

DRAGEN v3.4.9

Software Release Notes

October 16, 2019

Introduction

These release notes detail the key changes to software components for the Illumina® DRAGEN™ Bio-IT Platform v3.4.9 since the major release containing DRAGEN™ v3.4.5

If you are upgrading from a version prior to DRAGEN™ v3.4.5, please review the release notes for DRAGEN™ v3.4.5 for a list of features and bug fixes introduced in that version.

DRAGEN™ v3.4 Installers and Release Notes are available here:

<https://support.illumina.com/downloads/illumina-dragen-v3-4-installers.html>

The 3.4.9 software package includes:

- DRAGEN™ SW Intel Centos 6 - dragen-3.4.9.el6.x86_64
- DRAGEN™ SW Intel Centos 7 - dragen-3.4.9.el7.x86_64
- DRAGEN™ SW IBM PPC Centos 7 - dragen-3.4.9.el7.ppc64le.run

Contents

Highlights	3
SW Installation Procedure	3

Highlights

This is a patch release to address the following issues present in v3.4.5:

- **Stability improvements**
 - Fix for a rare intermittent hang during mapping, seen on Dell R740 servers only. This was due to a corruption in the FPGA DRAM that may happen during HW reset.
 - Fix for a rare intermittent crash during partial reconfiguration of the FPGA, seen on Dell R4740 servers only. This was due to a race condition when dragen_lic concurrently access the card while the FPGA is reconfigured.
 - Fix for a rare intermittent hang during RNA mapping.
 - Fix for a rare intermittent crash in germline mode with CRAM output.
 - Fix for an intermittent run-to-run variation on the Joint Caller output on chrX.
- **Bug fixes**
 - Fix for a bug in Joint Calling for pedigrees containing multiple trios: The positions of the sibling were GT corrected even though the individual GT did not show a mendelian conflict.
 - Fix for a bug in Joint Calling for pedigrees with trios: GT was updated even when the denovo quality score (DQ) is below the filter threshold.
 - Fix for crashing when enabling CRAM output for Somatic T/N runs.
 - Fix for failing to auto detect the stranded (ISR) library-type in RNA quantification.
 - Fix for crashing during BCL conversion of 384-plex, 8 lane, unique-duals inputs.
 - Fix for a missed deletion on the mitochondrial contig in the structural variant caller.
 - Fix to the calculation of GC bias, by skipping decoy and alt contigs.

SW Installation Procedure

- Install the appropriate release based on your Linux OS with the command: `sudo sh <DRAGEN 3.4.9 .run file>`
- Cold boot (hard reset or power cycle) is required after installation. The updated FPGA image needs to load from flash, this is only achieved with cold boot.
- Installing prior releases after 3.4.x was installed:
 - Installing a prior release, DRAGEN 3.3.7 or older, will require the following two steps. The prior .mcs file needs to be flashed manually:
 - Install the prior release: `sudo sh <DRAGEN 3.3.7 .run file>`
 - `program_flash /opt/edico/bitstream/07*/*.mcs`
 - Power cycle

md5checksum:

```
8ec68b1376ad33cf1f518f7f362c6b96 dragen-3.4.9.el6.x86_64.run
513b0169c849690adef678137bd71339 dragen-3.4.9.el7.x86_64.run
f124b17cb2e30f274549a3d4a0174a2f dragen-3.4.9.el7.ppc64le.run
```