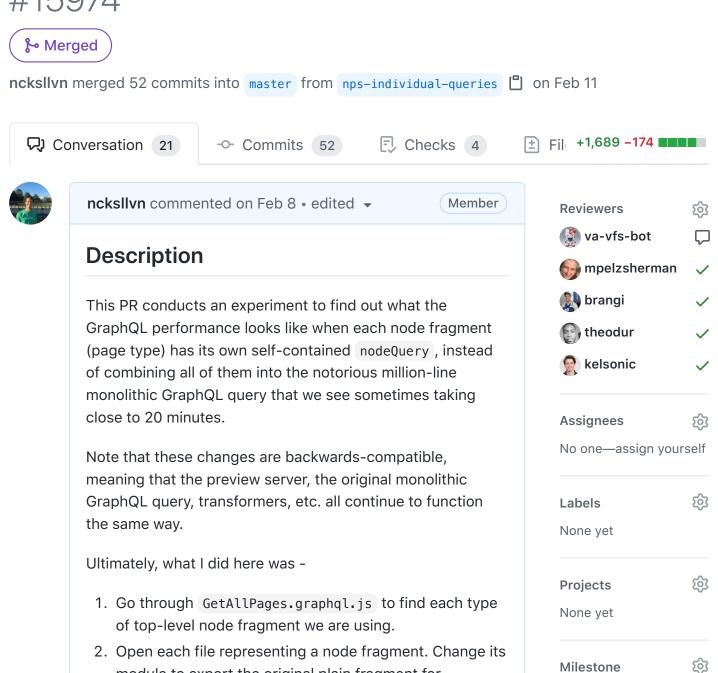


[GraphQL] Convert monolithic query Open with • into a pattern of small queries

#15974



module to export the original plain fragment for backwards-compatibility, and a self-contained

Milestone

No milestone

nodeQuery for this experiment. Each node fragment relied on a set of global paragraph fragments that normally the node fragment has no direct reference to, so I had to also import the paragraph fragments file and add those into the self-contained nodeQuery as well.

- 3. Write a new method onto build/drupal/api.js that does the "individualized" version of the GraphQL query, where it executes in parallel all of the nodeQuery s.
- 4. Call this new method from metalsmith-drupal when build type isn't prod.

Testing done

Sometimes the Drupal GraphQL API (both monolithic and individualized) is "hot" and will serve the entire response in seconds. Seriously, sometimes like 3 seconds. This is likely when Drupal's cache is ready and the content unchanged. The case we are worried about though is when the cache is cold, which was kinda tough to replicate. Here's an example though, where it appears to shave off 12 minutes.

The output is kind of verbose, but obviously we can wrap it with the verbose build arg. It's useful to see which specific queries are the most expensive. For instance, the nodeQuery to get all VA Forms has a lot of nodes (almost 500) and takes almost 3 minutes on its own, which means it is sometimes the bottleneck. We might be able to make this more efficient by splitting it into two queries, with one taking advantage of Drupal's GraphQL cache.

These result are taken from

http://jenkins.vfs.va.gov/blue/organizations/jenkins/testing%2 Fvets-website/detail/nps-individual-queries/20/pipeline/100.

The "Multiple queries" ran on the vagovstaging build whereas the monolithic query ran on the vagovprod build. Both use Drupal's prod environment.

▼ Multiple queries - finishes at 3 minutes, 2 seconds

[2021-02-08T14:59:44.610Z] Step 3 of 29 start: Get Drupal content [2021-02-08T14:59:44.610Z] Drupal content unavailable in local cache:

Linked issues



Successfully merging this pull request may close these issues.

None yet

7 participants











```
/application/.cache/vagovstaging/drupal/pages.json
[2021-02-08T14:59:44.610Z] Attempting to load
Drupal content from API at http://internal-dsva-
vagov-prod-cms-2000800896.us-gov-west-
1.elb.amazonaws.com
[2021-02-08T14:59:44.610Z] Pulling from Drupal via
GraphQL...
[2021-02-08T14:59:44.610Z] 2 page nodes loaded
from GetNodeHealthServicesListingPages
[2021-02-08T14:59:44.610Z]
GetNodeHealthServicesListingPages done: 1.146s
[2021-02-08T14:59:44.610Z] 13 page nodes loaded
from GetNodeHealthCareLocalFacilityPages
[2021-02-08T14:59:44.610Z]
GetNodeHealthCareLocalFacilityPages done: 1.154s
[2021-02-08T14:59:44.610Z] 158 page nodes loaded
from GetNodeEventPages
[2021-02-08T14:59:44.610Z] GetNodeEventPages done:
1.157s
[2021-02-08T14:59:44.610Z] 1 page nodes loaded
from GetNodeOffices
[2021-02-08T14:59:44.610Z] GetNodeOffices done:
1.386s
[2021-02-08T14:59:44.610Z] 2 page nodes loaded
from GetNodeHealthCareRegionPages
[2021-02-08T14:59:44.610Z]
GetNodeHealthCareRegionPages done: 1.481s
[2021-02-08T14:59:44.610Z] 12 page nodes loaded
from GetNodeLandingPages
[2021-02-08T14:59:44.611Z] GetNodeLandingPages
done: 1.510s
[2021-02-08T14:59:44.611Z] 29 page nodes loaded
from GetNodePressReleasePages
[2021-02-08T14:59:44.611Z]
GetNodePressReleasePages done: 1.512s
[2021-02-08T14:59:44.611Z] 3 page nodes loaded
from GetNodeEventListingPage
[2021-02-08T14:59:44.611Z] GetNodeEventListingPage
done: 2.896s
[2021-02-08T14:59:44.611Z] 108 page nodes loaded
from GetNodePersonProfiles
[2021-02-08T14:59:44.611Z] GetNodePersonProfiles
done: 3.303s
[2021-02-08T14:59:44.611Z] 2 page nodes loaded
from GetNodeLeadershipListingPages
[2021-02-08T14:59:44.611Z]
GetNodeLeadershipListingPages done: 3.623s
[2021-02-08T14:59:44.611Z] 1 page nodes loaded
from GetNodePublicationListingPages
[2021-02-08T14:59:44.611Z]
GetNodePublicationListingPages done: 3.704s
[2021-02-08T14:59:44.611Z] 76 page nodes loaded
from GetNodeQa
```

```
[2021-02-08T14:59:44.611Z] GetNodeQa done: 3.717s
[2021-02-08T14:59:44.611Z] 42 page nodes loaded
from GetNodeNewsStoryPages
[2021-02-08T14:59:44.611Z] GetNodeNewsStoryPages
done: 3.851s
[2021-02-08T14:59:44.611Z] 274 page nodes loaded
from GetNodePages
[2021-02-08T14:59:44.611Z] GetNodePages done:
4.041s
[2021-02-08T14:59:44.611Z] 1 page nodes loaded
from GetNodeBasicLandingPage
[2021-02-08T14:59:44.611Z] GetNodeBasicLandingPage
done: 4.631s
[2021-02-08T14:59:44.611Z] 2 page nodes loaded
from GetNodeLocationsListingPages
[2021-02-08T14:59:44.611Z]
GetNodeLocationsListingPages done: 4.846s
[2021-02-08T14:59:44.611Z] 365 page nodes loaded
from GetArchivedNodeEventPages
[2021-02-08T14:59:44.611Z]
GetArchivedNodeEventPages done: 4.875s
[2021-02-08T14:59:44.611Z] 13 page nodes loaded
from GetNodeMultipleQaPages
[2021-02-08T14:59:44.611Z] GetNodeMultipleQaPages
done: 4.878s
[2021-02-08T14:59:44.611Z] 0 page nodes loaded
from GetNodeMediaListImages
[2021-02-08T14:59:44.611Z] GetNodeMediaListImages
done: 5.020s
[2021-02-08T14:59:44.611Z] 2 page nodes loaded
from GetNodeStoryListingPages
[2021-02-08T14:59:44.611Z]
GetNodeStoryListingPages done: 5.064s
[2021-02-08T14:59:44.611Z] 2 page nodes loaded
from GetNodeVamcOperatingStatusAndAlerts
[2021-02-08T14:59:44.611Z]
GetNodeVamcOperatingStatusAndAlerts done: 5.130s
[2021-02-08T14:59:44.611Z] 0 page nodes loaded
from GetNodeMediaListVideos
[2021-02-08T14:59:44.611Z] GetNodeMediaListVideos
done: 5.883s
[2021-02-08T14:59:44.611Z] 10 page nodes loaded
from GetNodeSupportResourcesDetailPage
[2021-02-08T14:59:44.611Z]
GetNodeSupportResourcesDetailPage done: 5.917s
[2021-02-08T14:59:44.611Z] 0 page nodes loaded
from GetCampaignLandingPages
[2021-02-08T14:59:44.611Z] GetCampaignLandingPages
done: 5.988s
[2021-02-08T14:59:44.611Z] 6 page nodes loaded
from GetNodeStepByStep
[2021-02-08T14:59:44.611Z] GetNodeStepByStep done:
6.005s
```

```
[2021-02-08T14:59:44.611Z] 85 page nodes loaded
from GetNodeHealthCareRegionDetailPage
[2021-02-08T14:59:44.611Z]
GetNodeHealthCareRegionDetailPage done: 6.082s
[2021-02-08T14:59:44.611Z] 0 page nodes loaded
from GetNodeChecklist
[2021-02-08T14:59:44.611Z] GetNodeChecklist done:
6.087s
[2021-02-08T14:59:44.611Z] 2 page nodes loaded
from GetNodePressReleaseListingPages
[2021-02-08T14:59:44.611Z]
GetNodePressReleaseListingPages done: 6.329s
[2021-02-08T15:00:16.599Z]
GetNonNodeWebsiteComponents done: 37.508s
[2021-02-08T15:02:52.973Z] 438 page nodes loaded
from GetNodeVaForms
[2021-02-08T15:02:52.973Z] GetNodeVaForms done:
3:01.635 (m:ss.mmm)
[2021-02-08T15:02:52.973Z] Finished all queries -
1649 pages
[2021-02-08T15:02:52.973Z] http://internal-dsva-
vagov-prod-cms-2000800896.us-gov-west-
1.elb.amazonaws.com response time: : 3:01.642
(m:ss.mmm)
[2021-02-08T15:02:52.973Z] Total time to load
content from GraphQL: 3:02.001 (m:ss.mmm)
[2021-02-08T15:02:52.973Z] Drupal successfully
[2021-02-08T15:02:52.973Z] Successfully piped
Drupal content into Metalsmith!
[2021-02-08T15:02:52.973Z] Step 3 end [191751ms]:
Get Drupal content
```

▼ Monolithic query: 14 minutes, 48 seconds

```
[2021-02-08T14:59:44.590Z] Step 3 of 29 start: Get
Drupal content
[2021-02-08T14:59:44.590Z] Drupal content
unavailable in local cache:
/application/.cache/vagovprod/drupal/pages.json
[2021-02-08T14:59:44.590Z] Attempting to load
Drupal content from API at http://internal-dsva-
vagov-prod-cms-2000800896.us-gov-west-
1.elb.amazonaws.com
[2021-02-08T15:14:36.188Z] http://internal-dsva-
vagov-prod-cms-2000800896.us-gov-west-
1.elb.amazonaws.com response time: : 14:48.555
(m:ss.mmm)
[2021-02-08T15:14:36.188Z] Total time to load
content from GraphQL: 14:48.902 (m:ss.mmm)
[2021-02-08T15:14:36.188Z] Drupal successfully
loaded!
```

[2021-02-08T15:14:36.188Z] Successfully piped Drupal content into Metalsmith! [2021-02-08T15:14:36.188Z] Step 3 end [898942ms]: Get Drupal content

Test this locally but pulling the branch and running yarn build:content --pull-drupal.

Acceptance criteria

☑ Peak GraphQL response times are drastically reduced

Definition of done

- Events are logged appropriately
- Documentation has been updated, if applicable
- A link has been provided to the originating GitHub issue (or connected to it via ZenHub)
- ☑ No sensitive information (i.e. PII/credentials/internal URLs/etc.) is captured in logging, hardcoded, or specs









Begin pattern for separate nodeQuery 28bd8d7

-O- Add landing page, health care region 5e9a4e1 page

• Add bio page; fix health care region × 53c3c7c

► parallelize the requests × 3e4da4c

-o- add office 1354da3

- Add health care local facility 5408aea

→ add services listing × 7dddef6

add news stories 1297990

-0-	add press release page	23f0e63
-0-	<pre>add press release listing</pre>	a193a05
-0-	add event listing pages	15045fb
-0-	<pre>add story listing, event</pre>	× 1e3c592
-0-	add location lists and leader lists	× dbbe040
-0-	<pre>add GetNodeVamcOperatingStatusAndAlerts</pre>	× 5212582
~	<pre>add publication GetNodePublicationListingPages, GetNodeHealthCareRegi</pre>	× 45a9760
-0-	Add the non-node queries	6de7ae7
-0-	距 fail on graphql errors	516880f
-0-	Add NodeQA and fix components	74e9e46
-0-	Add multiple faq	X fbc3b9c
-0-	add step by step	× 0b430f9
-0-	<pre>Add GetNodeMediaListImages</pre>	6463ddb
-0-	♠ Add GetNodeChecklist	d50306e
-0-	add GetNodeMediaListVideos	051d591
-0-	<pre>add GetNodeSupportResourcesDetailPage</pre>	08f91f2
-0-	Add GetNodeBasicLandingPage	b572e36
-	<pre>Add GetCampaignLandingPages</pre>	abc01a1
-	<pre>update health_care_region_page filter</pre>	b3c7541
-	<pre>add to rest of build</pre>	× c388c0a
-	remove types	d447ce7
-0-	<pre>Merge remote-tracking branch 'origin/master' into nps-individual- queries</pre>	× ac26f5f
-	remove the prod flag	× 46d2e30

35 hidden items **Load more...**



o ncksllvn requested review from mpelzsherman and department-of-veterans-affairs/vsa-public-websites-frontend on Feb 9

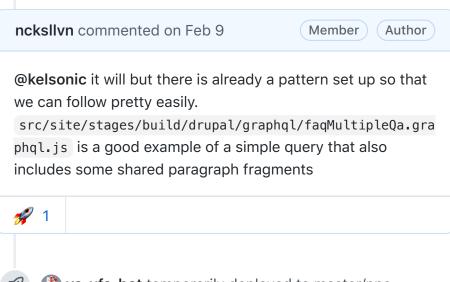


kelsonic approved these changes on behalf of department-of-veterans-affairs/vsa-public-websites-frontend on Feb 9

View changes







va-vfs-bot temporarily deployed to master/nps-individual-queries on Feb 9 (Inactive)





src/site/stages/build/drupal/graphql/paragraph-fra
gments/staffProfile.paragraph.graphql.js

		@@ -35,7 +35,7 @@ module.exports = `	
35	35	alt	
36	36	title	
37	37	url	
38		- derivative(style: _	1
	38	+ derivative(style: _	1



mpelzsherman on Feb 9 Member

Curious why this change was needed?



ncksllvn on Feb 9 Author Member

Using _1_1_SQUARE_MEDIUM_THUMBNAIL was reported as a GraphQL error and was relying on src/site/utilities/stringHelpers.js to turn it into _11SQUAREMEDIUMTHUMBNAIL . Instead of using the stringHelper , I just changed the value, because I can't find any context for why it was like that. Asking the CMS folks if they have any idea,

https://dsva.slack.com/archives/CDHBKAL9W/p1 612907370100500



ncksllvn on Feb 9 Author

Member

Found it...it's safe to just make this change. The string-helpers that did the replacement before is just leftover complexity from a CMS feature flag, 7b54b49 #diff-

78d2ba7081dd26ac2a8a81b3bc6c0c80461f62 412580c370dff8564362e33ee4R71.



ncksllvn on Feb 11 Author Member

I wrote a ticket to remove this old code, department-of-veterans-affairs/va.govteam#19722

Reply...



Resolve conversation



mpelzsherman approved these changes on Feb 9

View changes





brangi approved these changes on Feb 9

View changes

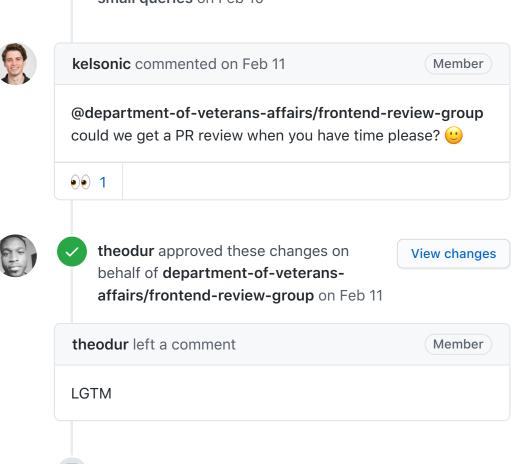
- ncksllvn added 3 commits on Feb 10
- o- Issue a count query to generate alcdc87 pagination dynamically
- -O- start index at 1 08a8676
- -O- fix some bugs with pagination × 24674e9
- **va-vfs-bot** temporarily deployed to master/nps-individual-queries on Feb 10 (Inactive)
- monolithic GraphQL query into a pattern of small

 GraphQL queries on Feb 10
- monolithic GraphQL query into a pattern of small
 GraphQL queries [GraphQL] Break apart monolithic
 query into a pattern of small queries on Feb 10



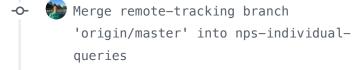
ncksllvn changed the title [GraphQL] Break apart monolithic query into a pattern of small queries [GraphQL] Convert monolithic query into a pattern of small queries on Feb 10







ncksllvn added 2 commits on Feb 11





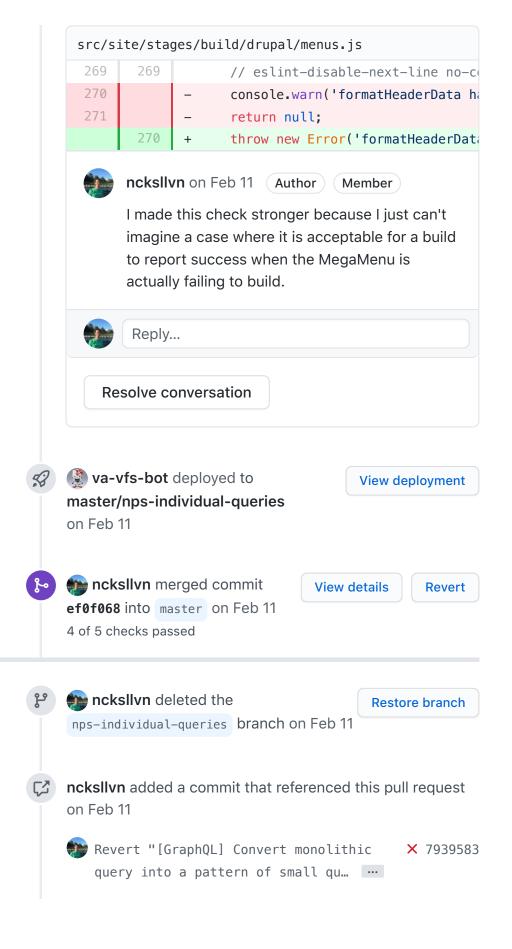
× f713f36

× e8a0211



ncksllvn reviewed on Feb 11

View changes





Revert "[GraphQL] Convert monolithic query into a pattern of small qu...

រ៉េ Closed

#16027

0 of 4 tasks complete



🔀 🍘 k80bowman mentioned this pull request 25 days ago

Discovery on Improving CMS Export Build Times department-of-veteransaffairs/va.gov-team#19612

