



Saphyr[®] ICS v5.1 Release Notes

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Table of Contents

Legal Notice	3
Revision History	4
Overview	4
Introduction	4
Compatibility	4
New Feature Highlights	5
Refined Status Icons	5
Saphyr Assure and System Health Monitor	5
Saphyr Assure Icon States	6
Saphyr Assure Menu options	6
Run Info	7
Bionano Access	7
Remote Support	8
Feature List	9
Resolved Issues	9
Known Issues	10
Technical Assistance	11

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Revision History

Revision	Notes
A	Initial Release
B	Patch Release (Update 1) See Resolve Issues section for details

Overview

This document describes the v5.1 release of Saphyr ICS (Instrument Control Software). In this document we will provide an overview of what is changing with this release so that you may better understand the impact of moving to this version of ICS. Should you have any questions, please contact support@bionanogenomics.com.

Introduction

Saphyr ICS v5.1 is a new release of our instrument control software which provides the Saphyr instrument user with an interface for operating the instrument. ICS is designed to run in a Windows 10 environment on the PC supplied with the Saphyr instrument. **ICS v5.1 must be installed by Bionano Genomics Support.**

Compatibility

Saphyr ICS v5.1 is compatible with Bionano Access® v1.6 and higher.

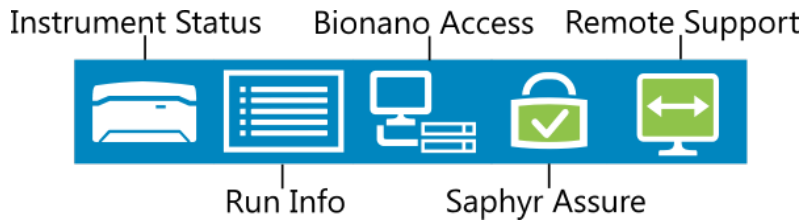
This software release is compatible with Saphyr Instruments with part number **60325**, **60239**, **60375** and **60396**.

Installation of Saphyr ICS V5.1.21018.02 is only supported in the following conditions:

Upgrade Saphyr ICS Version	Supported Instrument Part Numbers
None (Clean Installation)	60239, 60325, 60375, 60396
V3.1.4.3	60239
V4.8.19085.02	60325
V4.9.19238.01	60239, 60325, 60375
V4.9.19316.01 (Update 1)	60239, 60325, 60375
V4.9.20044.01 (Update 2)	60239, 60325, 60375, 60396
V5.1.20344.01	60239, 60325, 60375, 60396

New Feature Highlights

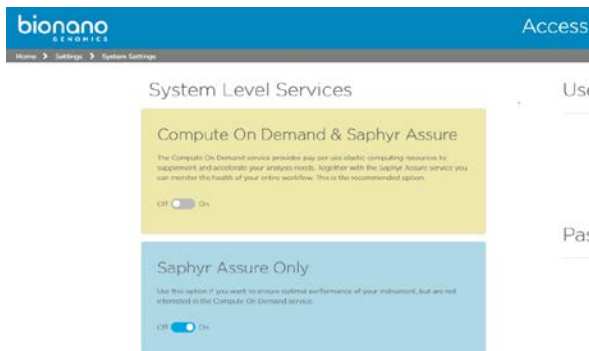
Refined Status Icons



Saphyr Assure and System Health Monitor

Saphyr Assure is a remote service provided by Bionano Genomics that enables the Instrument Control Software (ICS) to transmit instrument health metrics, run diagnostics and configuration information to enable Bionano to proactively provide support to customers. Saphyr Assure enables users to install software updates for Saphyr ICS, allowing for quick and easy updates. Saphyr Assure also manages windows update checking to ensure the system is always running with the latest validated updates. Saphyr Assure also automates the transfer of user initiated diagnostic requests.

- Saphyr ICS integrates with Saphyr Assure to enable automated health monitoring of the system. This feature is optional and must be opted into on the Bionano Access server.
 - How to connect: please refer to the Saphyr System Firewall Requirements section in document P/N 30251 Saphyr Networking and Setup Guide for network configuration requirements.
 - How to opt-in: Log into the Bionano Access server as an administrator, click settings and then click system settings. Select Compute On Demand service & Saphyr Assure, or if not using Compute On Demand, select Saphyr Assure Only.



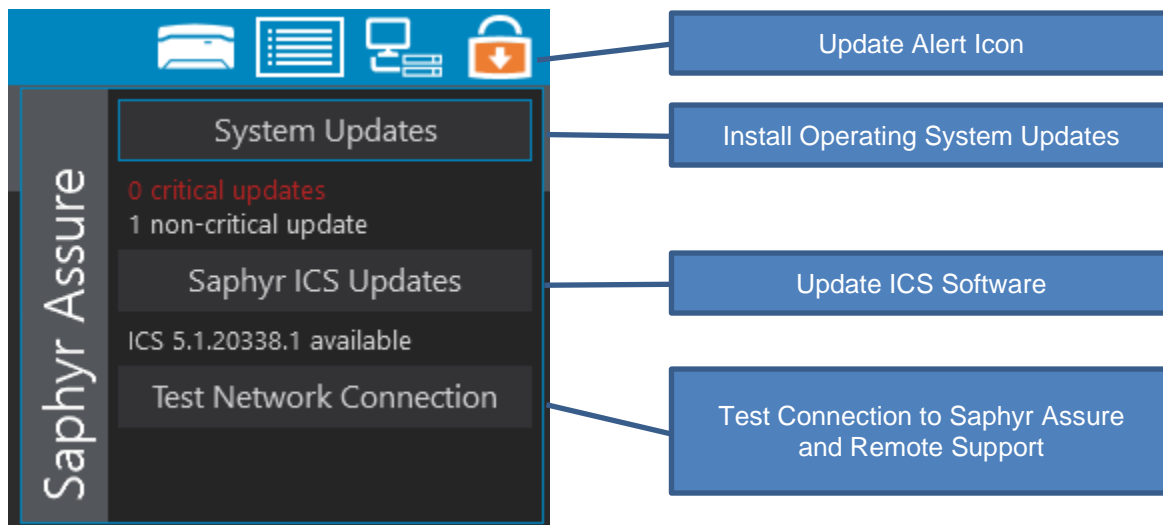
1 Bionano Access System Setting Screen

- See P/N 30251 Saphyr Networking and Setup Guide and P/N 30292 Bionano Genomics Data Security Guidelines for additional detail

Saphyr Assure Icon States

Icon	Description
	Saphyr Assure is connected and health monitoring is enabled.
	Saphyr Assure is connected and health monitoring is disabled.
	There is a connection error between ICS and Saphyr Assure.
	Update(s) are available for either ICS or Windows
	Disabled / Establishing Connection

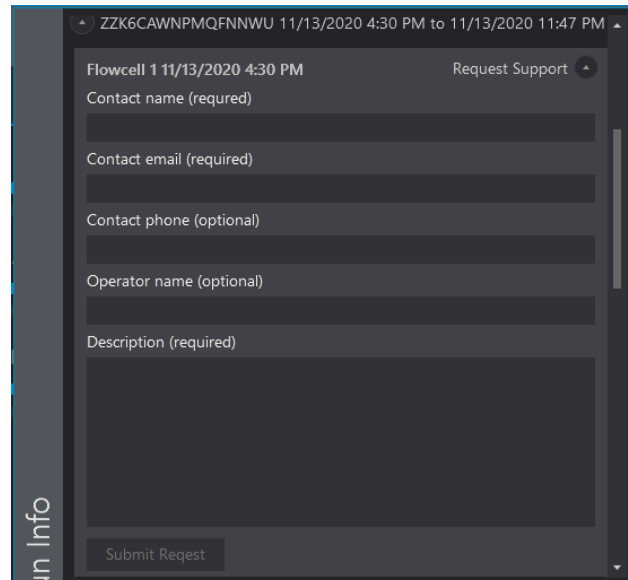
Saphyr Assure Menu options



2 Saphyr Assure User Interface

Run Info

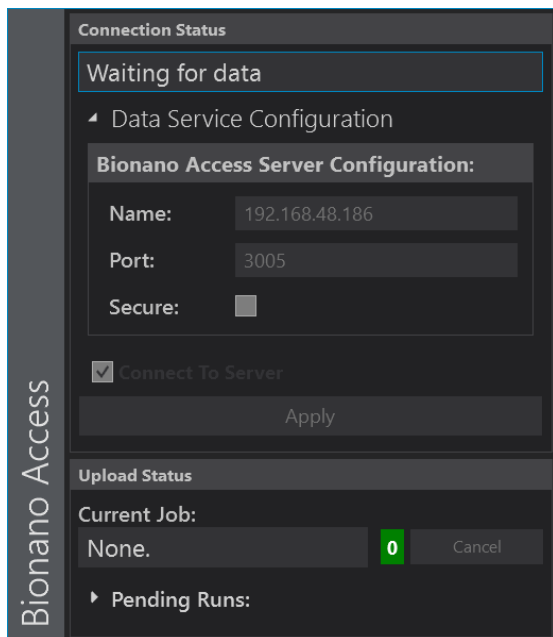
- Revised diagnostic submission to include user contact information form
- Enable diagnostic files to be transmitted directly to the Bionano support team through Saphyr Assure
 - If the system is not connected to the internet or has Saphyr Assure blocked, the user will be prompted to insert a USB flash drive to export the file to.



3 Run Info Diagnostic Request Submission Form

Bionano Access

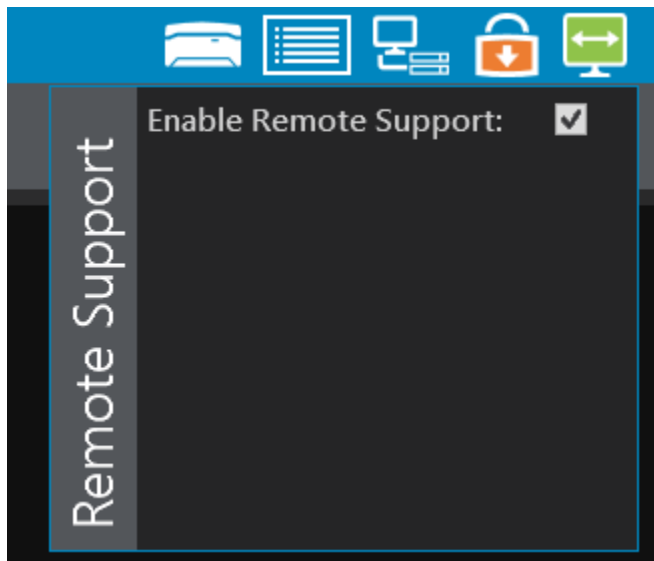
- Bionano Access configuration and upload status have been combined into a single menu.



4 Bionano Access Configuration & Status Screen

Remote Support

- Remote support (through TeamViewer) can be enabled / disabled by clicking the check box in the drop down.
- Note: The Remote Support icon will change color depending on if it is enabled (green) or disabled (blue) so the user can easily determine if remote access is enabled.



5 Remote Support Configuration Screen

Feature List

Category	Description	Associated JIRA Ticket(s)
Throughput	Increased throughput for DLS Experiments (approximately 15%)	ICX-3551
Security / Reliability / Support	Integrated Saphyr Assure	ICX-3093
Reliability	Automated System Health Monitoring (requires opt-in via Bionano Access) Allows Bionano to provide proactive support and identify issues and schedule repairs before system downtime or sample loss occurs.	ICX-3359
Security / Reliability	Kiosk Mode – available on Saphyr Gen 2 systems. Simplifies instrument usage and maintenance and increases system security and stability by limiting user interaction solely to the Saphyr ICS application.	ICX-3090
Throughput	Improved Image Quality – implemented Flat-Fielding to make SNR and intensity uniform across the field of view and across field of views. Automatically applied for each run on Saphyr Gen 2 systems.	ICX-3550
Data Quality	Improved red alignment calibration, only applicable when running multiplex of dual label experiments.	ICX-3161
Loading Reliability	Adaptive Loading: Improved wavefront detection	ICX-3046

Resolved Issues

Description	Associated JIRA Ticket(s)
BNX SourceFolder field does not contain Cohort ID as specified in BNX spec rev E	ICX-3540
TeamViewer remote support software does not properly register the instrument with the Bionano support account preventing remote access by support personnel.	ICX-3944 ^B
HW Burnin test incorrectly reports a failure while snapping an image	ICX-3948 ^B

^B Added in V5.1.21018.02

Known Issues

Description

A crash can occur if the USB flash drive is removed while exporting diagnostic files to it. Always wait for the operation to complete before removing the drive.

Technical Assistance

For technical assistance, contact Bionano Genomics Technical Support.

You can retrieve documentation on Bionano products, SDS's, certificates of analysis, frequently asked questions, and other related documents from the Support website or by request through e-mail and telephone.

Type	Contact
Email	support@bionanogenomics.com
Phone	Hours of Operation: Monday through Friday, 9:00 a.m. to 5:00 p.m., PST US: +1 (858) 888-7663
Website	www.bionanogenomics.com/support