Process Manager

ADMIN**UX** ®

Runaway ("hog") and orphan processes can adversely impact your system performance.

►The AdminUX Process Manager monitors server process daemons 24x7 to ensure proper system operation.

►Failed process daemons can be restarted automatically saving an administrator's time.

►Runaway and orphaned processes can be killed automatically to ensure proper system operation.

Runaway Processes

A daemon or process that consumes too much of the system's resources is called a runaway. The AdminUX Process Manager recognized two kinds of runaways:

►uses too much CPU time in a designated period

►forks too many other processes in a short period of time

Whether or not the runaway process watch is enabled and when it runs in configurable by the system administrator.

Specific processes can be excluded from the runaway process monitor.

Runaway processes are only monitored for regular users. Therefore, any process owned

by a "super user" can never be considered a runaway.

A process which uses too much CPU time will slow a system down. This is not a critical threat to your system, so when this type of runaway is identified the Process Manager sets an alarm and logs the runaway in the RUNAWAYS.log to let the administrator know there is a situation that may need attention.

To determine this kind of runaway, the Process Manager first gets a list of all processes, waits four minutes and gets another list.

If a process has consumed more than 120 seconds of CPU time (half of the CPU's time during the four minute interval) it is considered a runaway.

The 120-second variable is a default setting that may be modified by the user.

A process that forks too many other processes in a short period of time is considered a serious threat. It may "crash" your system by exceeding the limit on the number of processes per user. If the Process Manager identifies this type of runaway it will kill the process, set an alarm, and log the runaway in the RUNAWAYS.log.

To determine a forking type runaway, the Process

Manager looks at all processes owned by a regular user that belongs to a process group (with a ppid of 1). If the number of processes in the group exceeds 65 the user is considered a runaway.

Orphan Processes

A process whose owner is not currently logged into the system is an orphan. Orphans are usually created when a user is "knocked off" the network during the login process. They may also be created by applications that don't do a good job of cleaning up their processes.

The kernel's process table – a critical resource – stores these useless entries, and it is common for these orphan processes to use CPU cycles.

When an orphan process is found, it is logged in the PORPHANS.log. The Process Manager can automatically kill an orphan process if the option is enabled.

The system administrator can exclude application processes or users that, as a function of normal operations, create orphan processes.