



2008.09.25

Nextra transaction performance

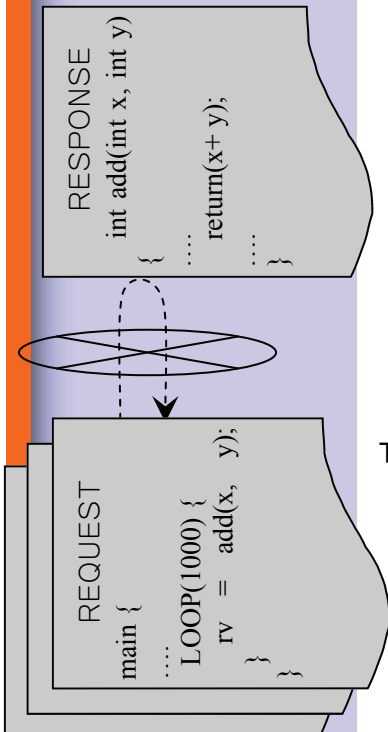
Volume 1, Issue 1

## Summary

- 1 Measured the benchmark along with Fail-over, Load Balancing and Monitoring built-in features.
- 2 Shown 1 transaction < 1 millisecond high-speed transaction processing.
- 3 64bit HP-UX fairly did a good job although relatively a powerless machine.



## Overview of the test programs



## Background

How fast would be of the Nextra's transactional performance? In order to respond to the request from the audience in worldwide, we picked up three popular platforms to conduct the benchmark.

## Configuration

We picked up C language used in both client and server for this benchmark, and could prove this time that our new feature Nextra MTT\*1) has brought it to the next level of transactional processing speed; 1 transaction < 1 millisecond. The new feature MTT is of course armored with Fail-over, Load Balancing and Monitoring standard built-in features.

## Scenario

The sets of the C programs consisting of the client (request side) and the server (response side) communicate over the network (100G LAN). The server adds inputs from the client and returns the result back to the client through the network. We loop 1,000 times in the client program and measure from the beginning to the end of the loop using time()\*2) function.

1,000 RPC requests (= 1,000 loop) per 1 client. We increased the number of the client running at the same time from 1 to 10 and mapped out the results in the two graphs.

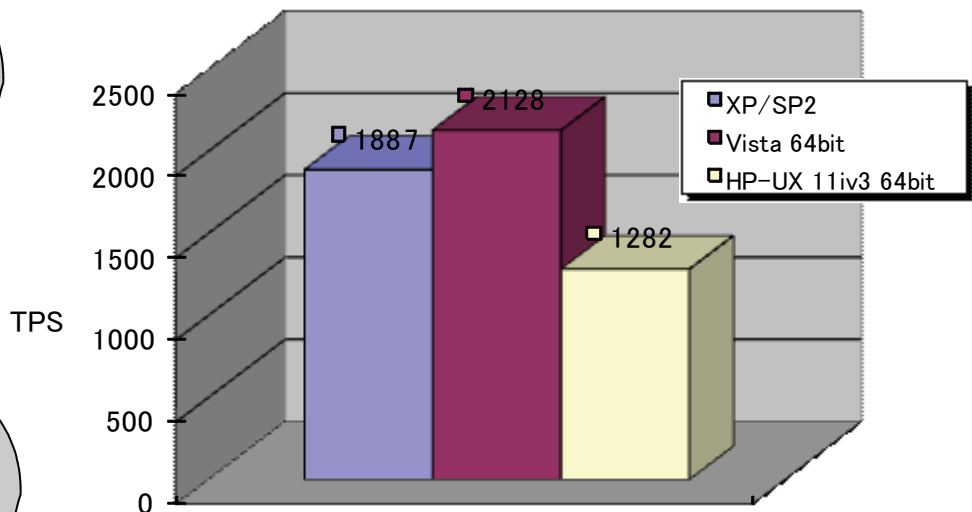
Needless to say, we will provide you the benchmark results using object languages such as Java in the next issue.

\*1) MTT = Multi Threading Technology

\*2) time() function returns in second

Platforms								
OS	H/W	CPU	#	CORE	Cycle	Cache	Mem	HDD
HP-UX11iv3	rx2600	Itanium2	2	1	1.5 GHz	6MB	2G	SCSI
Vista64	Precision	Xeon E5320 Quad Core	2	4	1.86GHz	8MB	4G	SATA
XP32	Precision	Xeon E5320 Quad Core	2	4	1.86GHz	8MB	2G	SATA

Totally 10,000 transactions executed

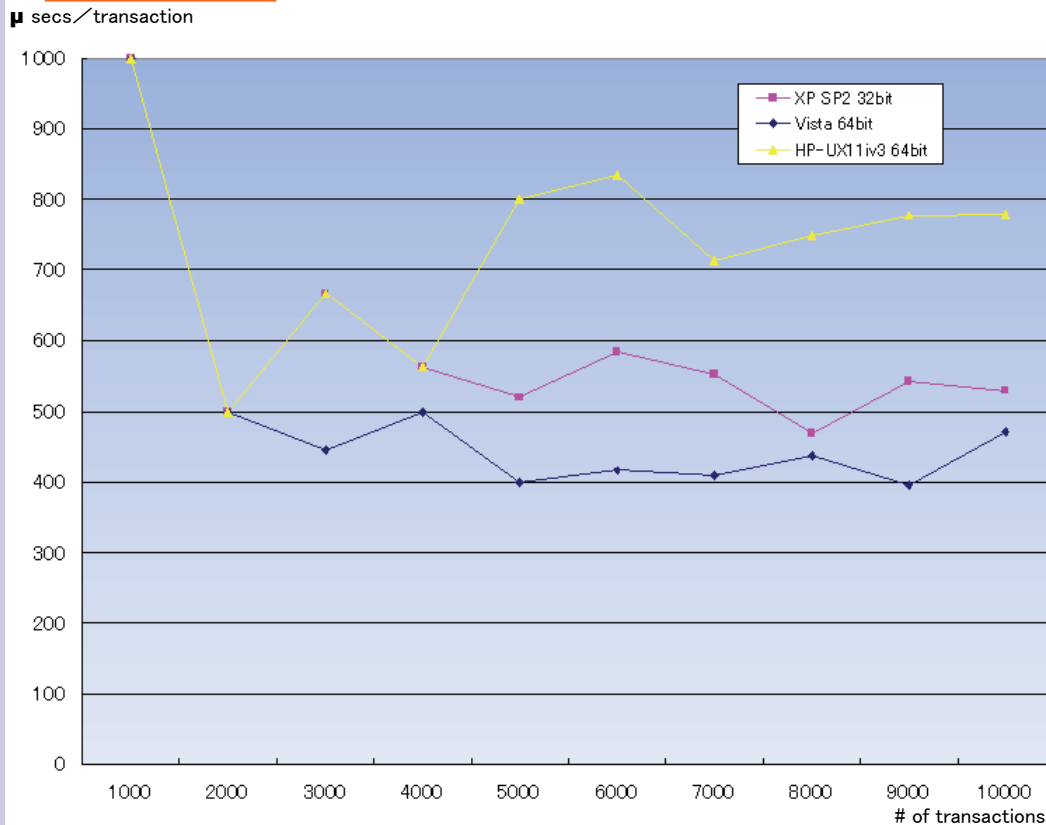


Note: Both Windows platforms, XP and Vista have 8 CPUs (4 core x 2 cpu) as opposed to 2CPUs (1 core x 2 cpu) on the HP-UX platform. Therefore, please treat the HP-UX benchmark result as a just reference.



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### Nextra Benchmark



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### Observation

#### Unix vs. Windows

The result on HP-UX11iv3 did not look too bad against the one on Windows platforms which have 8 CPUs comparing to 2 CPUs on HP-UX11iv3.

#### x64 vs. x86

x64/64bit showed about 13% better in the performance when measured at 10,000 transactions comparing to x86/32bit counterpart.

### Conditions

#### OS parameter set-up

HP-UX:  
tcp\_time\_wait\_interval 6000

Windows:  
MaxUserPort 60000  
TcpTimedWaitDelay 30

#### Network

In order to have the same condition for the network on all the target platforms, we ran the both client and server programs on the same machine.



Nextra Official URL  
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