

Increase Memory Capacity of ASR 9000 RSP5-TR or ASR 9900 RP3-TR

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Users can increase the memory capacity of an ASR 9000 RSP5-TR (PID: A9K-RSP5-TR) or ASR 9900 RP3-TR (PID: A99-RP3-TR) card from 16GB to 24GB by inserting an additional 8GB DIMM (PID: A9K-MEM-UPG-8G). Use only Cisco supported DIMM (dual in-line memory module).

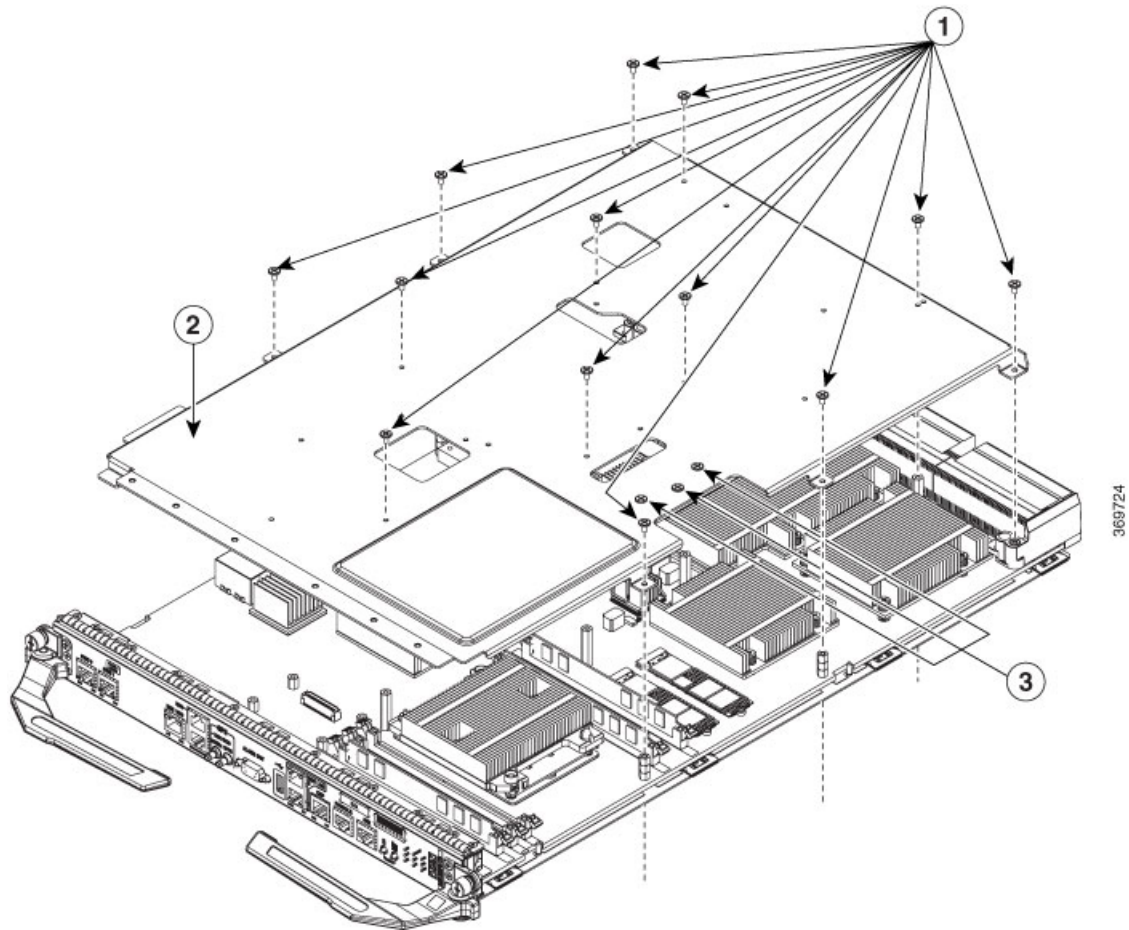


Note While performing the upgrade, avoid contact with open circuit board components. Handle the card and make contact only with the metal frame.

Procedure

- Step 1** Attach an ESD-preventive wrist or ankle strap and follow its instructions for use. Ensure that the wrist strap is correctly grounded to prevent electrostatic damage to the DIMM or the boards (ASR 9000 RSP5-TR or ASR 9900 RP3-TR).
- Step 2** Place the ASR 9000 RSP5-TR or ASR 9900 RP3-TR card on an antistatic mat so that the faceplate is nearest to you.
- Step 3** (Only ASR 9000 RSP5-TR) Except for the 3 screws at the side end of the metallic cover, remove all the other 13 screws from the metallic cover to get access to the PCB of the ASR 9000 RSP5-TR/ASR 9900 RP3-TR cards. See the image below:

Figure 1: Screws to be Removed from the Metallic Cover - ASR 9000 RSP5-TR

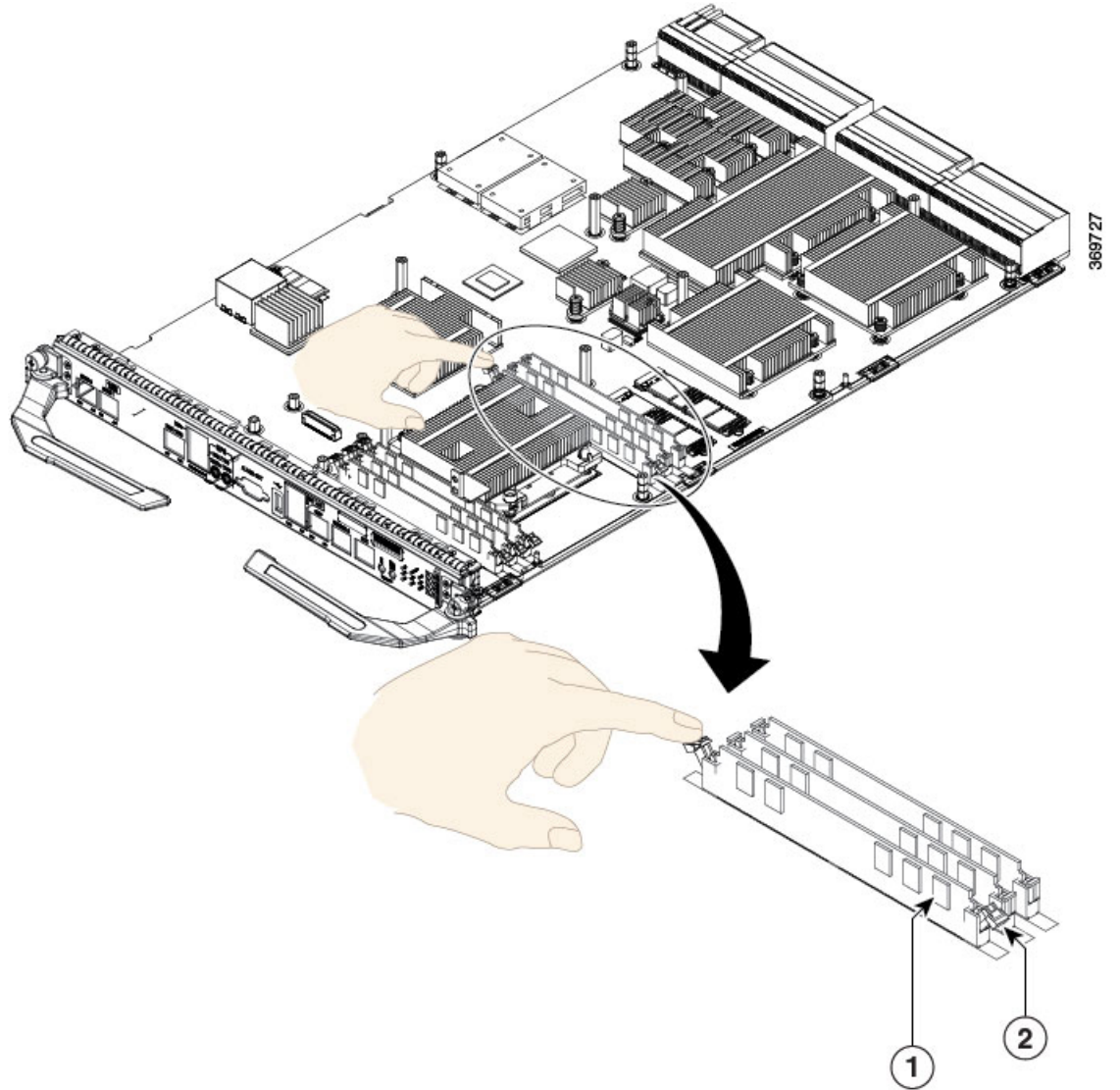


1	Remove Screws (13)	3	Do Not Remove Screws (3)
2	Metallic Cover		

Step 4 (Only ASR 9900 RP3-TR) There is no need to remove the metallic cover as the DIMM sockets are directly exposed.

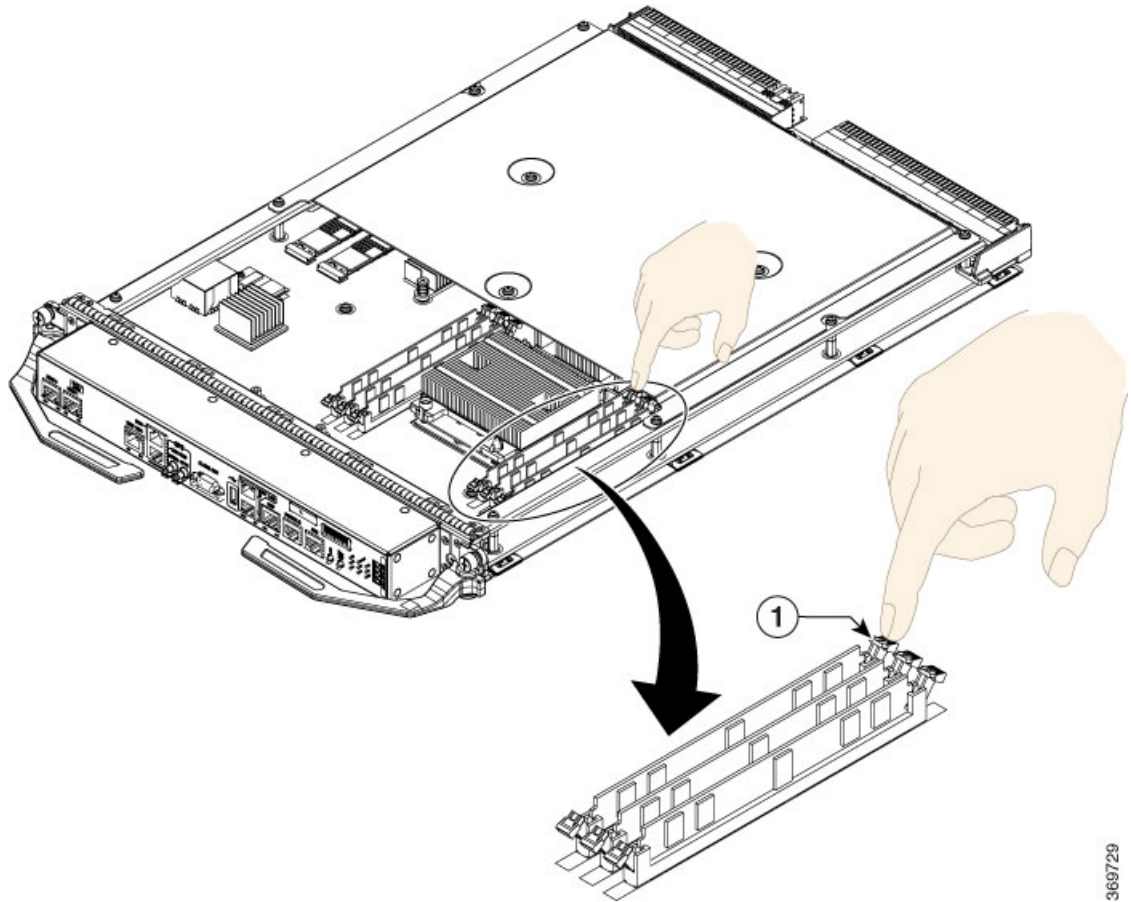
Step 5 Locate the DIMM sockets on the card. Please insert the DIMM only in the socket that is indicated in the image.

Figure 2: ASR 9000 RSP5-TR Card



1	DIMM Socket	2	Socket Release Lever
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Figure 3: ASR 9900 RP3-TR Card



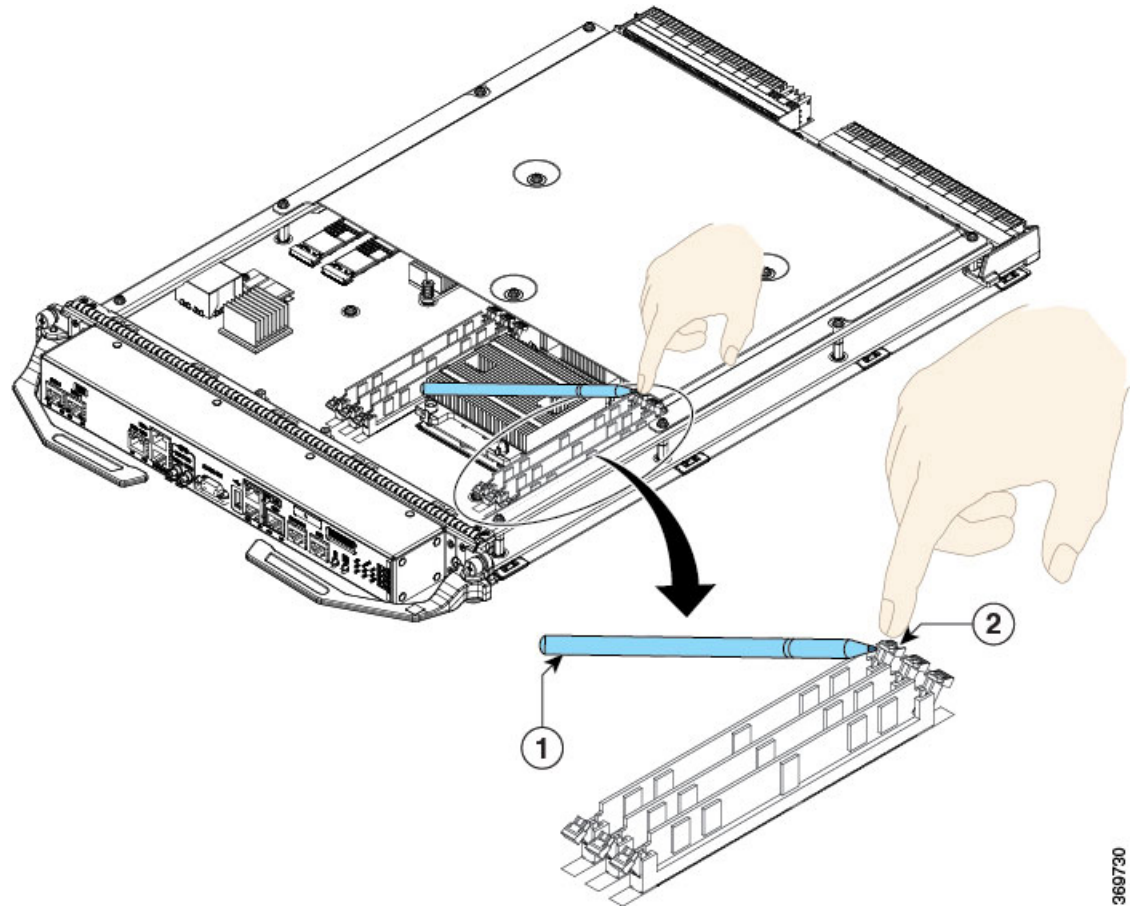
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1	Socket to Insert the DIMM		
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Step 6

Pull down the socket release levers. For an RP3 card, use a pointed object to gently push the socket lever outward, to release the lever. See the image below:

Figure 4: ASR 9900 RP3-TR Card—Release the Socket Lever

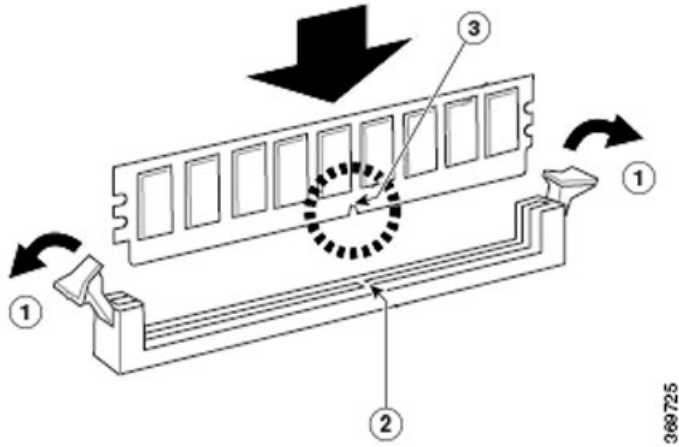


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1	Pointed Object	2	Socket Lever
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- Step 7** Remove the new DIMM from its protective antistatic bag.
- Step 8** Grasp the edges of the DIMM only. Do not touch the integrated circuit devices on the DIMM, the metal traces, or fingers, along the edge of the DIMM, or the pins in the DIMM socket.
- Step 9** To position the DIMM for insertion, orient it at the same angle as the DIMM socket. The single notch (key) on the bottom edge of the module ensure that the DIMM edge connector is registered properly in the socket. See the image below:

Figure 5: DIMM Notch and Slot Key



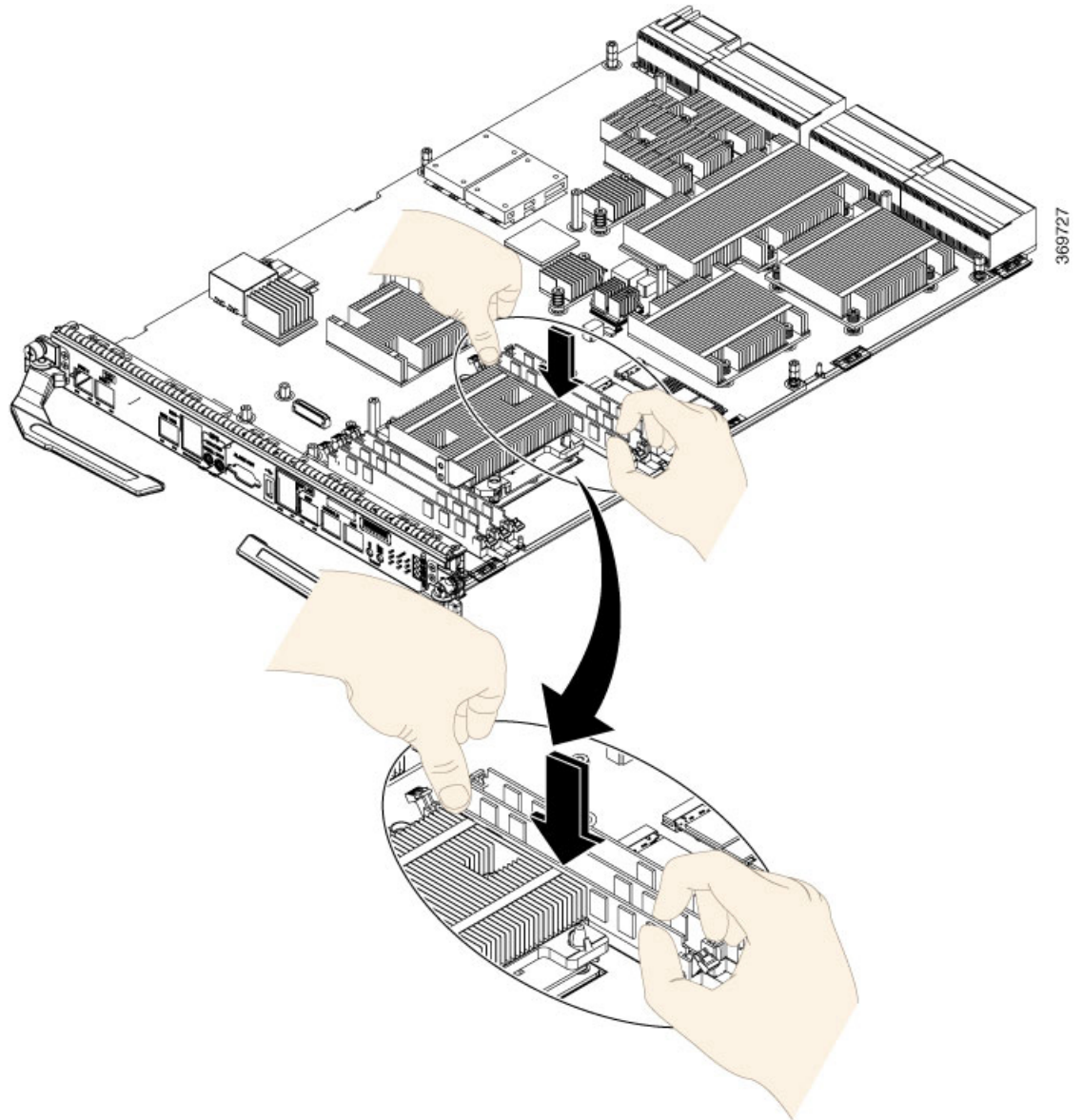
1	Unlocked Retention Clip	3	DIMM Notch
2	DIMM Slot Key		

If necessary, rock the DIMM back and forth gently to align it in the socket.

Caution When inserting DIMMs into a socket, apply firm, but not excessive, pressure. If the DIMM slot is damaged during the memory upgrade process, the card must be returned for repair.

Step 10 Gently insert the DIMM into the socket and push until the DIMM snaps into place and the release lever is flush against the side of the socket. See the figure below:

Figure 6: Push the DIMM in the Socket

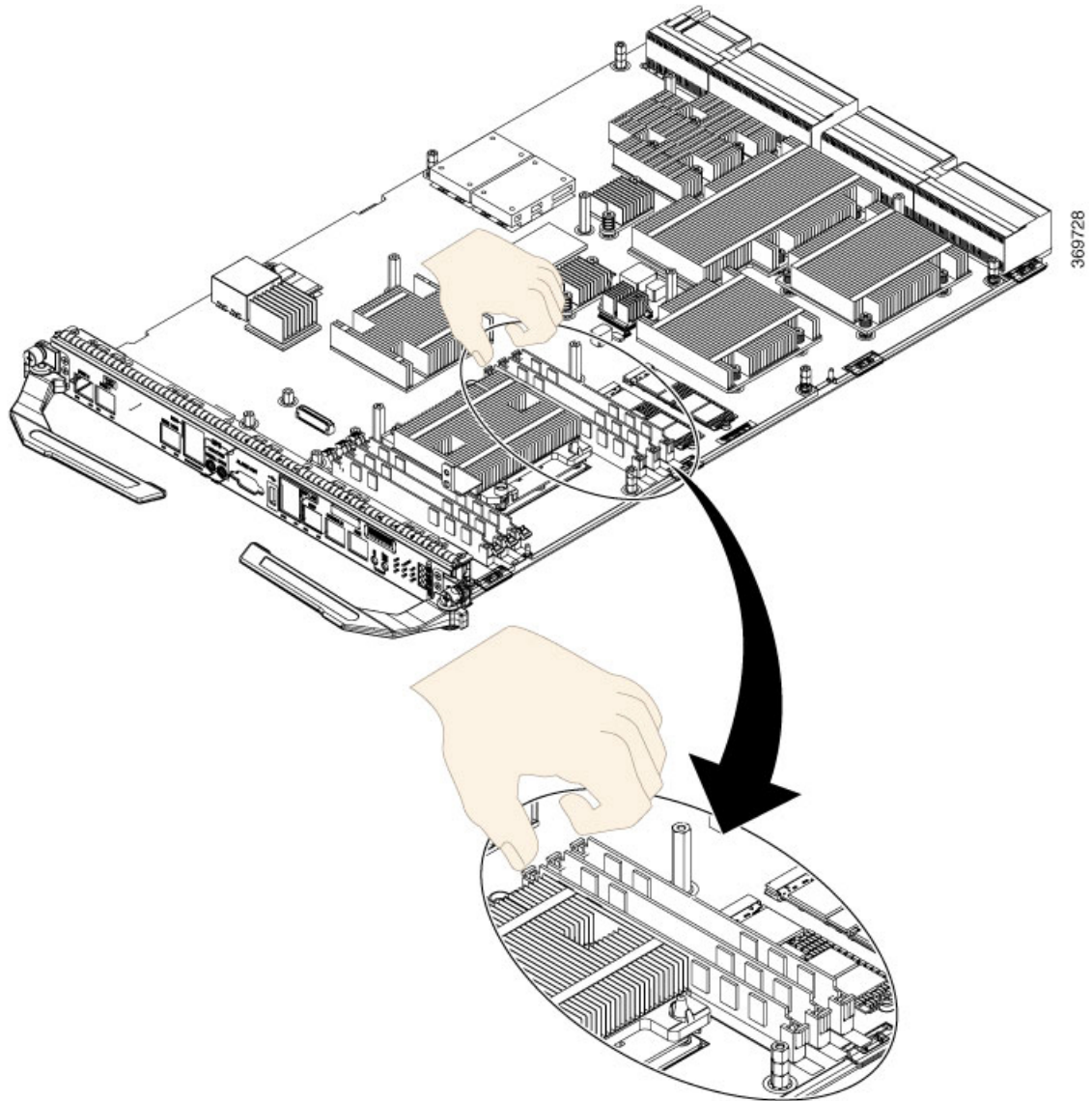


If necessary, rock the DIMM back and forth gently to align it in the socket.

Step 11

Verify that the release lever is flush against the side of the socket. If it is not, the DIMM might not be seated properly. On a socket with dual release levers, both levers should be flush against the sides of the DIMM. See the image below:

Figure 7: Verify that the Release Lever is Flush against the Socket



If the module appears misaligned, carefully remove it and reseal it, ensuring that the release lever is flush against the side of the DIMM socket.

- Step 12** (Only ASR 9000 RSP5-TR) Secure the metallic cover on the card and tighten the screws:
- a) First insert the front portion of the metallic cover (under the face plate) and then insert the rear end of the metallic cover keeping it flat aligned with the screws holes.

- Step 13** To identify the DIMM, no software upgrade or other changes are required. To verify the size of the memory that has been upgraded, start the system and execute the **show system resource** command in the admin mode. Check the Physical Available column to view the upgraded memory size against the host row:

Router# **show system resource**

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Physical      -- Available system memory
Application   -- Application memory allocated to host/sysadmin/XR
Boot Partition -- Boot memory allocated to host/sysadmin/XR
Total         -- Total memory
Available     -- Available free memory
Cached        -- Amount of memory used for disk caching
"^" character -- Within 10% of max memory
Node          Physical          Application          Boot
Partition     CPUs      Shmwin
              Total   Available   Cached  Total   Available   Cached  Total
Available
0/RSP1-Host   24207M^ 770M^      210M    23640M^ 752M^      205    923M    487M
      8      N/A
0/RSP1-Admin  1939M   1164M      124M    1894M   1137M      121    2308M
1144M        1      N/A
0/RSP1-XR    19643M  4875M      3256M   19183M  4761M      3179   N/A     N/A
      6      6655M
    
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