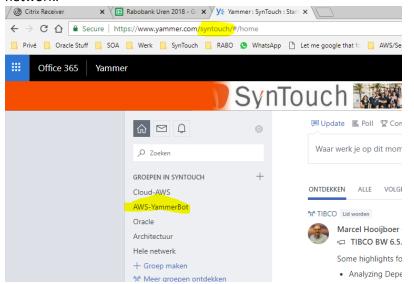
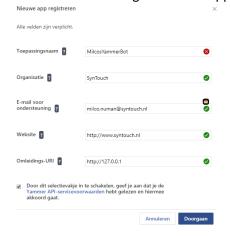
## Guys don't want to commit!

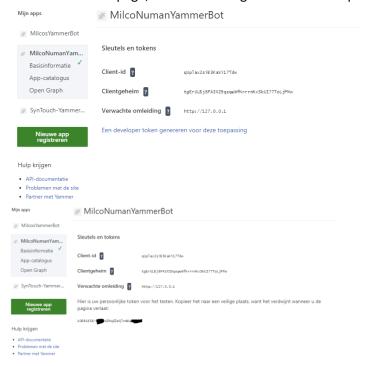
 Use your current Yammer-account to log into our <u>SynTouch</u> Yammer-network; if you have multiple networks on your Yammer account, please make sure to switch to the SynTouchnetwork:



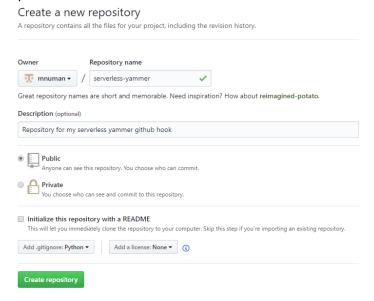
- 2) Open a new tab on your browser to <a href="https://www.yammer.com/client applications">https://www.yammer.com/client applications</a>
- 3) Use the button to register a new application, prefix this with your name:

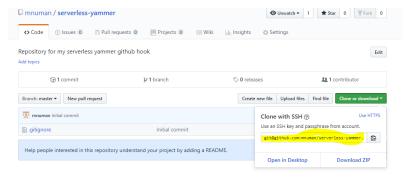


4) On the confirmation page, use the link to generate a developer token and capture the value:

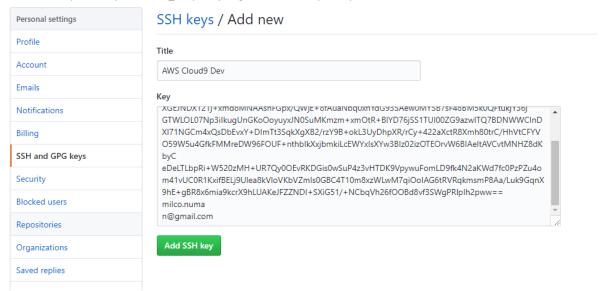


- 5) Open a new tab in your browser and lookup the groups in your network on URL https://www.yammer.com/api/v1/groups.json.
  Find the AWS-YammerBot group and note its id
- 6) Create a new empty repository in Github (note its SSH address), use the Python gitignore option:



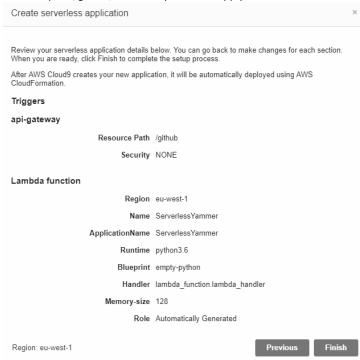


- 7) Generate a new keypair from your Cloud9 terminal window: ssh-keygen -t rsa -b 4096 -C "your-email-for-github"
- 8) Configure your git client by setting your identity for git (Cloud9, terminal window): git config --global user.name "User name to show in github" git config global user.email "your-github-email-here"
- 9) Now ad d the public key (~/.ssh/id\_rsa.pub) you generated in step 6 to your Github account:



- 10) In Cloud9's terminal window, move to your home directory and initialize a new git repository there:
- 11) Connect the new local repository to your GitHub repository (text in italics should be changed into YOUR repo address!):
  - git remote add origin git@github.com:mnuman/serverless-yammer.git
- 12) Synchronize by pulling in all remote changes and merging them into the master branch: git pull origin master

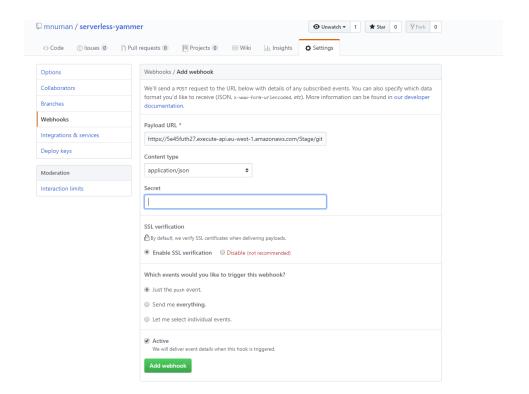
13) Create a new serverless application + function in Cloud9, type empty python 3.6, triggered by API Gateway on resource path /github, no security. Defaults apply:



14) Verify if the API has been deployed to a stage (API > Stages). If it has been deployed, pick one of the endpoints for the API. Otherwise you need to deploy the API first:



Navigate to Github, add a new webhook from the repository settings in the repository you created for this purpose:



15) Now commit your code from Cloud9's terminal window and push this to Github. This should trigger the actual lambda function:

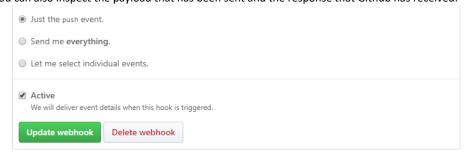
(From my home directory)

git add ServerlessYammer # add all resources in my serverless application directory git commit -m "Initial commit, empty shell"

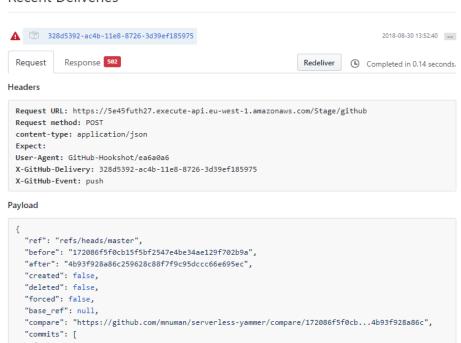
git push --set-upstream origin master

 ${\bf 16)} \ \ {\bf Verify\ in\ CloudWatch\ that\ your\ lambda\ function\ has\ been\ triggered.}$ 

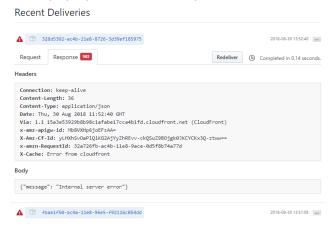
17) From Github you can also inspect the payload that has been sent and the response that Github has received:



## Recent Deliveries



Currently, API Gateway still returns an error message (statuscode 5xx) as we did not put in any effort to format the answer properly – for now that is okay:

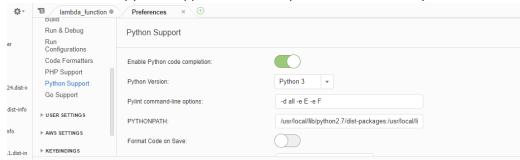


18) Change into your **Application's** directory using the Cloud9 terminal, enable the virtual environment by source the activate script from venv/bin/activate and install the requests package locally:

```
admin:~/environment (master) $ cd ServerlessYammer/
admin:~/environment/ServerlessYammer (master) $ source venv/bin/activate
(venv) admin:~/environment/ServerlessYammer (master) $
```

pip install requests -t .

19) Make sure that the python support in Cloud9's preferences is set to Python3:



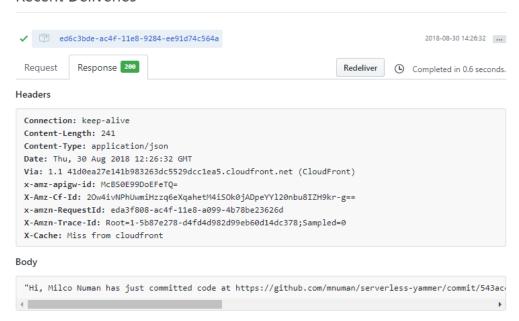
20) Define some implementation code to compose a message (to be sent out later) and prepare a response for GitHub:

```
import json
import requests
def lambda_handler(event, context):
    body = json.loads(event['body'])
    myMessage = f"Hi, {body['head_commit']['author']['name']} has just
committed code at {body['head_commit']['url']} with message
{body['head_commit']['message']}"

    return {
        "isBase64Encoded": "false",
        "statusCode": 200,
        "headers": {},
        "body": json.dumps(myMessage)
}
```

- 21) Deploy your code to AWS
- 22) Again, commit your changes locally and commit your change to Github. Now verify that Github receives a proper response:

## Recent Deliveries



- 23) Now we're ready to push the message to the world ...
- 24) In order to do this, you will need the Yammer developer token you jotted down earlier; we're leveraging the Yammer REST API (that's why you installed the requests package). This API is documented <a href="here">here</a>. To authenticate your call, you need to pass in a dictionary in the headers parameters with the HTTP headers; the

header's name must be "Authorization", it's value is your developer token prefixed by "Bearer" (that is Bearer followed by a single space (OAuth).

The address for the Yammer API is <a href="https://www.yammer.com/api/v1/messages.json">https://www.yammer.com/api/v1/messages.json</a>. The payload is entered as a dictionary in the data parameter, this dictionary must have a body key holding the actual message and a group\_id holding the id of the AWS-Yammer group:

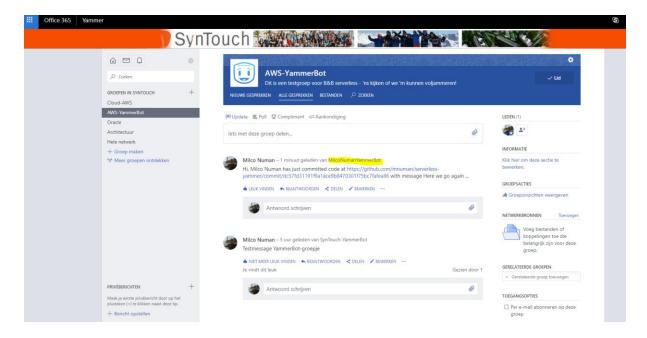
```
import json
import requests
def lambda handler (event, context):
   print(json.dumps(event))
   body = json.loads(event['body'])
   myMessage = f"Hi, {body['head commit']['author']['name']} has just
committed code at {body['head commit']['url']} with message
{body['head_commit']['message']}"
   auth = { "Authorization" : "Bearer 10691656-iLf4mZMqSZzQlnAKeQq4aA"}
    payload = { "body" : myMessage, "group_id" : 15767042}
   r = requests.post("https://www.yammer.com/api/v1/messages.json",
headers=auth, data=payload)
   print("Status code Yammer call:" + str(r.status_code))
    return {
        "isBase64Encoded" : "false",
        "statusCode" : 200,
        "headers" : {},
        "body" : json.dumps(myMessage)
    }
```

Should you mess up (e.g. commit and push the code and forget to redeploy it first ...), you can also redeliver message from GitHub:

## Recent Deliveries



And then, finally ...



As an extra exercise, retrieve the authentication token from the function's environment variables (or from the secrets manager) – e.g. us <u>os.environ</u> to retrieve values.

