

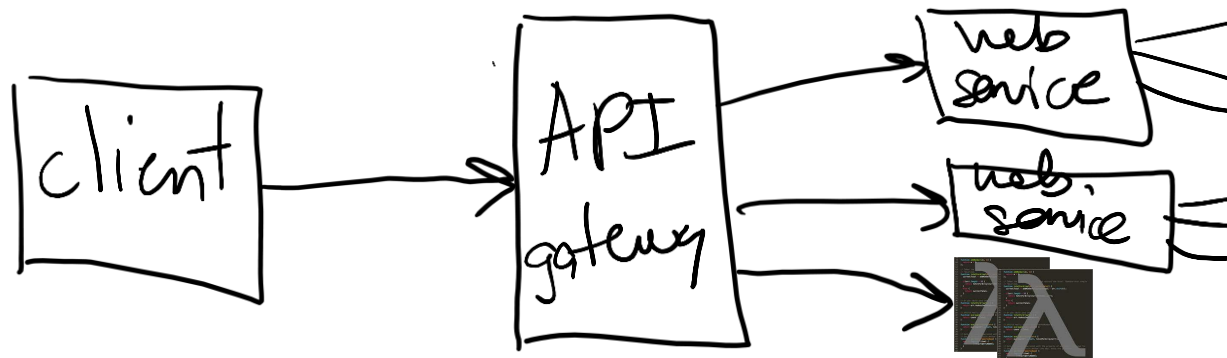
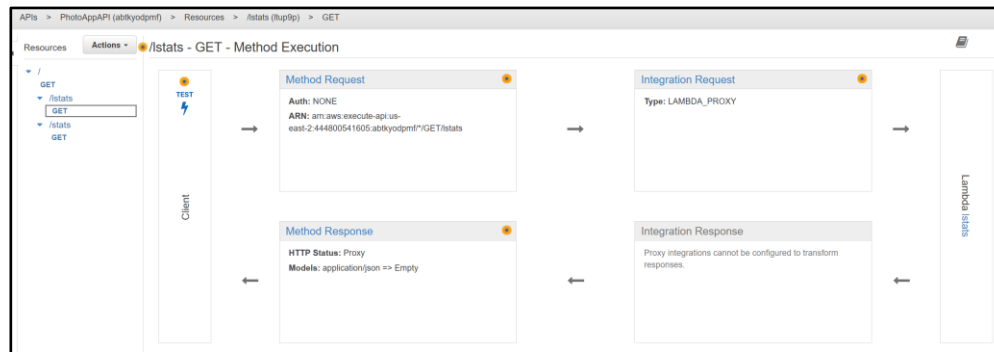
API Gateway

- **Programming example**
 - **API Gateway + lambda**
- **Other ways to call lambda functions**



API Gateway

- **API Gateway** allows you to define a RESTful API that forwards to other services / lambdas
 - *Define HTTP verb and URL path (e.g. GET /movies)*
 - *Specify target...*



Programming demo

- **Let's build a simple calculator using API Gateway and lambda...**

(1) lambda functions

```
#  
# uuid()           gives u a uuid  
#  
import json  
import uuid
```

```
def lambda_handler(event, context):  
    result = str(uuid.uuid4())  
  
    print("uuid:", result)  
  
    return {  
        'statusCode': 200,  
        'body': json.dumps(result)  
    }
```

```
#  
# pow(x, e)         power function  
#  
import json
```

```
def lambda_handler(event, context):  
    params = event["pathParameters"]  
    x = float(params["x"])  
    e = float(params["e"])  
  
    result = x ** e  
  
    print("pow:", x, e, result)  
  
    return {  
        'statusCode': 200,  
        'body': json.dumps(result)  
    }
```

```
#  
# factors(n)         tells you prime factors  
#  
import json
```

```
def lambda_handler(event, context):  
    params = event["queryStringParameters"]  
    n = int(params["n"])  
  
    i = 2  
    factors = []  
    while i * i <= n:  
        if n % i:  
            i += 1  
        else:  
            n //= i  
            factors.append(i)  
  
    if n > 1:  
        factors.append(n)  
  
    print("factors:", n, factors)  
  
    return {  
        'statusCode': 200,  
        'body': json.dumps(factors)  
    }
```