

Enforcing path restrictions via triplet locking. In the example above, there are four possible paths that can extend through node C: {ACD, ACE, BCD, BCE}, and each may meet the minimum path extension requirements based on read compatibility and support. Notice, however, that there are read paths (blue thin lines) that traverse triplets of nodes, including ACD and BCE, and there are no complete read paths that traverse the alternative two paths: ACE and BCD. With the '--triplet-lock' parameter enabled, if a node has reads support that passes through both incoming and outgoing nodes, only those triplet paths will be allowed to be included during transcript reconstruction, reducing the number of weakly supported paths to be reported. Triplet-locking is currently enabled by default via Trinity.pl but can be disabled using the Trinity.pl '--no_triplet_lock' flag. Using the no_triplet_lock flag will result in a larger number of transcripts reported, of which some might be chimeric (lower specificity), but will ensure that all possible transcripts will be reported (higher sensitivity).