

Supported instruments and chemistries

SMRT Link v12.0 supports the following:

Instruments	Supported ICS software versions	Supported chemistries
Revio™ system	v12.0	All
Sequel [®] II and Sequel IIe systems	v11.0+	All
Sequel system	Not supported	

Note: SMRT Link v12.0 does **not** support Sequel systems.

Supported operating systems

SMRT Link v12.0 is supported on:

- English-language CentOS 7.x, supported until end-of-life 6/30/2024.
- English-language Rocky Linux 8.x supported until end-of-life 5/31/2029.
- Ubuntu 18.04 and 20.04 64-bit Linux[®] distributions.
- See **SMRT Link software installation guide (v12.0)** for detailed hardware and software requirements and installation instructions.
- SMRT Link v12.0 **requires** use of the newer Keycloak API gateway for all Revio/Sequel II/Sequel IIe systems; SMRT Link v12.0 will **not** work with WSO2 API manager. Users who have not yet migrated to the Keycloak API gateway **must** do so to use SMRT Link v12.0 with **all** systems. See **SMRT Link software installation guide (v12.0)** for migration instructions.

New Features

SMRT Link support for new Revio systems

- Support for new Revio systems in the **Runs**, **Instruments**, and **Sample Setup** modules.

New Instruments module

- New **Instruments** module displays information on **all** Revio systems, Sequel IIe systems, and Sequel II systems connected to SMRT Link.
- The **Instruments** module includes support for connecting new Revio systems to SMRT Link, as well as for modifying parameters of installed Revio systems. (**Admin** users only.)

New Runs module

- The new **Runs** module replaces the **Run Design** and **Run QC** modules in previous releases.
- Includes a simplified procedure for creating Run Designs for use with the Revio system.
- The **Auto Analysis** functionality from previous releases is replaced with a mechanism to specify in **Run Design** a secondary analysis application to run after the data is transferred from the instrument. This applies to **all** supported instruments.

New Variant Calling pipeline featuring DeepVariant

- New **Variant Calling** pipeline performs read mapping, structural variant-calling using `pbsv`, small variant calling using `DeepVariant`, and phasing using `whatshap`.
- `DeepVariant` model supports HiFi reads from the Revio, Sequel II, and Sequel IIe systems.
- Outputs `DeepVariant` variant calls in gVCF and VCF formats, as well as structural variant calls in VCF format.

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- Tables now display **all** instrument types, instead of one type per tab.

Known issues

- **Single-Cell Iso-Seq[®] method:** In the **Advanced Parameters** dialog, uploading a 10x barcode file larger than 100 MB displays the wrong error message.
- **Single-Cell Iso-Seq method:** In the **Advanced Parameters** dialog, uploading an uncompressed 10x barcode file causes the upload to be rejected with an **HTTP 413 Entity Too Large** message. However, the UI still shows the upload as being successful and fills in the new file name. Gzipping the file fixes the problem.
- Sample wells on each plate **must** be filled in sequential order, from A01->B02->C01->D01. In addition, you **cannot** leave unused wells between samples.
- In the Analysis or Data Sets tables, specifying a column-filter and then selecting one or more items may cause the filter to be cleared. The workaround is to reapply the filter.
- In some cases, there is a delay between connecting an instrument and seeing it on the instruments page.
- Exporting a Data Set to a location for which the user does not have permissions causes problems with the error message display.
- For Revio systems, **Retry File Transfer** functionality on the Runs Details page may not work (despite the button being enabled) if it has been too long since the run was performed and the Revio system no longer has a copy of the data needed for the retry.
- In some cases, SMRT Link cannot display the Time remaining for post processing.
- On the **Run Details** page, Run Created, Run Start, Run Complete, and Transfer Status timestamps do not update when the time zone is changed.

Fixed issues

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- Fixed an issue that caused reserved characters not being correctly encoded when used in the **Edit Output Filename Prefix** dialog. This made it impossible for the output files to be downloaded.
- Fixed an issue where the **Iso-Seq** workflow requested an erroneous amount of memory.
- Fixed an issue where a Microbial Genome Analysis job with **Find Modified Base Motifs** set to **ON** failed.
- Fixed an issue where an edited Run Design could not be saved.
- Fixed an issue where clicking **Display All Enabled Users** caused an error.
- Fixed an issue that caused the `pbservice import-run` command to not post a Run Design CSV.

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