
Subject: Scaling UBC values: Why?

Posted by [divB](#) on Wed, 02 Sep 2009 14:14:15 GMT

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[quote src="http://wiki.openvz.org/UBC_derived_configuration_examples"]Caution: do not subtract the values of one configuration from others.[/quote]

Why not? I found this warning on many locations.

Also it seems to me that man should only scale configurations with the formula in http://wiki.openvz.org/Intermediate_UBC_configurations and never add/subtract values.

Why not?

Regards,
divB

Subject: Re: Scaling UBC values: Why?

Posted by [maratrus](#) on Fri, 04 Sep 2009 12:54:17 GMT

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Hi,

all UBC configuration parameters should obey the consistency rules which are described at the page

http://wiki.openvz.org/UBC_consistency_check

It's just a simple math exercise

For example

Let's assume that there are exist two configuration examples.

Each of them should obey the inequalities that are described in a page mentioned above i.e.

$\text{privvmpages_1_bar} \geq \text{vmguarpages_1_bar}$

$\text{privvmpages_2_bar} \geq \text{vmguarpages_2_bar}$

If

$\text{privvmpages_3_bar} = a_1 * \text{privvmpages_1_bar} + a_2 * \text{privvmpages_2_bar}$

$\text{vmguarpages_3_bar} = a_1 * \text{vmguarpages_1_bar} + a_2 * \text{vmguarpages_2_bar}$

$a_1 + a_2 = 1, a_1 \geq 0, a_2 \geq 0$

then the consistency rule is still being held

$\text{privvmpages_3_bar} \geq \text{vmguarpages_3_bar}$

So, the third configuration which is obtained as

$[\text{THIRD_CONFIGURATION}] = a_1 * [\text{FIRST_CONFIGURATION}] + a_2 * [\text{SECOND_CONFIGURATION}]$
 $a_1 \geq 0, a_2 \geq 0, a_1 + a_2 = 1$

obey the consistency rule.

Consider another rule

$\text{tcprcvbuf_1_bar} \geq 64$
 $\text{tcprcv)buf_2_bar} \geq 64$

So, the third configuration which is obtained as

$[\text{THIRD_CONFIGURATION}] = a_1 * [\text{FIRST_CONFIGURATION}] + a_2 * [\text{SECOND_CONFIGURATION}]$
 $a_1 \geq 0, a_2 \geq 0, a_1 + a_2 = 1$

should obtain this rule too

$\text{tcprcvbuf_3_bar} = a_1 * \text{tcprcvbuf_1_bar} + a_2 * \text{tcprcv)buf_2_bar} \geq a_1 * 64 + a_2 * 64 = 64 * (a_1 + a_2) = 64$

because $a_1 + a_2 = 1$.

But subtraction doesn't guarantee that all rules are preserved.
Example

$5 > 3, 4 > 1$ but $(5 - 4) < (3 - 1)$ because $1 < 2$

Subject: Re: Scaling UBC values: Why?
Posted by [divB](#) on Fri, 04 Sep 2009 17:23:28 GMT
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Oh, thank you very much, now that's clear.

That means that I can also add/subtract specific values if I run `vzcfgvalidate` afterwards?

Regards,

divB