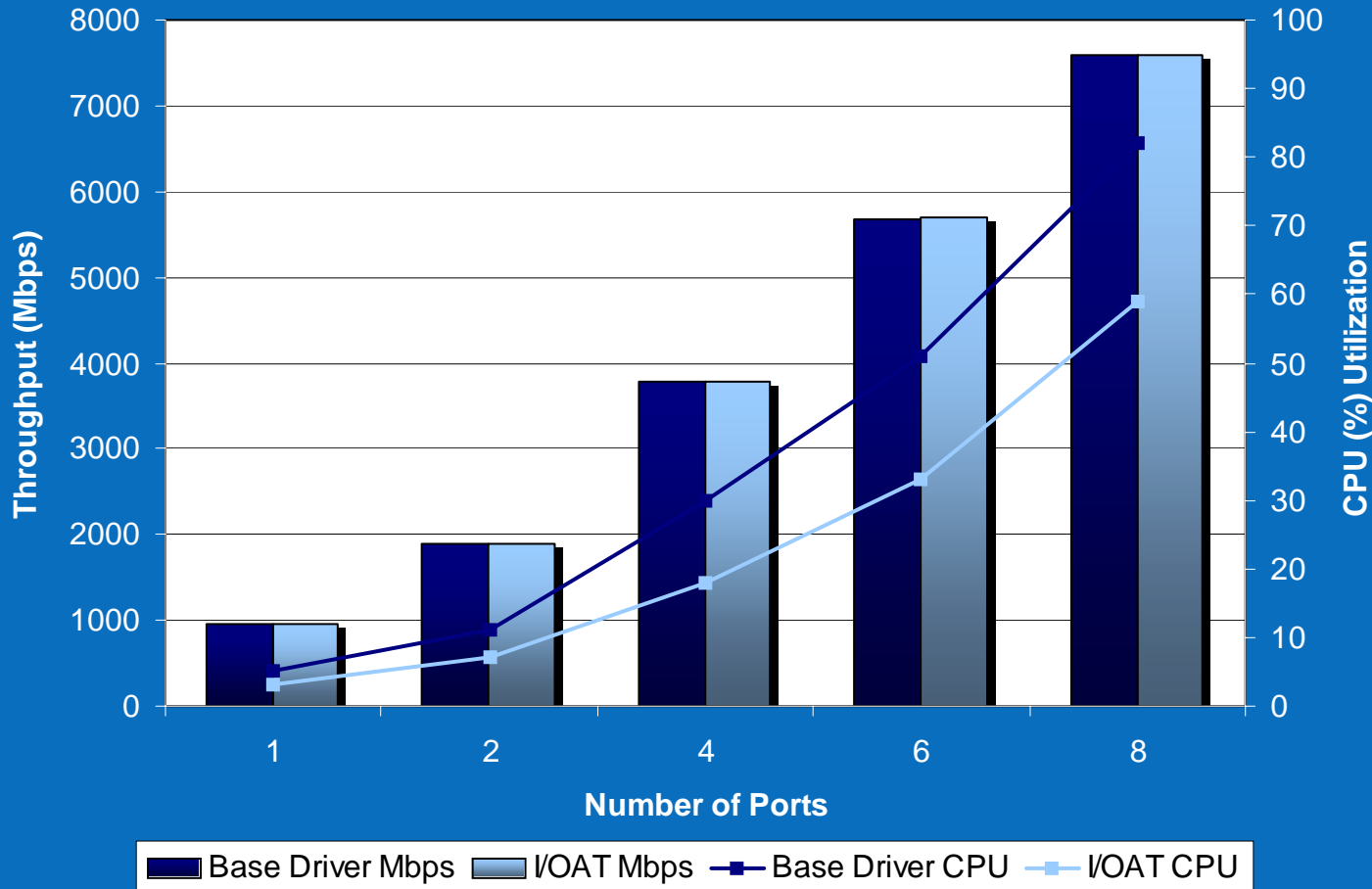


Linux Receive Port Scaling with Intel® I/OAT

Bensley Linux Kernel 2.6.16.1 Std. GbE vs. Intel® I/OAT
64KB Buffer Size Receive (Rx) Port Scaling Performance Test



Test

Ixia IxChariot* 6.2
6 Clients Per Port Under Test
High Perf. Throughput script
File Size = 1000000 Bytes
Buffer Sizes = 64 to 64K Bytes
Data Type – Zeros
Data Verification Disabled

Bensley Server

Intel® Bridgeport CRB 55
2x 3.2GHz Dual Core Xeon®
8GB RAM
Linux Kernel 2.6.16.1 patched
with Intel® I/OAT DMA v1.5
Base Driver 7.0.38

Clients

Dell PowerEdge 750
3.4Ghz Pentium® 4 processor
Windows XP Professional SP1
Network Configuration
Cisco 6509
Clients connected @ 1000 Mbs

Source: Intel Labs April 2006

Legal Disclaimer:

Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing. For more information on performance tests and on the performance of Intel products, visit (<http://www.intel.com/performance/resources/limits.htm>).



Linux Receive Port Scaling with Intel® I/OAT

Linux Kernel 2.6.16.1 with 7.0.38 Base Driver			Linux Kernel 2.6.16.1 with I/OAT v1.5		
Num Ports	Base Driver Mbps	Base Driver CPU	Num Ports	I/OAT Mbps	I/OAT CPU
1	948	5	1	948	3
	947	5		948	3
	948	5		948	3
2	1896	11	2	1894	7
	1895	11		1895	7
	1896	11		1897	7
4	3792	30	4	3790	18
	3790	30		3791	18
	3789	30		3790	18
6	5686	51	6	5687	33
	5684	51		5686	33
	5688	51		5687	33
8	7580	83	8	7580	59
	7582	82		7580	59
	7577	81		7582	59
Num Ports	Base Driver Mbps	Base Driver CPU	Num Ports	I/OAT Mbps	I/OAT CPU
1	948	5	1	948	3
2	1895	11	2	1895	7
4	3790	30	4	3791	18
6	5686	51	6	5687	33
8	7580	82	8	7581	59

Test

Ixia IxChariot* 6.2
 6 Clients Per Port Under Test
 High Perf. Throughput script
 File Size = 1000000 Bytes
 Buffer Sizes = 64 to 64K Bytes
 Data Type – Zeros
 Data Verification Disabled

Bensley Server

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Network Configuration

Cisco 6509
 Clients connected @ 1000 Mbs

Source: Intel Labs April 2006

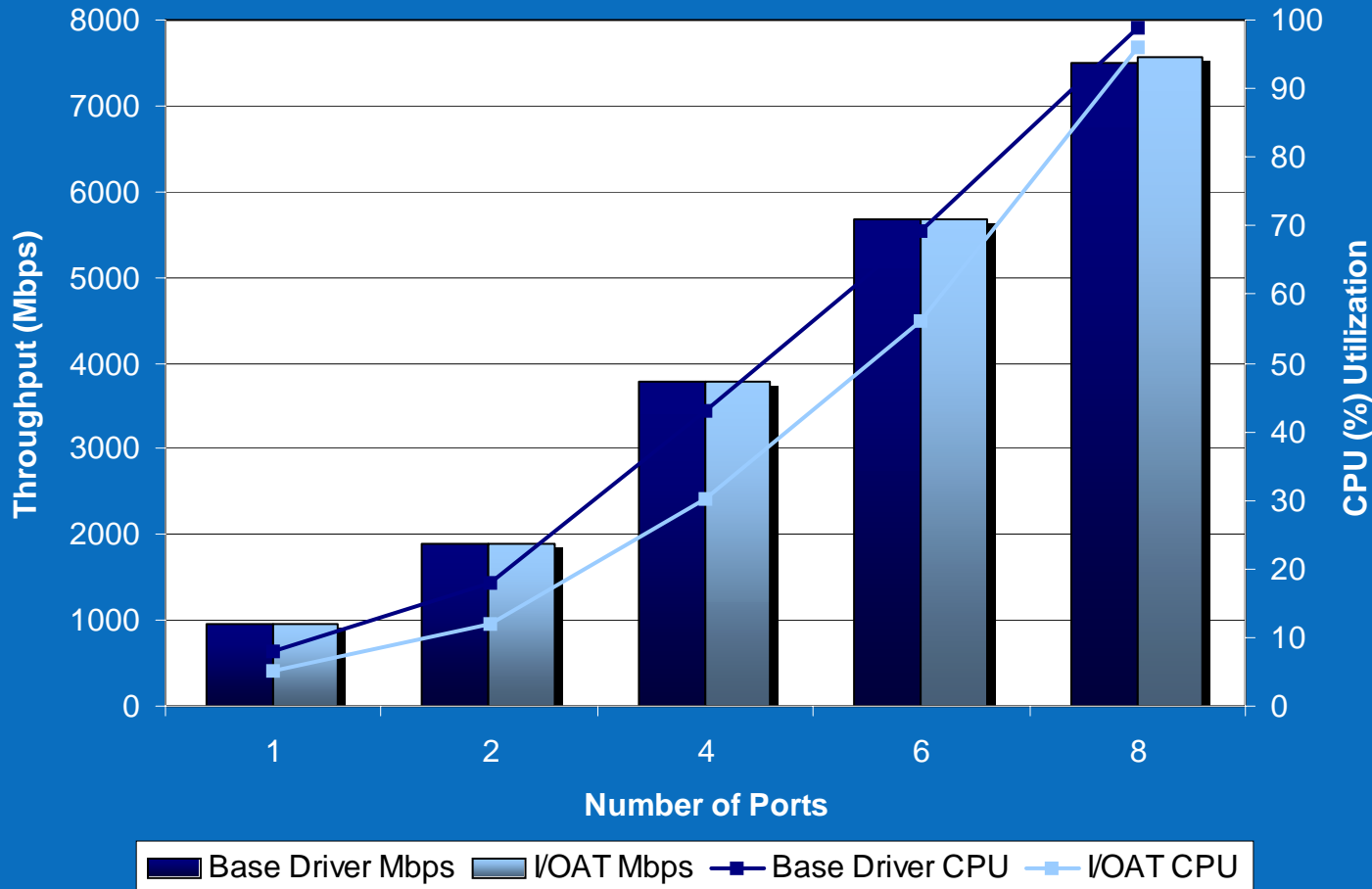


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Linux Receive Port Scaling with Intel® I/OAT Chariot Data Verification Enabled*

Bensley Linux Kernel 2.6.16.1 Std. GbE vs. Intel® I/OAT
64KB Buffer Size Receive (Rx) Port Scaling Performance Test



Test

Ixia IxChariot* 6.2
6 Clients Per Port Under Test
High Perf. Throughput script
File Size = 1000000 Bytes
Buffer Sizes = 64 to 64K Bytes
Data Type – Zeros
Data Verification Enabled
*(Touched Data)

Bensley Server

Intel® Bridgeport CRB 55
2x 3.2GHz Dual Core Xeon®
8GB RAM
Linux Kernel 2.6.16.1 patched
with Intel® I/OAT DMA v1.5
Base Driver 7.0.38

Clients

Dell PowerEdge 750
3.4GHz Pentium® 4 processor
Windows XP Professional SP1

Network Configuration

Cisco 6509
Clients connected @ 1000 Mbs

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Linux Receive Port Scaling with Intel® I/OAT Chariot Data Verification Enabled*

Linux Kernel 2.6.16.1 with 7.0.38 Base Driver				Linux Kernel 2.6.16.1 with I/OAT v1.5			
Num Ports	Base Driver Mbps	Base Driver CPU		Num Ports	I/OAT Mbps	I/OAT CPU	
1	947	8		1	948	5	
	948	8			948	5	
	948	8			948	5	
2	1896	18		2	1896	12	
	1894	18			1895	12	
	1895	18			1897	12	
4	3791	43		4	3790	31	
	3790	43			3790	30	
	3790	43			3792	30	
6	5686	69		6	5686	58	
	5686	69			5684	56	
	5686	70			5685	56	
8	7509	99		8	7572	96	
	7507	99			7573	96	
	7501	99			7576	96	
Num Ports	Base Driver Mbps	Base Driver CPU		Num Ports	I/OAT Mbps	I/OAT CPU	
1	948	8		1	948	5	
2	1895	18		2	1896	12	
4	3790	43		4	3791	30	
6	5686	69		6	5685	56	
8	7506	99		8	7574	96	

Test

Ixia IxChariot* 6.2
6 Clients Per Port Under Test
High Perf. Throughput script
File Size = 1000000 Bytes
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