
Subject: HELP:How can one VM interrupt another running VM ??

Posted by [shule ney](#) on Tue, 03 May 2011 19:58:39 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi all:

I was wondering how can I use one VM to interrupt another running VM, is there any scheduler support this function, or any control I can use to implement it. For OpenVZ, is it possible to achieve this?

Subject: Re: HELP:How can one VM interrupt another running VM ??

Posted by [Steven Crothers](#) on Tue, 03 May 2011 20:03:48 GMT

[View Forum Message](#) <> [Reply to Message](#)

Why does this request sound malicious?

On Tue, May 3, 2011 at 3:58 PM, shule ney <neyshule@gmail.com> wrote:

> Hi all:

> I was wondering how can I use one VM to interrupt another running VM, is

> there any scheduler support this function, or any control I can use

> to implement it. For OpenVZ, is it possible to achieve this?

--

Steven Crothers

steven.crothers@gmail.com

Subject: Re: HELP:How can one VM interrupt another running VM ??

Posted by [shule ney](#) on Tue, 03 May 2011 20:08:51 GMT

[View Forum Message](#) <> [Reply to Message](#)

I can't quite understand you, why you mean it's "malicious"?

2011/5/3 Steven Crothers <steven.crothers@gmail.com>

> Why does this request sound malicious?

>

> On Tue, May 3, 2011 at 3:58 PM, shule ney <neyshule@gmail.com> wrote:

> > Hi all:

> > I was wondering how can I use one VM to interrupt another running VM, is

> > there any scheduler support this function, or any control I can use

> > to implement it. For OpenVZ, is it possible to achieve this?

> --

> Steven Crothers

> steven.crothers@gmail.com

>

Subject: Re: HELP:How can one VM interrupt another running VM ??

Posted by [Daniel Pittman](#) on Tue, 03 May 2011 20:12:06 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Tue, May 3, 2011 at 12:58, shule ney <neyshule@gmail.com> wrote:

> I was wondering how can I use one VM to interrupt another running VM, is
> there any scheduler support this function, or any control I can use
> to implement it. For OpenVZ, is it possible to achieve this?

Not as such, no, but: OpenVZ has a single scheduler across all threads / processes in all VEs. So, if you imagine the scheduler as working on a single system with all those tasks the normal rules of process scheduling apply.

Which means that if you set your higher priority stuff to a high nice level, or real-time priority, it will take precedence over another VE that runs lower priority stuff.

Finally, if you assign appropriate CPU shares to the VEs you can ensure that they will get all the time divided appropriately at a high level.

Regards,
Daniel

PS: Native Linux doesn't support this either. :)

--

Subject: Re: HELP:How can one VM interrupt another running VM ??

Posted by [shule ney](#) on Tue, 03 May 2011 20:27:06 GMT

[View Forum Message](#) <> [Reply to Message](#)

Thanks Daniel, but it's not interrupt for that thread/process, the nice value just set higher priority, what I want to do is like stop the current running process in one VM, context switching to another process in another VM, when this process finishes, switch back to the original VM, of course this preempting VM has higher nice value. Is it possible?

2011/5/3 Daniel Pittman <daniel@rimspace.net>

> On Tue, May 3, 2011 at 12:58, shule ney <neyshule@gmail.com> wrote:

>
> > I was wondering how can I use one VM to interrupt another running VM, is
> > there any scheduler support this function, or any control I can use
> > to implement it. For OpenVZ, is it possible to achieve this?
>
> Not as such, no, but: OpenVZ has a single scheduler across all threads
> / processes in all VEs. So, if you imagine the scheduler as working
> on a single system with all those tasks the normal rules of process
> scheduling apply.
>
> Which means that if you set your higher priority stuff to a high nice
> level, or real-time priority, it will take precedence over another VE
> that runs lower priority stuff.
>
> Finally, if you assign appropriate CPU shares to the VEs you can
> ensure that they will get all the time divided appropriately at a high
> level.
>
> Regards,
> Daniel
>
> PS: Native Linux doesn't support this either. :)
>
> --

>

Subject: Re: HELP:How can one VM interrupt another running VM ??
Posted by [dowdle](#) on Tue, 03 May 2011 21:27:56 GMT
[View Forum Message](#) <> [Reply to Message](#)

Greetings,

----- Original Message -----

> Thanks Daniel, but it's not interrupt for that thread/process, the
> nice value just set higher priority, what I want to do is like stop
> the current running process in one VM, context switching to another
> process in another VM, when this process finishes, switch back to
> the original VM, of course this preempting VM has higher nice value.
> Is it possible?

No, that is NOT a built in feature of OpenVZ... and one would argue that it should not be a feature.

Having said that though, assuming you have root access to the host node running the containers,

you could setup some type of monitoring of the process in the container that communicates to the host node, and when the host node sees a condition, you could chkcpnt the container, pass a message to the second container, start up some process there, monitor it, and when done, restore from chkpoint the first container.

That would take some work. The easiest way for monitoring would be checking for the presence or absence of a file... and that should be easy since the host node can see the container's filesystems.

I don't know if that is what you want or not but if I had to have that feature, that's what I'd do.

TYL,

--

Scott Dowdle
704 Church Street
Belgrade, MT 59714
(406)388-0827 [home]
(406)994-3931 [work]

Subject: Re: HELP:How can one VM interrupt another running VM ??

Posted by [Daniel Pittman](#) on Tue, 03 May 2011 21:41:18 GMT

[View Forum Message](#) <> [Reply to Message](#)

No, that is absolutely impossible. The only mechanism for that Linux provides for this is using RT scheduling and IPC, and those are not really available to you. What you are describing sounds very much like cooperative multitasking, which Linux doesn't do at this level.

Are you sure you don't want, for example, a TCP socket passing data to the "switch to" process, and then to block until the response comes back?

Daniel

On Tue, May 3, 2011 at 13:27, shule ney <neyshule@gmail.com> wrote:

> Thanks Daniel, but it's not interrupt for that thread/process, the nice
> value just set higher priority, what I want to do is like stop the current
> running process in one VM, context switching to another process in another
> VM, when this process finishes, switch back to the original VM, of
> course this preempting VM has higher nice value. Is it possible?

>

> 2011/5/3 Daniel Pittman <daniel@rimspace.net>

>>

>> On Tue, May 3, 2011 at 12:58, shule ney <neyshule@gmail.com> wrote:

>>

>> > I was wondering how can I use one VM to interrupt another running VM, is

>> > there any scheduler support this function, or any control I can use

>> > to implement it. For OpenVZ, is it possible to achieve this?
>>
>> Not as such, no, but: OpenVZ has a single scheduler across all threads
>> / processes in all VEs. So, if you imagine the scheduler as working
>> on a single system with all those tasks the normal rules of process
>> scheduling apply.
>>
>> Which means that if you set your higher priority stuff to a high nice
>> level, or real-time priority, it will take precedence over another VE
>> that runs lower priority stuff.
>>
>> Finally, if you assign appropriate CPU shares to the VEs you can
>> ensure that they will get all the time divided appropriately at a high
>> level.
>>
>> Regards,
>> Daniel
>>
>> PS: Native Linux doesn't support this either. :)
>>
>> --

>>
--