

# MiSeq Software Release Notes

## MiSeq Control Software v2.6

### RTA v1.18.54

### MiSeq Reporter v2.6

### BaseSpace Broker v2.5.3

### MiSeq Recipes v3.1.0

*For MiSeq Systems*

## Revision History

Revision	Date	Description of Change
00	June 22, 2015	Initial version
01	Sept 8, 2015	Release version
02	Oct 21, 2015	Product name update
03	May 27, 2016	Version updates

## Introduction

These Release Notes detail the key changes to software components for the Illumina MiSeq Software between the specific versions listed in the table.

Software Application	Prior Version	New Version
MiSeq Control Software	2.5	2.6.2
MiSeq Reporter	2.5	2.6
RTA	1.18.54	No Change
BaseSpace Broker	2.1	2.5
MiSeq Recipes	3.1	No Change

This release is required for TruSight Tumor 15 Workflow users, and BaseSpace Onsite users wishing to connect their MiSeq. For all other users, this release is optional, but highly recommended due to the features and bug fixes described in these Release Notes. Review these changes before updating your software.

If you are upgrading from a version earlier than v2.5, review the release notes for v2.5 for a list of features and bug fixes introduced in that version.

For more information about the MiSeq System and how to use the software included with it, see the product and support pages at [illumina.com](http://illumina.com):

[www.illumina.com/systems/miseq.html](http://www.illumina.com/systems/miseq.html)

[support.illumina.com/sequencing/sequencing\\_instruments/miseq.html](http://support.illumina.com/sequencing/sequencing_instruments/miseq.html)

To update this software suite, your MiSeq must already be running MiSeq versions 2.4, 2.5 or 2.6.1.

## I. MiSeq Control Software (MCS) v2.6.2

### NEW FEATURES:

- Added BaseSpace Onsite option for MiSeq data analysis; BaseSpace Onsite v2.1 will be compatible with MiSeq.
  - If the user has selected to share instrument health data, these data are sent to BaseSpace Cloud.
- Added check for VeriSeq workflow to ensure that there are no more than 26 samples.
- Added a new VeriSeq workflow Reagent kit part number (15063276).
- Added TruSight Tumor 15 Workflow name acceptance for sample sheet validation.

### DEFECT REPAIRS:

- Added pump recovery logic in event of valve overload.
- Updated to fix focus errors in MCS version 2.6.1. Refer to PCN0176

### KNOWN ISSUES:

- The BaseSpace Broker version is not displayed on the About screen in the MiSeq Control Software. It currently reads "<not installed>".

## II. RTA v1.18.54

- No changes were made to this application in this release.

## III. MiSeq Reporter v2.6

### SOFTWARE VERSIONS:

Category	Software	Version
Aligner	BWA	0.7.9a-isis-1.0.0 (or 0.6.1-r104-tpx)
Variant Caller	Starling (Isaac Variant Caller)	2.1.4.1 (Windows)
Variant Caller	GATK	v1.6-23-gf0210b3
Variant Caller	CallSomaticVariants (Somatic Variant Caller)	3.6.2
Other	SAMtools	0.1.19-isis-1.0.1

### NEW FEATURES:

- TruSight Tumor 15 Workflow added. This workflow supports analysis of the new TruSight Tumor 15 panel. The Amplicon - DS Workflow remains the analysis method for the previous TruSight Tumor Panel featuring 26 genes.
  - To use this analysis workflow, download a separate package containing the Illumina Annotation Engine support files, available on the MiSeq Reporter support website:

[support.illumina.com/sequencing/sequencing\\_software/miseq\\_reporter/downloads.html](http://support.illumina.com/sequencing/sequencing_software/miseq_reporter/downloads.html)

The Illumina Annotation Engine download consists of a single .zip file (~2GB in size), containing an automated .msi installer and associated reference files. More information can be found on the above website.

- Enrichment, Library QC, PCR Amplicon, and Resequencing Workflows:
  - BWA-MEM (BWA v0.7.9a-isis-1.0.0) now replaces BWA-backtrack (BWA v0.6.1-r104-tpx) as the default aligner. BWA-MEM offers faster performance,

and greater sensitivity in detecting structural variants. BWA-backtrack is available for continued use by utilizing the sample sheet setting (RunBwaAln,1). This setting is also available using Illumina Experiment Manager v1.11, in each of the respective workflow selections.

**DEFECT REPAIRS:**

- All Workflows:
  - A fix was made to prevent a rare, but critical bug when writing out gVCF files.
  - A fix was made to include the GATK version number in all PDF reports.

**KNOWN ISSUES:**

- In some cases where phased SNPs are present in degraded samples, the somatic variant caller may cause an error shown as "System.ArgumentOutOfRangeException" due to the high number of phased SNPs detected. The workaround to this error is to turn off phased SNP calling with the sample sheet setting (Variantcallphasedsnp, false).

## IV. BaseSpace Broker v2.5

- The previous release of MiSeq software contained BaseSpace Broker v2.1. Since this release, a number of changes were implemented. These releases notes contain all changes between v2.1 and v2.5 of the BaseSpace Broker.

**NEW FEATURES:**

- Added support for NeoPrep instrument.
- Added support for MiSeq FGx instrument.

**DEFECT REPAIRS:**

- Fixed a memory leak that would cause increasing memory consumption throughout the duration of a run.
- Fixed a condition that could cause the windows service to hang attempting to start.
- Fixed a bug that could cause external systems to fail to write files to the run folder.
- Fixed a bug that could cause all file uploads to stop, requiring the windows service to be restarted.
- Fixed the previously known issue "An aborted or canceled sequencing run can lead to a loss in data uploaded to BaseSpace due to polling interval of Broker service".
- Fixed bug where ContinuousUpdate files could be continuously uploaded indefinitely because the "last updated time stamp" of the run was being changed even if a file had not been modified since the last upload.

**KNOWN ISSUES:**

- None

## V. MiSeq Recipes v3.1.0

- No changes were made to this application in this release.