

HP Documentation

HP N-Class Enterprise Server Owner's Guide

System Shutdown

Perform an orderly shutdown of the HP-UX operating system (by executing `shutdown -h` as root). Reference the Owner's Guide for detailed instructions.

Power Down

After the operating system halts, power-down the system by turning the power switch to the standby (0) position. After one minute, disconnect the system power cables (3 cables) from the SPU.

Remove the Front Bezel

Remove the front bezel by grasping each side and pulling the bezel away from the SPU. Set the bezel aside.

Remove the Front Bezel Brackets

Remove the two T-25 Torx screws from each side of the front of the SPU. These four screws lock the SPU into cabinet. Carefully slide the SPU about two inches out the front of the cabinet. Loosen the three Torx-15 screws holding each front bezel bracket to the side of the SPU. Lift the two front bezel brackets up and off the SPU chassis. Set the bezel brackets aside.

Slide the SPU out the Back of the System

Open the rear cabinet door. Slowly slide the SPU out the back of the cabinet until the stops on the rails prevent further movement.

Remove the Top Cover from the Back of the SPU

Attach the ESD Wrist Strap to the bare metal on the rear panel of the SPU using the instructions on the 3M package. Loosen the two captive screws (T-15) along the back edge of the top cover. Lift the back edge of the top cover up and away from the SPU.

Remove the Back Air Baffle

Loosen the two captive mounting screws (T-15) securing the Air Baffle to the support bar. Grasp the air baffle by the extruded handle and lift it out of the SPU.

Remove Memory Carrier(s)

The memory carriers are located at the back of the SPU. Remove the desired memory carrier by pulling up on its extractor levers to unseat it from the system board. Carefully slide the memory carrier out of the SPU. Place the memory carrier on an anti-static pad.

Memory Configuration Rules

The system supports up to four memory carriers. The memory carrier slots are labeled "MEM SLOT 0", "MEM SLOT 1", "MEM SLOT 2", and "MEM SLOT 3". The memory carriers must be installed in the sequence 0, 1, 2, then 3. If only one memory carrier is installed, then it must be installed in slot 0. If only two memory carriers are installed, then the carriers must be installed in slots 0 and 1.

Each memory carrier can be configured with four DIMM pairs. Each DIMM pair consists of two DIMMs of the same size in megabytes. The slot pairs in the memory carrier are labeled "0a/b", "1a/b", "2a/b", and "3a/b". The DIMM pairs must be installed in the sequence 0a/b, 1a/b, 2a/b, and 3a/b.

For optimal performance, the DIMM pairs should be distributed identically among the memory carriers. For example, if the system has four memory carriers with eight pairs of 1GB DIMM pairs, then slot pairs 0a/b and 1a/b should be loaded in all four memory carriers.

Install DIMMs in the Memory Carrier

Loosen the four captive screws (T-15) that hold the metal card bracket to the memory carrier. Carefully remove the metal card bracket from the memory carrier. Locate the DIMMs currently installed in the memory carrier. The memory carrier has eight memory slots. The memory must be installed in pairs. The physical layout of the slots is represented in the following installation sequence lists.

Slot #	Installation Sequence (by pair)
0A	Load 1st pair
2A	Load 3rd
1A	Load 2nd
3A	Load 4th
3B	Load 4th
1B	Load 2nd
2B	Load 3rd
0B	Load 1st pair

Installing a DIMM into a Connector

Make sure the connector tabs are angled out (i.e. away from each other). Insert the gold edge of the DIMM so that the notches in the DIMM line up with the dividers in the slot. The DIMM is keyed to prevent the DIMM from being inserted backwards. With the DIMM positioned correctly, **firmly and evenly** press or seat the card into the connector. **Do not "rocker" the DIMM into the connector!** This may damage the DIMM or the connector. When the DIMM is correctly seated, it will "snap" into the connector. At this point, ensure that the ejector levers are in the up position. After all the DIMMs have been installed, check to ensure that they are seated evenly and that all the DIMMs are the same height. An incorrectly seated DIMM may stick out above the other.

Reinstall the Memory Carrier(s)

Carefully place the metal card bracket into place. The metal card bracket helps to support and separate the DIMMs. Tighten the four captive screws (T-15) that hold the metal card bracket in place. Hold the memory carrier by the extraction levers. Carefully align the memory carrier with the appropriate slot's card guides on the system board. Carefully lower the memory carrier into the card guides until the extractor levers engage under the card guide edges. Press the extractor levers down until the memory carrier firmly seats into the system board. The extractor levers should be resting flat on top of the memory carrier edge.

Replace the Back Air Baffle

Angle the back end of the air baffle onto the support bar. Make sure the screws slip into the holes on the support bar. Then lower the air baffle over the system board. Tighten the two captive screws (T-15) at the support bar.

Replace the Back Top Cover

Angle the back end of the top cover toward the support bar. Make sure the metal tabs on the back end of the top cover slip into the guide holes in the support bar. Lower the top cover down over the SPU. Tighten the two captive screws (T-15).

Slide the SPU Back into the Cabinet

If the rail slide locks are activated, then press the locks on each side while carefully pushing the SPU forward. The SPU should stick out of the front of the cabinet by about 2 inches.

Replace the Front Bezel Brackets

On each side, align the bezel bracket over the three bracket screws. Slide the bezel brackets down into place and tighten the screws (T-15). Slide the SPU back into the cabinet by about 2 inches. On each side, tighten the two screws (T-25) that hold the bezel bracket to the side of the SPU.

Replace the Front Bezel

Align the front bezel over the front of the SPU. Press the front bezel onto the cabinet until it snaps into place.

Reconnect the System Cables

Reconnect the power cables and any other cables that were disconnected. Reconnect all peripheral devices and their power cables.

Verify the New System Memory

Power up the peripherals first, then power up the system by putting the switch in the on (I) position. You will hear the cooling fans coming up to speed. This creates a high pitched squeak for a few seconds. The system memory is automatically configured to the system by the software.

Check all the front panel LEDs for normal indications with no warnings or faults indicated. The SPU should take a few minutes to perform all selftests and initialization routines. At the end of these selftests, you should be able to boot the operating system or initiate the Boot Console Handler.

At the Boot Console Handler Interface prompt, type *in* to get the information menu. Then type *me* to get the memory information. The memory status table provides the size of the cards installed in each slot and the system memory size.

If the system has errors or the memory status table does not reflect the expected configuration then the possible error sources are the DIMMs are not seated properly, the DIMMs are not paired correctly, or the DIMMs are not sequenced correctly. If errors exist or the table does not reflect the expected configuration, then repeat the installation procedure but take special care to seat the DIMMs properly, paired and in the correct sequence.