```
 1  # Source: https://gist.github.com/4e75e84de9e0f503fb95fdf312de1051
 2
 3  ##############################################
 4  # Using Argo Rollouts To Deploy Applications #
 5  ##############################################
 6
 7  ###########################################
 8  # Installing And Configuring Argo Rollouts #
 9  ###########################################
10
11  # Docker Desktop (docker-istio.sh):
    https://gist.github.com/a3025923ad025215fe01594f937d4298)
12  # Minikube (minikube-istio.sh):
    https://gist.github.com/1ab5f877852193e8ebd33a97ae170612)
13  # GKE (gke-istio.sh): https://gist.github.com/d5c93afc83535f0b5fec93bd03e447f4)
14  # EKS (eks-istio.sh): https://gist.github.com/2ebbabc3ff515ed27b2e46c0201fb1f8)
15  # AKS (aks-istio.sh): https://gist.github.com/2ec945256e3901fee1a62bb04d8b53b0)
16
17  # If macOS
18  brew install \
19      argoproj/tap/kubectl-argo-rollouts
20
21  # If Linux or WSL
22  curl -LO https://github.com/argoproj/argo-rollouts/releases/download/v0.9.1/kubectl-
    argo-rollouts-linux-amd64
23
24  # If Linux or WSL
25  chmod +x kubectl-argo-rollouts-linux-amd64
26
27  # If Linux or WSL
28  sudo mv ./kubectl-argo-rollouts-linux-amd64 \
29      /usr/local/bin/kubectl-argo-rollouts
30
31  kubectl argo rollouts --help
32
33  kubectl create namespace argo-rollouts
34
35  kubectl --namespace argo-rollouts apply \
36      --filename https://raw.githubusercontent.com/argoproj/argo-
    rollouts/stable/manifests/install.yaml
37
38  git clone https://github.com/vfarcic/devops-toolkit.git
39
40  cd devops-toolkit
41
42  git pull
43
44  cat helm/templates/rollout.yaml
45
46  cat helm/templates/hpa.yaml
47
48  cat helm/templates/istio.yaml
49
50  cat helm/values.yaml
51
52  ##############################
53  # Deploying The First Release #
54  ##############################
55
56  cat rollout/values-pause-x2.yaml
```

```
57
58  helm upgrade --install \
59      devops-toolkit helm \
60      --namespace devops-toolkit \
61      --create-namespace \
62      --values rollout/values-pause-x2.yaml \
63      --set ingress.host=devops-toolkit.$ISTIO_HOST.xip.io \
64      --set image.tag=2.6.2 \
65      --wait
66
67  helm upgrade --install \
68      devops-toolkit helm \
69      --namespace devops-toolkit \
70      --create-namespace \
71      --values rollout/values-pause-x2.yaml \
72      --set image.tag=2.6.2 \
73      --wait
74
75  kubectl argo rollouts \
76      --namespace devops-toolkit \
77      get rollout devops-toolkit-devops-toolkit \
78      --watch
79
80  # If NOT Minikube
81  open http://devops-toolkit.$ISTIO_HOST.xip.io
82
83  ##########################################################
84  # Deploying New Releases Using The Canary Strategy #
85  ##########################################################
86
87  helm upgrade devops-toolkit helm \
88      --namespace devops-toolkit \
89      --reuse-values \
90      --set image.tag=2.9.9
91
92  kubectl argo rollouts \
93      --namespace devops-toolkit \
94      get rollout devops-toolkit-devops-toolkit \
95      --watch
96
97  # If NOT Minikube
98  for i in {1..100}; do
99      curl -s http://devops-toolkit.$ISTIO_HOST.xip.io \
100         | grep -i "catalog, patterns, and blueprints"
101 done | wc -l
102
103 # If Minikube
104 for i in {1..100}; do
105     curl -s -H "Host: devopstoolkitseries.com" \
106         "http://$ISTIO_HOST" \
107         | grep -i "catalog, patterns, and blueprints"
108 done | wc -l
109
110 kubectl --namespace devops-toolkit \
111     get virtualservice \
112     devops-toolkit-devops-toolkit \
113     --output yaml
114
115 kubectl argo rollouts \
116     --namespace devops-toolkit \
```

```
117        promote devops-toolkit-devops-toolkit
118
119  kubectl argo rollouts \
120        --namespace devops-toolkit \
121        get rollout devops-toolkit-devops-toolkit \
122        --watch
123
124  # If NOT Minikube
125  for i in {1..100}; do
126        curl -s http://devops-toolkit.$ISTIO_HOST.xip.io \
127            | grep -i "catalog, patterns, and blueprints"
128  done | wc -l
129
130  # If Minikube
131  for i in {1..100}; do
132        curl -s -H "Host: devopstoolkitseries.com" \
133            "http://$ISTIO_HOST" \
134            | grep -i "catalog, patterns, and blueprints"
135  done | wc -l
136
137  kubectl argo rollouts \
138        --namespace devops-toolkit \
139        promote devops-toolkit-devops-toolkit
140
141  kubectl argo rollouts \
142        --namespace devops-toolkit \
143        get rollout devops-toolkit-devops-toolkit \
144        --watch
145
146  # If NOT Minikube
147  for i in {1..100}; do
148        curl -s http://devops-toolkit.$ISTIO_HOST.xip.io \
149            | grep -i "catalog, patterns, and blueprints"
150  done | wc -l
151
152  # If Minikube
153  for i in {1..100}; do
154        curl -s -H "Host: devopstoolkitseries.com" \
155            "http://$ISTIO_HOST" \
156            | grep -i "catalog, patterns, and blueprints"
157  done | wc -l
158
159  ##############################
160  # Rolling Back New Releases #
161  ##############################
162
163  helm upgrade devops-toolkit helm \
164        --namespace devops-toolkit \
165        --reuse-values \
166        --set image.tag=2.9.17
167
168  kubectl argo rollouts \
169        --namespace devops-toolkit \
170        get rollout devops-toolkit-devops-toolkit \
171        --watch
172
173  # Do NOT run this command
174  kubectl argo rollouts \
175        --namespace devops-toolkit \
176        abort devops-toolkit-devops-toolkit
```

```
177
178 helm upgrade devops-toolkit helm \
179     --namespace devops-toolkit \
180     --reuse-values \
181     --set image.tag=2.9.9
182
183 kubectl argo rollouts \
184     --namespace devops-toolkit \
185     get rollout devops-toolkit-devops-toolkit \
186     --watch
187
188 ##################################################################
189 # Exploring Prometheus Metrics And Writing Rollout Queries #
190 ##################################################################
191
192 echo $ISTIO_HOST
193
194 # Open a second terminal session.
195
196 export ISTIO_HOST=[...]
197
198 # If NOT Minikube
199 while true; do
200     curl -I http://devops-toolkit.$ISTIO_HOST.xip.io
201     sleep 1
202 done
203
204 # If Minikube
205 while true; do
206     curl -I -H "Host: devopstoolkitseries.com" \
207         "http://$ISTIO_HOST"
208     sleep 1
209 done
210
211 # If WSL and `sleep` fails with `sleep: cannot read realtime clock: Invalid argument`
    (it's a bug in WSL 1, upgrades Ubuntu to 20.04)
212 sudo apt-mark hold libc6
213
214 # If WSL and `sleep` fails with `sleep: cannot read realtime clock: Invalid argument`
    (it's a bug in WSL 1, upgrades Ubuntu to 20.04)
215 sudo apt -y --fix-broken install
216
217 # If WSL and `sleep` fails with `sleep: cannot read realtime clock: Invalid argument`
    (it's a bug in WSL 1, upgrades Ubuntu to 20.04)
218 sudo apt update
219
220 # If WSL and `sleep` fails with `sleep: cannot read realtime clock: Invalid argument`
    (it's a bug in WSL 1, upgrades Ubuntu to 20.04)
221 sudo apt -y full-upgrade
222
223 # Go back to the first terminal session
224
225 helm repo add prometheus \
226     https://prometheus-community.github.io/helm-charts
227
228 helm upgrade --install \
229     prometheus prometheus/prometheus \
230     --namespace monitoring \
231     --create-namespace \
232     --wait
```

```
233
234 kubectl --namespace monitoring \
235     port-forward deployment/prometheus-server \
236     9090 &
237
238 open http://localhost:9090
239
240 # Prometheus query (uncomment first):
241 # istio_requests_total
242
243 # Prometheus query (uncomment first):
244 # sum(irate(
245 #   istio_requests_total{
246 #     reporter="source",
247 #     destination_service=~"devops-toolkit-devops-toolkit.devops-
    toolkit.svc.cluster.local"
248 #   }[2m]
249 # ))
250
251 # Prometheus query (uncomment first):
252 # sum(irate(
253 #   istio_requests_total{
254 #     reporter="source",
255 #     destination_service=~"devops-toolkit-devops-toolkit.devops-
    toolkit.svc.cluster.local",
256 #     response_code=~"2.*"
257 #   }[2m]
258 # )) / sum(irate(
259 #   istio_requests_total{
260 #     reporter="source",
261 #     destination_service=~"devops-toolkit-devops-toolkit.devops-
    toolkit.svc.cluster.local"
262 #   }[2m]
263 # ))
264
265 pkill kubectl
266
267 ################################
268 # Exploring Automated Analysis #
269 ################################
270
271 cat rollout/values-analysis.yaml
272
273 cat helm/values.yaml
274
275 cat helm/templates/rollout.yaml
276
277 kubectl delete namespace devops-toolkit
278
279 ####################################################
280 # Deploying Releases With Fully Automated Steps #
281 ####################################################
282
283 # If NOT Minikube
284 helm upgrade --install \
285     devops-toolkit helm \
286     --namespace devops-toolkit \
287     --create-namespace \
288     --values rollout/values-analysis.yaml \
289     --set ingress.host=devops-toolkit.$ISTIO_HOST.xip.io \
```

```
290         --set image.tag=2.6.2 \
291         --wait
292
293 # If Minikube
294 helm upgrade --install \
295         devops-toolkit helm \
296         --namespace devops-toolkit \
297         --create-namespace \
298         --values rollout/values-analysis.yaml \
299         --set image.tag=2.6.2 \
300         --wait
301
302 kubectl argo rollouts \
303         --namespace devops-toolkit \
304         get rollout devops-toolkit-devops-toolkit \
305         --watch
306
307 # Go to the second terminal
308
309 # If NOT Minikube
310 while true; do
311         curl -I http://devops-toolkit.$ISTIO_HOST.xip.io/this-does-not-exist
312         sleep 1
313 done
314
315 # If Minikube
316 while true; do
317         curl -I -H "Host: devopstoolkitseries.com" \
318             "http://$ISTIO_HOST/this-does-not-exist"
319         sleep 1
320 done
321
322 # Go to the first terminal session
323
324 helm upgrade devops-toolkit helm \
325         --namespace devops-toolkit \
326         --reuse-values \
327         --set image.tag=2.9.9
328
329 kubectl argo rollouts \
330         --namespace devops-toolkit \
331         get rollout devops-toolkit-devops-toolkit \
332         --watch
333
334 # Go to the second terminal session
335
336 # If NOT Minikube
337 while true; do
338         curl -I http://devops-toolkit.$ISTIO_HOST.xip.io
339         sleep 1
340 done
341
342 # If Minikube
343 while true; do
344         curl -I -H "Host: devopstoolkitseries.com" \
345             "http://$ISTIO_HOST"
346         sleep 1
347 done
348
349 helm upgrade devops-toolkit helm \
```

```
350     --namespace devops-toolkit \
351     --reuse-values \
352     --set image.tag=2.9.17
353
354 kubectl argo rollouts \
355     --namespace devops-toolkit \
356     get rollout devops-toolkit-devops-toolkit \
357     --watch
358
359 # Stop the rollout and loops in both terminals
360
361 # Go to the first terminal session
362
363 #####################
364 # What Happens Now? #
365 #####################
366
367 kubectl delete namespace devops-toolkit
368
369 kubectl delete namespace argo-rollouts
370
371 kubectl delete namespace monitoring
372
373 cd ..
374
```