

# Powering a Server Off and On

See [Change History](#) for a history of changes made to this topic.

Most servers are running 24 hours a day. When it is necessary to power off a server, for example, before disconnecting AC power, you must power it off first using OSM, TSM, or SCF. If the enclosures are not placed in a power-down state first, they enter power-fail mode and continue drawing battery power when main power is removed. The exception is when the emergency power-off (EPO) switch is activated. If this option is installed, the EPO switch shuts down the system and removes battery power.

Do not power off a server or an enclosure until you have identified affected applications, processes, and devices and taken the appropriate actions. To power off individual enclosures on running systems, see the NonStop S-Series System Expansion and Reduction Guide. Do not power off a system until you have brought the applications and processes to an orderly stop. On most systems, the customer maintains startup and shutdown files for this purpose. If the system is not shut down properly, an unrecoverable loss of data can occur.

To restore power, see [Powering On a Server](#).

There are two options for removing power:

- Halt all processors by using the OSM Service Connection or TSM Service Application, and then power off the server by using the Low-Level Link.
- Halt all processors except one by using the OSM Service Connection or TSM Service Application, and then power off the server by using SCF. SCF can be used only on running servers.

Before halting the applications and powering off a server:

- Notify users in advance so they can be prepared.
- Plan your activity or new configuration in advance.



**Caution:** If the system is part of a ServerNet cluster, remove the system from the cluster before stopping the system. See the ServerNet Cluster Manual for details.

## Preparing to Shut Down the Applications and System Software:

- 1 Schedule the shutdown in advance, if possible. Send a message to notify the users.
- 2 If shutdown command files are being used, execute the files or ask the customer to execute them.

## If Shutdown Command Files Are Not Used:

## Stop The Applications and Processes in This Order

3 Stop all user applications. See [Stopping User Processes](#).

4 If the system is running Pathway, at the Pathway prompt, enter:

```
= SHUTDOWN2, MODE, ORDERLY
```

5 If the system is running Distributed Systems Management/Software Configuration Manager (DSM/SCM), at a TACL prompt, enter:

```
> Volume $DSMSCM.ZDSMSCM  
> Run STOPSCM
```

6 Stop communications lines, such as Expand lines.

7 Use the TACL PPD and STATUS commands to identify any remaining processes that should be stopped individually. Stop the processes using the TACL STOP command.

You must be aware of which processes must not be stopped. For example, some TCP and system processes must not be stopped. Generic processes configured to be persistent cannot be stopped.

8 Drain the spooler. At a TACL prompt, enter:

```
> SPOOLCOM supervisor-name, SPOOLER DRAIN
```


9 Stop the Transaction Management Facility (TMF subsystem), the main functional component of NonStop TM/MP. At a TACL prompt, enter:

```
> TMFCOM STOP TMF
```

10 Refresh the disks to put them in an orderly state before shutdown.

```
> SCF CONTROL DISK $*, REFRESH
```

## Halt the Processors Using OSM or TSM:

 **Note:** This resets the processors (halts them and reinitializes the registers and status).

11 Log on to the OSM or TSM Low-Level Link.

12 On the toolbar, click **Processor Status**.

13 In the Processor Status dialog box, scroll down the list and select processors to halt. If you intend to use SCF to power off the system, leave one processor running (0 or 1).

You can use the Shift key to select more than one processor, but selection must be in numeric order. Use the Ctrl key to select multiple processors, regardless of their order.

14 Select **> Processor Actions> Halt**.

15 A dialog box appears asking if you are sure that you want to halt the selected processors? Click **OK**.

16 Click **Perform Action**.

### To Power Off the System Using the Low-Level Link:

17 On the menu bar at the top of the screen, click **System Power Off**.

A message appears indicating that a power off will terminate your OSM or TSM session. Click **Yes**. You are logged off, and the system is powered down.

### To Power Off the System Using SCF:

18 Start a TACL prompt on the system console and log on as super ID (255, 255).

19 Enter the SCF power off command:

```
>SCF CONTROL SUBSYS $ZZKRN, SHUTDOWN
```

### Note:

- If the system fails to power off, you might have a bad PMF CRU.
- In an emergency, you might need to remove AC power quickly. If your site is equipped with an EPO switch, you can use it to remove power from the system. If the EPO option is not installed, turn off the circuit breakers in the AC (wall) panel or unplug the enclosures and peripherals from the AC outlets. This step will not disable battery power. If a system has not been shut down properly, battery backup must remain on to prevent data intergity problems. Battery backup is removed when an enclosure is powered down using OSM, TSM, SCF, or the EPO switch.

To restore power, see [Powering a System On](#).

### Sources of Information:

For the EPO option, see:

- NonStop S-Series Planning and Configuration Guide. For G06.16 and earlier, see the Himalaya S-Series Planning and Configuration Guide.

For powering a server off and on:

- NonStop S-series Operations Guide

- Starting and Stopping the System
- Powering Off the System
- Powering On the System
- NonStop S-Series System Expansion and Reduction Guide
  - Power Off Enclosures
- OSM or TSM online help
  - Stopping the System
  - Powering Off the Server
  - Powering On the Server
  - Starting the System
  - Troubleshooting System Startup Problems.

For G06.16 and earlier, see the Himalaya S-series Operations Guide and the Himalaya S-Series System Expansion and Reduction Guide.

For other sources of information related to planning, creating system power-down command files, and devices and subsystems, see [Sources of Information for System power Down](#).

# Change History for Powering a Server Off and On

**September 24, 2003**

Restructured topic, updated for OSM, and provided steps for OSM or TSM Low-Level Link and SCF options.

# Powering On a Server

After the server shuts down the power supplies and powers off all CRUs, you can power the server on again as follows:

- 1 Locate the **power-on push button** above the handle on either processor multifunction (PMF) customer replaceable unit (CRU) in group 01 (the group containing processors 0 and 1).
- 2 Press and hold down the **power-on push button** for at least one second.
- 3 Check fan activity by placing your hand near the outlet grill located above slots 51 through 54 and between slots 50 and 55 of the enclosure.
- 4 Make sure that the green LEDs are lit and that the amber LEDs are not lit.
- 5 You can now start your system.

For starting a system, see OSM or TSM online help and the NonStop S-Series Operations Guide. For G06.16 and earlier, see the Himalaya S-Series Operations Guide.

# Stopping User Processes:

If shutdown command files are not used, stop the processes individually. Identify the running processes by using the TACL PPD and STATUS commands. Stop the processes by using the TACL STOP command.

To stop the named, unnamed, and TACL processes, log on as a super-group user (255, n) and perform these steps:

## Stop User's Named or Unnamed Processes

- 1 Determine the names of the user's running processes by entering:

```
>STATUS *, PRI 199
```

- 2 Make a note of the name or names of running processes. For unnamed processes, note the processor (CPU) and PIN numbers of those processes, because you must use them to stop the unnamed process.

- 3 To stop a named process by using the TACL STOP command, enter:

```
>STOP $process-name
```

Repeat this command for each named process you want to stop.

- 4 To stop an unnamed process, enter for each process:

```
>STOP cpu,pin
```

Repeat this command for each unnamed process you want to stop.

See the TACL Reference Manual for complete syntax, considerations, and examples.

# Sources of Information for Powering Down a Server

## For information on:

Forms you can use for planning your configuration

Managing change

Creating system power-down command files (see system shutdown files):

Stopping individual devices, including all disks, and communications lines

## Refer to:

For G06.17 and later: NonStop S-Series Planning and Configuration Guide

For G06.16 and earlier: Himalaya S-Series Planning and Configuration Guide

For G05 and later: WAN Subsystem Configuration and Management Manual

For G03.02 and earlier: ServerNet Communications Configuration and Management Manual

OSM User's Guide; TSM Configuration Guide

Availability Guide for Change Management

For G06.21 and later: NonStop S-Series Hardware Installation and FastPath Guide

For G06.20 and later: NonStop S-Series Hardware Installation Guide

For G06.17, G06.18, and G06.19: NonStop S-Series Planning and Configuration Guide

For G06.16 and earlier: Himalaya S-Series Planning and Configuration Guide

Introduction to NonStop Operations Management

For G06.17 and later: SCF Reference Manual for G-Series RVUs

For G06.16 and earlier: SCF Reference Manual for G-Series Releases

	SCF manuals that are specific to each peripheral device
Working with storage devices, such as disk and tape drives	SCF Reference Manual for the Storage Subsystem
Working with Ethernet addressable devices, such as terminals and printers	For G05 and later: LAN Configuration and Management Manual  For G03.02 and earlier: ServerNet LAN Systems Access Configuration and Management Manual
Working with WAN communications lines for devices and intersystem communication protocols	For G05 and later: WAN Subsystem Configuration and Management Manual  For G03.02 and earlier: ServerNet Communications Configuration and Management Manual
	SCF reference manuals that apply to your specific devices and communications protocol products
Starting and stopping a system	For G06.17 and later: NonStop S-Series Operations Guide  For G06.16 and earlier: Himalaya S-Series Operations Guide  OSM User's Guide and TSM Online User Guide  OSM or TSM online help