

# **DRAGEN v3.6.6**

## **Software Release Notes**

**June 30, 2021**

## Introduction

These release notes detail the key changes to software components for the Illumina® DRAGEN™ Bio-IT Platform v3.6.6.

Changes are relative to DRAGEN™ v3.6.4. If you are upgrading from a version prior to DRAGEN™ v3.6.4, please review the release notes for a list of features and bug fixes introduced in subsequent versions.

DRAGEN™ Installers, User Guide and Release Notes are available here:

[https://support.illumina.com/sequencing/sequencing\\_software/dragen-bio-it-platform.html](https://support.illumina.com/sequencing/sequencing_software/dragen-bio-it-platform.html)

The 3.6.6 software package includes:

- DRAGEN™ SW Intel Centos 6 - dragen-3.6.6-2.el6.x86\_64.run
- DRAGEN™ SW Intel Centos 7 - dragen-3.6.6-2.el7.x86\_64.run
- DRAGEN™ SW IBM PPC Centos 7 - dragen-3.6.6-2.el7.ppc64le.run

The following configurations are also available on request:

- Amazon Machine Image (AMI)
- RPM packages for Centos 7 and Ubuntu 14.04 for Amazon Web Services (AWS)

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## Changes

Defect ID	Component	Issue Type	Description
DRAGEN-10089	Small Variant Caller	Bug	Fix: When enabling VCF in a gVCF run by using <code>--vc-enable-vcf-output=true</code> and <code>--vc-emit-ref-confidence=GVCF</code> , the VCF generated is not complete.
DRAGEN-9663	RNA-Seq	Robustness	Fix: A hang can occur during RNA-seq, when the pileup of reads in a narrow region is very large, and a window of reads cannot fit into 20Gbytes (default) of bin memory
DRAGEN-10767	RNA	Accuracy	Report intronic and intergenic fusions
DRAGEN-9834	UMI	Robustness	Prevent crash in UMI due to high depth input regions, by splitting the regions containing larger than 500000 reads (ctDNA v2)
DRAGEN-12291	UMI	Robustness	Fix watchdog hang in UMI collapser when very large size FASTQ file is used. (ctDNA v2)
DRAGEN-11670	UMI	Bug	Fix incorrect UMI metrics when ctDNA has very deep coverage, due to uint32 overflow (ctDNA v2)
DRAGEN-13068 NAPA-1380	UMI	Robustness	Fix for Out-Of-Memory during UMI collapsing for samples with very high coverage, by trimming memory every 10M reads (ctDNA v2)

## Known Issues

Defect ID	Component	Issue Type	Description	Remedy / Workaround
None				

## SW Installation Procedure

- Download the desired installer from the Illumina support website and unzip the package
- The archive integrity can be checked using: `./<DRAGEN 3.6.6 .run file> --check`
- Install the appropriate release based on your Linux OS with the command: `sudo sh <DRAGEN 3.6.6 .run file>`

- Please follow the installer instructions. Server power cycle may be required after installation, depending on the currently installed version. If an updated FPGA shell image needs to load from flash, this is only achieved with power cycle.
  - A power cycle is required when upgrading from v3.3.7 or older
  - A power cycle is required when downgrading to v3.3.7 or older
  - A power cycle is not required when upgrading from a release after v3.3.7
- Procedure to downgrade to v3.3.7 or older:
  - Requires the following three 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