Customer Release Notes

BCL Convert v3.10.5

INTRODUCTION

These Release Notes detail the latest release of BCL Convert, including known issues.

BCL Convert converts per cycle binary data output by Illumina sequencers containing basecall files and quality scores to per read FASTQ files.

FEATURES

- A barcode collision will now be detected if sequences from either index read in a dual index run collide, as opposed to requiring both indices colliding. When this occurs the software will error out
- Increased values reported to 6 decimal points in the following stats outputs:
  - '% of Hopped Reads' and '% of All Reads' columns of Index_Hopping_Metrics.csv
  - '% of Unknown Barcodes' and '% of All Reads' columns of Top_Unknown_Barcodes.csv
- Allow the number of unknown barcodes reported to be set via the command line option --num-unknown-barcodes-reported, where the default is 1000 and any integer from 0 can be specified, including "all" to output all unknown barcodes
- Performance and robustness improvements

RESOLVED ISSUES

- Top Unknown Barcodes '% of Unknown Barcodes' is now % of all unknown, not just % of printed unknown barcodes (i.e. not affected by number of barcodes being output)
- Fixed a crash when a pure lane specifier is followed by a '+' for 'tiles' & 'exclude-tiles' command-line options (e.g. '--tiles s_1+s_2)
- Fixed a crash when config.xml is present in BaseCalls directory on aggregated-bcl inputs (bcl.bgzf)
- Fixed a bug where incorrect demux or data is produced when a run has a Read 1 size less than 25 cycles
- Barcode Collision Error and Solution
  - Previous versions of BCL Convert allowed the overall concentrated sequence to pass the single index hamming distance rules if the concentration was sufficiently diverse. BCL Convert 3.10.5 uses strict barcode collision logic to support increased high-throughput and complex sample pooling. Each index in a dual setup must individually meet the hamming distance requirements set by the BarcodeMismatchesIndex# value. If either i7 or i5 does not meet the hamming distance requirements the program will error.
    For default BarcodeMismatchesIndex1 and BarcodeMismatchesIndex2:
  - Barcodes must differ by at least three bases.
  - If any two samples in i7 differ by fewer than 3 bases, an error is produced and the run will not proceed, regardless of their i5 values.
  - If any two samples in i5 differ by fewer than 3 bases, an error is produced regardless of their i7 values.
  - If you receive errors with current versions of DRAGEN or BCL Convert, lower the mismatch tolerance for the index producing the error by using the BarcodeMismatchesIndex1 or BarcodeMismatchesIndex2 sample sheet settings.

KNOWN ISSUES

- If a directory is specified as input to '--sample-sheet', bcl-convert will hang at the beginning of a run while trying to copy that path as a file to <outdir>/Reports/SampleSheet.csv
- BCL Convert does not validate when “Logs” or “Reports” is provided for a Sample_Project, and the software will be unable to create the subdirectories if these string are provided.
- BCL Convert will not provided a warning or error when a corrupt bci lane file is found in strict or robust mode
- BCL Convert does not support the --first-tile-only option being specified for SP flow cells, but the new ***–tiles*** option can be used as a substitute.

Release History

Revision	Release Reference	Originator	Description of Change
00	CN 1065609	Daniel Tracy	Initial release
01	CN 1083702	Daniel Tracy	Added resolved issue ‘barcode collision error and solution’