NovaSeq X Series 1.3.1 Release Notes

March 2025

INTRODUCTION

This document details improvements and known issues for the NovaSeq X Series release 1.3.1.

For more information on the NovaSeq X Series Sequencing System, see the NovaSeq X Series Product Documentation available on the NovaSeq X Series Support Site - Support Resources - Documentation page. To learn more about the improvements included in the NovaSeq X series release v1.3, refer to the NovaSeq X Series Software Suite v1.3 page.

NOVASEQ X SERIES CONTROL SOFTWARE Release 1.3.1

The software package includes components listed in the table below

	Previous Release (v1.3.0)	Current Release (v1.3.1)
NovaSeq X Series Control Software	1.3.0.39308	1.3.1.59007
Firmware	1.3.15	1.3.15 (no change)
Image Analysis Gateway	1.42.3	1.42.4
Universal Copy Service	2.10.0.1518	2.10.0.1518 (no change)
Real-Time Analysis	4.29.2	4.29.3
Illumina Run Manager	1.7.1259	1.7.1259 (no change)
Instrument Network Configuration	1.4.0.5439	1.4.1.5990
NovaSeq X Plus Recipes	1.3.0	1.3.0 (no change)
DRAGEN	4.3.13	4.3.16
DRAGEN Applications	1.3.11	1.3.13
Genome Reference Files	V10	V10 (no change)

NovaSeq X Series Control Software v1.2.2 or v1.3.0 is required to be on instrument before installing v1.3.1.

Bug Fixes

NovaSeq X Series Software v1.3.1 enhances the performance of v1.3.0 features by eliminating redundant data, improving the DRAGEN BCLConvert application, and adding other minor bug fixes.

Control Software Related Fixes

- Implemented Real Time Analysis (RTA) Changes
  - **Prevention of Duplicate Cluster Location**: Resolved duplicate headers impacting BAM/CRAM file format to resolve low frequency errors. These errors did not impact data quality but impacted some downstream analysis applications.
- Released DRAGEN 4.3.16

  - Increased memory allocated to BCLConvert to address the higher output enabled by v1.3.0.
  - Eliminated event timing conflicts which may occur at low probability when transitioning between DRAGEN versions. These transitions can occur when flow cells are configured with different DRAGEN versions, or when one flow cell is configured with multiple DRAGEN versions.
  - Further details about the update can be found in the DRAGEN Applications Release Notes on the Support website.
- Included an OS Kernel upgrade. 4.18.0-553.16.1 has been updated to 4.18.0-553.37.1 to resolve rare cases of control software unresponsiveness on v1.3.0.
- Updated the About screen with Readme location on the Illumina website.
- Eliminated a sample sheet parsing error that some users encountered when starting a manual run using the import sample sheet for local analysis with validation checks skipped.
- Resolved permissions issue within the Instrument Network Configuration causing proxy set up to fail.

Known Issues

Please note the following known issues in the v1.3.1 release:

- Execution of self-test using DRAGEN versions prior to 4.3 will result in a time-out. Contact an FSE if there is a need to execute this test.
- Time-out errors can occur when planning a run that includes highly complex configurations (i.e., sample sheets). Validation checks may be skipped to bypass this error.
- If a customer provided signed certificate expires without renewal, it will require a manual intervention by Illumina personnel.

Release History

Revision	Release Reference	Originator	Description of Change
00	CN 1119624	Graham Bloom	Initial release.