changes again after you replace the system board.



NOTE: Before disconnecting the cables from the system board, note the location of the connectors so that you can reconnect the cables correctly after you replace the system board.

Prerequisites

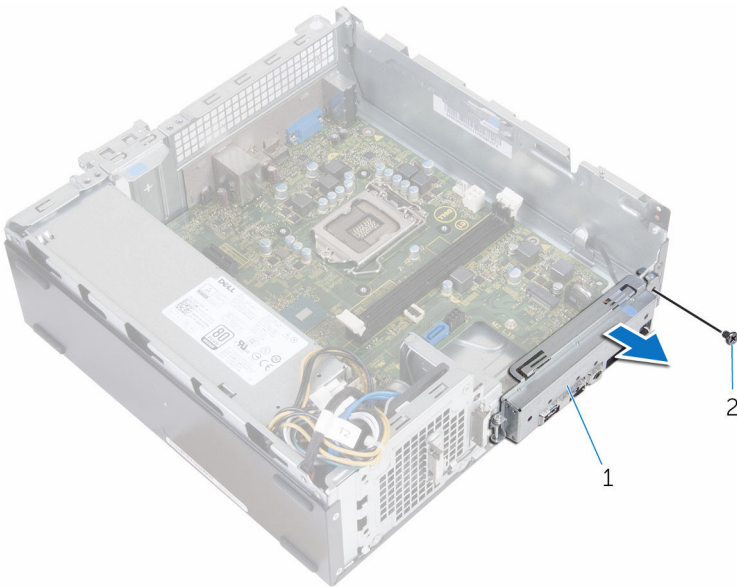
- 1 Remove the [computer cover](#).
- 2 Remove the [front bezel](#).
- 3 Remove the [heat-sink assembly](#).
- 4 Remove the [drive cage](#).
- 5 Remove the [memory module](#).
- 6 Remove the [wireless card](#).
- 7 Remove the [graphics card](#).

Procedure

- 1 Disconnect the power-button cable, hard-drive data cable, optical-drive data cable, and hard-drive and optical-drive power cable from the system board.



- 2** Remove the screw that secures the front panel to the chassis.

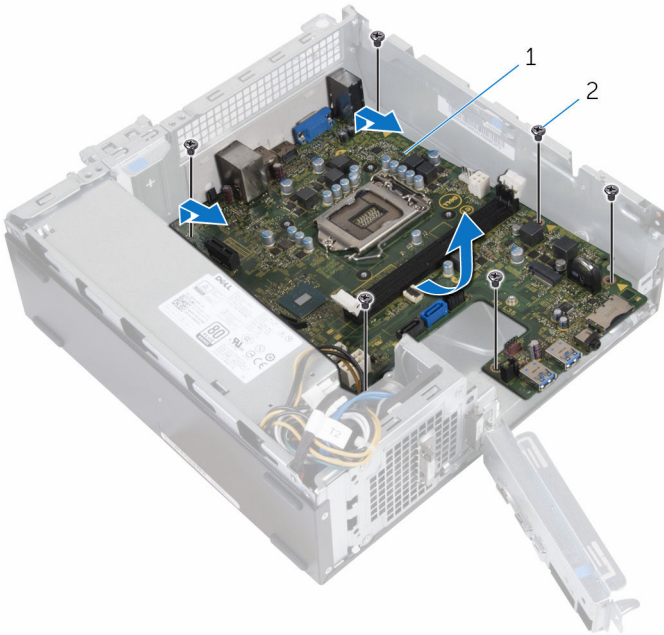


1 front panel

2 screw

- 3** Press the tab down to release the front panel from the chassis and then rotate it outward.
- 4** Remove the screws that secure the system board to the chassis.

- 5** Starting from the back of the chassis, lift and slide the system board out of the chassis.



1 system board

2 screws (6)

Replacing the system board



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NOTE: Your computer's Service Tag is stored in the system board. You must enter the Service Tag in the BIOS setup program after you replace the system board.



NOTE: Replacing the system board removes any changes you have made to the BIOS using the BIOS setup program. You must make the appropriate changes again after you replace the system board.

Procedure

- 1 Slide the ports on the system board into the slots on the back of the chassis and gently place the system board into the chassis.
- 2 Align the screw holes on the system board with the screw holes on the chassis.
- 3 Replace the screws that secure the system board to the chassis.
- 4 Close the front panel and align the screw hole on the front panel to the screw hole on the chassis.
- 5 Replace the screw that secures the front panel to the chassis.
- 6 Connect the power-button cable, hard-drive data cable, optical-drive data cable, and hard-drive and optical-drive power cable to the system board.

Post-requisites

- 1 Replace the [graphics card](#).
- 2 Replace the [wireless card](#).
- 3 Replace the [memory module](#).
- 4 Replace the [drive cage](#).
- 5 Replace the [heat-sink assembly](#).

- 6 Replace the [front bezel](#).
- 7 Replace the [computer cover](#).



BIOS setup program

BIOS Overview



CAUTION: Unless you are an expert computer user, do not change the settings in the BIOS setup program. Certain changes can make your computer work incorrectly.



NOTE: Before you change BIOS setup program, it is recommended that you write down the BIOS setup program screen information for future reference.

Use BIOS setup program to:

- Get information about the hardware installed in your computer, such as the amount of RAM, the size of the hard drive, and so on.
- Change the system configuration information.
- Set or change a user-selectable option, such as the user password, type of hard drive installed, enabling or disabling base devices, and so on.

Entering BIOS setup program

- 1 Turn on (or restart) your computer.
- 2 During POST, when the DELL logo is displayed, watch for the F2 prompt to appear, and then press F2 immediately.



NOTE: The F2 prompt indicates that the keyboard is initialized. This prompt can appear very quickly, so you must watch for it, and then press F2. If you press F2 before the F2 prompt, this keystroke is lost. If you wait too long and the operating system logo appears, continue to wait until you see the desktop. Then, turn off your computer and try again.

Clearing Forgotten Passwords



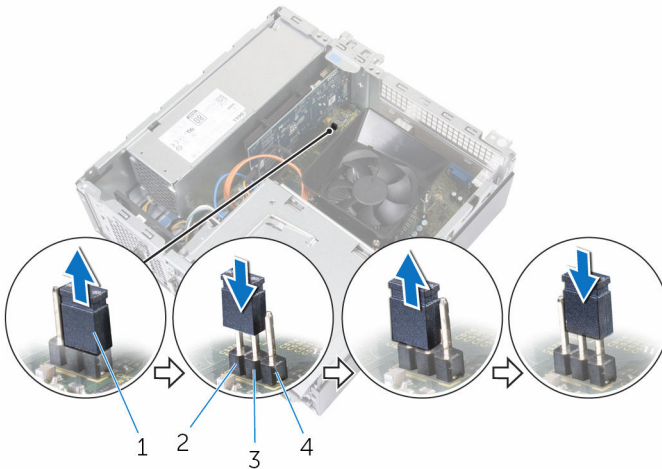
WARNING: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in [Before working inside your computer](#). After working inside your computer, follow the instructions in [After working inside your computer](#). For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Prerequisites

Remove the [computer cover](#).

Procedure

- 1 Remove the jumper plug from pins 2 and 3 and replace it on pins 1 and 2.
- 2 Wait for 5 seconds.
- 3 Remove the jumper plug from pins 1 and 2 and replace it on pins 2 and 3.



1 jumper plug
3 pin 2

2 pin 1
4 pin 3



Post-requisites

Replace the [computer cover](#).

Clearing CMOS Settings



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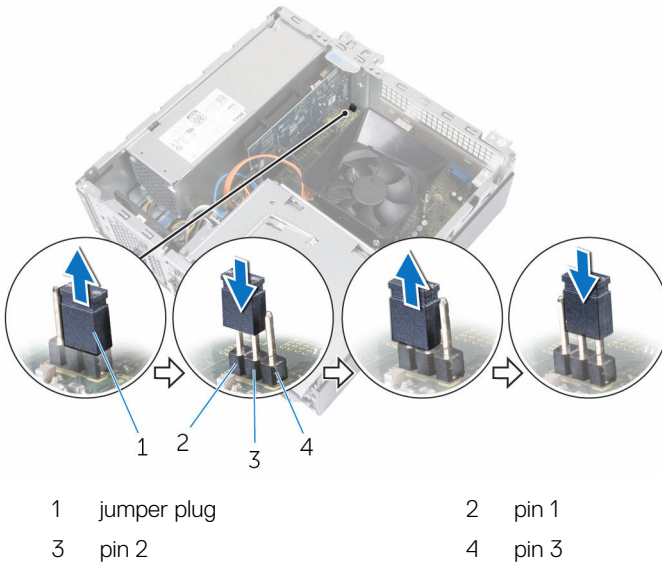
Prerequisites

Remove the [computer cover](#).

Procedure

- 1 Remove the jumper plug from pins 2 and 3 and replace it on pins 1 and 2.
- 2 Wait for 5 seconds.

- 3** Remove the jumper plug from pins 1 and 2 and replace it on pins 2 and 3.



Post-requisites

Replace the [computer cover](#).

Flashing the BIOS

You may need to flash (update) the BIOS when an update is available or when you replace the system board. To flash the BIOS:

- 1 Turn on your computer.
- 2 Go to www.dell.com/support.
- 3 Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.



NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.

- 4 Click **Drivers & downloads** → **Find it myself**.
- 5 Select the operating system installed on your computer.
- 6 Scroll down the page and expand **BIOS**.
- 7 Click **Download** to download the latest version of the BIOS for your computer.
- 8 After the download is complete, navigate to the folder where you saved the BIOS update file.
- 9 Double-click the BIOS update file icon and follow the instructions on the screen.

Getting help and contacting Dell

Self-help resources

You can get information and help on Dell products and services using these self-help resources:

Information about Dell products and services

www.dell.com

Windows 8.1 and Windows 10

Dell Help & Support app



Windows 10

Get started app



Windows 8.1

Help + Tips app



Accessing help in Windows 8, Windows 8.1, and Windows 10

In Windows search, type **Help and Support**, and press Enter.

Accessing help in Windows 7

Click **Start** → **Help and Support**.

Online help for operating system

www.dell.com/support/windows

www.dell.com/support/linux

Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on.

www.dell.com/support

Learn about your operating system, setting up and using your computer, data backup, diagnostics, and so on.

See *Me and My Dell* at www.dell.com/support/manuals.



Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see www.dell.com/contactdell.



NOTE: Availability varies by country and product, and some services may not be available in your country.



NOTE: If you do not have an active internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.