

Geminator

Serverless Ruby Bundler

```
83 i18n (1.5.2)
84   concurrent-ruby (~> 1.0)
85   io-like (0.3.0)
86 jbuilder (2.8.0)
87   activesupport (>= 4.2.0)
88   multi_json (>= 1.2)
✂ @@ -140,20 +141,20 @@ GEM
140   method_source
141   rake (>= 0.8.7)
142   thor (>= 0.19.0, < 2.0)
143 - rainbow (2.2.2)
144 - rake
145 rake (12.3.2)
146 rb-fsevent (0.10.3)
147 rb-inotify (0.10.0)
148   ffi (~> 1.0)
149 regexp_parser (1.3.0)
150 - rubocop (0.50.0)
151   parallel (~> 1.10)
152 - parser (>= 2.3.3.1, < 3.0)
153   powerpack (~> 0.1)
154 - rainbow (>= 2.2.2, < 3.0)
155   ruby-progressbar (~> 1.7)
156 - unicode-display_width (~> 1.0, >= 1.0.1)
157   ruby-progressbar (1.10.0)
158   ruby_dep (1.5.0)
159   rubyzip (1.2.2)
```

```
83 i18n (1.5.2)
84   concurrent-ruby (~> 1.0)
85   io-like (0.3.0)
86 + jaro_winkler (1.5.2)
87 jbuilder (2.8.0)
88   activesupport (>= 4.2.0)
89   multi_json (>= 1.2)
141   method_source
142   rake (>= 0.8.7)
143   thor (>= 0.19.0, < 2.0)
144 + rainbow (3.0.0)
145 rake (12.3.2)
146 rb-fsevent (0.10.3)
147 rb-inotify (0.10.0)
148   ffi (~> 1.0)
149 regexp_parser (1.3.0)
150 + rubocop (0.63.0)
151 + jaro_winkler (~> 1.5.1)
152   parallel (~> 1.10)
153 + parser (>= 2.5, != 2.5.1.1)
154   powerpack (~> 0.1)
155 + rainbow (>= 2.2.2, < 4.0)
156   ruby-progressbar (~> 1.7)
157 + unicode-display_width (~> 1.4.0)
158   ruby-progressbar (1.10.0)
159   ruby_dep (1.5.0)
160   rubyzip (1.2.2)
```

Goal: Automated Dependency Updates

```
runtime: lambda.Runtime.Ruby25,  
code: lambda.Code.asset("resources/bundle-update"),  
handler: handler,  
environment: {  
  GIT_PROVIDER: GitProvider.Github,  
  PRIVATE_KEY: gitProviderToken.token  
},  
timeout: 180,  
memorySize: 512,  
layers: [layer]  
});  
  
return bundleUpdate;  
}
```

AWS Cloud Development Kit

Developer Preview

```
createUpdateGraphQLHandler(  
  handler: lambda.IFunction,  
  graphqlApi: GraphQLApi  
) {  
  handler.grantInvoke(graphqlApi.serviceRole);
```

AWS Lambda Ruby Runtime



Ruby 2.5

```
3 set -e
4
5 rm -rf layer && mkdir -p layer/bin && mkdir -p layer/ruby/gems
6 docker build -t ruby25-bundler-builder -f Dockerfile .
7
```

```
8 CONTAINER=$(docker run -d ruby25-bundler-builder false)
```

```
9
10 docker cp \
11     $CONTAINER:/var/runtime/bin/bundle \
12     layer/bin/bundle
```

```
13
14 docker cp \
15     $CONTAINER:/var/runtime/bin/bundler \
16     layer/bin/bundler
```

```
17
18 docker cp \
19     $CONTAINER:/var/runtime/gems/bundler-2.0.1 \
20     layer/ruby/gems/bundler-2.0.1
```

```
21
22 cp -r layer/* ../resources/layer
```

AWS Lambda Layers

Share Libraries

```
1 # Get outdated gems which would be updateable conservatively
2 query outdated {
3   outdatedDependencies(projectSlug: "intrabaseio/geminator-demo") {
4     name
5     newest
6     installed
7   }
8 }
```

```
{
  "data": {
    "outdatedDependencies": [
      {
        "name": "capybara",
        "newest": "3.13.2",
        "installed": "3.11.0"
      },
      {
        "name": "i18n",
        "newest": "1.5.3",
        "installed": "1.5.2"
      },
      {
        "name": "rainbow",
        "newest": "3.0.0",
        "installed": "2.2.2"
      },
      {
        "name": "rubocop",
        "newest": "0.63.1",
        "installed": "0.50.0"
      },
      {
        "name": "sqlite3",
        "newest": "1.4.0",
        "installed": "1.3.13"
      }
    ]
  }
}
```

AWS App Sync

GraphQL Api

Leverage "Bundle Lock"

- Doesn't download gems
- Just operates with Gemfile / Gemfile.lock
- Gemfile / Gemfile.lock fetched via API

Current Workflow

- Ensure a working branch
- Update given Gem
- Create commit and Pull Request
- Github / (Gitlab)
- Idempotent

DDaemo

What does it cost?

Zero

Lambda Free Tier

50,000 invocations * 15 seconds at
512mb Ram

~ 6 Euro if you had to pay for it

Possible Iterations

- Add AWS Step Functions as workflow orchestrator
- Handle batch gem updates
- Subscribe to published Gems of rubygems.org
- Add NPM, Cargo, ...
- Add Webinterface
- ...

Thanks



@skorfmann

Resources

- AWS CDK: <https://github.com/aws-labs/aws-cdk>
- Aws Lambda Ruby Runtime: <https://docs.aws.amazon.com/lambda/latest/dg/lambda-ruby.html>
- Geminator: <https://github.com/IntraBaseIO/geminator>