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How to kill Zombie/Defunct process ?

✔ **SOLUTION VERIFIED** - Updated April 29 2015 at 1:16 PM - English ▾

Environment

- Red Hat Enterprise Linux 6
- Red Hat JBoss Enterprise Application Platform (EAP)

Issue

- How to kill Zombie/Defunct process ?
- Try to stop `JBoss EAP` but cannot stop as `JBoss` process become to defunct process.

Resolution

From the man pages of wait system call:

<div style="text-align: right">Raw</div>

```
All  of these system calls are used to wait for state changes in a child of the calling process, and obtain
information about the child whose state has changed.  A state change is considered to be: the child terminated;
the child was stopped by a signal; or the child was resumed by a signal. In  the  case  of  a  terminated
child,  performing  a wait allows the system to release the resources associated with the child; if a wait is
not performed, then the terminated child remains in a "zombie" state

A child that terminates, but has not been waited for becomes a "zombie".  The kernel maintains a minimal set of
information about the zombie process (PID, termina-tion status, resource usage information) in order to allow the
parent to later perform a wait to obtain information about the child.  As long as  a  zombie  is  not removed  from
the  system  via a wait, it will consume a slot in the kernel process table, and if this table fills, it will not be
possible to create further pro-cesses.  If a parent process terminates, then its "zombie" children (if any) are adopted
by init(8), which automatically performs a wait to remove the zombies.
```

There is no other way to clear the zombies from system. To remove zombies, the SIGCHLD signal can be sent to the parent manually, using the kill command. If the parent process still refuses to reap the zombie, the next step would be to remove the parent process. When a process loses its parent, init becomes its new parent. Init periodically executes the wait system call to reap any zombies with init as parent.

Product(s) Red Hat JBoss Enterprise Application Platform   **Tags** eap jboss jboss_eap

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3 Comments

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Kannan Kunchithapatham   19 April 2018 10:55 AM

Give example or illustration, just there are only texts

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Airwide Team   8 February 2019 4:57 AM

Please provide the command to kill the defunct process instead of giving explanation.

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13 Points

Adolphe Bom   5 June 2020 2:33 PM

kill <process(s)> is the command the kill processes. You can use it with –9 or –15 options. Example kill –9 109446 or kill –15 109446. Remember you can kill more than one process.

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