

```
{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_  
- betta_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()  
}
```