

AirNowDrupal Tome Deployment

03/18/2020

INTRODUCTION

This is the procedure to deploy the AirNowDrupal site with the Tome Module to cloud.gov in a Drupal Development environment where Tome is already installed. Tome is a static HTML website generator for Drupal 8. Also, posting AirNowDrupal as Tome requires administrative (or Elevated Privileges) and the following software be installed:

- Acquia DevDesktop
- Cloud Foundry Client

Big Picture:

1. Download the existing Drupal website
2. Make changes to the current Drupal website
3. Generate a static HTML
4. Prepare the static HTML for cloud.gov
5. Push the static HTML to cloud.gov
6. Complete a Blue/Green Deployment on cloud.gov
7. Verify Success in a web Browser

PROCEDURE

Download the existing Drupal website

1. Pull latest version of the site Content (database) and Code from Acquia DevCloud using DevDesktop (or your preferred tool) while **off** the EPA network.
2. Go to "/user/login" to login to your localhost.
3. In the Drupal admin goto Admin >> Configuration >> Performance >> Development and click on the "Clear all caches" button.
4. Wait for the "Caches cleared" message.

Make changes to the current Drupal website

5. In the Drupal admin goto Admin >> Configuration >> Performance >> Development and click on the "CLEAR TOME STATIC CONTENT SUPER CACHE" twisty button.
6. Click on "Fully clear caches"
7. Wait for the "Caches fully cleared" message.
8. Goto Admin >> Reports >> Recent log messages and click on the Delete tab. Then click "Confirm". This will delete the current logs to make plenty of room for any new entries.
9. Update modules
 - a. Goto Admin >> Extend
 - b. Filter for "tome"
 - c. Enable all 6 of the Tome Modules and click "Install"
 - d. Click "Continue" to enable the Serialization Module as well.

Generate a static HTML

10. Delete the contents of the "/docroot/html/" directory. Tome will do this in the "Generate static site" step, but Drupal tends to timeout.
11. Goto Config >> Tome Static >> Generate static site (towards the middle of the page) and enter the desired final URL for your deployment from this list:
 - a. <https://airnow.gov>
 - b. <https://airnow-cdn.epa.gov>
 - c. <https://airnow.app.cloud.gov>

AirNowDrupal Tome Deployment

03/18/2020

- d. <https://airnowstage.app.cloud.gov>
 - e. <https://airnowdev.app.cloud.gov>
 - f. <https://<cf app name>.app.cloud.gov> (for testing)
12. Click on "Submit"
 13. Wait for site generation... it takes about 20 minutes and the status bar will run at least twice. If needed, resolve any errors and repeat site generation.
Hint: Goto Admin >> Reports >> Recent log messages to identify any problems.
 14. Goto the "/docroot/html/" directory to see the new files. The directory should contain about 50 MB of files.

Prepare the static HTML for cloud.gov

15. Copy the contents of the "/docroot/html/" directory into the desired "Holding Directory" from the list:
 - a. dev
 - b. stage
 - c. prod
16. Copy the current "themes" and "sites" directories into the "Holding Directory". Replace existing files.
 - a. "/docroot/themes/"
 - b. "/docroot/sites/"
17. Verify the followig files are in the "Holding Directory":
 - a. .htpasswd
 - b. buildpack.yml
 - c. mine.types
 - d. nginx.conf
18. For Production ONLY, open the nginx.conf file and verify that the Simple HTTP Password block is documented out. i.e. each line starts with "#". These are at approximately lines 23 to 28.
19. [Optional] Remove any *.php and *.yml files in the "/sites/" and "/sites/default/" directories within the "Holding Directory". These are not needed on the static HTML cloud.gov server.
20. The "Holding Directory" should now contain about 570 MB of files.

Push the static HTML to cloud.gov

21. Open PowerShell as an Administrator.
22. Change into the desired "Holding Directory".

```
cd C:\Users\cwilkes\Sites\devdesktop\airnowgov-dev\dev
```

(Example is "dev")
23. Verify existing cloud login by listing the applications in the current space.

```
cf a
```
24. If NOT Logged in, then login to cloud.gov (Hint: <https://cloud.gov/docs/getting-started/setup/>)

```
cf login -a api.fr.cloud.gov -sso
```


<https://login.fr.cloud.gov/passcode>
Select the "epa-airnow" org
Verify existing applications and login

```
cf a
```
25. Move the correct Org and Space on cloud.gov

```
cf target -o epa-airnow -s airnow-dev
```

(Example is "dev")
The available options are the following:
 - s airnow-dev
 - s airnow-stage
 - s airnow-prod

AirNowDrupal Tome Deployment

03/18/2020

Complete a Blue/Green Deployment on cloud.gov *(Examples are going "Blue")*

26. Determine if the current deployment is Blue or Green by listing the current Cloud Foundry application in that space.

```
cf a
```

The current deployment is the one with "airnow.gov" (or "airnow-cdn.epa.gov") and "airnow.app.cloud.gov" in the URLs list. Don't confuse it with the "airnowfire-[blue/green]" which is also in the "airnow-prod" space. You will be pushing to cloud.gov with the **opposite** color.

27. Send the "Push" command using and Nginx buildpack Use 5 instances for production!

```
cf push airnowdev-green -m 80M -i 5 -b
```

<https://github.com/cloudfoundry/nginx-buildpack.git>

This command is one line...

```
(memory allocated) ^ ^ (instances)
```

(Example is "dev" and pushing "Green")

28. Wait for the site to deploy... about 5 minutes.

29. Assign Domain name to the new application.

```
cf map-route airnowdev-blue app.cloud.gov -n airnowdev; cf unmap-route airnowdev-green app.cloud.gov -n airnowdev; cf a
```

This command is one line...

(Example is "dev" and going "Blue")

30. Assign the CDN & Custom Domain name to the new application.

```
cf map-route airnowdev-blue airnow-cdn.epa.gov; cf unmap-route airnowdev-blue airnow-cdn.epa.gov; cf a
```

This command is one line...

(Example is "dev" / "airnow-dev.epa.gov" and going "Blue")

Verify the app in the cloud

31. Verify recently deployed application by listing the applications in the current space.

```
cf a
```

32. See snapshot of application CPU load

```
cf v3-scale tome
```

33. Verify Status on the Cloud.gov dashboard

<https://dashboard.fr.cloud.gov/>

34. Verify site at the Final URL from this list:

- <https://airnow.gov>
- <https://airnow-cdn.epa.gov>
- <https://airnow.app.cloud.gov>
- <https://airnowstage.app.cloud.gov>
- <https://airnowdev.app.cloud.gov>
- <https://<cf app name>.app.cloud.gov> (for testing)

35. [Optional] Run Selenium tests against the Final URLs:

- <https://airnow.gov>
- <https://airnow-cdn.epa.gov>
- <https://airnow.app.cloud.gov>
- <https://airnowstage.app.cloud.gov>
- <https://airnowdev.app.cloud.gov>

36. Delete the "old" color Application from the current space on cloud.gov

```
cf d airnowdev-green
```

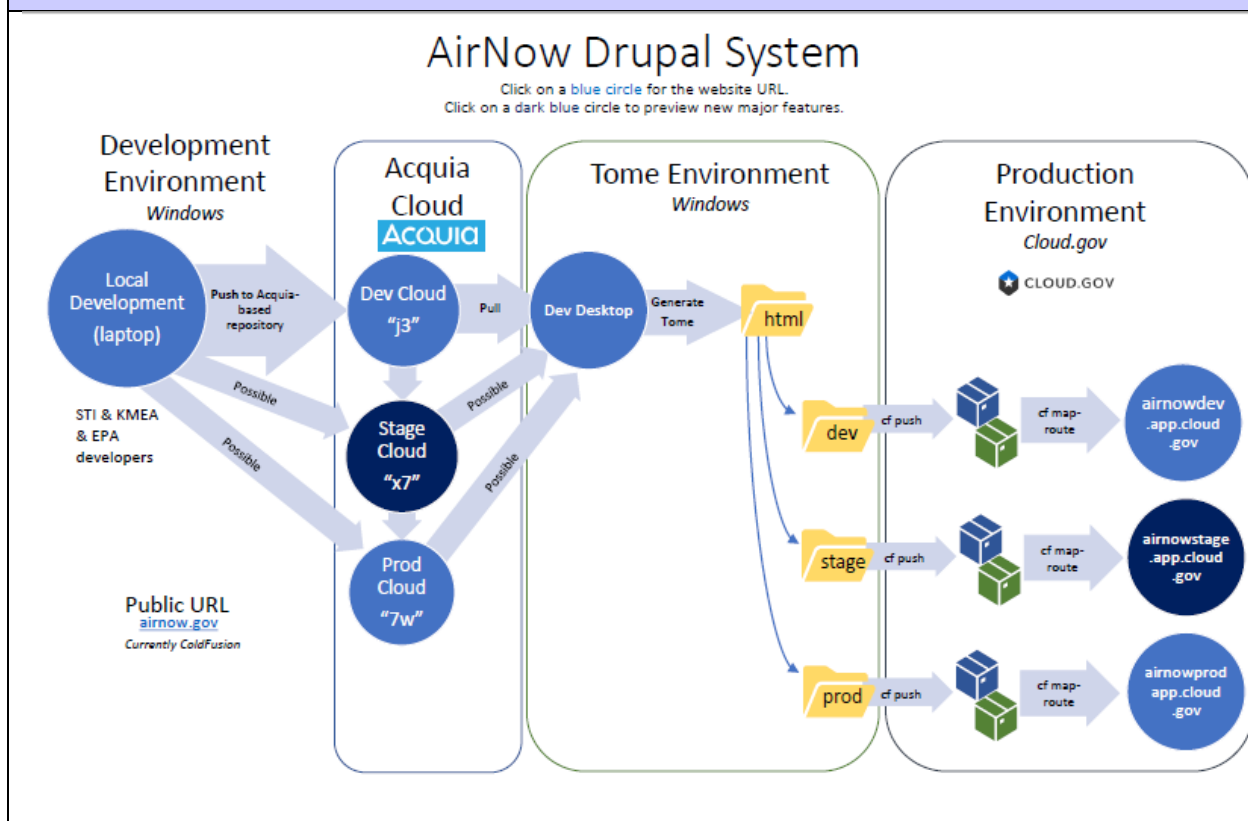
(Example is "dev" and going "Blue")

Done!

AirNowDrupal Tome Deployment

03/18/2020

SYSTEM DIAGRAM



KNOWN ISSUES

This issue may occur again, but it was resolved on Acquia Dev Cloud servers in the past.

The "Generate Static HTML" process may end with a DatabaseExceptionWrapper error stating: "The size of BLOB/TEXT data inserted in one transaction is greater than 10% of redo log size."

We need to increase the log file size on DevCloud and let it pull down with the database / code.

DOCUMENT VERSION HISTORY

2019-08-23 v1 Initial DRAFT by Chris Wilkes
2019-09-06 v1.1 Updates after Spanish content fixes on DevCloud by Chris Wilkes
2019-09-09 v1.2 Updates to Known Problems Section by Chris Wilkes
2019-09-24 v1.3 Updates for Staticfile.auth by Chris Wilkes
2020-01-02 v1.4 Updates for multi HTML directories by Chris Wilkes
2020-03-18 v1.5 Updates and add Blue/Green Deployments by Chris Wilkes