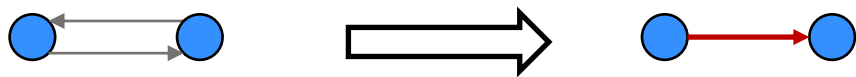
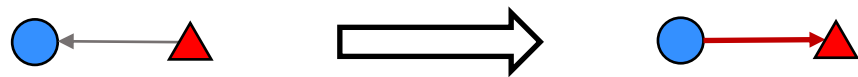


Constraint 1: unique direction



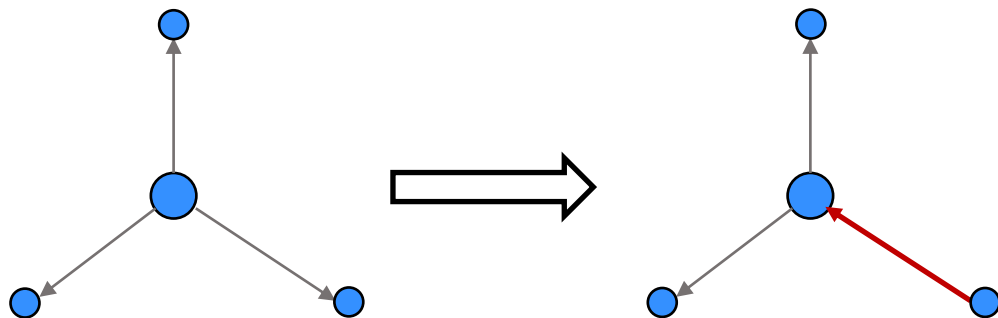
Constraint 2: zero out-degrees at outfalls



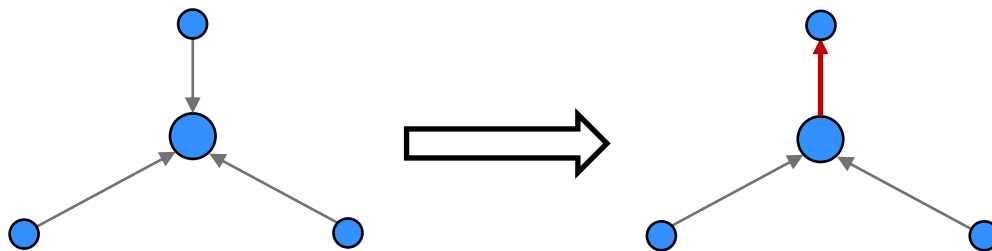
Constraint 3: known flow directions



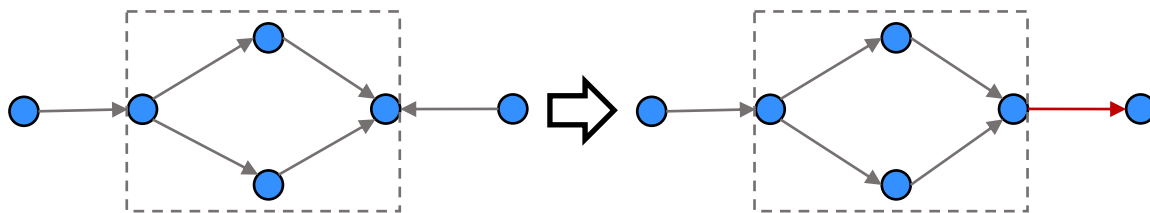
Constraint 4: strictly positive in-degrees at nodes that are neither sources nor situated in an island



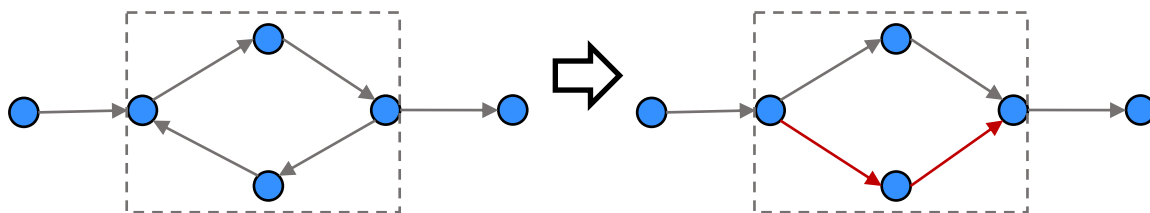
Constraint 5: strictly positive out-degrees at non-outfall nodes



Constraint 6: strictly positive out-degrees of cycles



Constraint 7: no recirculation inside the cycles



● junction ▲ outfall → directed link