

GlideinWMS - Feature #11854

Reduce GWMS glidein pressure sensitivity to pslot fragmentation - new glideins are not requests when there are usable fragments idle

03/01/2016 03:35 PM - Marco Mambelli

Status:	New	Start date:	03/01/2016
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:		Spent time:	0.00 hour
Stakeholders:			
Description			
<p>GWMS is very sensitive to fragmentation (jobs vs pslots). If I submit jobs asking for 3 cores and the pslots have 4 cores there is 1 core remaining idle and causing idle glideins/cores and no new requests.</p> <p>The full problem is multidimensional and complex: any resource (memory, disk, cpus) could cause fragmentation, clustering resources and jobs in buckets would allow a better management but could explode complexity and computing time.</p> <p>Using htcondor auto-clustering may be also a direction for a solution (can machines be auto-clustered as well?)</p> <p>Comparing idle cores instead of idle slots will generate a more correct pressure, the data is already available and could be a first step in the right direction.</p> <p>Very little jobs (<10%) currently are multicore so the problem is not urgent.</p> <p>Follows an example: OK, 151-49=102, respecting 5 idle limit: [2016-03-01 11:46:42,998] INFO: glideinFrontendElement:1746: 151(151 102 0 151) 49(49 10000) 98 49 49 0 196 49 147 5 114k Up ITB_FC_CE3x4@gfactory_inst</p> <p>Could ask for more glideins but 43<70 even if those 70 are unusable 70 cores and there are 129 cores requested by jobs: [2016-03-01 11:54:43,973] INFO: glideinFrontendElement:1746: 43(43 0 0 43) 70(70 10000) 140 70 70 0 280 70 210 0 70001 Up ITB_FC_CE3x4@gfactory_inst</p>			

History

#1 - 03/03/2016 11:31 AM - Marco Mambelli

- Subject changed from Reduce GWMS glidein pressure sensitivity to pslot fragmentation to Reduce GWMS glidein pressure sensitivity to pslot fragmentation - new glideins are not requests when there are usable fragments idle