
Subject: RE: Container Test Campaign

Posted by [mef](#) on Wed, 21 Jun 2006 19:25:27 GMT

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Hi Clement,

You mention that testing isolation properties is more of an extra than an immediate criteria. Based on our experience, this actually is a fairly important criteria. Without decent isolation (both from a namespace and resource perspective) it is rather difficult to support lots of concurrent users. As our paper states, we run anywhere from 30-90 vservers per machine (each machine usually with a 2GHz processor and 1GB of RAM).

We are interested in checkpoint/restart too, but have nothing to test / contribute. I've forwarded your message to Jason Nieh @ Columbia. He has a relatively long history of working in that area. I saw a demo of their checkpoint/restart/migration support last December (live video migrated between servers within a single IBM blade system). Their latest paper published at USENIX LISA also states that they can migrate from one linux kernel version to another. This enables "live" system upgrade, which IMHO is just as important as load balancing.

Another area we are quite interested in is "network virtualization" (private route tables, ip tables, etc). We are aware that other container based systems (e.g., openvz) have support for this, but we (i.e., PlanetLab) are pretty much a vserver shop at the moment. We added our own support to safely share a single, public IPv4 address between multiple containers, while simultaneously support raw sockets etc. This is an absolute requirement for PlanetLab, and I'd argue (but not here) that it also is important for desktop usage scenarios that involve containers and want to avoid the use of NAT.

Best regards,
Marc
