

Torrent Suite™ Software 5.16

Release Notes

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Revision History

Revision	Date	Description
C.0	16 September 2021	Added chip type warning message for some imported panel files, a known issue in Torrent Suite™ Software 5.16.
B.0	10 September 2021	Updated release notes for Torrent Suite™ Software 5.16.1, which includes fixes to static IP issue after system reboot, Tri-link SmallRNA run plan template, an issue with the Ion Chef™ Instrument pump, and reactivation of some run plan templates that were incorrectly inactivated.
A.0	03 February 2021	New release notes for Torrent Suite™ Software 5.16.

Fixed Issues in Torrent Suite™ Software 5.16.1

Static IP remains persistent after system reboot on Ion Genestudio™ S5 and S5 Plus instruments

Remote access was lost if an instrument was rebooted. This issue is fixed in Torrent Suite™ Software 5.16.1. After instrument reboots, the static IP address is saved correctly, and the DNS server remains connects to instrument network.

Status of Apache Tomcat® software service displayed incorrectly

In Torrent Suite™ Software 5.12 and later, the status of the Apache Tomcat® software service was displayed incorrectly. The status in the Services screen showed that Tomcat® software service was down, although the service was active. This issue is fixed in Torrent Suite™ Software 5.16.1.

Tri-link SmallRNA run plan template is updated with new parameters including basecaller arguments

In Torrent Suite™ Software 5.16.0, specific read length in BaseCaller arguments was missing. Torrent Suite™ Software 5.16.1 updates arguments in the TriLink smallRNA template that are important for miRNA analysis on Ion Torrent S5 instruments. This issue is fixed in Torrent Suite™ Software 5.16.1.

Generic run plan template not visible

In Torrent Suite™ Software 5.16.0, some run plan templates were inactive. Torrent Suite™ Software 5.16.1 restores the inactivated run plan templates, including the Generic Sequencing Template.

Issue with Ion Chef™ Instrument pump

An issue of excess aspiration was reported that was caused liquid to flow to the pump on an Ion Chef™ Instrument. A new script in the software corrects excess aspiration of the library preparation workflow with the 550 templating script on Ion Chef™ Instrument. This issue is fixed in Torrent Suite™ Software 5.16.1.

New features in Torrent Suite™ Software 5.16

Support ends for use of Torrent Suite™ Software for Ion™ Proton and Ion™ PGM instruments

With the discontinuation of manufacture and sale of Ion Torrent™ Personal Genome Machine™ (Cat No. 4462921) and Ion Proton™ System (Cat No. 4476610), Torrent Suite™ Software 5.14 is the last software release that can be used with an Ion PGM™ System or Ion Proton™ System. When you upgrade to Torrent Suite™ Software 5.16, you can no longer create planned runs and planned run templates or use the software to run these instruments. However, you can continue to view data from an Ion PGM™ System or Ion Proton™ System that is connected to your Ion Torrent Server.

Create a Planned Run for a 2-pool Sample Set

When you use the OncoPrint™ Comprehensive Assay Plus panel, you can combine multiple Sample Sets for use in a single Planned Run. When you combine multiple Sample Sets, you can extend the number of samples that you use in a sequencing run. Each Sample Set can contain up to 8 samples. For more information, see OncoPrint™ Comprehensive Assay Plus User Guide (Pub. No. MAN0018490).

Create a Planned Run with multiple Ion Reporter™ Software analyses

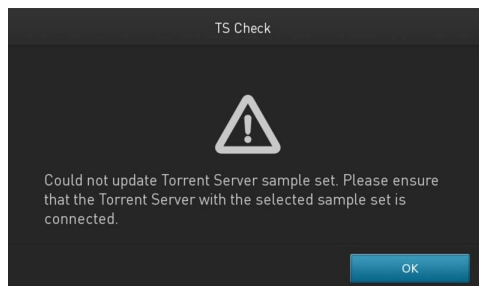
You can automatically launch multiple Ion Reporter™ Software workflows for use with a single sample when you use preinstalled Planned Run templates for use with the Immune Repertoire research application.

Support for TriLink Small RNA research application

With the discontinuation of the Ion Torrent™ Small RNA research application, Torrent Suite™ Software 5.16 updates include a run template and plugin to support the analysis of the recommended TriLink CleanTag Small RNA Library Prep Kit with Barcode Convert Primers for Ion Torrent™ Sequencing Technology.

Sample set creation required for creation of libraries on Ion Chef instrument

You must create a sample set in Torrent Suite™ Software before you begin to use the Ion Chef™ instrument to create Ion AmpliSeq™ libraries. If the Ion™ Chef does not find a sample set, the instrument touch screen will show an error and automated library creation will be suspended until a sample set is created. If you receive the following error, sign into Torrent Suite™ Software, create the sample set for the instrument run, then return to the instrument and click **OK**.



Fixed Issues in Torrent Suite™ Software 5.16

IonReporterUploader plugin fails to upload files from Torrent Suite™

Software

An issue with the IRU plugin version 5.14.0.6 caused the upload of files to Ion Reporter Software 5.14 to fail. This issue is fixed in Torrent Suite Software 5.16.

Increased time to complete runs after Ubuntu upgrade of Ion Torrent™ Server

After the Ion Torrent Server was upgraded to Ubuntu 18.04, some customers noticed an increase in the time required for the analysis pipeline to complete for runs that use a Ion Torrent™ 550 Chip. This issue fixed in Torrent Suite™ Software 5.16.

Known issue in Torrent Suite™ Software 5.16

Chip type error message for some imported panels

In some cases, in Torrent Suite™ Software 5.16, when you create a Planned Run, an error message is shown that indicates that the chip type is not found even though the chip is available. This issue occurs in the following instances, for some panels.

- When you import panel files and a Planned Run template from [AmpliSeq.com](https://www.ampliseq.com), then create a Planned Run with the imported panel and template.
- When you create a Planned Run in Torrent Suite™ Software 5.16 with some panels that you imported in some previous versions of the software.

Workaround: Ignore the warning message, select the appropriate chip for the run in the Kits step of the Create Plan workflow, then proceed with the Planned Run creation.

To resolve the issue, edit the Planned Run template, select the appropriate chip type in the Kits step of the Create Template workflow, then save the updated template. After the template is updated, the chip type error message is not shown when you create a Planned Run.

Important information in Torrent Suite™ Software 5.16

With the discontinuation of manufacture and sale of Ion Torrent™ Personal Genome Machine™ (Cat No. 4462921) and Ion Proton™ System (Cat No. 4476610), Torrent Suite™ Software 5.14 is the last software release that can be used with an Ion PGM™ System or Ion Proton™ System. When you upgrade to Torrent Suite™ Software 5.16, you can no longer create planned runs and planned run templates or use the software to run these instruments. However, you can continue to view data from an Ion PGM™ System or Ion Proton™ System that is connected to your Ion Torrent Server.

If you want to continue to plan and run Ion PGM™ System or Ion Proton™ System runs on an Ion Torrent™ Server, you can continue to use Torrent Suite™ Software 5.14 with the instruments and have the option to upgrade at a later time. You must continue to run Torrent Suite™ Software 5.14 on the Ion Torrent™ Server to create new planned runs and templates for the Ion PGM™ System or Ion Proton™ System, and run those instruments.

The two following options are available in Torrent Suite™ Software during the upgrade process:

- **Upgrade to Torrent Suite™ Software 5.16**

Torrent Suite™ Software 5.14 is the last software release that can be used with an Ion PGM™ System or Ion Proton™ System. If you have Ion S5™, Ion S5™ XL, or Ion GeneStudio™ S5 Sequencers and an Ion PGM™ System or Ion Proton™ System on an Ion Torrent™ Server, you have the option to upgrade to Torrent Suite™ Software 5.16.

IMPORTANT! After upgrade, you can maintain the instrument connections and continue to view Ion PGM™ System or Ion Proton™ System data and run results from earlier versions of Torrent Suite™ Software. However, you cannot use the Ion Torrent™ Server to create new planned runs and templates for the Ion PGM™ System or Ion Proton™ System, or to run those instruments.

- **Continue to use Torrent Suite™ Software 5.14**

If you want to continue to plan and run Ion PGM™ System or Ion Proton™ System runs on an Ion Torrent™ Server, you can continue to use Torrent Suite™ Software 5.14 with the instruments and have the option to upgrade at a later time. You must continue to run Torrent Suite™ Software 5.14 on the Ion Torrent™ Server to create new planned runs and templates for the Ion PGM™ System or Ion Proton™ System, and run those instruments.

Install Torrent Suite™ Software 5.16

IMPORTANT! You cannot roll back to a previous version of Torrent Suite™ Software and Ion Torrent™ instrument software after you perform the upgrade described in this document.

IMPORTANT! When updating Torrent Suite™ Software, it is critical that you update both the software on the instrument and the software on the Ion Torrent™ Server. In Torrent Suite™ Software 4.0 and later, the instrument will not retrieve the proper on-instrument analysis if both systems are not updated.

IMPORTANT! During this upgrade, you must use the same user account for both the Ion Torrent™ Server and the Ion instruments (Ion PGM™ Instrument, Ion Chef™ Instrument, Ion Proton™ Sequencer, Ion GeneStudio™ Plus S5, Ion GeneStudio™ S5 Prime, and Ion S5™ and S5™ XL Sequencers).

- 1) Click **(Settings) > Configure**.
- 2) Scroll to the Database Administration section, then click **Admin Interface**.
If you are prompted to sign in, use your ionadmin account.
- 3) On the Admin Interface scroll to the Management Actions section, then click **Update Server**.
The Update Torrent Suite screen opens with information on available software versions, including whether updates are available.
- 4) Click **Activate** to power on website maintenance.
- 5) Click **Check** to check for updates.
- 6) If your Ion Torrent™ Server is connected to both Ion PGM™ System or Ion Proton™ System and Ion GeneStudio™ S5 Series or Ion S5™ systems, select an option to either not upgrade and continue to run Torrent Suite™ Software 5.14, or to upgrade to Torrent Suite™ Software 5.16.

To use the Ion Torrent Server with . . .	Select this . . .
Torrent Suite™ Software 5.14 on an Ion Torrent™ Server that currently includes both an Ion S5™ System, Ion S5™ XL System, or Ion GeneStudio™ S5 System and an Ion PGM™ System or Ion Proton™ System.	PGM/Proton

Torrent Suite™ Software 5.16

S5

IMPORTANT! If you upgrade to Torrent Suite™ Software 5.16, you cannot downgrade the software to an earlier version. You can continue to view Ion PGM™ System or Ion Proton™ System data and run results with earlier versions of Torrent Suite™ Software but you cannot use the server to connect to those instruments.

- 7) Click **Update Server** to update software on the server.
- 8) When the software update is complete, click **Back to Main Site**, then click **(Settings) > About**. Review the software version number in the releases list to ensure that it reflects the update that you completed.
- 9) To ensure that the software upgrade is complete, and that the software is ready to run analysis programs, click **(Settings) > Services**.
- 10) In Services in the Status column, review all services to ensure that each is running.
- 11) To ensure compatibility between the software and your instruments, upgrade your sequencing instruments after the software upgrade is complete.


Updates through a command-line user interface

Note: This procedure is typically performed by Thermo Fisher Scientific field service engineers. Most users will instead use the procedure above for updates through the Torrent Suite™ Software.

You can use a command-line interface to update the Torrent Suite™ Software. The complete command-line interface update procedure is:

- 1 `sudo apt-get update`
- 2 `sudo apt-get install ion-tsconfig`
- 3 When prompted to accept EULA acceptance, press “Tab”, then “Return” to proceed with update.
- 4 `sudo TSconfig -s`
- 5 `sudo TSconfig --configure-server`

Verify the software update on the Ion Torrent™ Server

To verify that the Ion Torrent™ Server is running Torrent Suite™ Software 5.16, click  **(Settings) > About** in the Torrent Suite™ Software and review the version number.

Update the instrument software

Update the software on any Ion instruments in use:

- Ion GeneStudio™ S5 Sequencer
- Ion S5™ and S5™ XL Sequencer
- Ion Chef™ Instrument
- Ion OneTouch™ 2 Instrument

Package and version information

Release Date	September 2021
Release Version	5.16.1

Software packages versions in 5.16.1

These tables list the versions for each of the latest software packages for Torrent Suite™ Software plugins and Ion Torrent™ instruments.

Package	Version
ion-analysis	5.16.6-1
ion-dbreports	5.16.28-1
ion-django	5.16.0-1
ion-gpu	5.16.1-1
ion-pipeline	5.16.14-1
ion-plugins	5.16.6-1
ion-publishers	5.16.6-1
ion-rsmts	5.16.1-1
ion-torrentpy	5.16.6-1
ion-torrenttr	5.16.6-1
ion-tsconfig	5.16.19-1
Plugin	Version
ion-plugin-ampliseqrna	5.16.0.0
ion-plugin-assemblerspades	5.16.0.0
ion-plugin-coverageanalysis	5.16.0.4
ion-plugin-dataexport	5.16.0.0
ion-plugin-erccanalysis	5.16.0.0
ion-plugin-fieldsupport	5.16.11.0
ion-plugin-fileexporter	5.16.0.0
ion-plugin-filterduplicates	5.16.0.0

Package	Version
ion-plugin-immuneresponserna	5.16.0.0
ion-plugin-ionreporteruploader	5.16.0.29
ion-plugin-molecularcoverageanalysis	5.16.0.0
ion-plugin-pgxanalysis	5.16.0.0
ion-plugin-runtransfer	5.16.0.0
ion-plugin-sampleid	5.16.0.3
ion-plugin-variantcaller	5.16.0.0

Ion Chef™ Instrument Control Software in 5.16.1

Package	Version
ion-chefupdates	5.16.8
Package	Version
GUI	140005
IS_scripts	002005
InstrumentServer	002002
GM	000023
OS	00063
TsLink	6.0.6

Ion GeneStudio™ S5/Ion S5™ Instrument Control Software in 5.16.1

Update Package	Version
ion-s5updates	5.16.6
Packages	Version
Scripts	020146
RaptorScripts	000132
RsmAgent	40
RfidMgr	000034
OS	4
OIA	051231
LiveView	2762
Graphics	134
DataCollect	3976

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