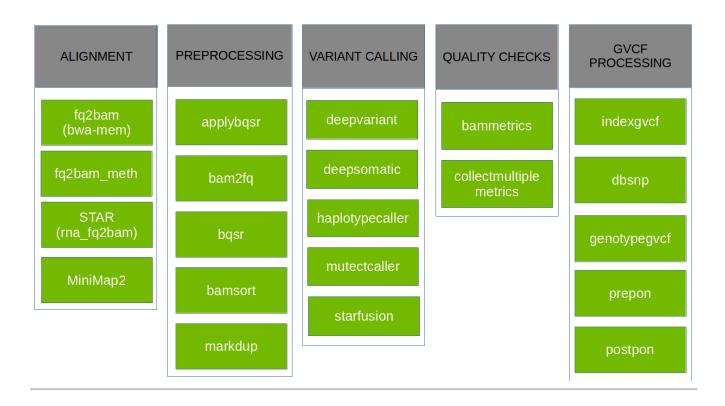


Software Overview

NVIDIA Parabricks is a software suite for genomic analysis. It delivers major improvements in throughput time for common analytical tasks in genomics, including germline and somatic analysis. The core of the Parabricks software is its tight integration with the GPU, which takes raw data and transforms it according to the users requirements.

Parabricks has been tested on Dell, HPE, IBM, and NVIDIA servers at Amazon Web Services, Google Cloud, Oracle Cloud Infrastructure, and Microsoft Azure.

Parabricks supports the tools shown below:



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The <u>somatic (Somatic Variant Caller)</u>, <u>germline (GATK Germline Pipeline)</u>, <u>pacbio_germline</u> (<u>Beta</u>), and <u>deepvariant_germline</u> tools are actually a collection of several individual tools that are frequently run together, each grouped as a single command for the users convenience. For example, <u>deepvariant_germline</u> takes FASTA and FASTQ files as input and produces a VCF and BAM file as output. Internally, it runs BWA mem alignment, performs coordinate sorting, marks duplicates, and then runs DeepVariant.

The <u>Tool Reference</u> page lists all the individual tools. The <u>Parabricks WDL/Nextflow</u> <u>Workflows</u> page discusses the use of Parabricks with WDL and Nextflow. The <u>Compatible CPU Software Versions</u> page lists the open-source CPU tools Parabricks is compatible with.

- Software Tools
- NVIDIA Parabricks WDL/Nextflow Workflows
- Compatible CPU Software Versions

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