

```
{nav2_core::Controller
  ||}
```



```
{cl_nav2z::backward
_local_planner::BackwardLocal
  Planner
|- nh_
- name_
- backwardsPlanPath_
- costmapRos_
- tf_
- goalMarkerPublisher_
- planPub_
- k_rho_
- k_alpha_
- k_beta_
- pure_spinning_allowed
  _beta_error_
- linear_mode_rho_error
  _threshold_
- alpha_offset_
- beta_offset_
- max_linear_x_speed_
- max_angular_z_speed_
- yaw_goal_tolerance_
- xy_goal_tolerance_
- carrot_distance_
- carrot_angular_distance_
- divergenceDetectionLastCarrot
  LinearDistance_
- transform_tolerance_
- waitingTimeout_
- waitingStamp_
- goalReached_
- initialPureSpinningStage_
- straightBackwardsAndPure
  SpinningMode_
- enable_obstacle_checking_
- inGoalPureSpinningState_
- waiting_
- currentCarrotPoseIndex_
|+ BackwardLocalPlanner()
+ ~BackwardLocalPlanner()
+ configure()
+ activate()
+ deactivate()
+ cleanup()
+ setPlan()
+ computeVelocityCommands()
+ isGoalReached()
+ setSpeedLimit()
- updateParameters()
- findInitialCarrotGoal()
- updateCarrotGoal()
- resamplePrecisePlan()
- straightBackwardsAndPure
  SpinCmd()
- clearMarkers()
- publishGoalMarker()
- computeCurrentEuclideanAnd
  AngularErrorsToCarrotGoal()
- checkGoalReached()
- checkCurrentPoseInGoalRange()
- resetDivergenceDetection()
- divergenceDetectionUpdate()
- checkCarrotHalfPlainConstraint()
- generateTrajectory()
- computeNewPositions()
}
```