



Agenda

- Benchmark Overview
- Benchmark Demonstration
- How did I do it? - Andrew Ford
- How did everyone else do?
Comparison of results
 - ONCONFIG Files
 - Database Changes

Fastest Informix DBA Contest

- At the 2012 IIUG Informix Conference, April 22-25, 2012 in San Diego
- 1,000 OLTP users benchmark run on an Apple Mac Mini Server
- Using the Open Source BenchmarkSQL Java program to generate transactions.

Can you take an Informix server running 1,000 OLTP users and optimize it in less than one hour?

Advanced DataTools

Apple Mac Mini Server Configuration

- Mac OS X 10.7.31 Server
- Intel Core i7 2 GHz with 4 cores
- 8 GB Memory
- 2 Disk Drives



- The BenchmarkSQL transaction manager and OS need about 2.5-3 GB of Memory to run!

Advanced DataTools

Contest Tasks

The challenge was to complete the following tasks in under 40 minutes:

- Tune and optimize the Onconfig file
- Tune and optimize the database
- Run the BenchmarkSQL for 10 minutes

Andrew Ford

Grand Prize Winner



Advanced DataTools

Jeff Filippi

Fastest DBA - Consultant



Advanced DataTools

Hugo Tellez

Fastest DBA - Domestic



Advanced DataTools

Neil Truby

Fastest DBA - International



Advanced DataTools

Goran Carlsson

Fastest DBA – Middle Aged



Advanced DataTools

John Fahey

Fastest DBA - Senior



© Lester Knutsen 2012

Advanced DataTools

Fastest Informix DBA Contest



Advanced DataTools

Benchmark Demo

Advanced DataTools

Andrew Ford

Grand Prize Winner

- Winner of the new Apple iPad and the Fastest Informix DBA
- Andrew's results were almost three times faster
- Andrew generated over 57,000 transactions per minute

Andrew is here today to talk about how he did it!



Advanced DataTools

Comparisons of ONCONFIG

Fastest Informix DBA Contest ONCONFIG Compare							
	Baseline	Ford	Filippi	Tellez	Truby	Carlsson	Fahey
AUTO_AIOVPS	1	1	1	1	0	1	1
AUTO_CKPTS	1	0	1	1	1	1	1
AUTO_LRU_TUNING	1	1	1	1	1	1	1
AUTO_READAHEAD	1	1,16	1	1	1	1	1
AUTO_REPREPARE	1	1	1	1	1	1	1
AUTO_STAT_MODE	1	0	1	1	1	1	1
BATCHEDREAD_INDEX	1	0	1	1	1	1	1
BTSCANNER	num=1,threshold=5000,rangesize=-1,alice=6,compression=default	num=0,threshold=5000,rangesize=-1,alice=6,compression=default	num=1,threshold=5000,rangesize=-1,alice=6,compression=default	num=1,threshold=5000,rangesize=-1,alice=6,compression=default	num=1,threshold=5000,rangesize=-1,alice=6,compression=default	num=1,threshold=5000,rangesize=-1,alice=6,compression=default	num=1,threshold=5000,rangesize=-1,alice=6,compression=default
BUFFERPOOL	default, buffers=10000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.50	default, buffers=10000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.50	default, buffers=10000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.50	default, buffers=10000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.50	default, buffers=10000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.50	default, buffers=10000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.50	default, buffers=10000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.50
BUFFERPOOL	size=4K, buffers=50000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.00	size=4K, buffers=857504, lrus=23, lru_min_dirty=70.00, lru_max_dirty=80.00	size=4K, buffers=900000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.00	size=4K, buffers=2000000, lrus=128, lru_min_dirty=50.00, lru_max_dirty=60.00	size=4K, buffers=1250000, lrus=63, lru_min_dirty=30.00, lru_max_dirty=65.00	size=4K, buffers=1250000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.00	size=4K, buffers=400000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.00
BUFFERPOOL							size=8K, buffers=100000, lrus=8, lru_min_dirty=50.00, lru_max_dirty=60.50
CKPTINTVL	300	3600	300	300	300	300	300
CLEANERS	8	8	20	32	63	8	4
DBSPACETEMP			tmpdbs	tmpdbs	tmpdbs	tmpdbs	tmpdbs:tmpdbs2:tmpdbs3
DEF_TABLE_LOCKMODE	page	row	row	row	page	page	page
DIRECTIVES	1	1	1	1	1	1	1
DIRECT_IO	0	1	1	1	0	0	1
DS_HASHSIZE	31	31	31	31	31	31	131
DS_MAX_QUERIES		1048576	1048576	1048576	1048576	1048576	1048576
DS_MAX_SCANS	128	1024	250000	4096	128	128	96000
DS_NONPDO_QUERY_MEM	127	127	12	127	127	127	127
DS_POOLSIZE	8192	8192	1000000	2000000	10240	8192	400000
DS_TOTAL_MEMORY	20000	20000	200000	200000	200000	200000	60000
EXTSHMADD	64	256	64	64	64	64	8192
LOGFILES	6	42	154	43	43	43	43
MULTIPROCESSOR	0	1	1	1	2	1	1
NETTYPE	ipcshm,1,50,CPU	ipcshm,1,50,CPU	ipcshm,1,50,CPU	ipcshm,10,50,CPU	ipcshm,4,350,CPU	ipcshm,1,50,CPU	ipcshm,2,500,CPU
NETTYPE	2	socketcp,4,250,NET	socketcp,5,250,NET	2	socketcp,3,200,NET	2	socketcp,2,500,NET
OPTCOMPIND	1	0	0	2	2	2	2
OPT_GOAL	128	1024	128	128	128	128	8192
PHYSBUFF	0	0	0	0	0	0	29371
RAS_PLOG_SPEED	0	2	1	1	1	1	1
RESIDENT	8192	8192	250000	32656	102400	8192	400000
SHMADD	0	0	0	0	0	0	600000
SHMTOTAL	32656	812000	1000000	1024000	1024000	32656	600000
SHMVIRTSIZE	1	0	1	1	1	1	0
SP_AUTOEXPAND	96	96	96	96	96	96	256
STMT_CACHE	0	0	2	0	2	2	2
STMT_CACHE_HITS	0	0	10	0	0	0	0
STMT_CACHE_NUMPOOL	1	1	1	1	10	10	64
STMT_CACHE_SIZE	512	512	1000000	512	2048	10240	16384
TBLSPACE_STATS	1	0	1	1	1	0	0
TEMPTAB_NOLOG	0	0	0	0	0	0	0
USELASTCOMMITTED	NONE	ALL	COMMITTED	NONE	NONE	NONE	NONE
VPCLASS	cpu,num=1,noage	cpu,num=5,noage	cpu,num=4,noage	cpu,num=10,noage	cpu,num=7,noage	cpu,num=3,noage	cpu,num=8,noage
VPCLASS							msc,num=8,noage
VPCLASS							net,num=8,noage
VP_MEMORY_CACHE_KB	0	8192	20000	4096	10240	0	0

Comparisons of Database Changes

- Alter tables to Row Level locking from Page Level locking
- Environment Setting
 - LIGHTSCANS=FORCE
 - LIGHT_SCANS=FORCE
 - OPTOFC=1
- Created 3 Large Logical Log Files
- Update Statistics High

Questions



Host – Lester Knutsen

Advanced DataTools

Provides:

- Informix Training
- Informix Upgrades
- Informix Performance Tuning
- Informix Development
- Informix Data Warehouse



Advanced DataTools

Advanced Informix Performance Tuning Course

June 25-28, 2012

December 3-6 2012

- Attend online or in person
- 4 days of benchmarking on our servers
- Course is for database administrators and application developers who will be responsible for managing, optimizing, and tuning an IDS database server.
- We provide a toolkit of scripts and utilities to start monitoring and optimizing your IDS database server.
- **More info online at www.advancedatatools.com**

Advanced DataTools



Thank You

Lester Knutsen
Advanced DataTools
Corporation

lester@advanceddatatools.com

For more information:

<http://www.advanceddatatools.com>

Advanced DataTools