Charm++ - Bug #1537
Support for Shrink/Expand in 6.8.0
04/25/2017 04:58 PM - Bilge Acun

Status: Implemented
Priority: Normal
Assignee: Bilge Acun
Category: 6.8.0
Target version: 6.8.0

Start date: 12/12/2016
Due date:
% Done: 0%
Estimated time: 0.00 hour
Spent time: 0.00 hour

Description
Test if it works.

Subtasks:
Feature # 1251: Document shrink/expand in the manual
Feature # 1328: AMPI shrink/expand example and documentation

History
#1 - 04/25/2017 07:21 PM - Bilge Acun
examples/charm++/shrink_expand is broken. Both shrink and expand operation hangs right after restart.

#2 - 04/25/2017 08:01 PM - Bilge Acun
Bisecting shows that this commit that replaces signal with sigaction is the culprit: https://charm.cs.illinois.edu/gerrit/#/c/887/

#3 - 04/25/2017 09:55 PM - Bilge Acun
- Assignee set to Bilge Acun

Simply replacing signal with sigaction is not giving the same behavior for shrink/expand and the reason is the difference in their semantics. signal function only handles one instance of the signal and returns to default behavior afterwards and this is what's needed for shrink/expand case. On the other hand, sigaction sets the action for all signal occurrences - not just one.

A simple fix to solve this using sigaction is to set the action to SIG_DFL in the handler action function in the first occurrence of the signal. Or we can revert it back to using signal. I'm not sure which solution one is the best since signal seems the behavior that's wanted but sigaction seems to be recommended by Linux manual.

#4 - 04/26/2017 09:02 AM - Bilge Acun
- Status changed from New to Implemented

https://charm.cs.illinois.edu/gerrit/#/c/2438/