

HiSeq X Instrument Software Release Notes

HiSeq Control Software (HCS) HD 3.4.0

Real-Time Analysis (RTA) v2.7.7

Recipe Fragments HD 3.5.0

Microsoft .Net Framework 4.5.1

Sequencing Analysis Viewer (SAV) v1.10.2

BaseSpace Broker v2.9.2.15

Run Copy Service v1.0.19.0

For HiSeq X[®] Systems

January 2017

Introduction

These Release Notes detail the key changes to instrument software components for the HiSeq X since the release of the previous HiSeq X Control Software (HCS) package. The previous release contained HCS v3.3.76.1, RTA v2.7.6, Run Copy Service 1.0.19.0, Recipe Fragments v3.3.9, and BaseSpace Broker v2.9.02.

If you are upgrading from a version earlier than HiSeq X Control Software v3.3.76, review the release notes for HCS v3.3.76. These release notes contain a list of features and bug fixes introduced in that version.

If installing on an instrument containing version HCS 3.3.39 or later the software included in this release is customer-installable. Software versions prior to HCS 3.3.39 will require additional support from trained Illumina service personnel.

The Recipe Fragments installation overwrites any custom recipe files. Therefore, recreate any custom recipes after receiving this update.

The BaseSpace Send Instrument Health data option is activated during this software installation. After receiving this update, update your BaseSpace Send Instrument Health settings.

The software package includes:

- HCS HD 3.4.0
- RTA v2.7.7
- Recipe Fragments HD 3.5.0
- Microsoft .Net Framework 4.5.1 – no change
- SAV v1.10.2 – no change
- BaseSpace Broker v2.9.2.15
- Run Copy Service v1.0.19.0 – no change

I. HiSeq X Control Software HD 3.4.0

NEW FEATURES:

- Reduction of PhiX spike in requirement for low diversity libraries.

IMPROVEMENTS:

- Reduced PhiX spike in required for low diversity libraries.
 - PhiX spike in recommendation for sequencing of bisulphite libraries reduced to 5% with new software.
- Updated Broker enables connection to European instance of BaseSpace Sequence Hub.
- Instrument Health Interop files now uploaded per cycle rather than at the end of the run.
- Increased frequency of Run Copy Status Icon refresh to more accurately reflect run state.
- Inclusion of Reagent Kit ID and Paired End Cluster Kit ID now optional.

DEFECT REPAIRS:

- If BaseSpace is disabled BaseSpace Icon will no longer attempt to update.

KNOWN ISSUES:

- Selecting the Abort button to stop a run during imaging puts the camera in an unknown state and stops the adjacent run.
 - To recover from this issue, restart HCS.
 - The sequencing run for either flow cell cannot be resumed.

II. RTA v2.7.7

DEFECT REPAIRS:

- Changes to the color matrix normalization improves RTA robustness.

KNOWN ISSUES:

- PhiX error rate quantized at 0.2% at lowest allowed spike-in of 0.1%. Illumina recommends using a minimum spike-in of 0.5% to recover.

III. Recipe Fragments v3.5.0

IMPROVEMENTS:

- None

DEFECT REPAIR:

- None

KNOWN ISSUES:

- None

IV. Sequencing Analysis Viewer v1.10.2

- No changes in this release.

V. BaseSpace Broker v2.9.2.15

NEW FEATURES:

- Updated Broker enables connection to European instance of BaseSpace Sequence Hub.

IMPROVEMENTS:

- None

DEFECT REPAIR:

- None

KNOWN ISSUES:

- None

EXTERNAL CONSIDERATIONS:

- The following domains should be whitelisted for the user site firewall to enable run file uploading:
 - euc1.sh.basespace.illumina.com
 - api.euc1.sh.basespace.illumina.com
 - euc1-prd-seq-hub-data-bucket.s3-eu-central-1.amazonaws.com

VI. Run Copy Service v1.0.19.0

NEW FEATURES:

- No changes in this release