

Arvados - Story #13908

[Epic] Replace SLURM for cloud job scheduling/dispatching

07/25/2018 01:55 PM - Tom Morris

Status:	Resolved	Start date:	
Priority:	Normal	Due date:	
Assigned To:		% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
See Dispatching containers to cloud VMs			
Outstanding TODOs not covered by a linked ticket:			
<ul style="list-style-type: none">• Integration test that uses a loopback driver to execute crunch-run on localhost (this verifies the interface between dispatcher and crunch-run)• Add tests for activity/resource usage metrics• Performance metrics for dispatching (e.g., time between seeing a container in the queue and starting its crunch-run process on a worker), see Dispatching containers to cloud VMs• Cloud behavior metrics: count unexpected shutdowns, split by instance type• Configurable spending limits• Update runtime_status field when cancelling containers after crunch-run crashes or the cloud VM dies without finalizing the container (already done for the “no suitable instance type” case)• (API) Allow admin users to specify image ID in runtime_constraints; (dispatcher) if present, use runtime_constraints image ID instead of image ID from cluster config file• Run crunch-run as a non-root user• Don't require root at all on the cloud instance			
Outstanding TODO-or-maybe-not-TODOs not covered by a linked ticket:			
<ul style="list-style-type: none">• Periodic status reports in logs. This kind of logging should normally (always?) be handled by an external monitoring system that connects to the existing metrics endpoint.• Cancel containers that take longer than a configurable time limit to schedule (e.g., no nodes ever come up). Unsure whether this is useful: maybe containers should just stay queued until the problem is fixed.			
Related issues:			
Related to Arvados - Bug #13964: crunch-dispatch-cloud spike		Resolved	
Related to Arvados - Feature #14325: [crunch-dispatch-cloud] Dispatch contain...		Resolved	01/28/2019
Related to Arvados - Story #14360: [crunch-dispatch-cloud] Merge incomplete i...		Resolved	10/26/2018
Related to Arvados - Feature #14324: [crunch-dispatch-cloud] Azure driver		Resolved	01/09/2019
Related to Arvados - Story #14807: [arvados-dispatch-cloud] Features/fixes ne...		Resolved	01/29/2019
Related to Arvados - Bug #14745: [crunch-dispatch-cloud] Azure cloud driver f...		Resolved	02/13/2019
Related to Arvados - Bug #14844: [dispatch-cloud] Azure driver bugs discover...		Resolved	02/28/2019
Related to Arvados - Feature #14291: [crunch-dispatch-cloud] AWS driver		Resolved	02/28/2019
Related to Arvados - Story #14931: [arvados-dispatch-cloud] Configurable inst...		Resolved	05/31/2019
Related to Arvados - Feature #14912: [Crunch2] Azure driver supports attachin...		New	
Related to Arvados - Feature #15025: [arvados-dispatch-cloud] GCE driver (Goo...		New	
Related to Arvados - Feature #15051: [a-d-c] EC2 driver supports AssumeRole		New	
Related to Arvados - Feature #15063: [a-d-c] Assign names to EC2 instances		Duplicate	
Related to Arvados - Feature #15370: [arvados-dispatch-cloud] loopback driver		New	
Related to Arvados - Story #15759: [arvados-dispatch-cloud] deploy/run correc...		Resolved	12/30/2019
Related to Arvados - Story #15823: [arvados-dispatch-cloud] Add arvados-dispa...		Resolved	01/13/2020
Related to Arvados - Story #15865: [arvados-dispatch-cloud] Cumulative instan...		New	
Related to Arvados - Feature #16106: [arvados-dispatch-cloud] Azure driver su...		In Progress	
Related to Arvados - Feature #16636: [arvados-dispatch-cloud] Add instance me...		Resolved	08/03/2020
Blocked by Arvados - Story #14796: [crunch-dispatch-cloud] Document installat...		Resolved	01/29/2019
Blocks Arvados - Story #13484: Support multiple load-balanced API server nodes		New	03/18/2019

Blocked by Arvados - Feature #15340: [arvados-dispatch-cloud] Error-counting ...	Resolved	
Blocked by Arvados - Story #15026: [arvados-dispatch-cloud] Cloud driver/conf...	Resolved	06/21/2019
Blocked by Arvados - Feature #15345: [arvados-dispatch-cloud] kill container ...	Resolved	06/19/2019
Blocked by Arvados - Story #15775: [arvados-dispatch-cloud] Promote a-d-c fro...	Resolved	
Blocked by Arvados - Story #15776: [arvados-dispatch-cloud] Add nodemanager->...	Resolved	

History

#1 - 07/25/2018 03:33 PM - Peter Amstutz

- Description updated

#2 - 07/25/2018 03:34 PM - Peter Amstutz

- Description updated

#3 - 08/01/2018 03:24 PM - Tom Morris

- Target version changed from Arvados Future Sprints to To Be Groomed

#4 - 10/10/2018 02:17 PM - Tom Morris

- Related to Bug #13964: crunch-dispatch-cloud spike added

#5 - 10/10/2018 03:44 PM - Tom Clegg

- Related to Feature #14325: [crunch-dispatch-cloud] Dispatch containers to cloud VMs directly, without slurm or nodemanager added

#6 - 12/19/2018 03:25 PM - Tom Clegg

- Related to Story #14360: [crunch-dispatch-cloud] Merge incomplete implementation added

#7 - 12/19/2018 03:26 PM - Tom Clegg

- Related to Feature #14324: [crunch-dispatch-cloud] Azure driver added

#8 - 01/30/2019 04:47 PM - Tom Clegg

- Blocked by Story #14796: [crunch-dispatch-cloud] Document installation / migration from c-d-slurm + node manager added

#9 - 02/04/2019 10:17 PM - Tom Clegg

- Related to Story #14807: [arvados-dispatch-cloud] Features/fixes needed before first production deploy added

#10 - 02/07/2019 07:34 PM - Tom Clegg

- Description updated

#12 - 02/12/2019 03:40 PM - Tom Clegg

- Related to Bug #14745: [crunch-dispatch-cloud] Azure cloud driver fixups added

#13 - 02/13/2019 07:57 PM - Tom Clegg

- Related to Bug #14844: [dispatch-cloud] Azure driver bugs discovered in trial run added

#14 - 03/08/2019 07:43 PM - Tom Clegg

- Related to Feature #14291: [crunch-dispatch-cloud] AWS driver added

#15 - 03/26/2019 05:35 PM - Tom Clegg

- Related to Story #14931: [arvados-dispatch-cloud] Configurable instance tags added

#16 - 03/26/2019 06:02 PM - Tom Clegg

- Related to Feature #14912: [Crunch2] Azure driver supports attaching extra storage added

#17 - 03/26/2019 06:06 PM - Tom Clegg

- Related to Feature #15025: [arvados-dispatch-cloud] GCE driver (Google Compute Engine) added

#18 - 03/26/2019 06:37 PM - Tom Clegg

- Related to Story #15026: [arvados-dispatch-cloud] Cloud driver/config testing tool added

#19 - 03/26/2019 07:17 PM - Tom Clegg

- Description updated

#20 - 04/03/2019 03:06 PM - Tom Clegg

- Related to Feature #15051: [a-d-c] EC2 driver supports AssumeRole added

#21 - 04/10/2019 04:06 PM - Tom Clegg

- Related to Feature #15063: [a-d-c] Assign names to EC2 instances added

#23 - 06/03/2019 06:10 PM - Ward Vandewege

- Blocks Story #13484: Support multiple load-balanced API server nodes added

#24 - 06/05/2019 03:15 PM - Ward Vandewege

- Subject changed from Replace SLURM for cloud job scheduling/dispatching to [Epic] Replace SLURM for cloud job scheduling/dispatching

#25 - 06/05/2019 03:46 PM - Ward Vandewege

- Release set to 22

#26 - 06/07/2019 05:51 PM - Tom Clegg

- Blocked by Feature #15340: [arvados-dispatch-cloud] Error-counting metrics added

#27 - 06/07/2019 07:56 PM - Tom Clegg

- Related to deleted (Story #15026: [arvados-dispatch-cloud] Cloud driver/config testing tool)

#28 - 06/07/2019 07:56 PM - Tom Clegg

- Blocked by Story #15026: [arvados-dispatch-cloud] Cloud driver/config testing tool added

#29 - 06/10/2019 03:21 PM - Tom Clegg

- Blocked by Feature #15345: [arvados-dispatch-cloud] kill container (management API) added

#30 - 06/14/2019 08:38 PM - Tom Clegg

- Description updated

#31 - 06/14/2019 09:02 PM - Tom Clegg

- Related to Feature #15370: [arvados-dispatch-cloud] loopback driver added

#32 - 10/24/2019 06:14 PM - Tom Clegg

- Related to Story #15759: [arvados-dispatch-cloud] deploy/run correct version of crunch-run binary on worker nodes added

#33 - 10/29/2019 07:55 PM - Tom Clegg

- Description updated

#34 - 10/29/2019 08:01 PM - Tom Clegg

- Blocked by Story #15775: [arvados-dispatch-cloud] Promote a-d-c from "experimental" to default in install docs added

#35 - 10/29/2019 08:01 PM - Tom Clegg

- Blocked by Story #15776: [arvados-dispatch-cloud] Add nodemanager->a-d-c instructions to upgrade notes added

#36 - 11/06/2019 04:40 PM - Tom Morris

- Target version changed from To Be Groomed to 2019-11-20 Sprint

#37 - 11/06/2019 04:58 PM - Tom Morris

- Target version deleted (2019-11-20 Sprint)

#38 - 11/06/2019 04:58 PM - Tom Morris

- Target version set to Arvados Future Sprints

#39 - 11/13/2019 03:46 PM - Tom Clegg

- Related to Story #15823: [arvados-dispatch-cloud] Add arvados-dispatch-cloud management APIs to doc site added

#41 - 11/21/2019 09:48 PM - Tom Clegg

- Related to Story #15865: [arvados-dispatch-cloud] Cumulative instance time and cost metrics added

#42 - 01/08/2020 05:06 PM - Tom Clegg

- Release deleted (22)

#43 - 01/30/2020 09:24 PM - Tom Clegg

- Related to Feature #16106: [arvados-dispatch-cloud] Azure driver support for preemptible instances added

#44 - 07/29/2020 01:50 PM - Tom Clegg

- Related to Feature #16636: [arvados-dispatch-cloud] Add instance metrics added

#45 - 09/21/2020 03:12 PM - Peter Amstutz

- Status changed from New to Resolved

#46 - 11/04/2020 05:02 PM - Ward Vandewege

- Target version deleted (Arvados Future Sprints)