

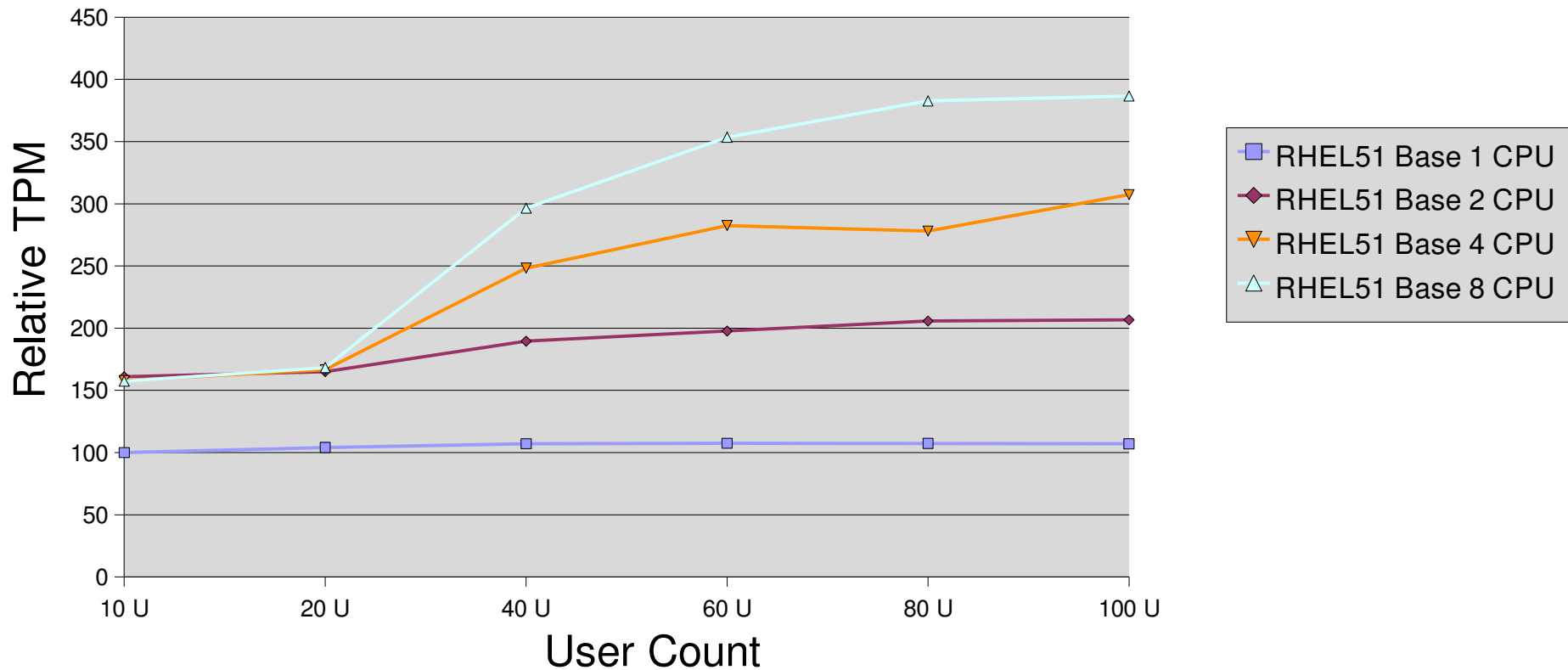
Red Hat Enterprise Linux 5 - Virtualization

*RHEL 5.1 provides the most **scalable** Virtualization platform*

- Scales from single CPU servers to largest multi core machines
- The only virtualization platform that spans the entire enterprise
 - From x86 up to Itanium2
- Scales to meet the needs of enterprise class workloads
 - Supports up to 32 virtual CPUs per guest
 - Use Async I/O and Direct I/O within Guest (tap:aio)
 - Up to 16GB memory per guest
 - Up to 16TB of memory per host
 - *Dynamically allocate resources to respond to business needs*
 - *Add memory or CPU resources on-the-fly*
 - *Scale-up or scale-down resources*
 - *Live Migrate servers to take advantage of unused resources*

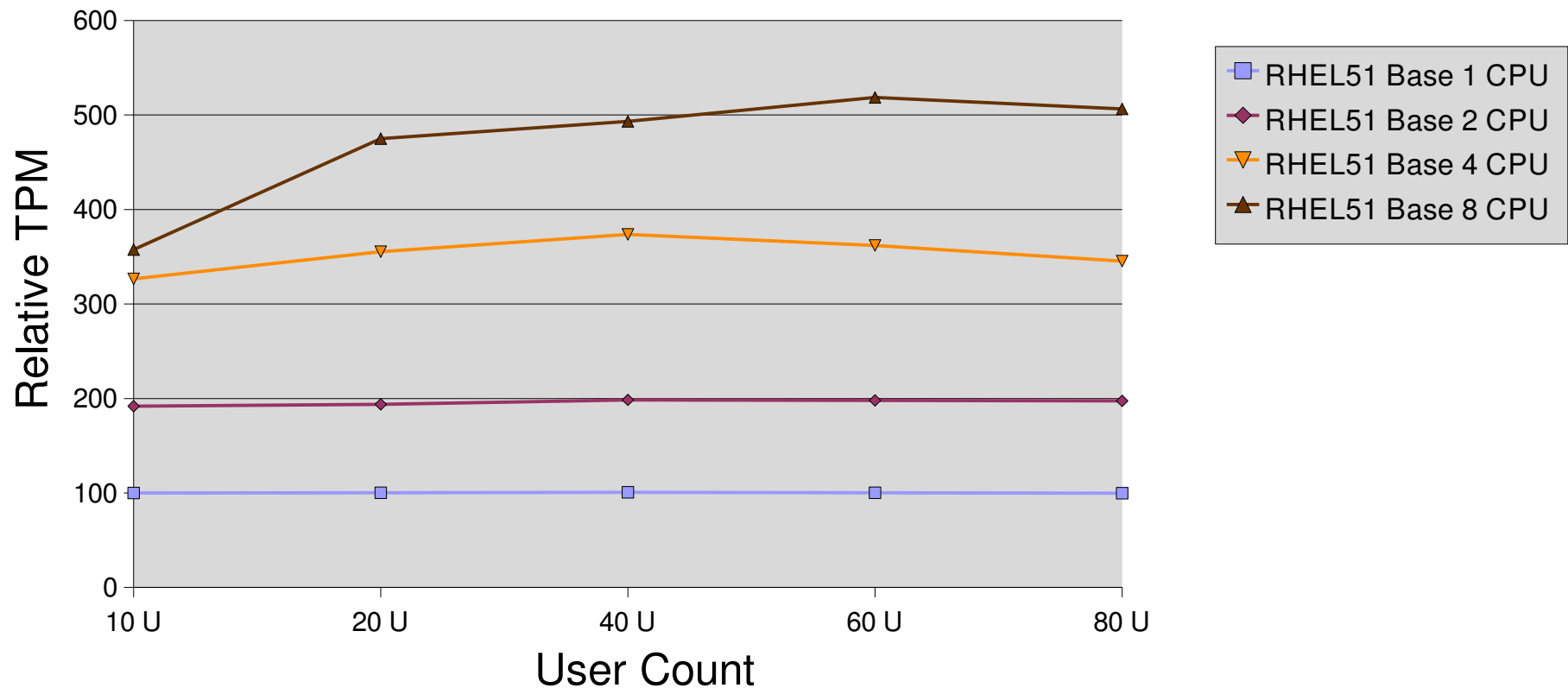
Database Scaling - Intel

RHEL5.1 Scaling - Oracle 10.2 OLTP Intel Quad Core 2.33 GHz



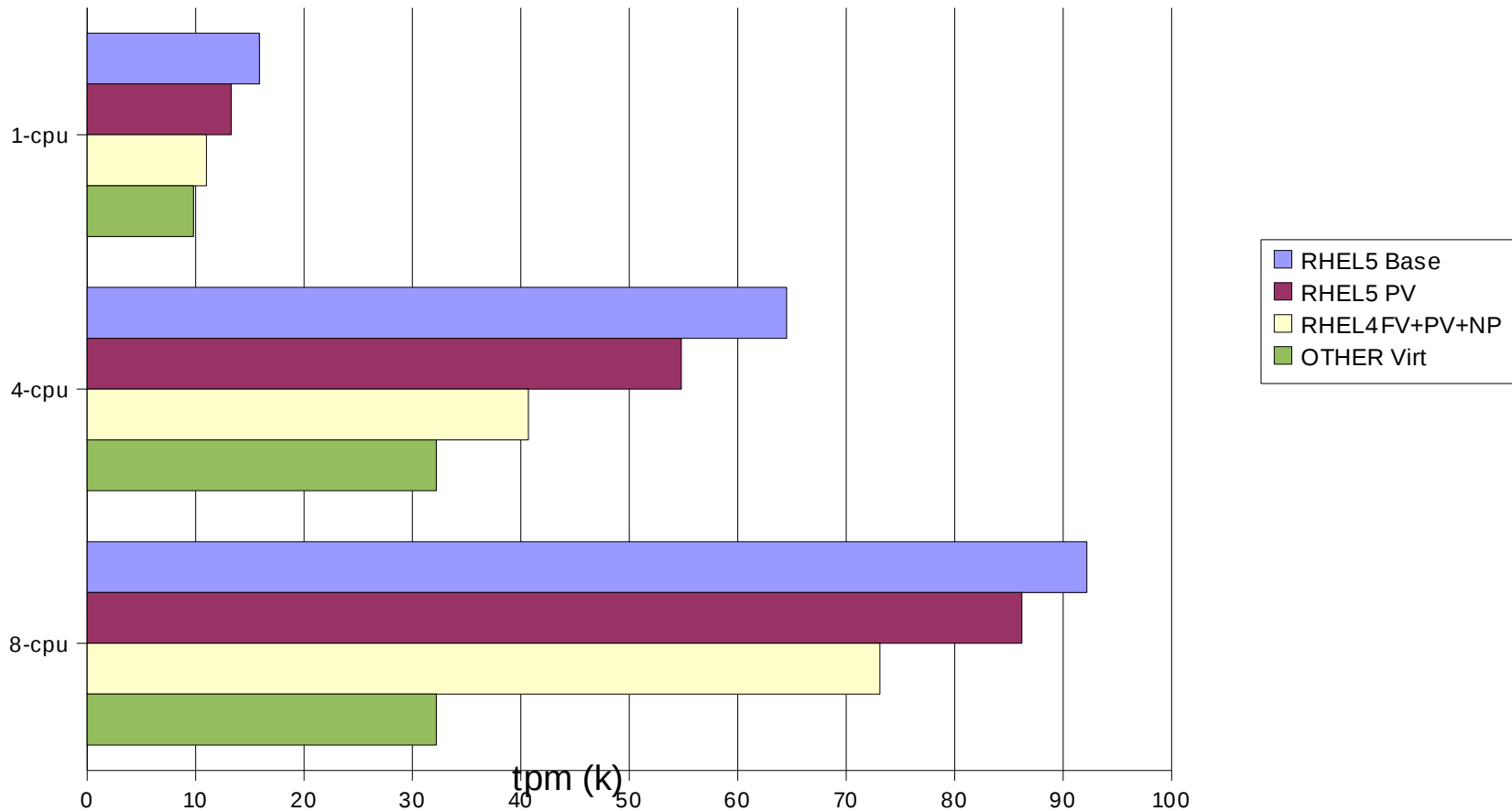
Database Scaling - AMD

RHEL5.1 Scaling - Oracle 10.2 OLTP
AMD Dual Socket Quad Core 2.0 GHz

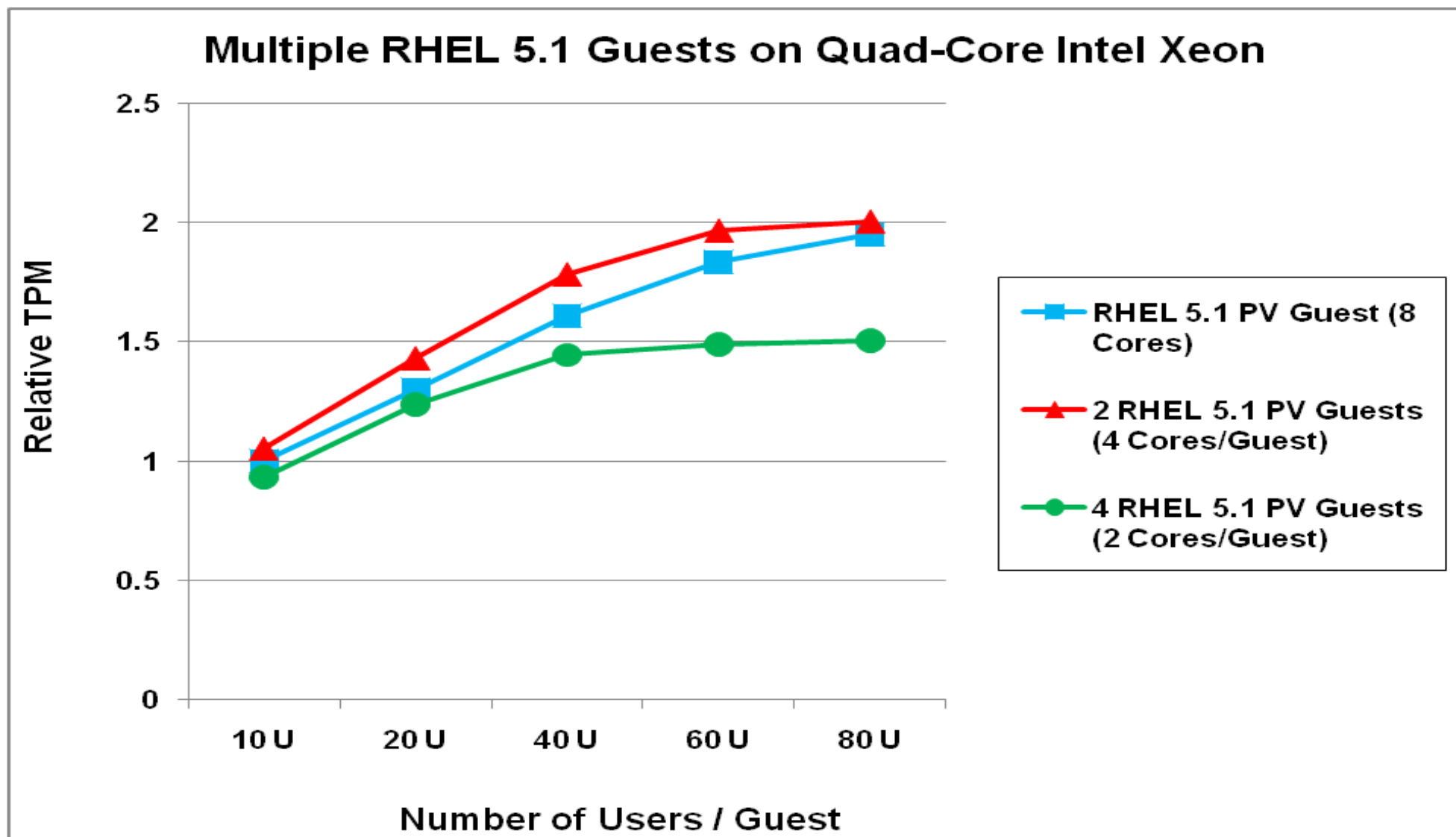


Red Hat 5.1 Virtualization Performance

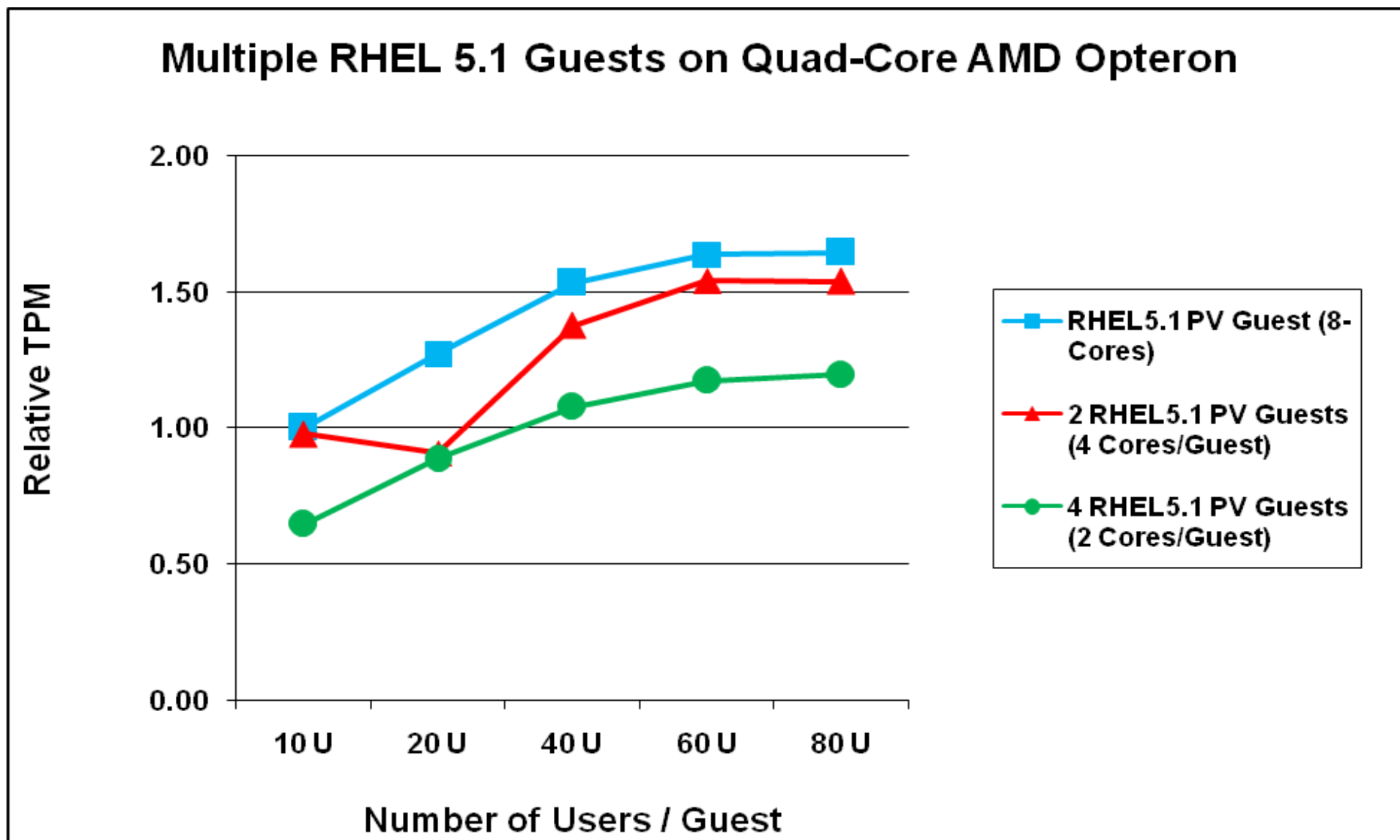
RHEL5.1 Virt Performance of Oracle 10G
vs Other Virt , AMD 1-4-8 cpu, 8Gb mem



Red Hat 5.1 Virt Multi-Guest Scalability

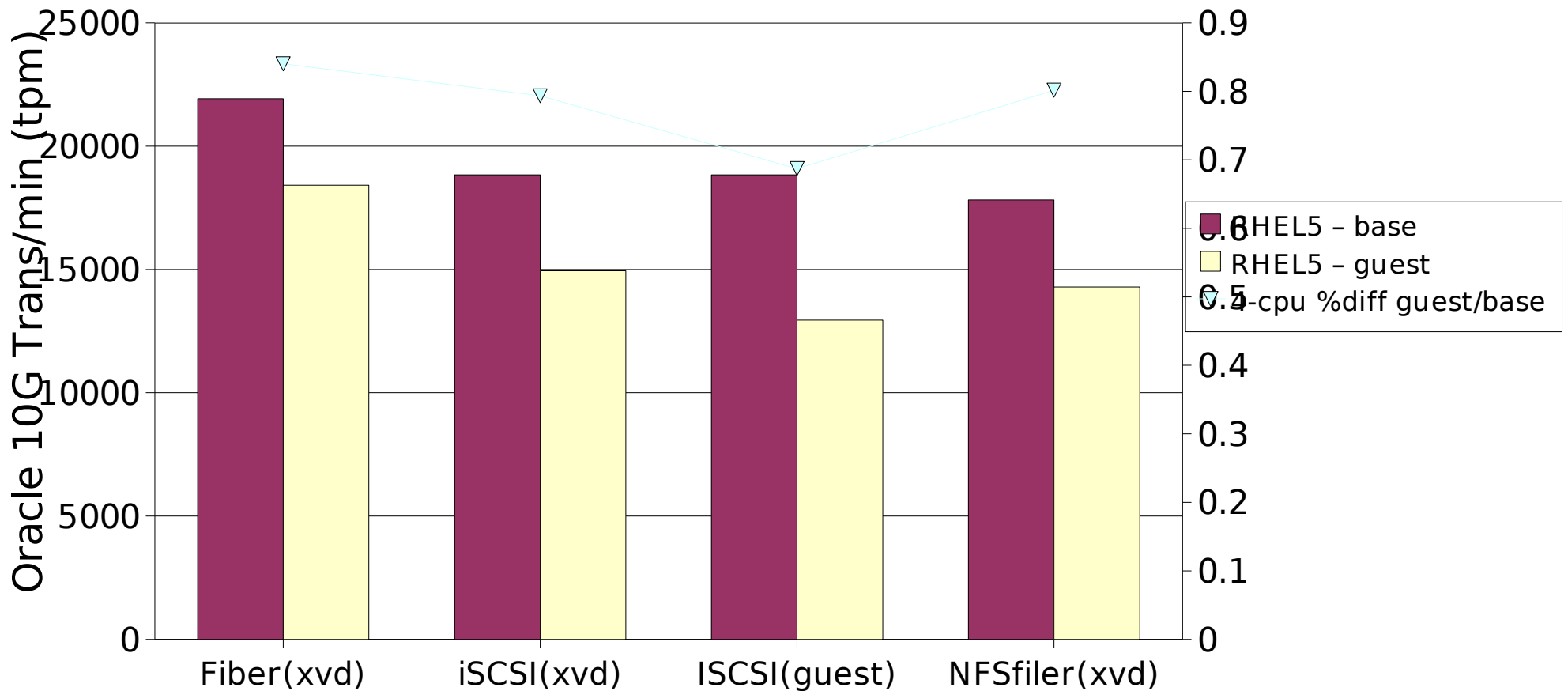


Red Hat 5.1 Virt Multi-Guest Scalability



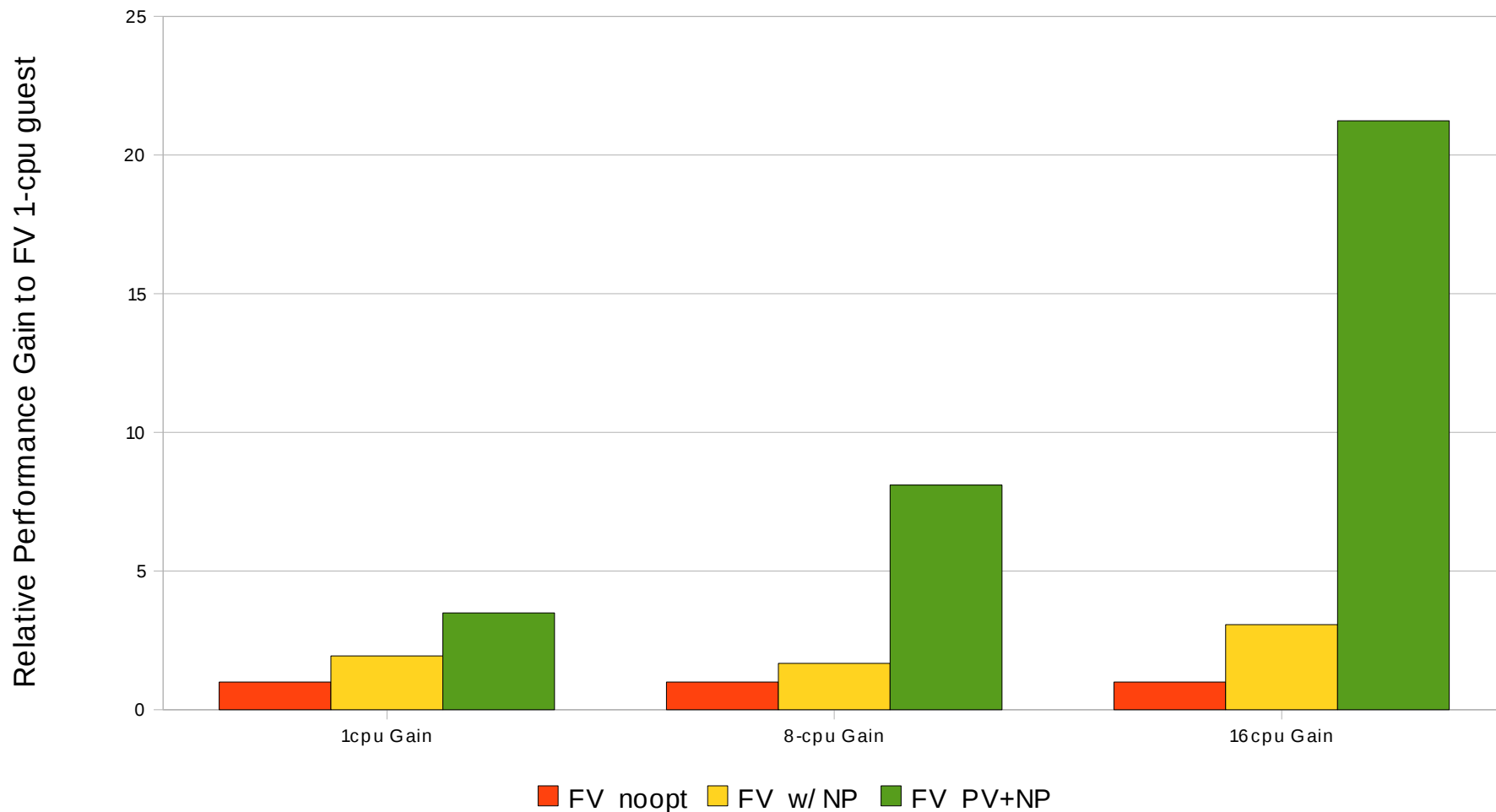
Red Hat Virt Storage Alternatives

RHEL5.1 Virt Application Performance
w/ various Storage (2-cpu AMD64 2.2)



Red Hat 5 - AMD Rapid Virtualization Indexing

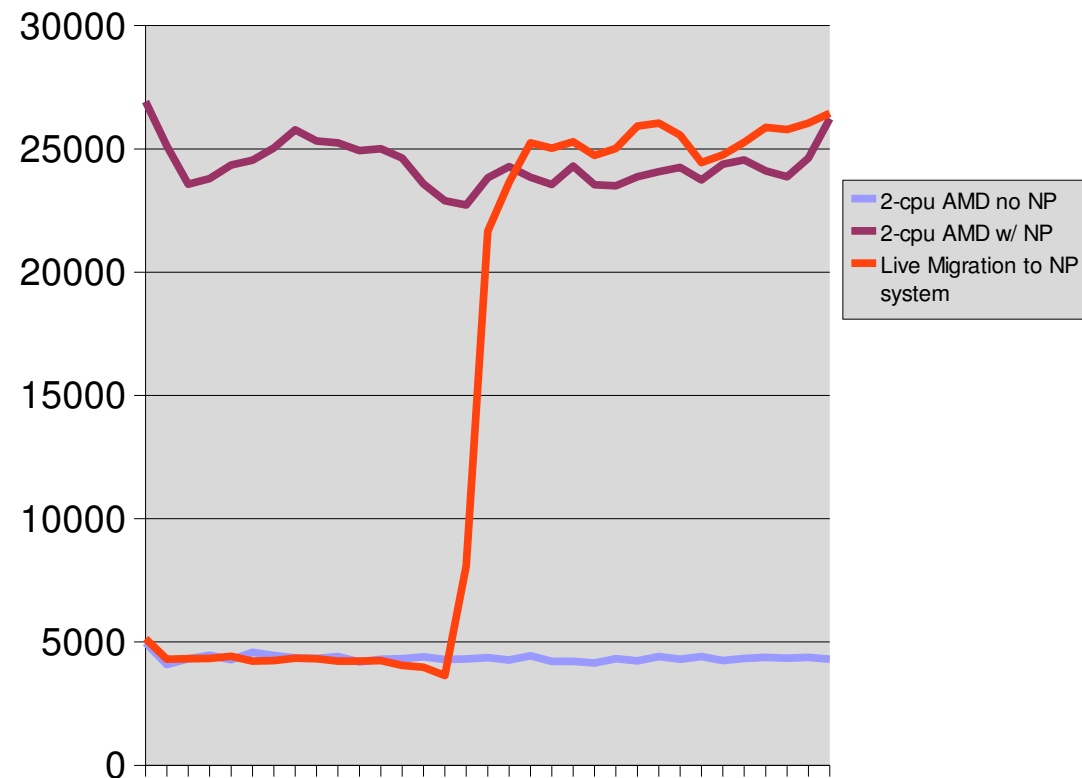
RHEL5.1 Virt HPDL585 16-cpu AMD Database Scaling



RHEL5.1 Virtualization “Live Migration” w/ Oracle 10G R2 on GFS cluster

- RHEL 5.1 Advance Platform
 - Virtualization
 - GFS cluster
 - Shared Fiber Channel SAN
- RHEL4u4 FV guest
 - OLTP running on older AMD sys (not using nested paging)
 - Live migration to newer system (faster w/ nested paging HW)
 - App migrated without shutdown
 - Performance impact immediate
- Migration examples
 - <http://et.redhat.com/~jmh/VirtDemo/>
 - http://people.redhat.com/dshaks/ora_amd_demo.html/

RHEL5.1 Virtualization Database Performance
Transactions/min during Migration from
older AMD to new AMD w/ Nested Paging



Resources

- Red Hat
 - <http://www.redhat.com/>
- Virtualization Infocenter
 - <http://www.openvirtualization.com/>
 - <http://www.redhat.com/promo/virtualization/>
- libvirt
 - <http://www.libvirt.org/>
- Virt-Manager
 - <http://virt-manager.et.redhat.com/>
- Red Hat Cluster Suite
 - <http://www.redhat.com/gfs/>
- View more information
 - <http://www.redhat.com/promo/webinars/>

Where to Look for Performance Results

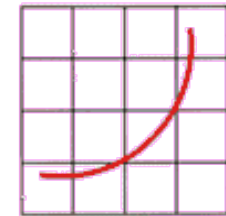
Transaction Processing Performance Council

- www.tpc.org



Standard Performance Evaluation Corporation

- www.spec.org



spec

Oracle Applications Standard Benchmark

- www.oracle.com/benchmarks

SAP Standard Application Benchmarks

- www.sap.com/benchmark



Questions?

