Bio-Rad Laboratories, Inc.

Release Notes for CFX Opus and PTC Tempo Instruments, and the BR.io Cloud Platform

Version 1.7

March 2023

Contents

Introduction

Using the BR.io Cloud Platform with connected Bio-Rad instruments, you can remotely set up, run, monitor, and analyze your experiments. This document summarizes key features and provides a concise list of known issues.

Note: For detailed information regarding CFX Opus and PTC Tempo instruments, refer to the corresponding user guides available at www.bio-rad.com.

Supported Browsers

BR.io is supported on the following browsers:

- Chrome desktop browser v108 and above
- Safari desktop browser v16 and above

Summary of PTC Tempo Features

In version 1.7, BR.io is integrated with the PTC Tempo conventional PCR instrument, allowing you to do the following:

- Follow the process from the instrument to BR.io to link your PTC Tempo 96 well and 96 Deepwell instruments to your BR.io user account
- Create protocols in BR.io for the 96 well or 96 Deepwell systems
- View and run your BR.io protocols on linked PTC Tempo instruments
- View run data that is automatically uploaded to BR.io upon completion of the PTC Tempo run

The following sections describe in more detail the capabilities of PTC Tempo instruments linked to BR.io.

Linking Your Instruments

- Link PTC Tempo instruments using OAuth 2.0's code flow for authorized access

Managing Linked Instruments in BR.io

- View your linked instruments on the Instruments page, and recently used instruments as icons on the BR.io Home page
- On the BR.io Instruments page, view instrument details for your linked PTC Tempo (for example, serial number, instrument name and model, and software and firmware versions)

Creating and Managing PTC Tempo Protocols in BR.io

- BR.io provides a dedicated repository for your protocols, separated by instrument
- You can create, edit, and archive protocols in BR.io
- Protocols in BR.io appear in both graphical step format and a protocol step list
- You can add or remove temperature, gradient, and GOTO steps in your PTC Tempo protocols
- Protocol parameters are validated, and error messages appear where applicable

Viewing Email Notifications, Completed Run Details, and Run Report

You can receive and view completed run information, as follows:

- Receive an email notification when your run on the PTC Tempo is completed
- In BR.io, access a summary of your completed run in BR.io and open a run report containing temperatures and durations for the protocol steps
- From Brio, download the run report in PDF format

Interoperability with Legacy Instruments

- You can upload and export protocol files in .prcl format, which can be used on legacy instruments

Fixed Issues

The following issues with the CFX Opus have been resolved:

- The correct CFX Opus instrument is now identified in the subject line and message body in email notifications for completed CFX Opus runs
- If there is a protocol mismatch between CFX Opus and BR.io, an internal error appears and you cannot proceed with the run until the error is corrected. To proceed with the run, the user must do the following:
  1. Exit out of the run on the instrument.
  2. Refresh the file browser on the instrument to get the latest version of the pending run.
  3. Reload the run before starting it.

Known Issues

BR.io

- In the protocol view, if a protocol name with 255 characters contains no spaces, then the name does not fit in the text box. To avoid text overflow past the field boundaries, use spaces in long protocol names.

PTC Tempo

- You might encounter the following issues when linking your PTC Tempo instrument to BR.io:
  - If your browser is not connected to the network, submitting a valid instrument linking code prompts an invalid code error in BR.io.
  - You must use lower-case characters for your BR.io username, or the login fails during the linking process.
- If your PTC Tempo instrument loses internet connectivity, an in-progress run remains in progress in BR.io, and the instrument fails to upload a run report.
- If you are using a Safari browser and the PTC Tempo run report file name is between 252 and 255 characters, you cannot download the run report as a PDF. You must rename the file with fewer characters or use Google Chrome to download the PDF.
- For content allowed in certain fields, note the following differences between BR.io and the PTC Tempo:

  Maximum time: In BR.io, you can set a maximum time for a protocol at 64800 seconds, but the PTC Tempo allows up to 64799 seconds only. If you enter 64800, the instrument automatically decreases the run time by 1 second.

  Non-GOTO step fields: In BR.io, you can edit the Increment and Extend fields in temperature and gradient steps; however, the instrument does not allow editing of those fields and ignores the BR.io values during the run.

  GOTO step counts: In BR.io, you can specify up to 9999 GOTO steps in a PTC Tempo protocol, but the instrument limits the user to 999 GOTO steps only. If you enter 1000 or more, the instrument automatically reduces the GOTO repetitions to 999.

  Protocol name: In BR.io, you can name a PTC Tempo protocol using up to 255 characters, but the instrument allows up to 32 characters only.

  Note: BR.io allows longer entries in alphanumeric character fields to support current and future connected instruments.

CFX Opus

- BR.io allows you to create CFX Opus protocols containing melt and temperature steps under 4° C, although those temperatures are not supported by CFX Opus instruments. To avoid issues with the run, ensure the temperature is 4° C or above.
- You must close the run successfully uploaded to your BR.io account dialog box soon after the run is completed, or BR.io incorrectly displays the CFX Opus status as Offline.
- If you navigate from the CFX run workflow while uploading a file, BR.io does not warn you about unsaved changes to your CFX run.
- For CFX Opus templates, note the following:
  - You must create CFX Opus run templates from an existing completed CFX run file.
  - You cannot open, view, or edit CFX Opus run templates independently.
  - After saving the run file created from a template, you cannot directly edit the sample list.
  - If the sample list contains fewer samples than the plate layout accepts, you must open the run file after it has been saved, and manually clear the unused wells from the plate.
- BR.io does not currently support the following:
  - Analysis of .pcrd or .zpcr files containing legacy or user-calibrated fluorophores; you can upload the files in BR.io, but errors are likely if you work with the data in the Analysis module.
  - Application-based analysis, such as standard curve/absolute quantification, gene expression/relative quantification, and allelic discrimination

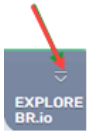
Documentation

Click the following URL, and then click the  icon to access the online Help Center.

https://br.io

For user assistance with main BR.io pages, you can select Help for This Page.

You can also click the down arrow above EXPLORE BR.io for links to the online help.



Contacting Technical Support

The Bio-Rad Technical Support department in the U.S. is open Monday through Friday, 5:00 AM to 5:00 PM, Pacific Time.

Phone: 1-800-424-6723, option 2
Email: Support@bio-rad.com (U.S./Canada Only)

For technical assistance outside the U.S. and Canada, contact your local technical support office or click the Contact Us link at www.bio-rad.com.

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