



Automation Best Practices with the GSLB Tool

- BRINGING MULTI-CLUSTER TO OCP WITH GSLB AUTOMATION
- OCP MIGRATION DEMO

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October 8, 2020

1996

F5 founded; NASDAQ-listed 1999

\$2.2B

FY19 revenue

#1

Market segment position in application delivery controllers²

\$1.3B

Cash and investments (Q419)

THE BASICS

Leader

in The Forrester Wave:
Web Application Firewalls, Q2 2018

5,325

Employees (Q419)

>25k

Customers in 175 countries

336

U.S. and international patents

¹For a complete reconciliation of GAAP to non-GAAP measures, please see F5's most recent quarterly earnings press release.

²IDC Quarterly Ethernet Switch Tracker, ADC Segment, 2019Q2 Historical Release.

Our Partnership: 3 Key Integrations

Red Hat Product



F5 Integration

**F5 Container
Ingress Services
(CIS) & NGINX**



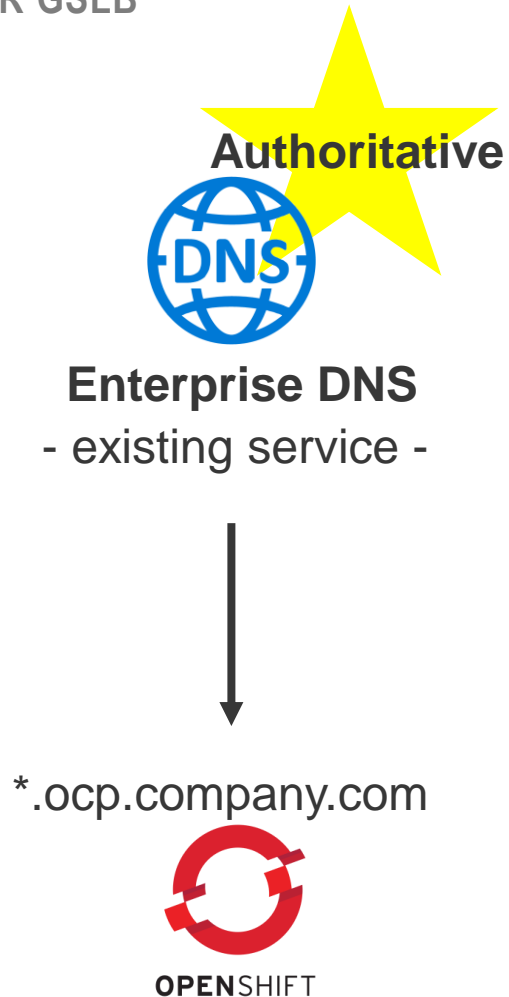
**F5 Collections on
Ansible Automation
Hub**



The F5\Ansible GSLB Tool

Anatomy of a basic OCP cluster

THE NEED FOR GSLB



No GSLB

No healthchecks and/or no external probes

No IP intelligence (customer region aware)

Not API enabled (no automation)

Not suitable for multi-cluster

Adding flexibility to OpenShift clusters

Enter multi-cluster OCP with F5 CloudServices

No appliances to manage - SaaS

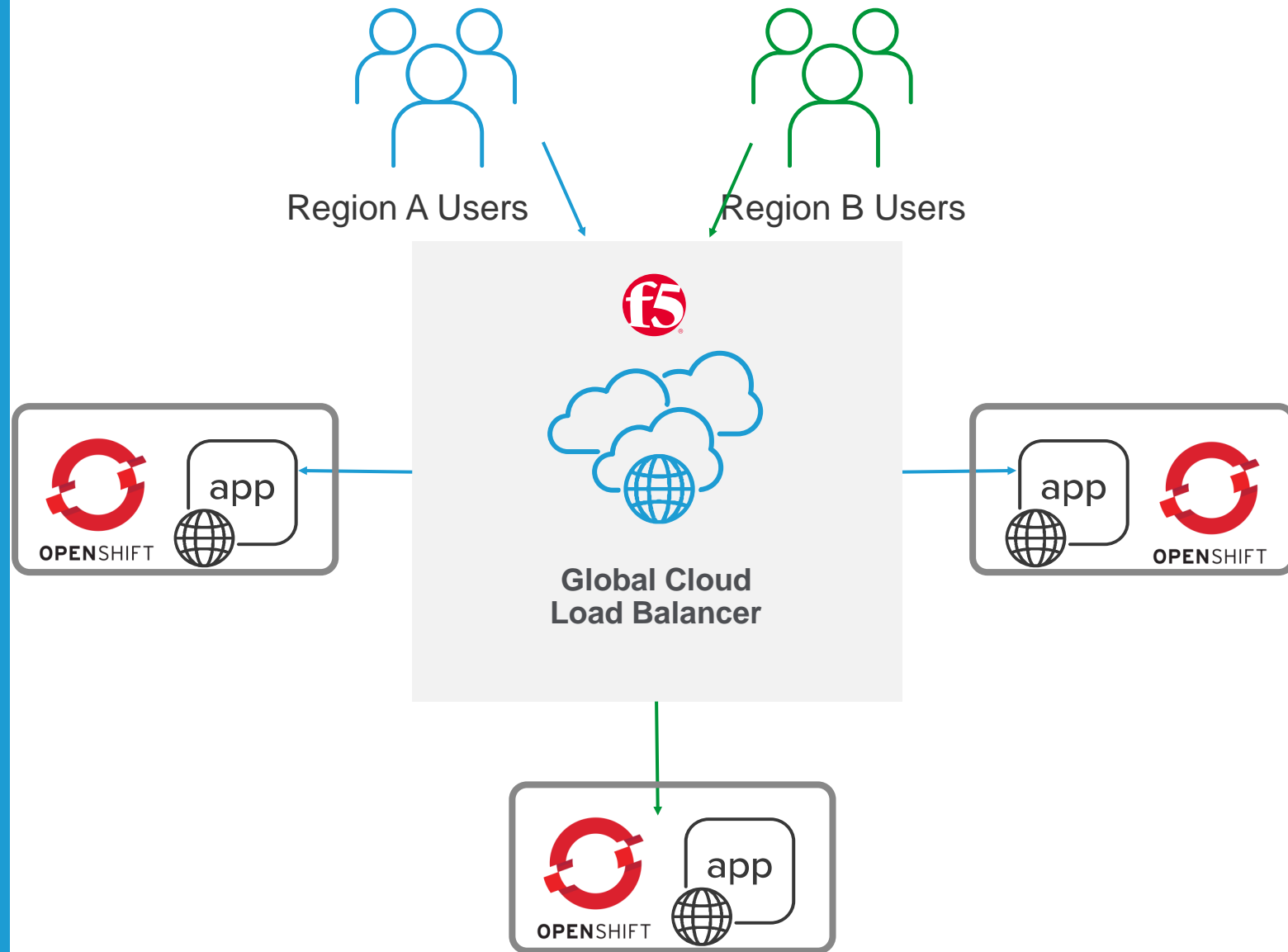
Direct traffic to the nearest application instance

Route traffic for GDPR compliancy

Split load across compute instances

Built-in DDoS protection

Fully configurable via APIs



OpenShift multi-cluster automation

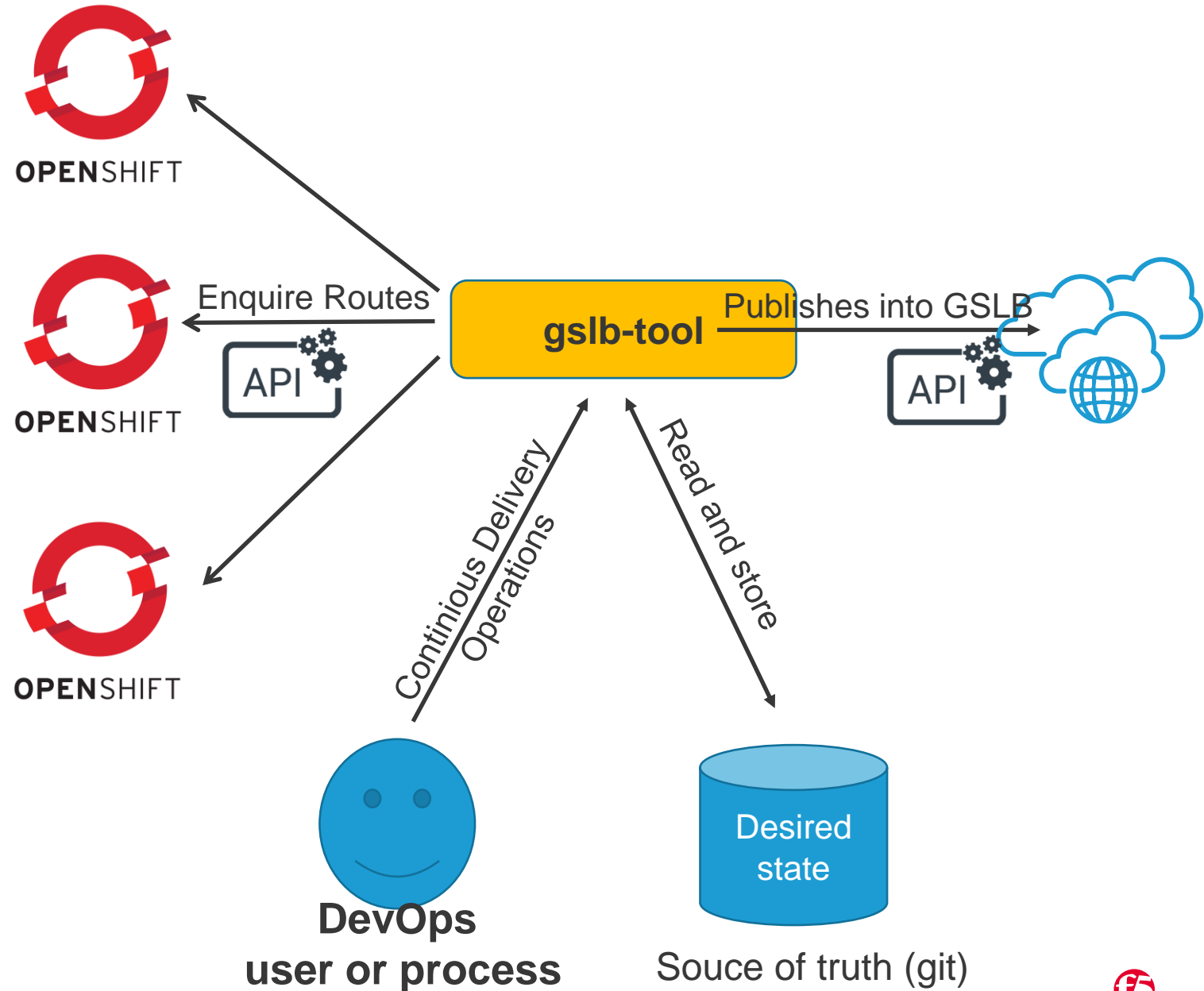
F5 CloudServices gslb-tool

gslb-tool is an automation tool that **glues** the OpenShift and GSLB APIs.

Minimizes operation errors.

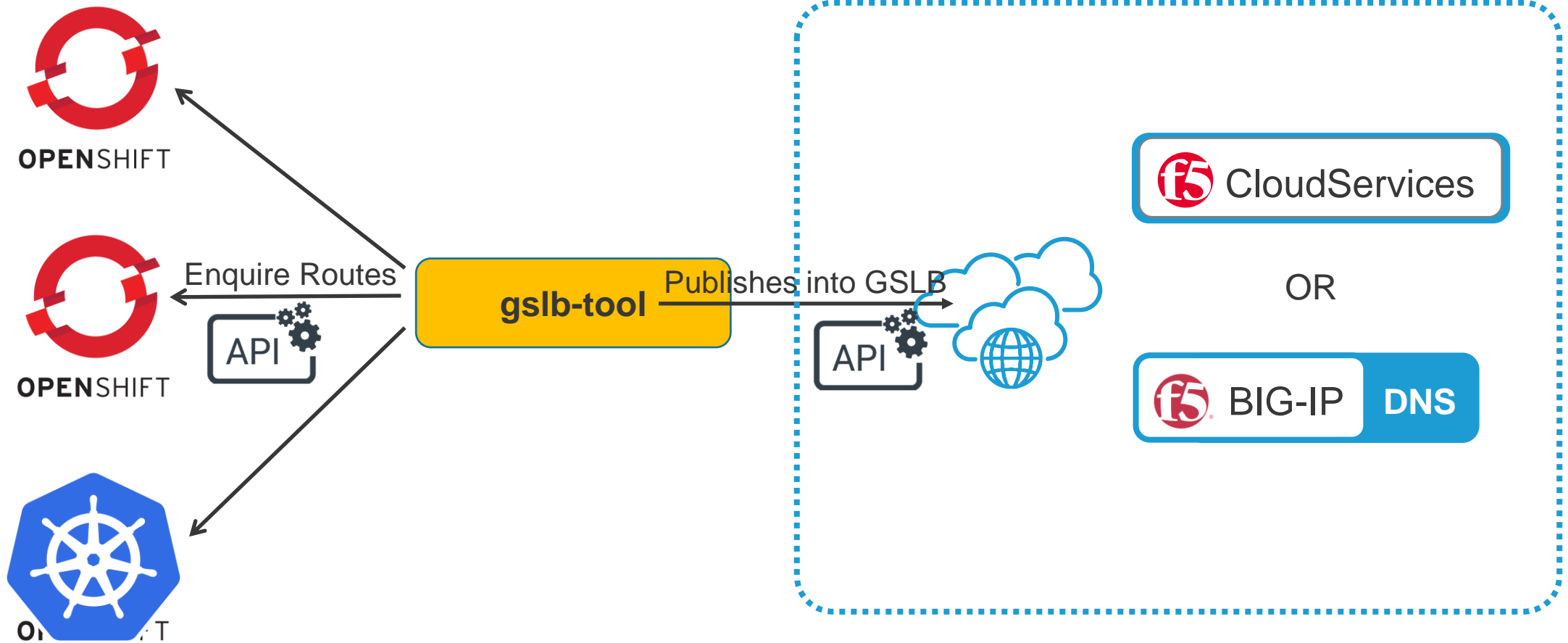
Allows swift application rollout across clusters.

Manages all Routes of a given project at once, like RedHat's migration tools.



Openshift multi-cluster automation

DETAIL

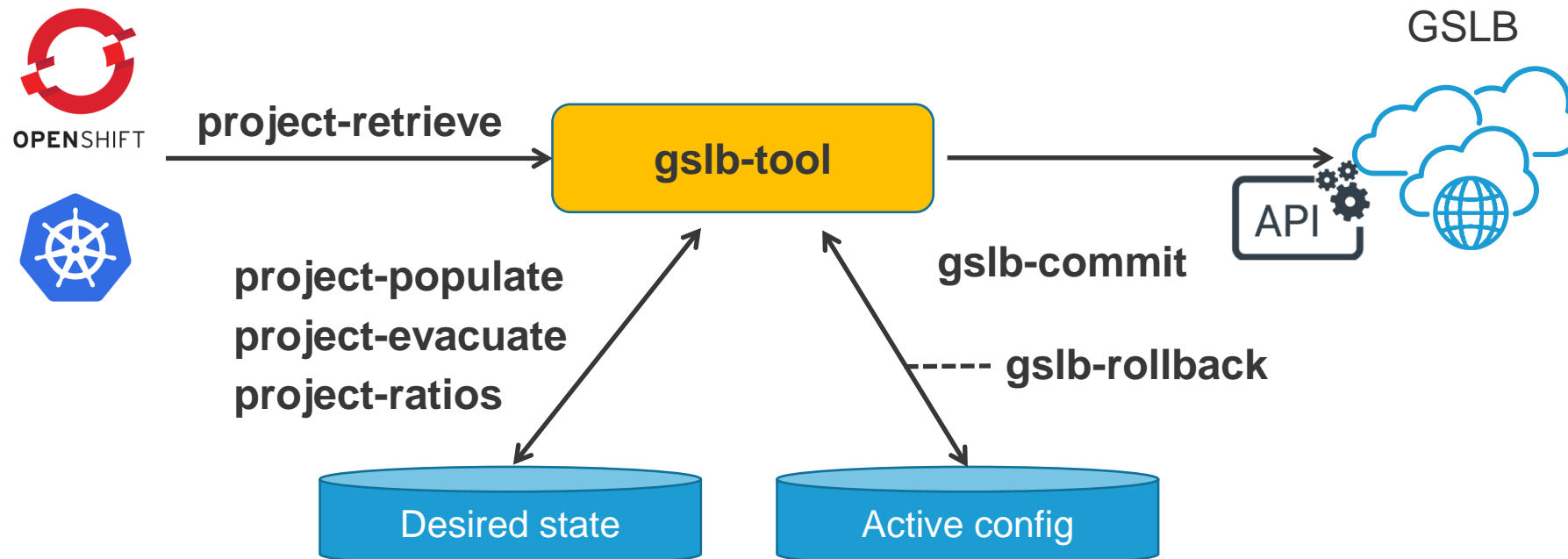


gslb-tool overview

OPERATIONS

`project-*` commands operates on a project/namespace, retrieve the L7 routes from the OpenShift/K8s API and only performs uncommitted operations.

`gslb-*` commands operates on the GIT repository and in the GSLB API, making active the desired state.



Ansible playbooks anatomy

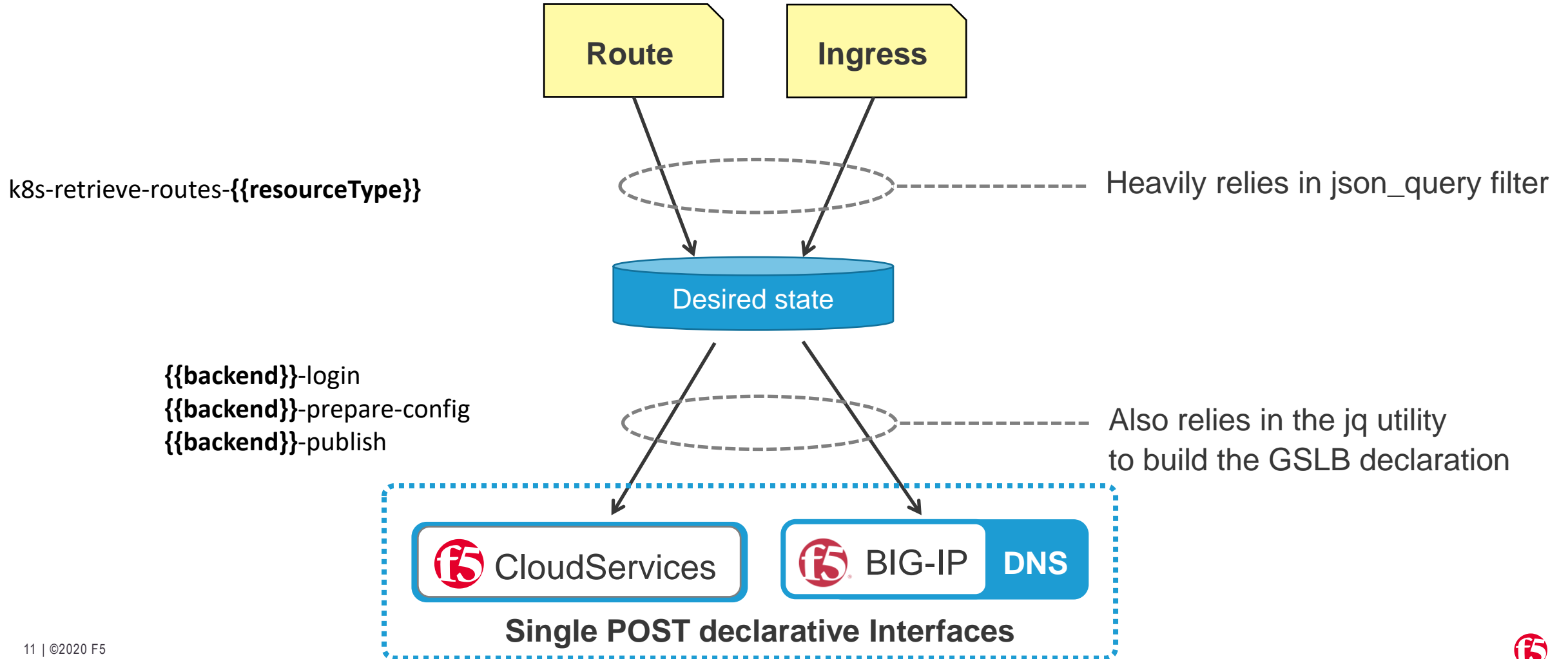
GSLB-TOOL IS 100% BUILT USING ANSIBLE – SAMPLE COMMAND

project-retrieve.yaml

```
- hosts: localhost
  gather_facts: no
  vars_files:
    - "vars/credentials.yaml" ← Ansible Vault
    - "vars/setup.yaml"
    - "vars/gslbState.desired.yaml"
  module_defaults:
    group/k8s:
      host: "{{apiEndpoint[dRouter]}}"
  roles:
    - gslb-tool-init-project-folder
    - gslb-tool-eliminate-project
    - "k8s-retrieve-routes-{{resourceType[dRouter]}}"
    - "gslb-tool-add-retrieved-routes-{{resourceType[dRouter]}}"
```

Main Ansible roles

MULTIPLE INPUT AND BACKEND SUPPORT



Ansible playbooks anatomy

GSLB-TOOL MAIN CONFIGURATION

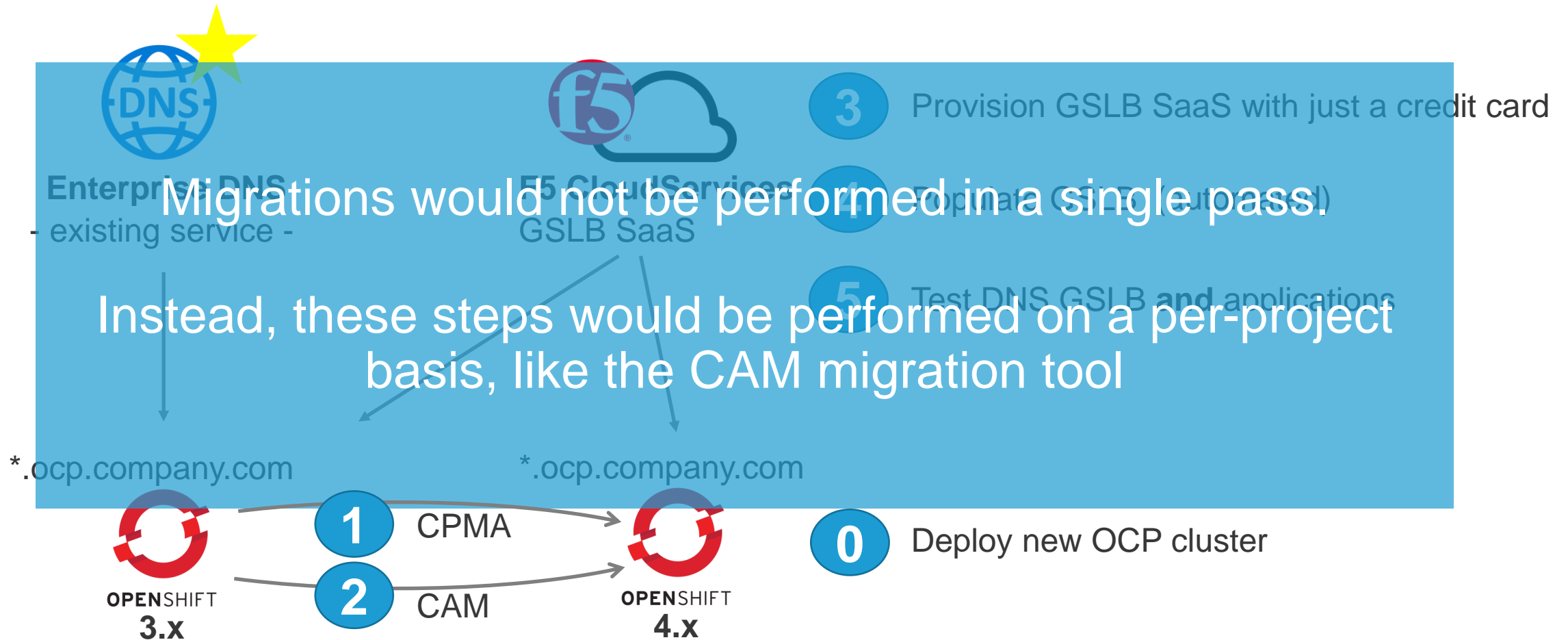
vars/setup.yaml

```
GSLB_ZONE: gslb
BASE_DOMAIN: f5bddemos.io
backend: bigip
=====
apiEndpoint:
  onprem: "https://openshift.onprem.f5bddemos.io:8443"
  aws: "https://openshift.aws.f5bddemos.io:6443"
resourceType:
  onprem: "Route"
  aws: "Route"
publicAddress:
  onprem:
    default: "12.202.13.146"
  aws:
    az1: "13.48.200.85"
    az2: "13.49.95.110"
```

OpenShift migration

F5 CLOUDSERVICES INFRASTRUCTURE INTEGRATION

6 Change authoritative DNS for zone ocp.company.com



Q & A and Next Steps

Demo Video: <https://www.youtube.com/watch?v=TiAMINSBPns>

Git Hub Repo: <https://github.com/f5devcentral/f5-bd-gslb-tool/>

The F5 Red Hat Partnership: www.f5.com/redhat

The F5 Ansible Partnership: www.f5.com/ansible

