

## **Analyze Ion Torrent Data using Partek Flow Plugin on Torrent Server PartekFlow**

Purpose: This document was created as an instructional document for configuring the Partek Flow plugin on Torrent Server to perform Enhanced QA/QC, and to seamlessly integrate into Partek Flow for downstream analysis.

If the plug-in doesn't exist, it can be downloaded and installed from the Ion Torrent Community:

[Download Plugin](#)

### Installation Option - Online

Copy and paste this link into your Torrent Browser under the 'Config' tab after clicking the 'Add' button in the plugin section to auto install the plugin.

<http://torrentcircuit.iontorrent.com/warehouse/download/feedfile/PartekFlow.xml>

### Installation Option - Offline

The link below provides the download to the plugin.

<http://torrentcircuit.iontorrent.com/warehouse/download/offlineinstaller/83>

The link below will take the user to the Ion Torrent Community to view an instructional video for installing plugins on Torrent Server:

([Auto-Installation of a Plugin on Torrent Circuit](#)) <http://lifetech-it.hosted.jivesoftware.com/videos/1307>

A username and password is required in order to gain access. Please sign up for the Ion Torrent Community if you do not already have an account.

## **Configure the Flow Plug-in within Ion Torrent Server**

From the CONFIG tab enable the plugin by selecting the 'Enabled' checkbox:

## Torrent Server

Plan
Monitor
Data

About
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**Plugins**
Configure
Accounts

Install or Upgrade Plugin

### Plugins

Enabled
Disabled
Either

Autorun
Manual
Either

Clear

Enabled	Autorun	Name	Version	Date ▼	Manage
<input checked="" type="checkbox"/>	<input type="checkbox"/>	PartekFlow	1	2013/08/29 01:44 PM	
<input checked="" type="checkbox"/>		RunRecognition	3.6.63335	2013/07/24 11:05 AM	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	IonReporterUploader	3.6.2-r62833	2013/07/24 11:05 AM	

Please configure the Partek Flow Installation dialog and set the server URL to the installation of Partek Flow and the username for the Partek Flow account.

Flow server URL (hostname:port)

Flow username

Flow password

Don't have an installation of Flow available? Contact [sales@partek.com](mailto:sales@partek.com)

(The plugin will still generate a QA/QC report if Flow server is left blank)

Submit

This plugin requires Partek Flow version **2.0.12.0305** or later.

### Running the Plugin

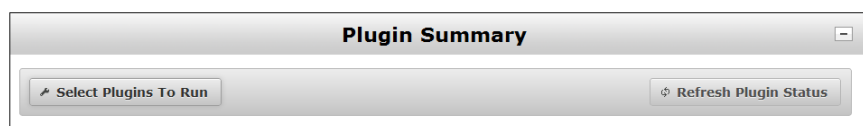
To run the plugin, select the report from the REPORTS tab.

# Torrent Server

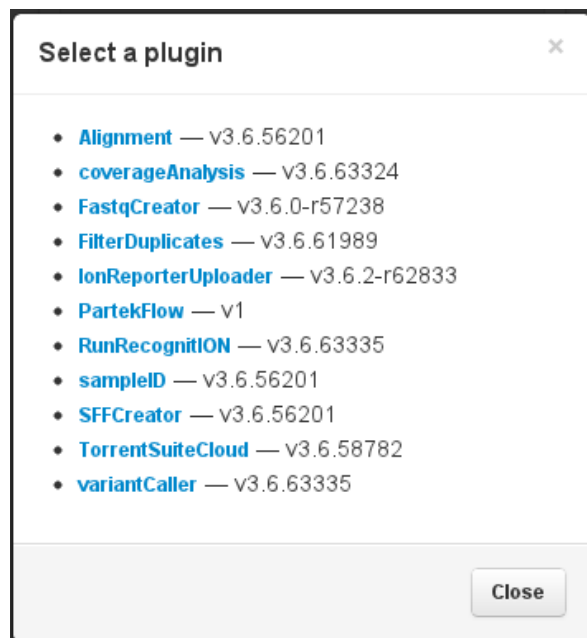


This will take you to a Report Summary page.


Scroll down to the 'Plugin Summary' at near the bottom of the page.



Click on the 'Select Plugins To Run' button and then run PartekFlow'.



You will be asked to configure the Flow Installation with a Flow Project name. The default URL and Username will be the values set from the CONFIG tab. After the information has been entered, select the button 'Run Enhanced QC Report and Export to Partek Flow'.



Don't have Partek Flow for NGS Data Analysis?  
[Click](#) to learn more and download a FREE trial.

**To export your data to Partek Flow,  
enter your login details.**

*Leave blank to only view QC report.*

Flow Server URL (hostname:port)

Flow Username

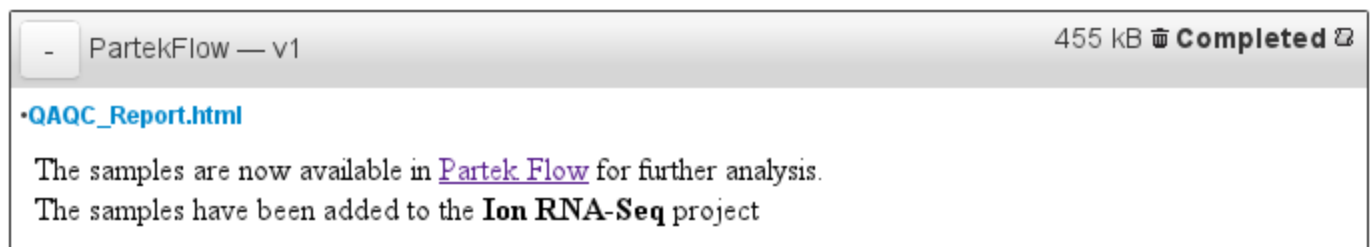
Flow Password

Project Name

**Run Enhanced QC Report  
and Export to Partek Flow**

The plugin will run and a message will show when the plugin has 'Completed'. You may have to click the button 'Refresh Plugin Status' for it to update.

By default, the sample will be added to a Project in Partek Flow that matches the name of the project you chose in the configuration dialog.



The QA/QC report is available from the link "QAQC\_Report.html". The bottom link in the PartekFlow plugin will direct you to the Flow server where the data was sent (The samples are now available in Partek Flow for further analysis).

By default, the QA/QC report will display information about the alignments to ERCC controls, forward/reverse strand matches, percent of controls present, Pearson correlation between observed concentrations and expected concentration. Plots are generated to display Observed vs. Expected concentrations and mapping quality score.

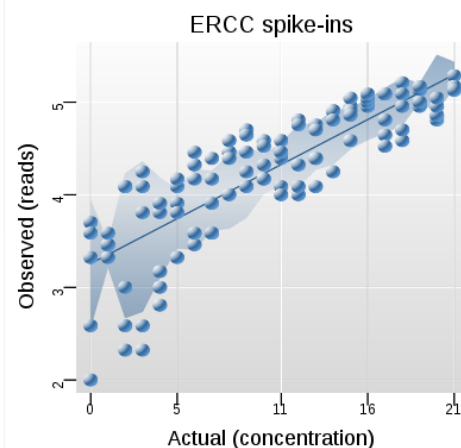
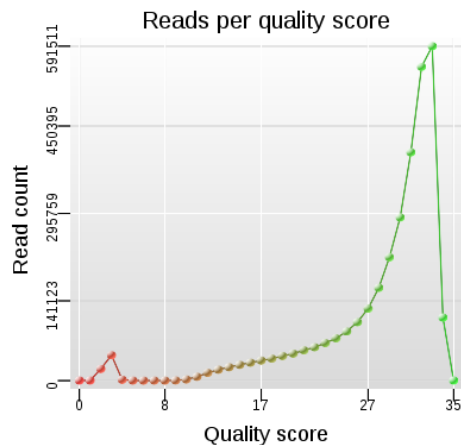
## QA/QC Report

**Total Reads:** 3264330  
**Average Read Quality Score:** 29.3869  
**Quality Score Format:** Phred+33

### ERCC controls

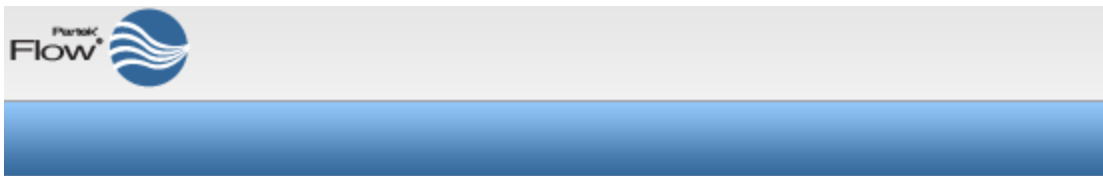
<b>Total number of alignments to controls</b>	125394
<b>Forward strand matches</b>	48689
<b>Reverse strand matches</b>	76705
<b>Percent of controls present (&gt;=1 count)</b>	100 (92 out of 92)
<b>Pearson correlation</b>	81.05214

Control	Alignments	Concentration
ERCC-00034	12388	7850
ERCC-00062	12247	8192
ERCC-00104	9653	5192
ERCC-00057	9335	5096
ERCC-00162	8782	4096
ERCC-00099	7850	3536
ERCC-00123	5731	2702
ERCC-00117	5677	2751
ERCC-00003	3536	1310
ERCC-00134	2838	1277
ERCC-00002	2526	890
ERCC-00004	2501	812
ERCC-00111	2296	819
ERCC-00044	2286	790
ERCC-00131	2048	741
ERCC-00042	1750	655
ERCC-00113	1370	524
ERCC-00154	1308	566
ERCC-00040	1277	253
ERCC-00098	1194	368



### Analyze Data data in Partek Flow

Login to Partek Flow using the appropriate credentials.

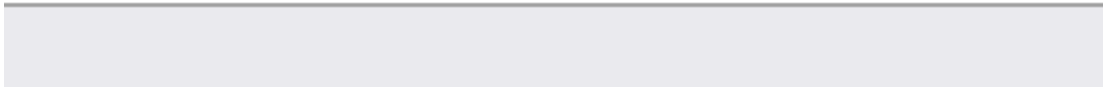


## Login

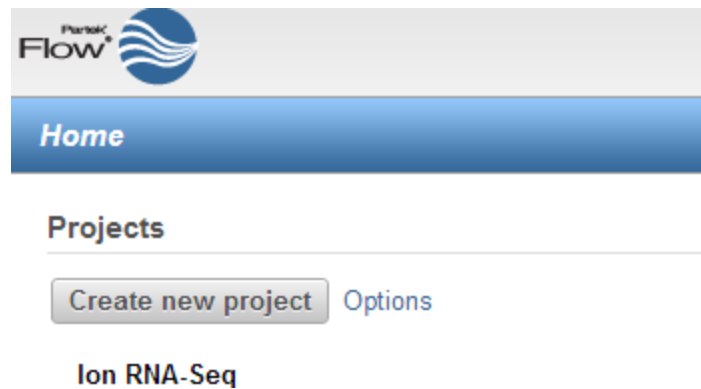
**Username**

**Password**

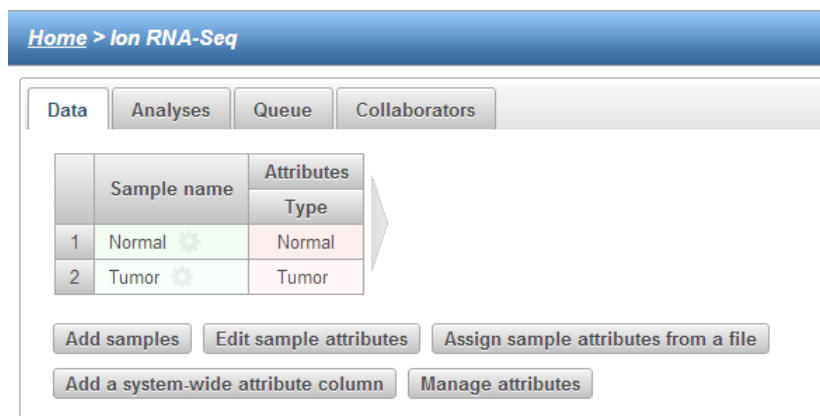
[Forgot password?](#)



After you log in to Flow you will see that the project has been created and the sample has been added to it.



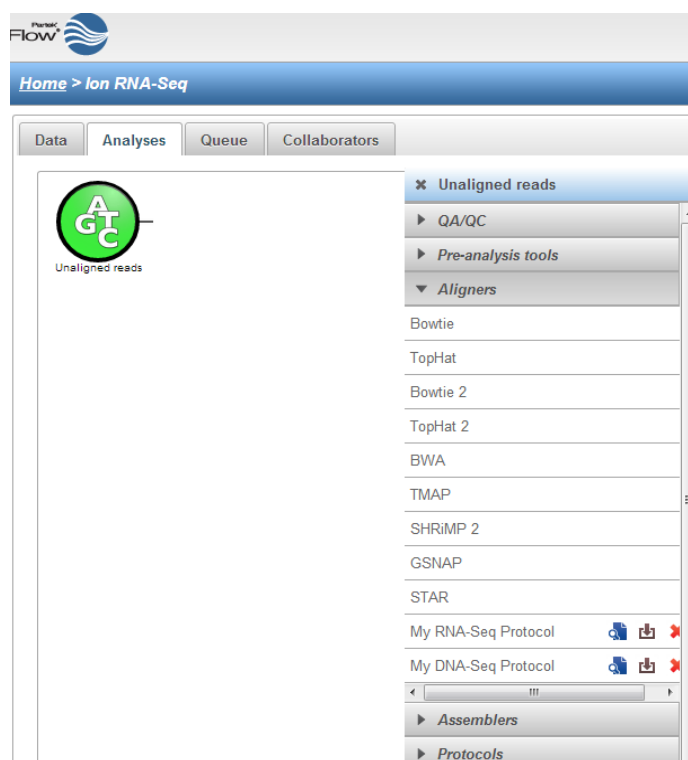
Click on the created project. You will see the sample(s) under the Data tab. Here you can add information about the samples using the sample manager.



After you have added the sample information, you can align your reads under the 'Analyze' tab.

### Align your reads using Ion Torrent TMAP algorithm

From the 'Analyze' tab you can align the data. Select the 'Unaligned reads' icon. You will see the option to align the reads to a reference genome using TMAP.



Refer to the Alignment Guide in Partek Flow to assist in the alignment. Once alignment is complete additional analysis can be performed.

