

# Intel® Cache Acceleration Software (Intel® CAS) for Windows\*

## Quick Start Guide

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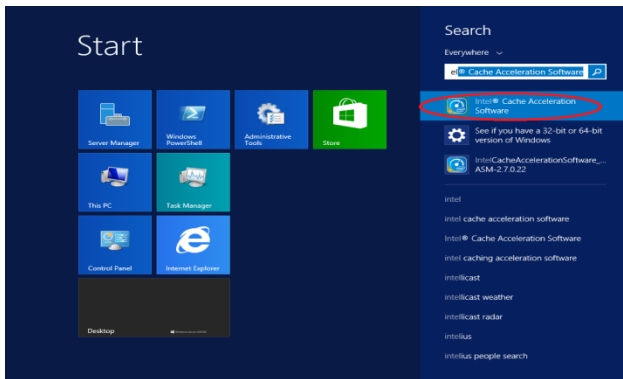


# 1 Setting up Intel® CAS

**NOTE: Back up all data before beginning Intel® Cache Acceleration Software setup!**

Set up Intel® Cache Acceleration Software (Intel® CAS) for Windows\* as follows:

1. Open the user interface (UI)
  - a. Click **Start**.
  - b. In the Search box, type *Intel Cache Acceleration Software*.



**NOTE:** For faster start next time, right click on **Intel® Cache Acceleration Software** and choose **pin to start**. Intel® CAS will show up on your start menu.

2. Log in using your administrator account

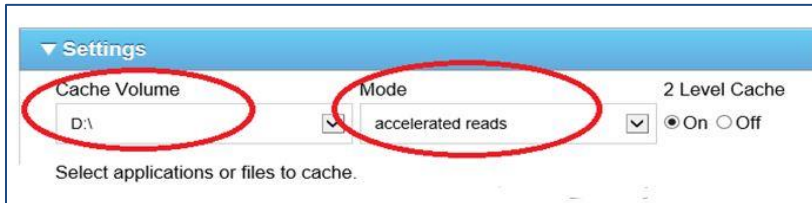


3. Click the **Start** button to access the Intel® CAS configuration options



4. Choose a Caching SSD and Caching Mode

Choose an empty SSD with NTFS file system or a partition on the SSD with NTFS file system. Intel® CAS for Windows 2.7 supports only read acceleration. (Release 3.0 will support both read and write acceleration.)



When **2 Level Cache** is On, Intel® CAS is able to use System Memory (DRAM) resources in addition to the Caching SSD storage media.



The following are guidelines with regard to the **2 Level Cache** option:

- If you have zero-tolerance for data loss due to unexpected power event (restart, shutdown), **2 Level Cache** should be set to Off. 2 Level Caching utilizes System Memory (DRAM), for caching of data. System Memory is volatile memory (by contrast SSD contains non-volatile memory) and in the event of an unexpected power failure, all data in system memory will be lost.
- If your system memory is already nearing capacity, keep this option off as it uses a significant amount of memory.
- If you use Intel PCIe\* NVMe\* SSD as a caching SSD, you can toggle this on and off to compare the performance. In certain situations, keeping this option turned off will result in better performance.
- If your SATA SSD is strictly a caching SSD, better performance can generally be achieved by keeping the **2 Level Caching** option on.
- You may want to consider adding more memory if you are using SQL Server or Exchange, as those applications also require extra memory.

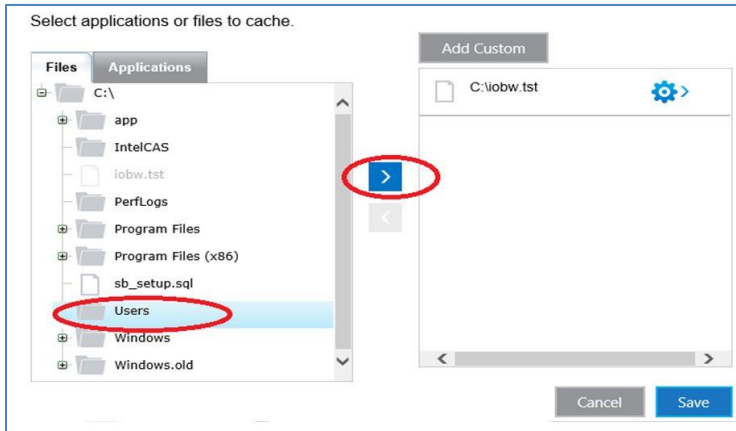
5. Include or Pin Files/Folders.

When setting up Intel® CAS you can customize, based on your specific needs, which files/folders will be kept in cache using the "Include" or "Pin" feature. The differences in the "Include" and "Pin" options are defined in the following table:

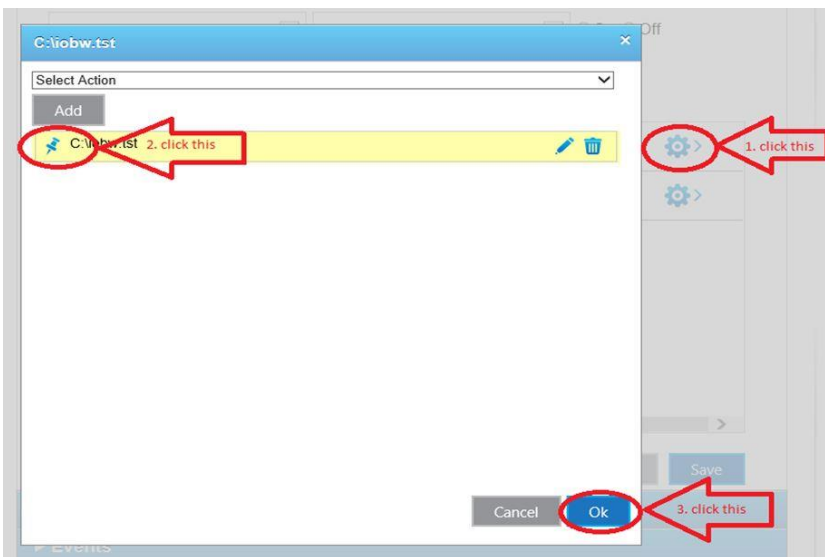
	Include	Pin
Guaranteed?	Best Effort i.e. "please try your best to put this file into cache"	Guaranteed i.e. "please guarantee this file into cache"
When?	First access of the file	Immediately
What?	Files and folders	Files only



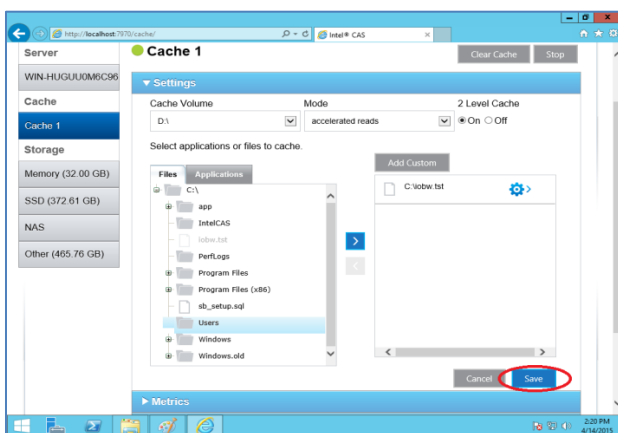
In the example below, “c:\jobw.tst” is “Included”.



Do the following if you prefer to choose “Pin” instead of “Include”:



6. Save your setup to make it activate your changes.

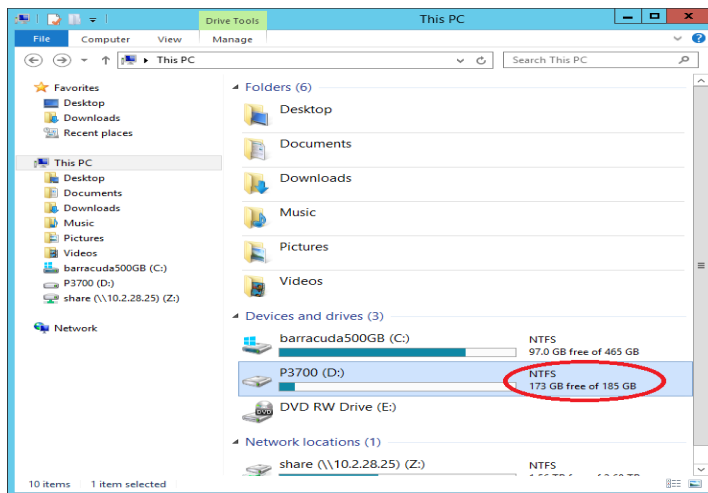


*Setup is now complete!*

## 2 Troubleshooting Intel® CAS

### 2.1 Is My Caching Warming up?

To determine how much data has been warmed up (prepared to support caching) look at how much of the caching SSD capacity has been used. In the example below, there are 12 GB of data on the SSD, this means that the 12 GB file that was already “pinned” to the SSD for caching has been completely warmed up.



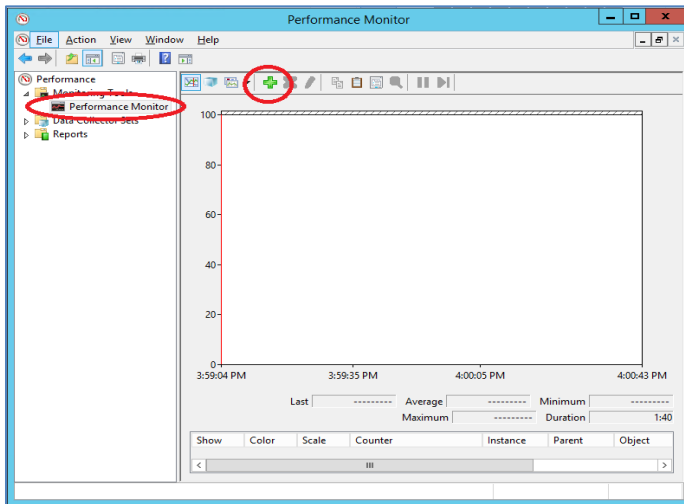
If your data does not warm up, perform the following steps:

1. Use “Pin” instead of “Include”
2. Wait a minute to see if data starts to warm up.
3. Hit F5 to refresh the SSD quota.
4. Toggling the “start”, “stop” and “clear” buttons in the Intel® CAS UI may help.

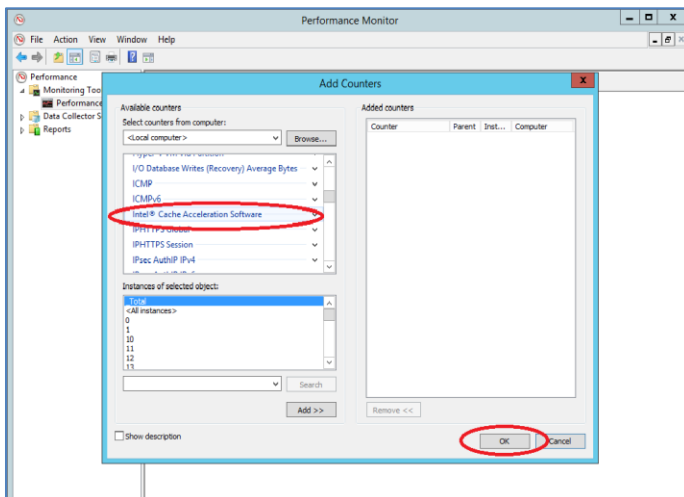
## 2.2 How Effective Is My Caching?

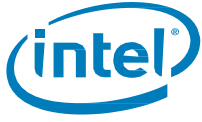
To determine how effective the caching is, check the cache hit rate by performing the following steps.

1. Open the Windows\* **Performance Monitor** utility by typing “Performance Monitor” in the search field.
2. Click the green plus (+) button to add performance counters.

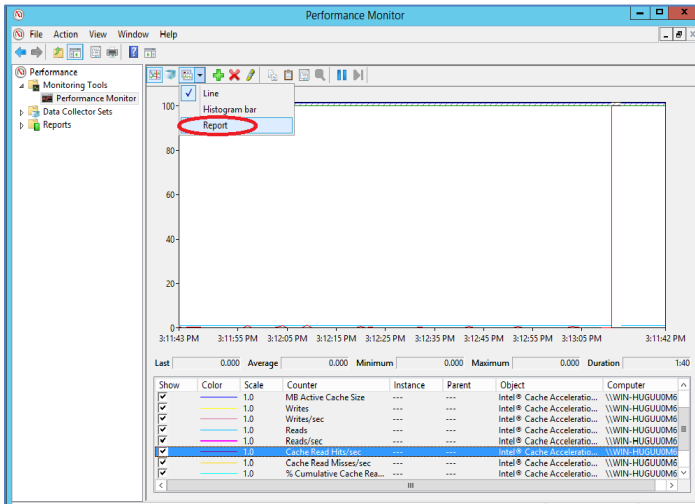


3. Scroll down, select **Intel Cache Acceleration Software** and click OK.





4. Change the view from the default **Line** to **Report**.



5. View the cache hit rates.

