Dorado

Opis

Dorado je visokoučinkovit, jednostavan za korištenje ,pozivatelj baza za čitanje Oxford Nanopore.

Dostupne verzije:

Verzija	Modul	Supek	Padobran
0.6.0	scientific/dorado/0.6.0	✅	❌

Službena dokumentacija

- https://github.com/nanoporetech/dorado?tab=readme-ov-file#modified-basecalling

Primjer korištenja

dorado-gpu.pbs

```
#!/bin/bash

#PBS -N dorado-run-gpu
#PBS -l select=1:ngpus=1
#PBS -q gpu

cd $PBS_O_WORKDIR

module load scientific/dorado/0.6.0

dorado basecaller $MOD/dna_r9.4.1_e8_hac@v3.3 test/ > test.bam
```

cuda:all

Dorado ima zadanu opciju **cuda:all** za sve vidljive grafičke procesore, sa ngpus ograničavamo taj broj.

models

Dorado ima opciju automatski prepoznati modelkoji je potreban, skinuti ga i izbrisati nakon upotreben,no čvorovi nemaju pristup interentu, ta opcija nije moguća.

dorado-cpu.pbs

```
#!/bin/bash

#PBS -N dorado-run-cpu
#PBS -l select=1:ncpus=20:mem=200GB
#PBS -q cpu

cd $PBS_O_WORKDIR

module load scientific/dorado/0.6.0

dorado basecaller $MOD/dna_r9.4.1_e8_hac@v3.3 test/ -x "cpu" > test.bam
```

cpu

Sa opcijom -x "cpu" Doradu zadamo da koristi obine procesore, znantno je sporije izvoenje posla u odnosu sa grafikim procesorima i koristi puno radne memorije.

- dostupni modeli se nalaze pod $MOD varijablom:
  - dna_r10.4.1_e8.2_260bps_fast@v3.5.2
  - dna_r10.4.1_e8.2_260bps_fast@v3.5.2_5mCG@v2
  - dna_r10.4.1_e8.2_260bps_fast@v4.0.0
  - dna_r10.4.1_e8.2_260bps_fast@v4.0.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_260bps_fast@v4.1.0
  - dna_r10.4.1_e8.2_260bps_fast@v4.1.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_260bps_hac@v3.5.2
  - dna_r10.4.1_e8.2_260bps_hac@v3.5.2_5mCG@v2
  - dna_r10.4.1_e8.2_260bps_hac@v4.0.0
  - dna_r10.4.1_e8.2_260bps_hac@v4.0.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_260bps_hac@v4.1.0
  - dna_r10.4.1_e8.2_260bps_hac@v4.1.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_260bps_sup@v3.5.2
  - dna_r10.4.1_e8.2_260bps_sup@v3.5.2_5mCG@v2
  - dna_r10.4.1_e8.2_260bps_sup@v4.0.0
  - dna_r10.4.1_e8.2_260bps_sup@v4.0.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_260bps_sup@v4.1.0
  - dna_r10.4.1_e8.2_260bps_sup@v4.1.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_400bps_fast@v3.5.2
  - dna_r10.4.1_e8.2_400bps_fast@v3.5.2_5mCG@v2
  - dna_r10.4.1_e8.2_400bps_fast@v4.0.0
  - dna_r10.4.1_e8.2_400bps_fast@v4.0.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_400bps_fast@v4.1.0
  - dna_r10.4.1_e8.2_400bps_fast@v4.1.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_400bps_fast@v4.2.0
  - dna_r10.4.1_e8.2_400bps_fast@v4.2.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_400bps_fast@v4.3.0
  - dna_r10.4.1_e8.2_400bps_hac@v3.5.2
  - dna_r10.4.1_e8.2_400bps_hac@v3.5.2_5mCG@v2
  - dna_r10.4.1_e8.2_400bps_hac@v4.0.0
  - dna_r10.4.1_e8.2_400bps_hac@v4.0.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_400bps_hac@v4.1.0
  - dna_r10.4.1_e8.2_400bps_hac@v4.1.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_400bps_hac@v4.2.0
  - dna_r10.4.1_e8.2_400bps_hac@v4.2.0_5mCG_5hmCG@v2
  - dna_r10.4.1_e8.2_400bps_hac@v4.3.0
  - dna_r10.4.1_e8.2_400bps_hac@v4.3.0_5mC_5hmC@v1
  - dna_r10.4.1_e8.2_400bps_hac@v4.3.0_5mCG_5hmCG@v1
  - dna_r10.4.1_e8.2_400bps_hac@v4.3.0_6mA@v1
  - dna_r10.4.1_e8.2_400bps_hac@v4.3.0_6mA@v2

- dna_r10.4.1_e8.2_400bps_sup@v3.5.2
- dna_r10.4.1_e8.2_400bps_sup@v3.5.2_5mCG@v2
- dna_r10.4.1_e8.2_400bps_sup@v4.0.0
- dna_r10.4.1_e8.2_400bps_sup@v4.0.0_5mCG_5hmCG@v2
- dna_r10.4.1_e8.2_400bps_sup@v4.1.0
- dna_r10.4.1_e8.2_400bps_sup@v4.1.0_5mCG_5hmCG@v2
- dna_r10.4.1_e8.2_400bps_sup@v4.2.0
- dna_r10.4.1_e8.2_400bps_sup@v4.2.0_5mC_5hmC@v1
- dna_r10.4.1_e8.2_400bps_sup@v4.2.0_5mCG_5hmCG@v2
- dna_r10.4.1_e8.2_400bps_sup@v4.2.0_5mCG_5hmCG@v3.1
- dna_r10.4.1_e8.2_400bps_sup@v4.2.0_5mC@v2
- dna_r10.4.1_e8.2_400bps_sup@v4.2.0_6mA@v2
- dna_r10.4.1_e8.2_400bps_sup@v4.2.0_6mA@v3
- dna_r10.4.1_e8.2_400bps_sup@v4.3.0
- dna_r10.4.1_e8.2_400bps_sup@v4.3.0_5mC_5hmC@v1
- dna_r10.4.1_e8.2_400bps_sup@v4.3.0_5mCG_5hmCG@v1
- dna_r10.4.1_e8.2_400bps_sup@v4.3.0_6mA@v1
- dna_r10.4.1_e8.2_400bps_sup@v4.3.0_6mA@v2
- dna_r10.4.1_e8.2_4khz_stereo@v1.1
- dna_r10.4.1_e8.2_5khz_stereo@v1.1
- dna_r10.4.1_e8.2_5khz_stereo@v1.2
- dna_r9.4.1_e8_fast@v3.4
- dna_r9.4.1_e8_fast@v3.4_5mCG_5hmCG@v0
- dna_r9.4.1_e8_fast@v3.4_5mCG@v0.1
- dna_r9.4.1_e8_hac@v3.3
- dna_r9.4.1_e8_hac@v3.3_5mCG_5hmCG@v0
- dna_r9.4.1_e8_hac@v3.3_5mCG@v0.1
- dna_r9.4.1_e8_sup@v3.3
- dna_r9.4.1_e8_sup@v3.3_5mCG_5hmCG@v0
- dna_r9.4.1_e8_sup@v3.3_5mCG@v0.1
- dna_r9.4.1_e8_sup@v3.6
- rna002_70bps_fast@v3
- rna002_70bps_hac@v3
- rna004_130bps_fast@v3.0.1
- rna004_130bps_hac@v3.0.1
- rna004_130bps_sup@v3.0.1
- rna004_130bps_sup@v3.0.1_m6A_DRACH@v1