

**REPORT:** Performance defects

**AUTHOR:** Wiktoria Sapota

**APPLICATION:** iMazing

### Symptoms of potential performance problems

Problems with performance will concern two areas. The software has a wide range of features that show data for a specific category. At performance tests first fault was found during the displayed data at the current time.



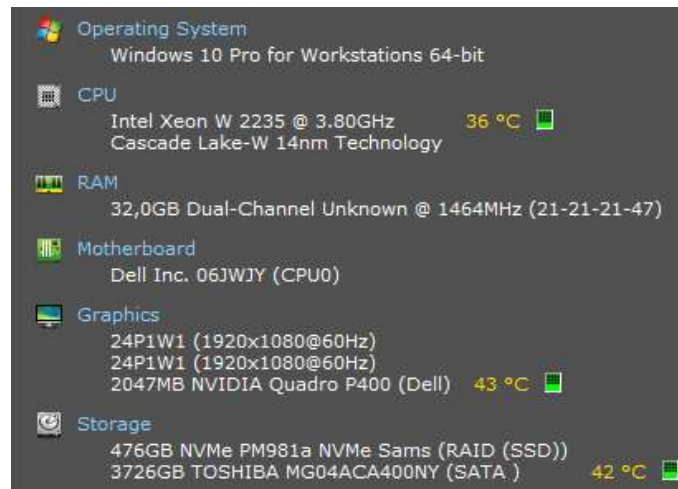
Time to display the contents of directories is very different:

Category	Waiting time
Files, Apps, Profiles, File System Music, TV, Ringtones, Books	immediately
Photos	a few seconds
Messages, WhatsApp, Phone, Safari, Calendar, Contacts	for tens of seconds to tens of minutes

The last category requires has the backup of this type of data or all system backup. If the user hasn't backup,iMazing create it immediately and extract data that a user can see. This significantly lengthens the data review process and is largely dependent on the amount of data within the category. A safe solution is to regularly backup the content of the entire phone. Still, it is associated with the need to store a very large amount (often duplicated data) outside the mobile device.

### Performance test

Hardware specifications and running results for 8 applications



CPU

Intel Xeon W 2235

Cores 6  
Threads 12  
Name Intel Xeon W 2235  
Code Name Cascade Lake-W  
Package Socket 2066 LGA  
Technology 14nm  
Specification Intel Xeon W-2235 CPU @ 3.80GHz  
Family 6  
Extended Family 6  
Model 5  
Extended Model 55  
Stepping 7  
Revision B1/L1  
Instructions MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, Intel 64, NX, VMX, AES, AVX, AVX2, FMA3  
Virtualization Supported, Enabled  
Hyperthreading Supported, Enabled  
Bus Speed 99.8 MHz  
Stock Core Speed 3800 MHz  
Stock Bus Speed 100 MHz  
Average Temperature 36 °C

Caches

L1 Data Cache Size 6 x 32 KBytes  
L1 Instructions Cache Size 6 x 32 KBytes  
L2 Unified Cache Size 6 x 1024 KBytes  
L3 Unified Cache Size 8448 KBytes

Cores

	Core Speed	Multiplier	Bus Speed	Temperature	Threads
Core 0	1197.5 MHz	x 12.0	99.8 MHz	36 °C	APIC ID: 0, 1
Core 1	1197.5 MHz	x 12.0	99.8 MHz	35 °C	APIC ID: 2, 3
Core 2	1197.5 MHz	x 12.0	99.8 MHz	36 °C	APIC ID: 4, 5
Core 3	1197.5 MHz	x 12.0	99.8 MHz	35 °C	APIC ID: 6, 7
Core 4	1197.5 MHz	x 12.0	99.8 MHz	36 °C	APIC ID: 8, 9
Core 5	1197.5 MHz	x 12.0	99.8 MHz	35 °C	APIC ID: 10, 11

## Aplikacje (8)

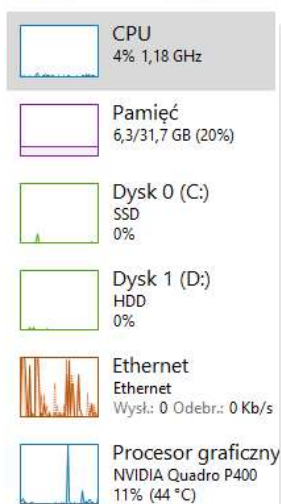
- > Eksplorator Windows (3)
- > Google Chrome (49)
- > iMazing (3)
- > Menedżer zadań
- > Microsoft Word (2)
- > Narzędzie Wycinanie
- > Speccy
- > Ustawienia

0,4%	56,9 MB	0,1 MB/s	0 Mb/s
0,1%	1 306,7 MB	0 MB/s	0,1 Mb/s
0,1%	411,1 MB	0 MB/s	0 Mb/s
0,2%	39,2 MB	0 MB/s	0 Mb/s
0,2%	116,1 MB	0,1 MB/s	0 Mb/s
0,2%	3,0 MB	0 MB/s	0 Mb/s
0,1%	12,8 MB	0 MB/s	0 Mb/s
0,1%	25,0 MB	0 MB/s	0 Mb/s

## Menedżer zadań

Plik Opcje Widok

Procesy Wydajność Historia aplikacji Uruchamianie Użytkownicy Szczegóły Usługi

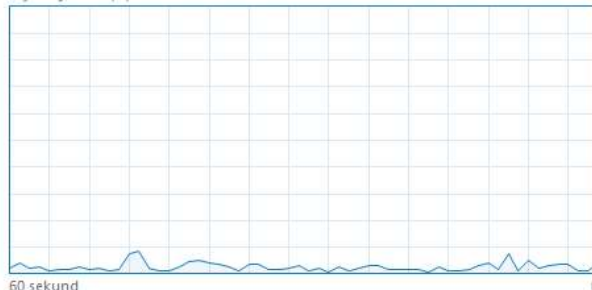


## Procesor CPU

Intel(R) Xeon(R) W-2235 CPU @ 3.80...

Wykorzystanie (%)

100%



Wykorzystanie	Szybkość	Szybkość podstawowa:	3,79 GHz
4%	1,18 GHz	Gniazda:	1
		Rdzenie:	6
Procesy	Wątki	Dojścia	Procesory logiczne:
264	3056	107125	Wirtualizacja:
			Pamięć podręczna poziomu 1:
			384 KB
			Pamięć podręczna poziomu 2:
			6,0 MB
			Pamięć podręczna poziomu 3:
			8,2 MB

Czas pracy

0:01:25:31

The results obtained when performing a backup of the entire iPhone 12 Mini device were maintained as shown below

Intel Xeon W-2235

Cores 6  
Threads 12  
Name Intel Xeon W 2235  
Code Name Cascade Lake-W  
Package Socket 2066 LGA  
Technology 14nm  
Specification Intel Xeon W-2235 CPU @ 3.80GHz  
Family 6  
Extended Family 6  
Model 5  
Extended Model 55  
Stepping 7  
Revision B1/L1  
Instructions MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, Intel 64, NX, VMX, AES, AVX, AVX2, FMA3  
Virtualization Supported, Enabled  
Hyperthreading Supported, Enabled  
Bus Speed 99.9 MHz  
Stock Core Speed 3800 MHz  
Stock Bus Speed 100 MHz  
Average Temperature 38 °C

▼ Caches

L1 Data Cache Size 6 x 32 KBytes  
L1 Instructions Cache Size 6 x 32 KBytes  
L2 Unified Cache Size 6 x 1024 KBytes  
L3 Unified Cache Size 8448 KBytes

▼ Cores

	Core Speed	Multiplier	Bus Speed	Temperature	Threads
Core 0	1199.3 MHz	x 12.0	99.9 MHz	37 °C	APIC ID: 0, 1
Core 1	1199.3 MHz	x 12.0	99.9 MHz	37 °C	APIC ID: 2, 3
Core 2	1998.9 MHz	x 20.0	99.9 MHz	40 °C	APIC ID: 4, 5
Core 3	1499.2 MHz	x 15.0	99.9 MHz	38 °C	APIC ID: 6, 7
Core 4	1199.3 MHz	x 12.0	99.9 MHz	37 °C	APIC ID: 8, 9
Core 5	2298.8 MHz	x 23.0	99.9 MHz	40 °C	APIC ID: 10, 11

Menedżer zadań

Plik Opcje Widok

Procesy Wydajność Historia aplikacji Uruchamianie Użytkownicy Szczegóły Usługi

CPU 12% 1,28 GHz

Pamięć 6,5/31,7 GB (21%)

Dysk 0 (C:) SSD 1%

Dysk 1 (D:) HDD 0%

Ethernet Ethernet Wysł.: 0 Odebr.: 0 Kb/s

Procesor graficzny NVIDIA Quadro P400 1% (40 °C)

## Procesor CPU Intel(R) Xeon(R) W-2235 CPU @ 3.80...

Wykorzystanie (%) 100%

60 sekund 0

Wykorzystanie 12% Szybkość 1,28 GHz

Szybkość podstawowa: 3,79 GHz  
Gniazda: 1  
Rdzenie: 6  
Procesory logiczne: 12  
Wirtualizacja: Włączone  
Pamięć podręczna poziomu 1: 384 KB  
Pamięć podręczna poziomu 2: 6,0 MB  
Pamięć podręczna poziomu 3: 8,2 MB

Procesy 272 Wątki 3304 Dojścia 111228

Czas pracy 0:01:39:36

Mniej szczegółów Otwórz monitor zasobów

Creating a backup resulted in a processor load of several percent and an increase in its temperature.

Important information. The first backup was done correctly. The process took about 55 minutes. Then (for testing purposes), the created backup was deleted, and a new one was attempted. This displayed an error and prevented the complete backup from being performed. The fault was committed and described in Exercise 10.

The second performance-prone situation involves importing/exporting data such as music, photos, files by a backup. Due to the amount of collected data of this type - their total size on external devices is very large (calculated in GB). In order to import or export, it is necessary to have the appropriate cable connecting the device with the computer. The efficiency of data transfer operations is influenced by many factors, including:

- amount of data transferred,
- quality of the cable connecting the device with the computer/ internet connection quality (without a cable connection, only Wi-Fi)
- running additional applications in the background,
- CPU workload.

Each of the factors can extend the duration of the transfer. Parallel operation of other software may pause or interrupt the import process.

\* It's impossible to execute the performance test of this task because an option *Export All Data* is unavailable on the iMazing trial version.

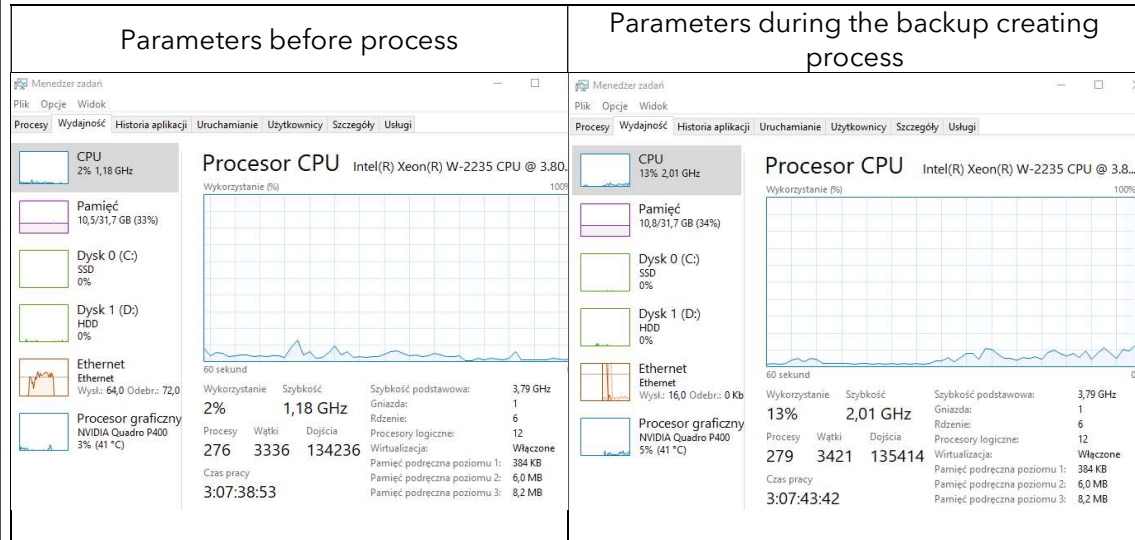
## Performance test at backup creating

Devices: PC computer, iPhone 12 mini

Connecting: Wi-Fi

Size of backup: 9GB

Time of creating backup: 7 minutes



The average load of the processor oscillated around 5-8%, with multiple jumps up to 15%. Time of creating backup (size: 9GB): 7 minutes.