



Intel Xen Testing

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Agenda

- What do we do for xen testing
- Components Tested
- Test Configuration
- Sample test results
- Two issues

What do we do for xen testing

- Find bugs and help Intel developers to fix them
- Validate big xen 3.0 release (xen-3.0, xen-3.0.2 etc)
- Validate Xen distributions from OSDs
- Develop test cases
 - Functional & performance tests
 - Focus on unmodified guest
- Work off xen-unstable, results published daily
 - Focus on VT-x / VT-I
 - Basic xenU boot test

Components Tested

Test Suite	Test Scope	P1 (nightly)	P2 (monthly)	P3 (on demand)
Control Panel	Test different configurations in /etc/xmexample.hvm, domain management, guest memory, schedule, console access, VM, VCPU; xm-test, etc.	<ul style="list-style-type: none"> •Fully automated •Boot different guest OS'es •Run selected LTP test cases •Run selected xm-test •3 environments tested (IA32, PAE, Intel 64) •2 hours per environment 	Auto	On demand
Device Model	Disk, NIC, VGA, Timer, Keyboard, Mouse		Auto	On demand
Guest OS	Linux (LTP, kernel parameters), Windows (HCT), Guest OS installation		Auto	On demand
Regression	Test cases that come from bugs	N.A.	N.A.	On demand
Stress	LTP stress, Crashme, Helltest, CV workloads	N.A.	Auto	On demand
Performance	CPU2K, Kernel build, Lmbench, Iometer, SpecJBB, Sysbench, Byte, Ttcp, Sysmark (Windows)	Weekly	N.A.	On demand

Test Configuration

Green	Daily
Blue	Monthly
Yellow	On demand
Grey	Not ready

SMP xen
SMP xen0

	32/32	32/32p	32p/32p	32/64	32p/64	64/64	IPF
xen build/install/boot	Green	Green	Green	Green	Green	Green	Green
SMP xenU, Linux HVM boot	Green	Green	Green	Green	Green	Green	Green
UP Windows HVM boot	Green	Blue	Green	Blue	Green	Grey	Green
Control Panel	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Device Model	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Guest	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Performance	Yellow	Blue	Yellow	Yellow	Yellow	Blue	Yellow
Stress	Blue	Yellow	Yellow	Yellow	Yellow	Blue	Yellow
VBD/VNIF	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Save/Restore	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Big xen 3.0 release test	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
OSD Test	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow

Sample Daily Test Results

Issues:

- + This bug fixed: Creating 32PAE SMP guest on 32pae/64bit platform crashes xen0
- Creating 4 VMX simultaneously on 32 platform will hang xen0
- Sometimes build base kernel 2.6.16 in IA32SMP guest fails on 32bit platform.

Details;

IA-32:

- + Build&Boot SMP xen0 without problem
- + Can bootup unmodified IA-32 SMP 2.6 linux Guest OS in VMX

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- + Can build base kernel 2.6.16 in IA32 SMP Guest OS in VMX(sometimes pass, sometimes fail)

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IA-32_PAE:

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IA-32e:

For details

Platform: IA-32

Service OS: FC5, IA-32, SMP

Hardware: Grandstale

Default guest OS: IA-32-SMP, 2.6 kernel

- 1, one vmx with memory 512M PASS
 - 2, one xenU with memory 256M PASS
 - 3, Two ia32 smp vmxs and 2 xenUs coexist PASS
 - 4, four ia32 smp vmx coexist(64M,128M,196M,256M)
FAIL(on grandstale hardware platform, it fails, but on Paxville hardware platform, it works fine)
 - 5, network in ia32 smp VMX domain PASS
 - 6, network in XenU domain PASS
 - 7, one window in VMX domain PASS
 - 8, 1 xpsp1 and 1 xpsp2 windows coexist in VMX domains
PASS
 - 10,subset LTP test in VMX domain PASS
 - 11,ia32 smp base kernel boot PASS
 - 12,xm-test PASS
 - 14,StartX in Dom0 PASS
 - 15,one ia32 smp vmx with acpi enablePASS
 - 16,Build base kernel in ia32 SMP guest OS in VMX
FAIL(sometimes pass, sometimes fail)
- xm test on ia32:

Issues we have

- **HVM blocked many times in xen-unstable**
 - Is it possible to have HVM boot test before checkin to xen-unstable, just like xenU?
- **With default build config, build time almost doubles than build with "xen0+xenU"**
 - Default build config builds much more modules than "xen0+xenU"

