Benchmarks

Benchmarks mit John the Ripper und Hashcat

Tom Gries

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John Benchmark - Yoga C940 (docker)

```
┌──(root㉿kali-docker)-[~]
└─# date
Fri Jan 13 00:02:13 UTC 2023

┌──(root㉿kali-docker)-[~]
└─# john --format=descrypt --test
Will run 8 OpenMP threads
Benchmarking: descrypt, traditional crypt(3) [DES 512/512 AVX512F]... (8xOMP) DONE
Many salts:     40798K c/s real, 5577K c/s virtual
Only one salt:  22370K c/s real, 3035K c/s virtual


┌──(root㉿kali-docker)-[~]
└─# john --format=LM --test
Will run 8 OpenMP threads
Benchmarking: LM [DES 512/512 AVX512F]... (8xOMP) DONE
Raw:    52490K c/s real, 6975K c/s virtual


┌──(root㉿kali-docker)-[~]
└─# john --format=NT --test
Benchmarking: NT [MD4 512/512 AVX512BW 16x3]... DONE
Raw:    58049K c/s real, 58341K c/s virtual
```

John Benchmark - Hetzner AX41 mit 12 Kernen (docker)

```
┌──(root㉿kali-docker)-[~]
└─# date
Fri Jan 13 00:18:59 UTC 2023

┌──(root㉿kali-docker)-[~]
└─# john --format=descrypt --test
Will run 12 OpenMP threads
Benchmarking: descrypt, traditional crypt(3) [DES 256/256 AVX2]... (12xOMP) DONE
Many salts:     102445K c/s real, 8537K c/s virtual
Only one salt:  47812K c/s real, 3991K c/s virtual


┌──(root㉿kali-docker)-[~]
└─# john --format=LM --test
Will run 12 OpenMP threads
Benchmarking: LM [DES 256/256 AVX2]... (12xOMP) DONE
Raw:    85979K c/s real, 7197K c/s virtual


┌──(root㉿kali-docker)-[~]
└─# john --format=NT --test
Benchmarking: NT [MD4 256/256 AVX2 8x3]... DONE
Raw:    73254K c/s real, 73254K c/s virtual
```

John Benchmark - Hetzner AX101 mit 16 Kernen (docker)

```
┌──(root㉿Password-Cracking)-[~]
└─# date
Sat Mar 11 16:47:54 UTC 2023

┌──(root㉿Password-Cracking)-[~]
└─# john --format=descrypt --test
Will run 32 OpenMP threads
Benchmarking: descrypt, traditional crypt(3) [DES 256/256 AVX2]... (32xOMP) DONE
Many salts:     253034K c/s real, 7909K c/s virtual
Only one salt:  61046K c/s real, 1908K c/s virtual


┌──(root㉿Password-Cracking)-[~]
└─# john --format=LM --test
Will run 32 OpenMP threads
Benchmarking: LM [DES 256/256 AVX2]... (32xOMP) DONE
Raw:    93880K c/s real, 2936K c/s virtual


┌──(root㉿Password-Cracking)-[~]
└─# john --format=NT --test
Benchmarking: NT [MD4 256/256 AVX2 8x3]... DONE
Raw:    78209K c/s real, 78209K c/s virtual
```

John Benchmark - Hetzner EPIC 7502P mit 32 Kernen (docker)

```
┌──(root㉿Password-Cracking)-[~]
└─# date
Sat Aug  2 09:58:39 UTC 2025

┌──(root㉿Password-Cracking)-[~]
└─# john --format=descrypt --test
Will run 32 OpenMP threads
Benchmarking: descrypt, traditional crypt(3) [DES 256/256 AVX2]... (32xOMP) DONE
Many salts:     321355K c/s real, 10039K c/s virtual
Only one salt:  78249K c/s real, 2443K c/s virtual


┌──(root㉿Password-Cracking)-[~]
└─# john --format=LM --test
Will run 32 OpenMP threads
Benchmarking: LM [DES 256/256 AVX2]... (32xOMP) DONE
Raw:    93804K c/s real, 2945K c/s virtual


┌──(root㉿Password-Cracking)-[~]
└─# john --format=NT --test
Benchmarking: NT [MD4 256/256 AVX2 8x3]... DONE
Raw:    76940K c/s real, 76940K c/s virtual
```

John Benchmark - Hetzner EPIC 7502P mit 32 Kernen (docker)

```
┌──(root㉿Password-Cracking)-[~]
└─# date
Sat Aug  2 10:19:32 UTC 2025

┌──(root㉿Password-Cracking)-[~]
└─# john --format=descrypt --test
Will run 63 OpenMP threads
Benchmarking: descrypt, traditional crypt(3) [DES 256/256 AVX2]... (63xOMP) DONE
Many salts:     360364K c/s real, 5721K c/s virtual
Only one salt:  66245K c/s real, 1056K c/s virtual


┌──(root㉿Password-Cracking)-[~]
└─# john --format=LM --test
Will run 63 OpenMP threads
Benchmarking: LM [DES 256/256 AVX2]... (63xOMP) DONE
Raw:    62318K c/s real, 999416 c/s virtual


┌──(root㉿Password-Cracking)-[~]
└─# john --format=NT --test
Benchmarking: NT [MD4 256/256 AVX2 8x3]... DONE
Raw:    73837K c/s real, 73837K c/s virtual
```

Hashcat Benchmark - GeForce GTX 1660 Ti

```
$ hashcat -b -m 1500 -w 3
   Hashtype: descrypt, DES (Unix)
   Speed.Dev.#3.....:  786.8 MH/s

$ hashcat -b -m 3000 -w 3
   Hashtype: LM
   Speed.Dev.#3.....:  19241.4 MH/s

$ hashcat -b -m 1000 -w 3
   Hashtype: NTLM
   Speed.Dev.#3.....:  35765.0 MH/s
```

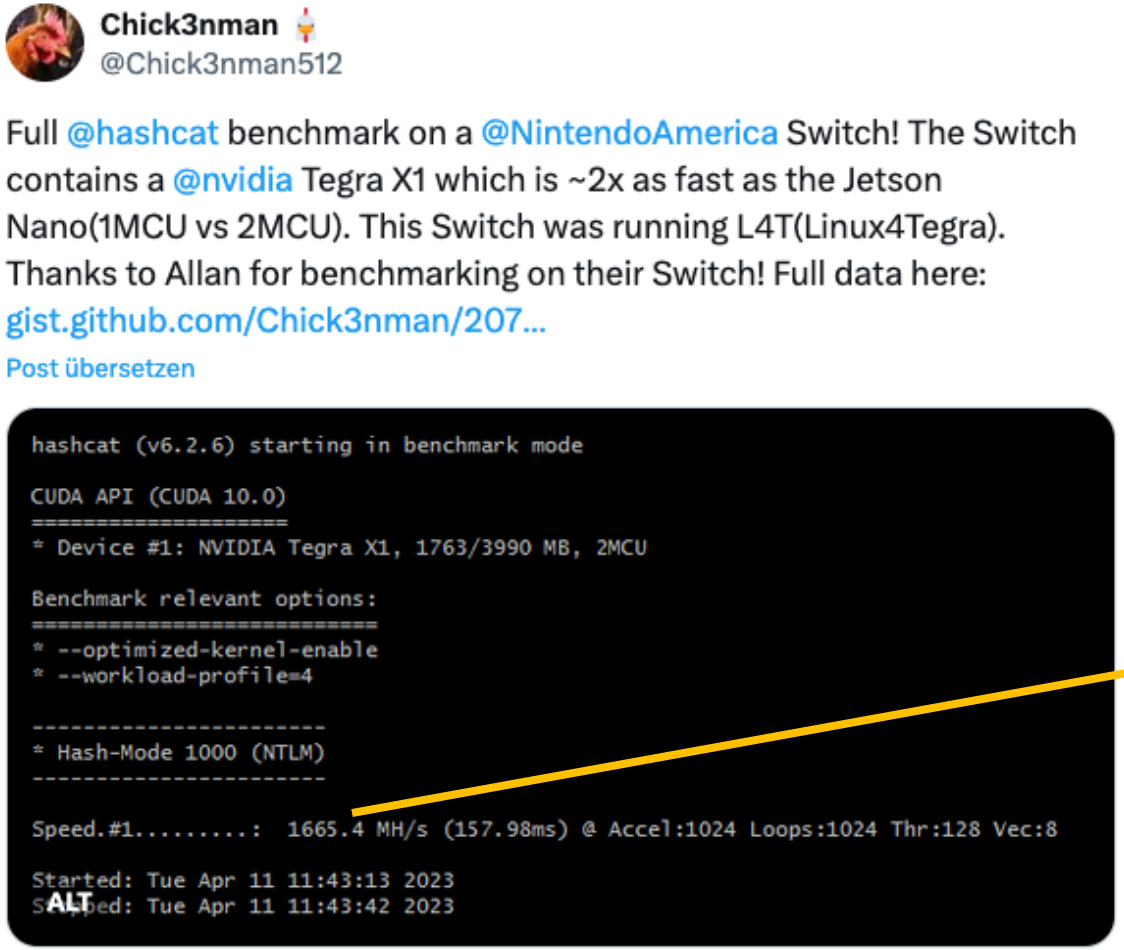
Mit hashcat 6.x im September 2019 getestet

Hashcat Benchmark - GeForce GTX 1660 Ti

```
$ hashcat -b -m 1600 -w 3
   Hashtype: Apache $apr1$ MD5, md5apr1, MD5 (APR)
   Speed.Dev.#3.....:     9808.9 kH/s

$ hashcat -b -m 8900 -w 3
   Hashtype: scrypt
   Speed.Dev.#3.....:  857.6 kH/s

$ hashcat -b -m 3200 -w 3
   Hashtype: bcrypt $2*$, Blowfish (Unix)
   Speed.Dev.#3.....:  10260 H/s
```

Mit hashcat 6.x im September 2019 getestet

Hashcat Benchmark – Nintendo Switch (Tegra X1)



Chick3nman 🕯️
@Chick3nman512

Full @hashcat benchmark on a @NintendoAmerica Switch! The Switch contains a @nvidia Tegra X1 which is ~2x as fast as the Jetson Nano(1MCU vs 2MCU). This Switch was running L4T(Linux4Tegra). Thanks to Allan for benchmarking on their Switch! Full data here: gist.github.com/Chick3nman/207...

Post übersetzen

```
hashcat (v6.2.6) starting in benchmark mode

CUDA API (CUDA 10.0)
====================
* Device #1: NVIDIA Tegra X1, 1763/3990 MB, 2MCU

Benchmark relevant options:
===========================
* --optimized-kernel-enable
* --workload-profile=4

----------------------
* Hash-Mode 1000 (NTLM)
----------------------

Speed.#1.........:  1665.4 MH/s (157.98ms) @ Accel:1024 Loops:1024 Thr:128 Vec:8

Started: Tue Apr 11 11:43:13 2023
Stopped: Tue Apr 11 11:43:42 2023
```

ALT

8:20 nachm. · 11. Apr. 2023 · **6.123** Mal angezeigt

1,66 Millionen Hashe/Sek.
Tweet vom April 2023

```
----------------------
* Hash-Mode 1000 (NTLM)
----------------------

Speed.#1.........:  1665.4 MH/s (157.98ms)
```

Hashcat Benchmark – über 102 GH/s – Stand Q1 2019

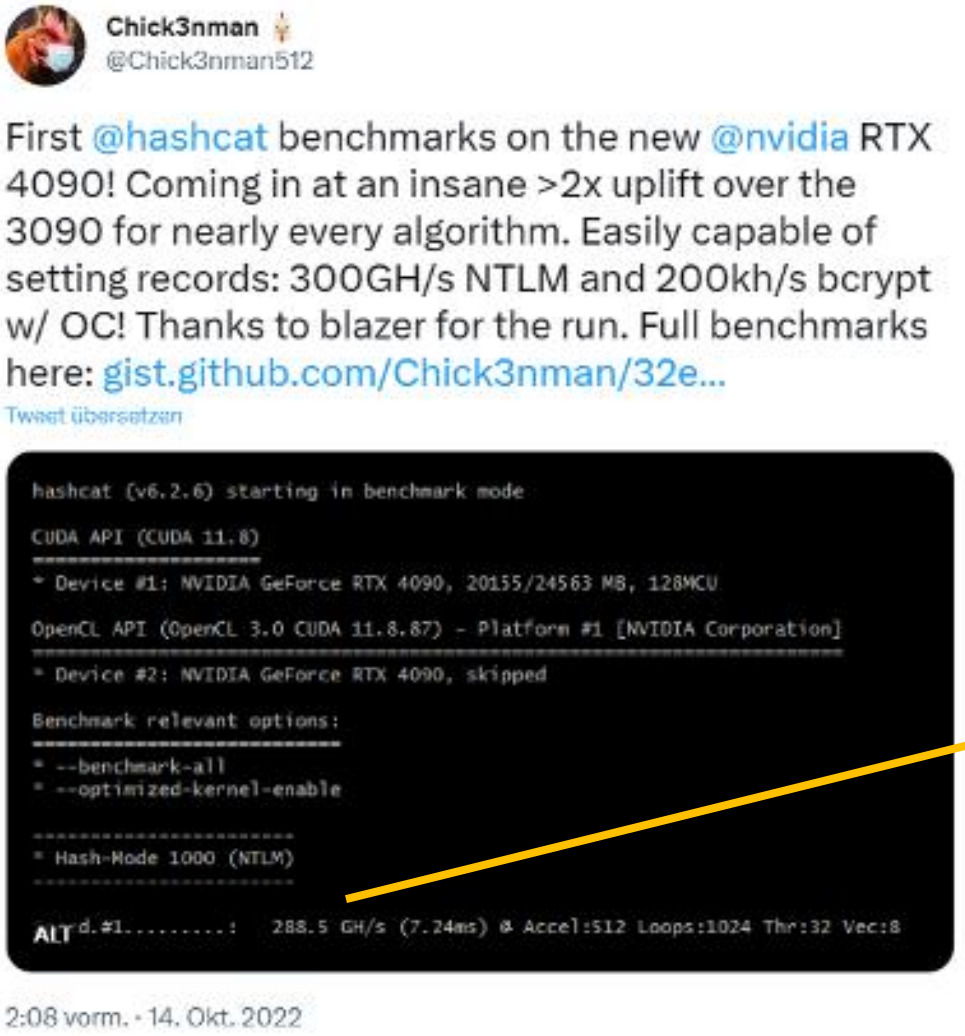
hashcat
@hashcat

hand-tuned hashcat 6.0.0 beta and 2080Ti (stock clocks) breaks NTLM cracking speed mark of 100GH/s on a single compute device

102,8 Milliarden Hashe/Sek.
Tweet vom Februar 2019

```
C:\Windows\System32\cmd.exe

d:\tools\hashcat-6.0.0>hashcat64 -b -m 1000 -u 1024 -n 512 --opencl-vector-width 8 --force -O

OpenCL Platform #1: NVIDIA Corporation
======================================
* Device #1: GeForce RTX 2080 Ti, 2816/11264 MB allocatable, 68MCU

Benchmark relevant options:
===========================
* --force
* --optimized-kernel-enable
* --opencl-vector-width=8
* --kernel-accel=512

Hashmode: 1000 - NTLM

Speed.#1.........:   102.8 GH/s (10.48ms) @ Accel:512 Loops:1024 Thr:32 Vec:8

Started: Wed Feb 13 22:57:19 2019
Stopped: Wed Feb 13 22:57:26 2019

d:\tools\hashcat-6.0.0>
```

Hashcat Benchmark – über 288 GH/s – Stand Q4 2022



Chick3nman
@Chick3nman512

First @hashcat benchmarks on the new @nvidia RTX 4090! Coming in at an insane >2x uplift over the 3090 for nearly every algorithm. Easily capable of setting records: 300GH/s NTLM and 200kh/s bcrypt w/ OC! Thanks to blazer for the run. Full benchmarks here: gist.github.com/Chick3nman/32e...

Tweet übersetzen

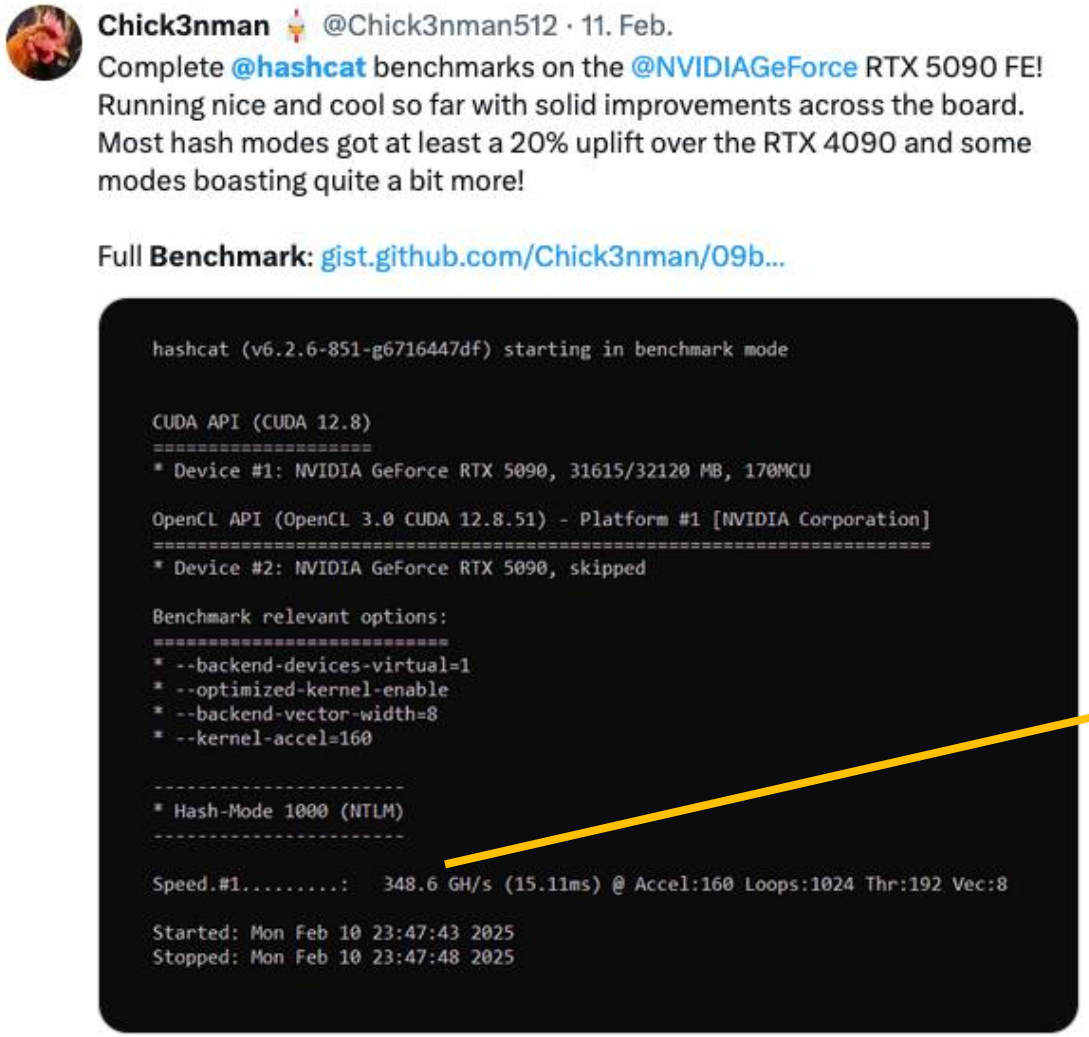
```
hashcat (v6.2.6) starting in benchmark mode

CUDA API (CUDA 11.8)
====================
* Device #1: NVIDIA GeForce RTX 4090, 20155/24563 MB, 128MCU

OpenCL API (OpenCL 3.0 CUDA 11.8.87) - Platform #1 [NVIDIA Corporation]
=======================================================================
* Device #2: NVIDIA GeForce RTX 4090, skipped

Benchmark relevant options:
===========================
* --benchmark-all
* --optimized-kernel-enable

----------------------
* Hash-Mode 1000 (NTLM)
----------------------

ALTd.#1.........:   288.5 GH/s (7.24ms) @ Accel:512 Loops:1024 Thr:32 Vec:8
```

2:08 vorm. · 14. Okt. 2022

288,5 Milliarden Hashe/Sek.
Tweet vom Oktober 2022

```
----------------------
* Hash-Mode 1000 (NTLM)
----------------------

Speed.#1.........:   288.5 GH/s (7.24ms)
```

Hashcat Benchmark – über 348 GH/s – Stand Q1 2025



Chick3nman 🍦 @Chick3nman512 · 11. Feb.

Complete **@hashcat** benchmarks on the @NVIDIAGeForce RTX 5090 FE! Running nice and cool so far with solid improvements across the board. Most hash modes got at least a 20% uplift over the RTX 4090 and some modes boasting quite a bit more!

Full **Benchmark**: gist.github.com/Chick3nman/09b...

```
hashcat (v6.2.6-851-g6716447df) starting in benchmark mode

CUDA API (CUDA 12.8)
====================
* Device #1: NVIDIA GeForce RTX 5090, 31615/32120 MB, 170MCU

OpenCL API (OpenCL 3.0 CUDA 12.8.51) - Platform #1 [NVIDIA Corporation]
=======================================================================
* Device #2: NVIDIA GeForce RTX 5090, skipped

Benchmark relevant options:
===========================
* --backend-devices-virtual=1
* --optimized-kernel-enable
* --backend-vector-width=8
* --kernel-accel=160

----------------------
* Hash-Mode 1000 (NTLM)
----------------------

Speed.#1.........:   348.6 GH/s (15.11ms) @ Accel:160 Loops:1024 Thr:192 Vec:8

Started: Mon Feb 10 23:47:43 2025
Stopped: Mon Feb 10 23:47:48 2025
```

348,6 Milliarden Hashe/Sek.
Tweet vom Februar 2025

```
----------------------
* Hash-Mode 1000 (NTLM)
----------------------

Speed.#1.........:   348.6 GH/s (15.11ms)
```

Mehr Benchmarks:
https://t.co/Bftucib7P9

Anmerkungen oder Fragen?