

Better Microservice Applications Using New Cloud Foundry Features

Context Path Routing
&
Wildcard Routing

Who am I?

Hi, I'm Zach

Two years at Pivotal as a Cloud Foundry
core contributor

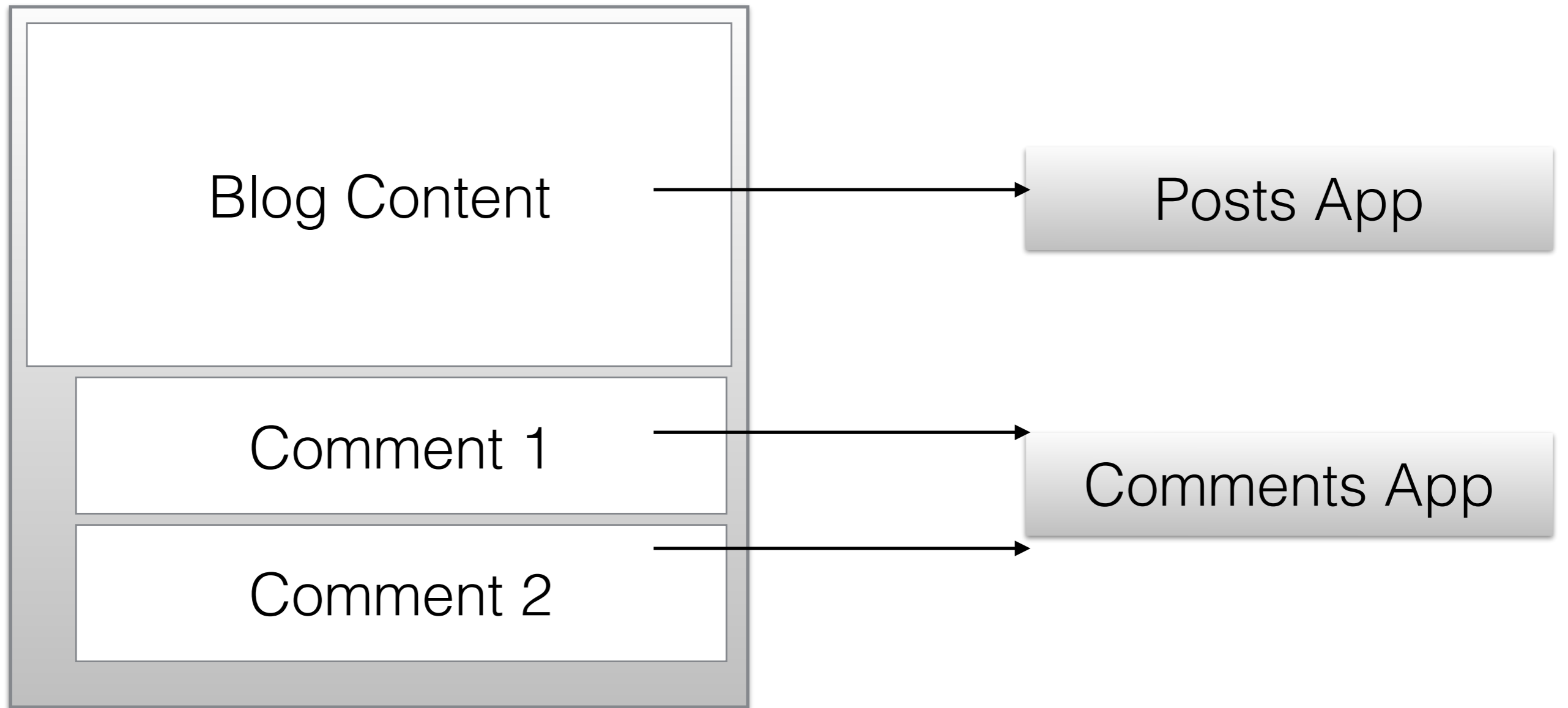
Previously an enterprise developer

Microservices

An application with a single-responsibility that works together with other micro service applications to create a larger complete application

Microservices

Cloud Foundry enables microservices through ease of deployment and operation.



```
$ cf apps
```

name	requested state	instances
comments	started	1/1
posts	started	1/1

Microservices

Cloud Foundry is really embracing microservices by adding features that makes using them together easier

Blog Content

Comment 1

Comment 2

Posts App

Comments App

 www.myblog.com

Blog Content

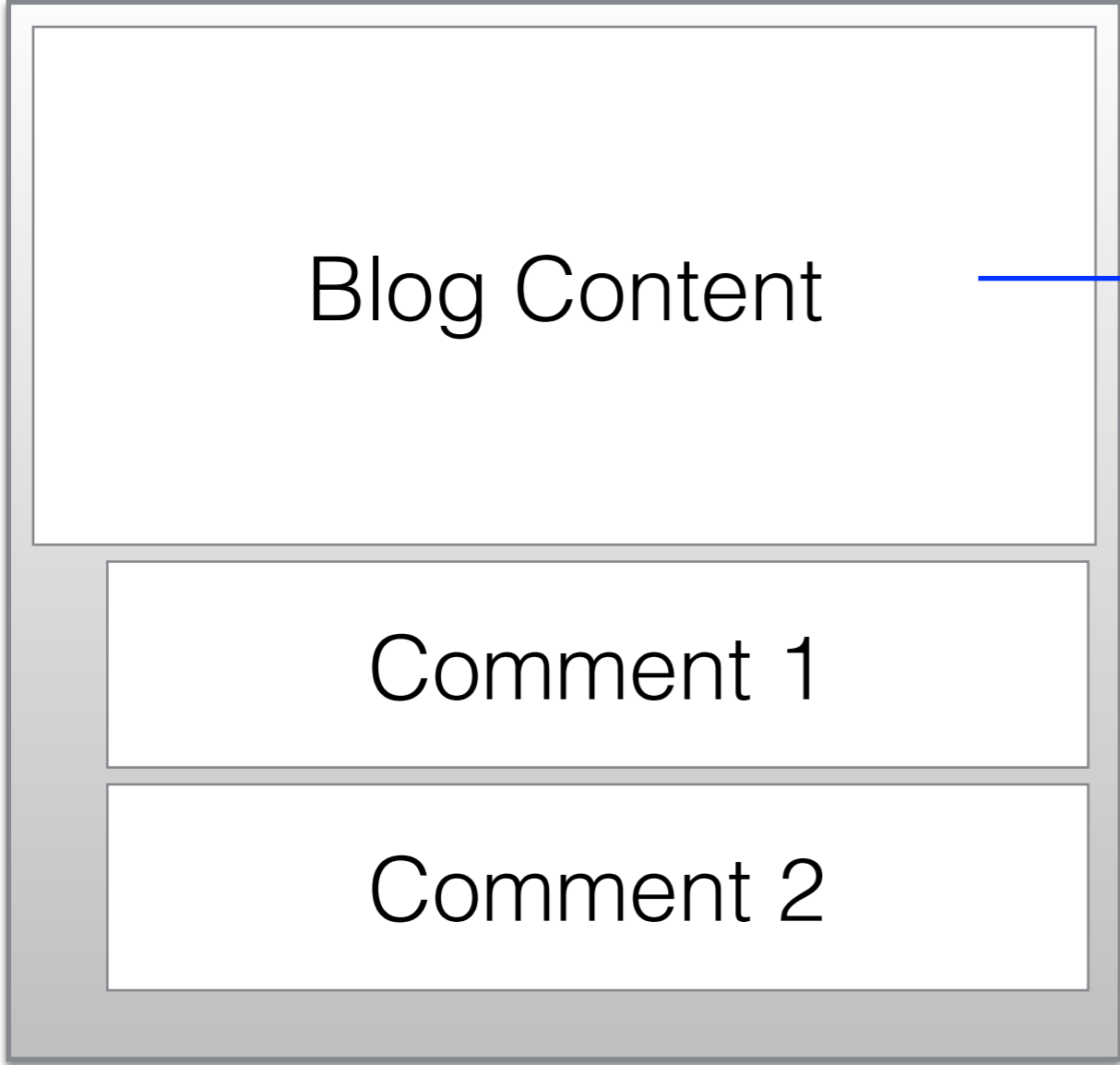
Comment 1

Comment 2

Posts App

Comments App

 www.myblog.com

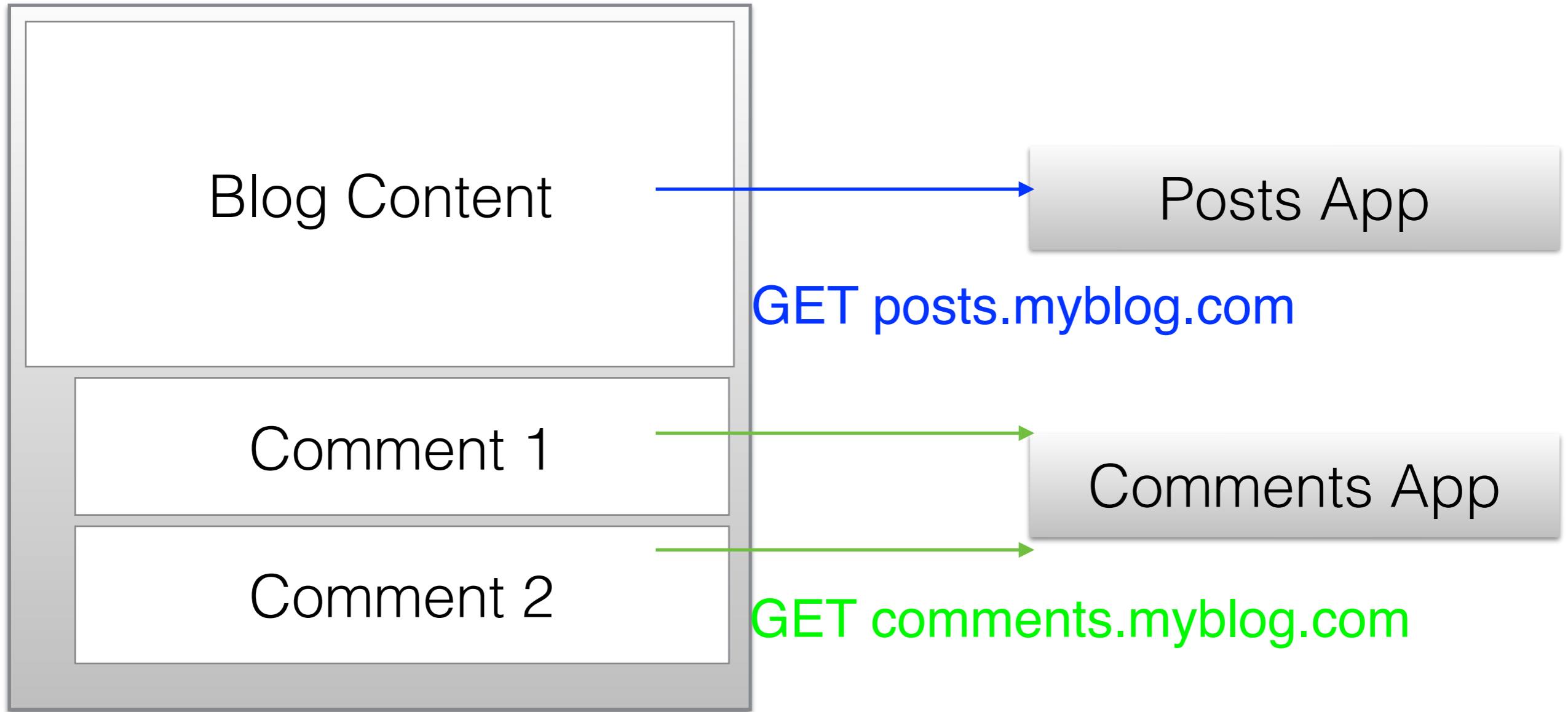


GET posts.myblog.com

Posts App

Comments App

 www.myblog.com





www.myblog.com

Blog Content

Posts App

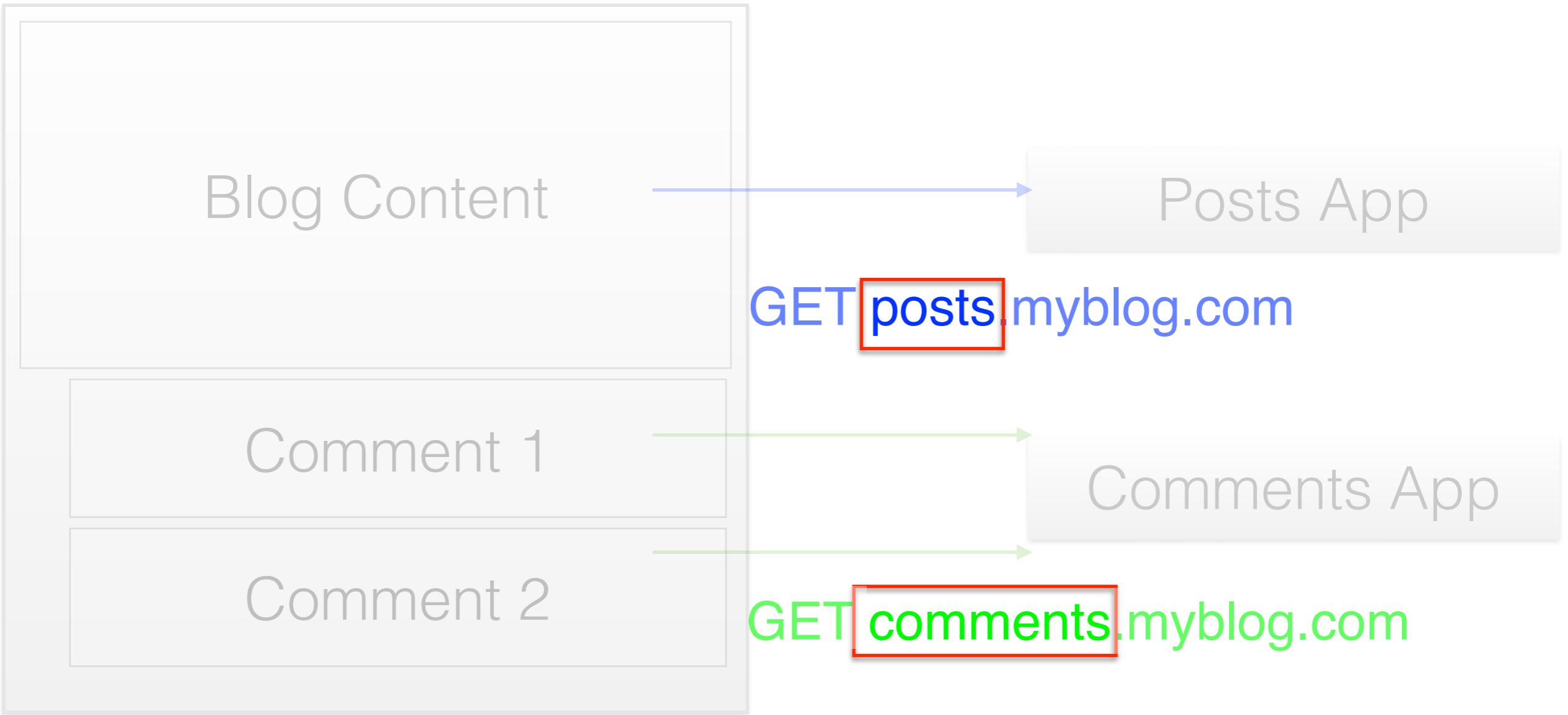
GET **posts**.myblog.com

Comment 1

Comments App

Comment 2

GET **comments**.myblog.com



www.myblog.com

GET posts.myblog.com

GET comments.myblog.com

www.myblog.com

posts.myblog.com

comments.myblog.com

www.myblog.com

posts.myblog.com

comments.myblog.com

www.myblog.com

myblog.com/posts

myblog.com/comments

Cloud Foundry Routes

```
$ cf routes
```

space	host	domain	apps
blog	posts	myblog.com	posts
blog	comments	myblog.com	comments

Cloud Foundry Routes

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$ cf routes
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space	host	domain	apps
blog	posts	myblog.com	posts
blog	comments	myblog.com	comments

Request address



Cloud Foundry Routes

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$ cf routes
```

space	host	domain	apps
blog	posts	myblog.com	posts
blog	comments	myblog.com	comments

Destination application



Cloud Foundry Routes

```
$ cf routes
```

space	host	domain	apps
blog	posts	myblog.com	posts
blog	comments	myblog.com	comments

Request address

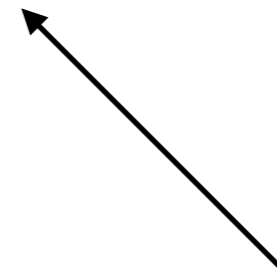
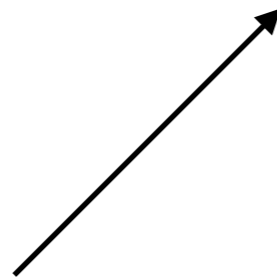
Destination application

posts.myblog.com

comments.myblog.com

posts

comments



 www.myblog.com



Posts App

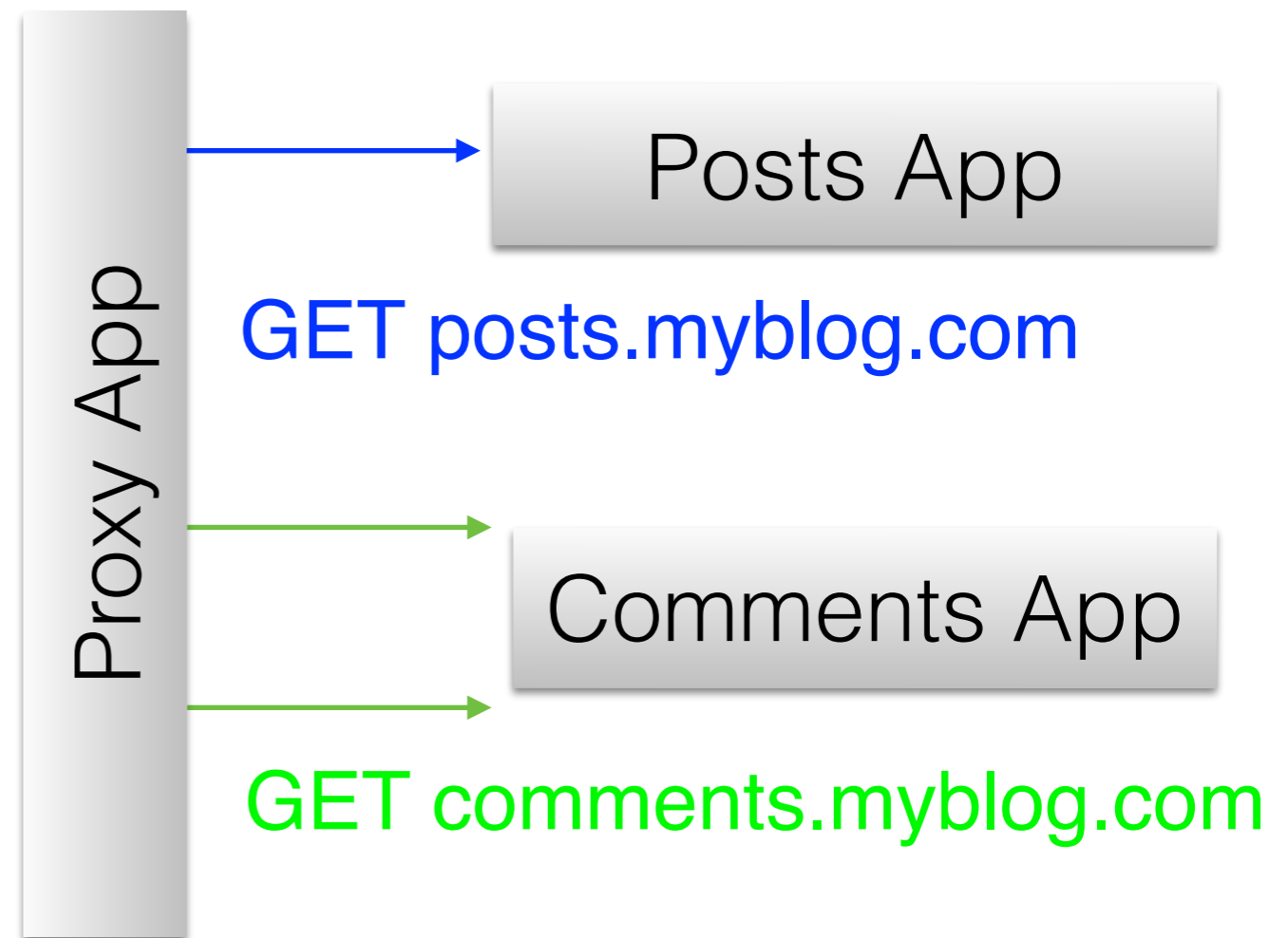
GET posts.myblog.com

Comments App

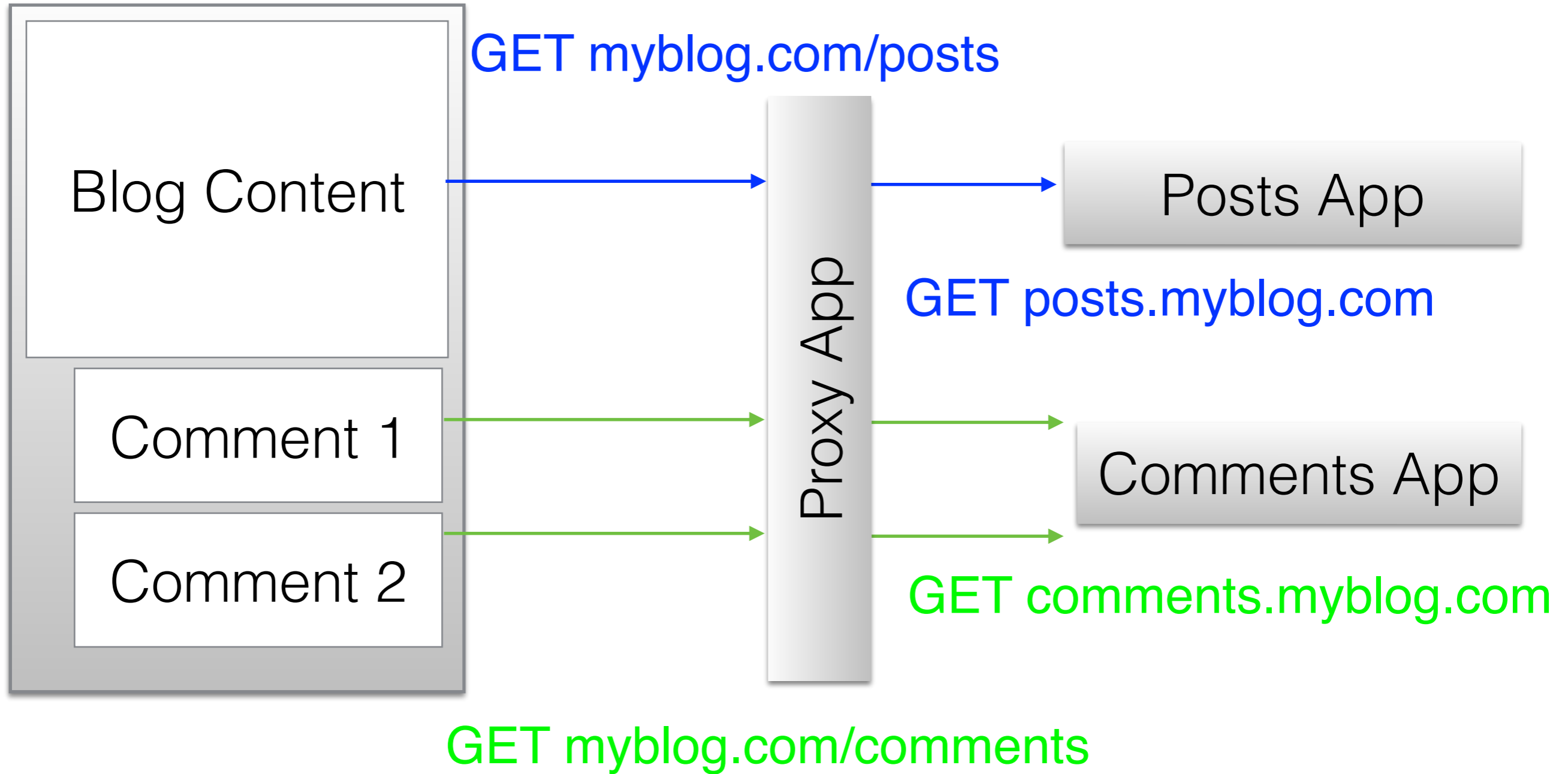
GET comments.myblog.com



 www.myblog.com



 www.myblog.com



Context path routing plugin

<https://github.com/zrob/context-route-plugin>

cf list-context-routes

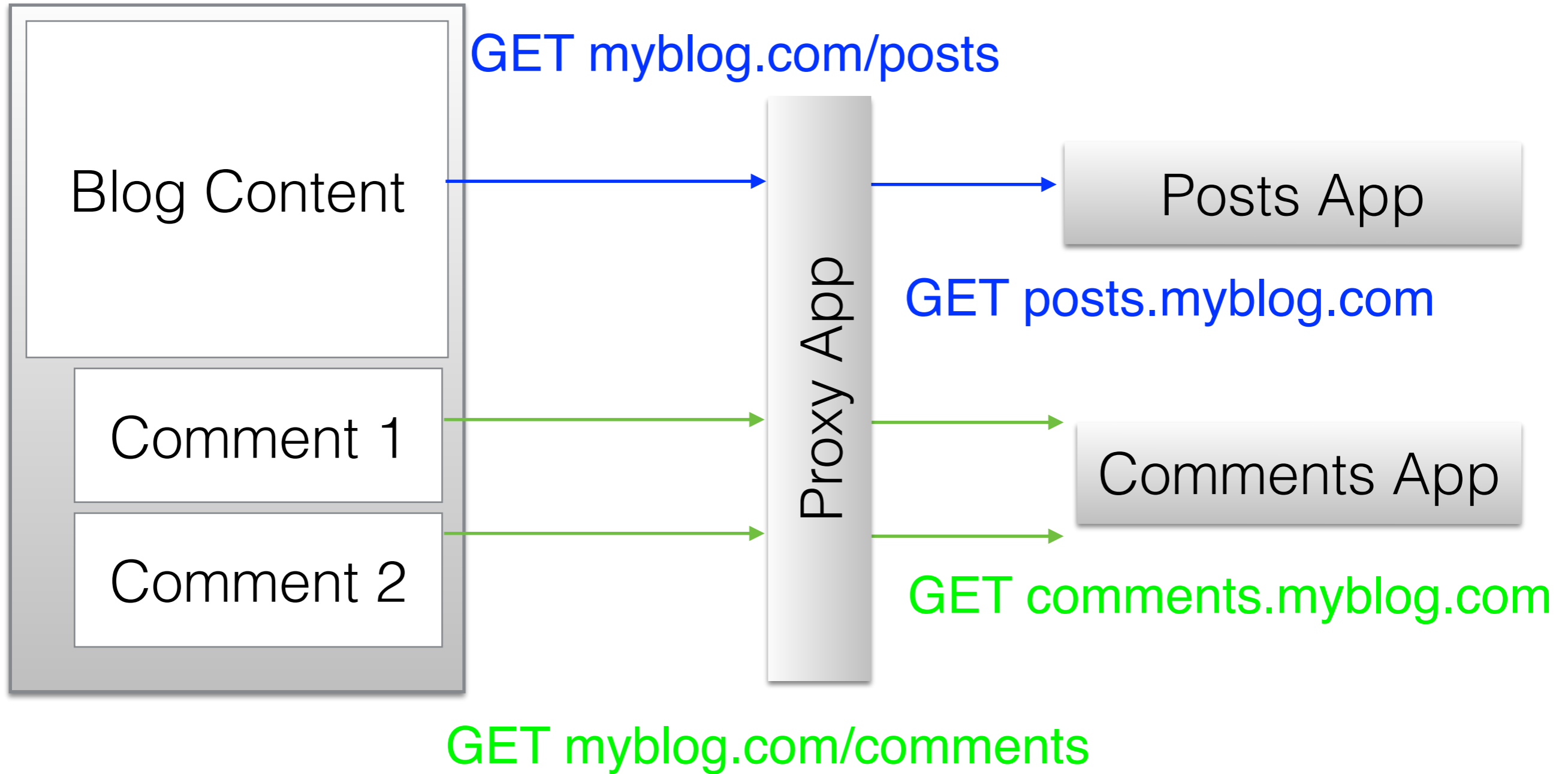
cf create-context-route

cf map-context-route

cf unmap-context-route

cf delete-context-route

 www.myblog.com



 www.myblog.com

Blog Content

Comment 1

Comment 2

Posts App

Comments App

\$



www.myblog.com

Blog Content

Comment 1

Comment 2

Posts App

Comments App

```
$ cf create-context-route blog myblog.com www /posts
```

```
$ cf create-context-route blog myblog.com www /comments
```

 www.myblog.com

Blog Content

Comment 1

Comment 2

Posts App

Comments App

```
$ cf create-context-route blog myblog.com www /posts
```

```
$ cf create-context-route blog myblog.com www /comments
```

 www.myblog.com

Blog Content

Comment 1

Comment 2

GET myblog.com/posts

Posts App

Comments App

GET myblog.com/comments

```
$ cf map-context-route posts myblog.com www /posts
```

```
$ cf map-context-route comments myblog.com www /comments
```

 www.myblog.com



GET myblog.com/posts

Posts App

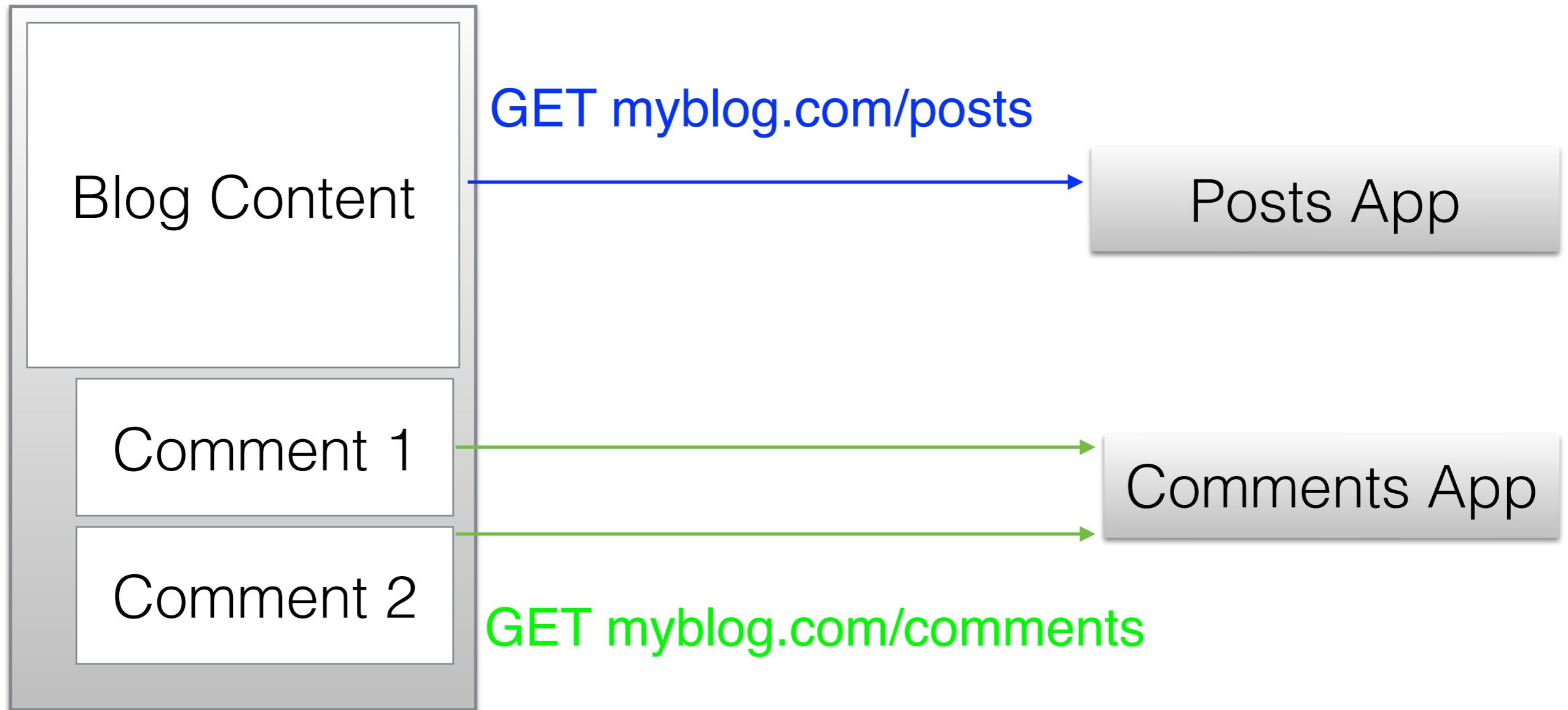
Comments App

GET myblog.com/comments

```
$ cf map-context-route posts myblog.com www posts
```

```
$ cf map-context-route comments myblog.com www comments
```

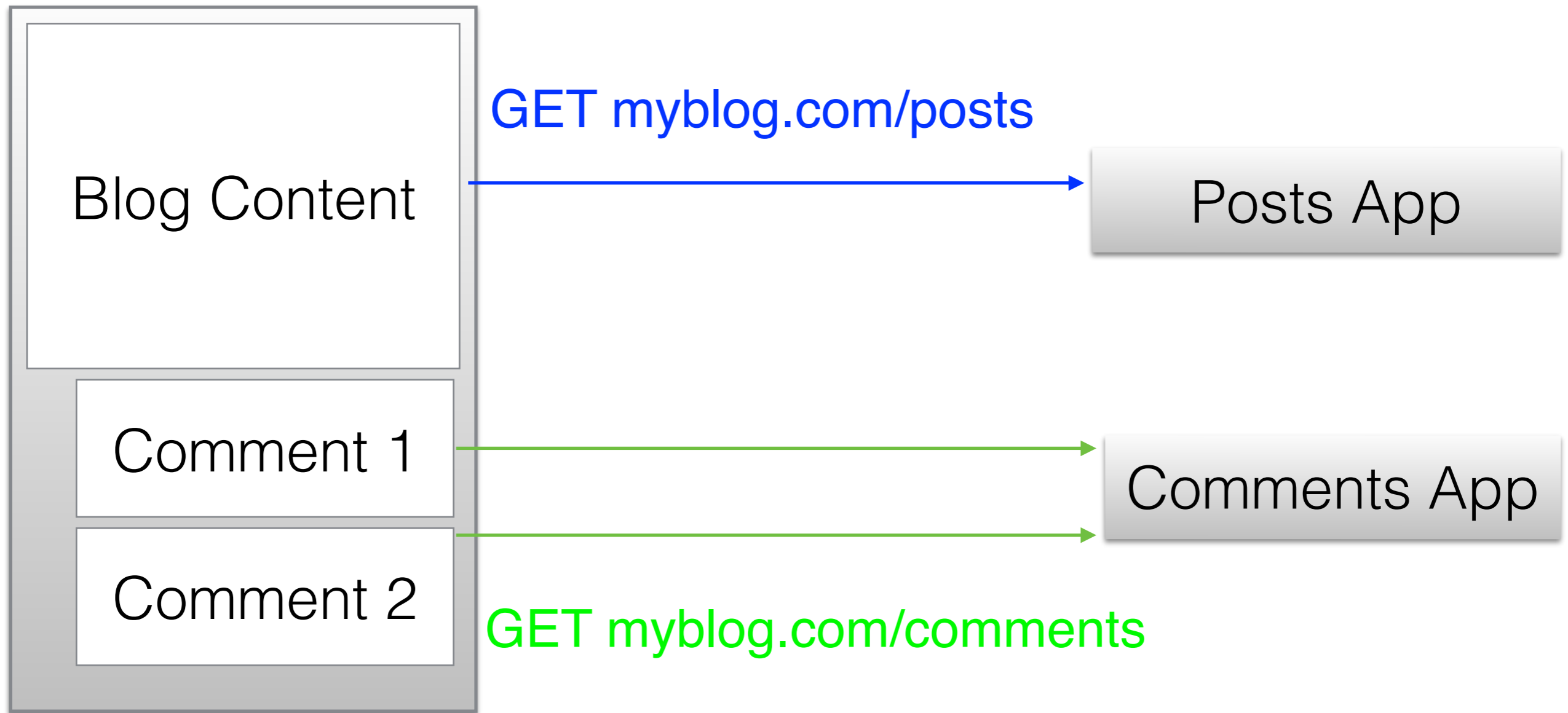
 www.myblog.com



```
$ cf list-context-routes
```

space	host	domain	apps	path
blog	www	myblog.com	posts	/posts
blog	www	myblog.com	comments	/comments

 www.myblog.com



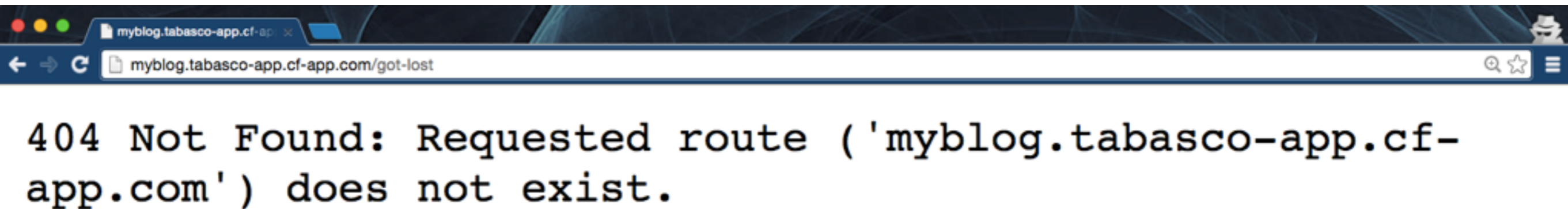
But now this happens



404 Not Found: Requested route ('myblog.tabasco-app.cf-app.com') does not exist.

:(

But now this happens



```
$ cf list-context-routes
```

space	host	domain	apps	path
blog	www	myblog.com	posts	/posts
blog	www	myblog.com	comments	/comments


```
$ cf create-route blog myblog.com -n www
```

```
$ cf list-context-routes
```

space	host	domain	apps	paths
blog	www	myblog.com	posts	/posts
blog	www	myblog.com	comments	/comments
blog	www	myblog.com	the-blog	

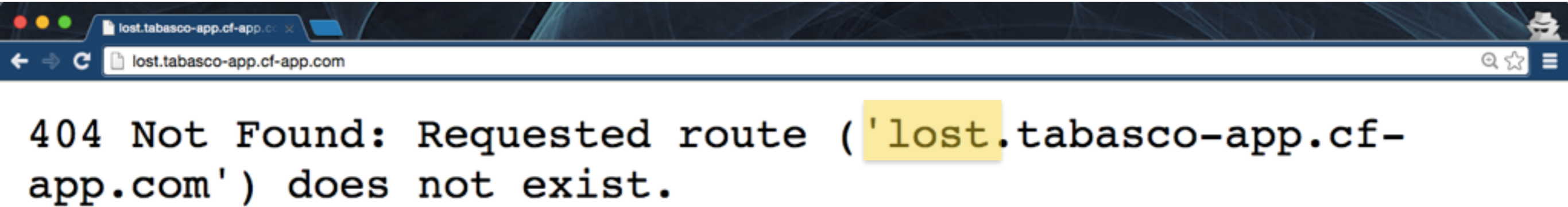
Context Path Routes

- Allow multiple apps to live under the same domain
- Can be created using a CLI plugin here: github.com/zrob/context-route-plugin

Zach's wishlist

- Real CLI support (coming soon)
- HTTP Verb routing
- Declarative route configuration

So there's this weird thing that happens on Cloud Foundry



A screenshot of a web browser window. The address bar shows the URL `lost.tabasco-app.cf-app.com`. The main content area displays a 404 Not Found error message: `404 Not Found: Requested route ('lost.tabasco-app.cf-app.com') does not exist.` The word `lost` in the error message is highlighted in yellow.

Add a 404 app

```
$ cf map-route blog myblog.com -n '*'
```

Add a 404 app

```
$ cf map-route blog myblog.com -n '*'
```

Create a wildcard route



Wildcard route

*.myblog.com

Will match:

lost.myblog.com
really.lost.myblog.com

Questions?

