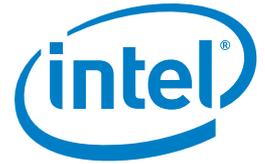


## CASE STUDY

### Intel® Cache Acceleration Software

Performance: Data-Intensive Computing

Non-Volatile Memory Solutions Group



# Do More with Less:

## IndustryBuilt\* Solution with Intel® Cache Acceleration Software and Intel® Solid-State Drives

### Background

IndustryBuilt\*, one of the largest Microsoft\* Dynamics NAV partners in North America, provides industry-focused software and services primarily to mid-sized businesses. Its customers often have the same challenges as larger organizations without the same resources, with employees often performing multiple duties.

The company is comprised of two business groups that each focus on matching the best software technology with the appropriate business processes for each industry. JustFoodERP\* helps food companies lower costs, improve food safety and manage customer compliance. Equip-Soft\* helps equipment distributors manage growth and improve efficiencies through its rentals, service, sales, parts, and fleet management software.



"For a limited cost and minimal change to their infrastructure, Intel® CAS provides the enhancements that our customers are looking for. Anybody who has limited resources and an infrastructure that can't be greatly expanded can benefit from what Intel has done. Intel® CAS provides an immediate return on investment while providing a significant increase on system performance."

*- Dan Oughton  
CTO, IndustryBuilt*

### CHALLENGE

- **Limited hardware and management resources.** Customers rely heavily on storage- and resource-intensive transactional databases.

### SOLUTION

- **Intel® Cache Acceleration Software with the Intel® Solid-State Drive DC S3700 Series.** IndustryBuilt performed simulation testing of 30 different real-world scenarios before deploying to its customers.

### IMPACT

- **Increased performance, reduced latency.** Read speeds increased between 11 to 18 times for both IOPS (IO/sec) and throughput (MB/sec), while latency (ms) was reduced by 96 percent.
- **Industry-unique control.** The multi-level caching solution allows applications to exceed the excellent performance achieved when running fully on SSDs.

### RIGOROUS CUSTOMER DEMANDS

Many of IndustryBuilt's customers rely heavily on storage- and resource-intensive transactional databases, so they needed to find a solution to add to its product portfolio that could solve performance and latency issues while making the most out of limited hardware and management resources. After serving as a test bed for Intel® Cache Acceleration Software's new and innovative caching solution and running it through simulation testing of 30 different real-world scenarios, IndustryBuilt began offering it to customers as a powerful and cost-effective way to overcome the limitations of their current network infrastructure.

### INCREASED READ SPEEDS WITH REDUCED LATENCY

The combined solution of Intel® Cache Acceleration Software with the Intel® Solid-State Drive DC S3700 Series resulted in increased read performance and reduced latency times when compared with the previous RAID 10 configuration of 15K SAS hard drives. Read speeds increased between 11 to 18 times for both IOPS (IO/sec) and throughput (MB/sec), while latency (ms) was reduced by 96 percent.

"With Intel CAS, we are able to configure our customer's solution with less HDDs and deliver higher performance without adding additional servers or CPUs," said Dan Oughton, CTO of IndustryBuilt. "This translates to less power and space consumption and increased performance at a lower cost per IOP, thus improving overall TCO for our customers."

Oughton said that IndustryBuilt customers with resource-hungry SQL servers can benefit from Intel's ability to read-cache instead of installing additional hardware servers that introduce latency. With a 90 percent reduction in latency in IndustryBuilt's testing of Intel® CAS, performance issues in transactional database applications were greatly alleviated, even in all solid-state environments where faster speeds were still achieved.

#### INTEL® CAS DELIVERS CONTROL AND PERFORMANCE

Intel® Cache Acceleration Software is a policy-based caching software that enables administrators to target higher performance for specific applications and to do so inexpensively. Its innovative approach to SSD/Flash caching solves the storage I/O bottleneck while enabling better utilization of existing storage infrastructures. Whether the applications are running on VMware\*, Microsoft Hyper-V\* virtual machines or physical servers, Intel® CAS provides industry-unique control over the Windows\* memory cache or Linux\* operating systems to create a multi-level caching solution that allows applications to exceed the excellent performance achieved when running fully on SSDs.

"When evaluating business software, customers realize that industry fit, implementation expertise, product longevity, and product familiarity are equally as important criteria as are software functionality and software cost," said Oughton. "Intel® CAS certainly is promising, especially for those who have limited resources and an infrastructure that can't greatly expand. We now package it with our software so that our customers buy it as part of our complete software and services package."

#### CHANNEL PLAY

As a company dedicated to matching up the best technology with the best business processes and one that understands the unique needs of ISVs and VARs, IndustryBuilt is appreciative of Intel's commitment to its ecosystem partners. By providing the tools to create immediate value-add for its clients and help ecosystem partners grow their business, Intel's ready access to technical product and sales support enables those in the channel to resell Intel® Cache Acceleration Software with confidence.

"Having had more than 12 years of success with the largest provider of business software in the world with Microsoft\* Dynamics, we have high expectations from partners regarding the level of sales and technical support we receive from them," said Oughton. "Intel has been very easy to work with, providing speedy turnaround on sales issues. Because of our ability to leverage Intel® CAS as part of a total solution package for our customers and the good margins we receive from sales of the product, we are pleased with our association with Intel and their ability to deliver performance-boosting solutions to our customers."

## SPOTLIGHT ON INDUSTRYBUILT

IndustryBuilt Software delivers software and services to vertical industries to help companies lower costs, improve efficiencies, and manage compliance, by matching up the best business software technology with the best business processes. The products of IndustryBuilt Software -JustFoodERP for food companies, and Equip-Soft for equipment distributors - are built with industry-specific functionality on top of the powerful Microsoft Dynamics platform, the world's fastest growing ERP. IndustryBuilt has offices in Allentown, PA and Toronto, ON. For more information, visit [industrybuilt.com](http://industrybuilt.com).

#### Configuration

##### Dell PowerEdge\* 710 DP Server (2 Socket)

- Intel® Xeon® Processor X5670 (12M Cache, 2.93 GHz, 6 Cores Per Socket)
- Dell PowerEdge RAID Controller (PERC) 710
- 96GB DRAM

##### Seagate\* SAS 15K HDDs

- 2x600 GB RAID 1 for OS
- 2x600 GB RAID 1 for Logs
- 4x600 GB RAID 10 for data

##### Software Stack

- Microsoft\* Windows Server\* 2008 R2
- Microsoft\* SQL Server
- Microsoft\* Dynamics NAV
- Customer Application

##### Caching Layer

- Intel® CAS for Windows version 2.0
- Intel® SSD DC S3700 - 400GB



Find the Intel® Solid-State Drive that's right for you. Visit [intel.com/go/ssd](http://intel.com/go/ssd) for product information.

To learn more about other Intel business solutions, please visit the Reference Room at [intel.com/references](http://intel.com/references).

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