



RtDC: Big Blocks to Little Blocks

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CA NV AZ NM HI

17 February 2022



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Dominic Lucia & Leigh-Anne Levinski

CA NV AZ NM HI (& Guam!)

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Agenda

Previously on...

Grounding the metaphor

How the building blocks are different

Placing and controlling the blocks

Example microservices app

Discussion



Last session's Challenge answers

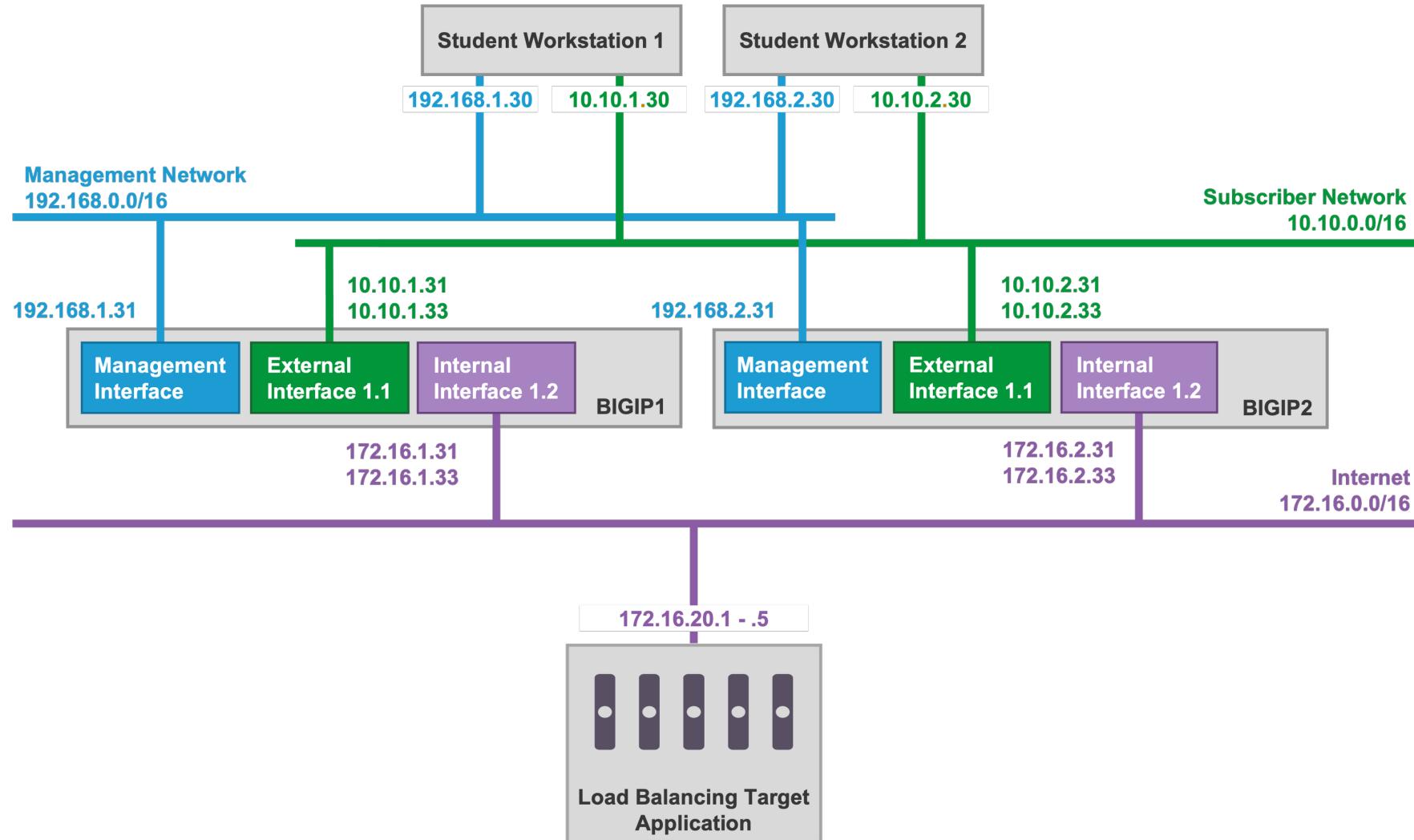
- Question – What would a **customer/prospect** need to do for you to get \$500?
- Answer: a *customer/prospect* would need to be part of a *registered opportunity*, *and* do one of the following:
 1. Attend a workshop hosted by Dom, *or*
 2. Have an NGINX or SHAPE scan run on your environment, *or*
 3. Be on a call with an F5 SE that the partner SE shadowed (although that's only \$200)

Previously on

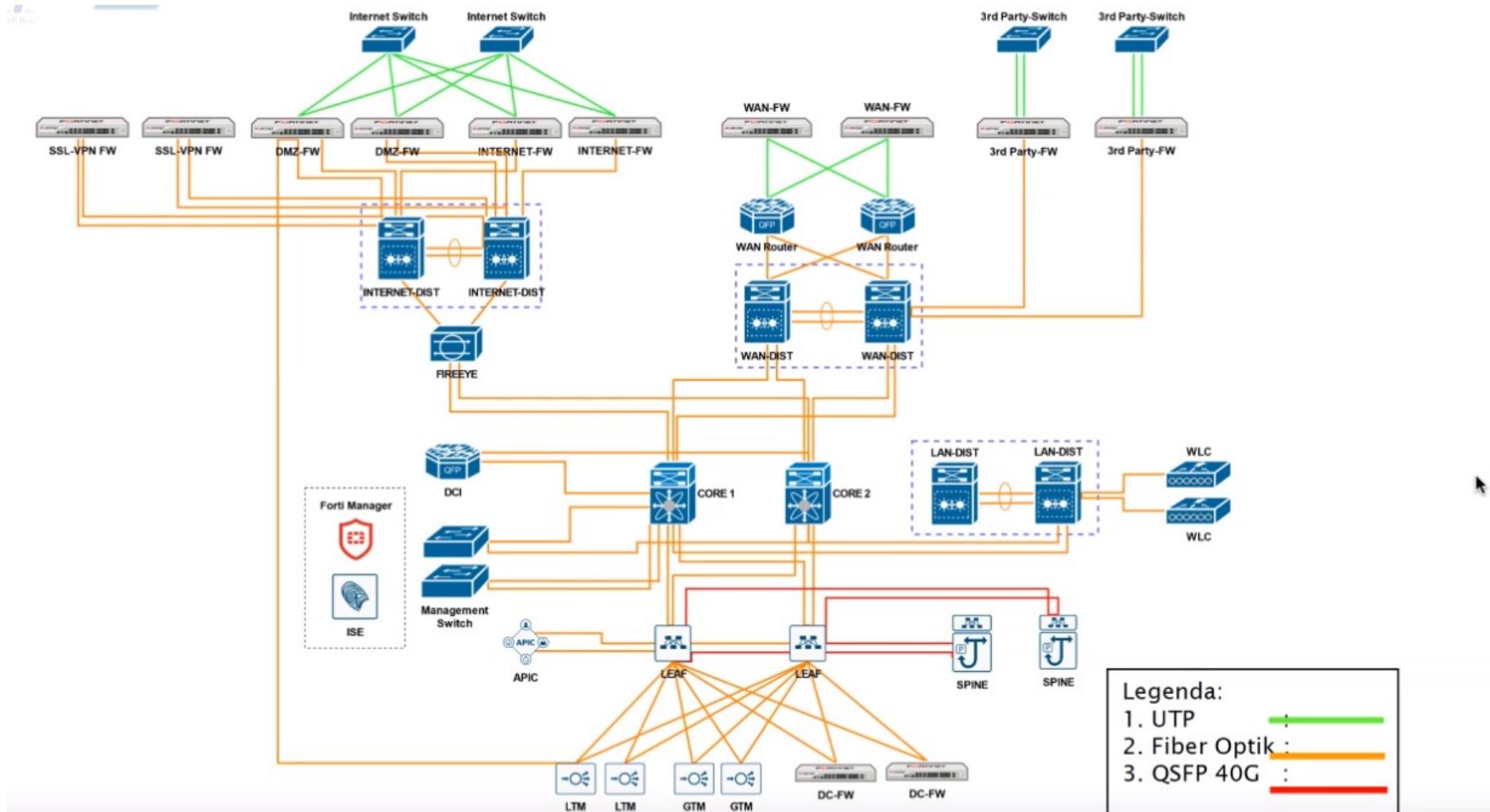
Leaderboard

NAME	PARTNER	POINTS EARNED
Frank Maisano	ANM	300
Sam Ghanaim	InterVision	300
Joel Dalke	CompuNet	300

What are you talking about?

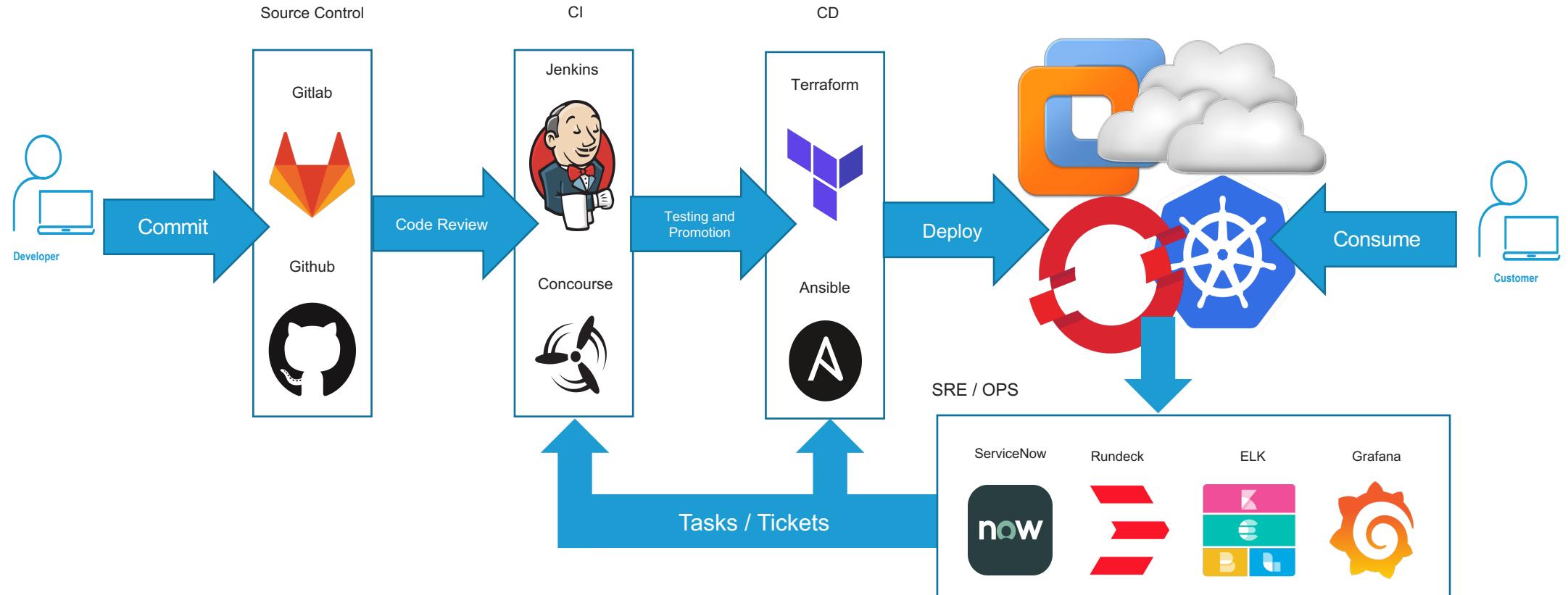


What are you *talking* about?

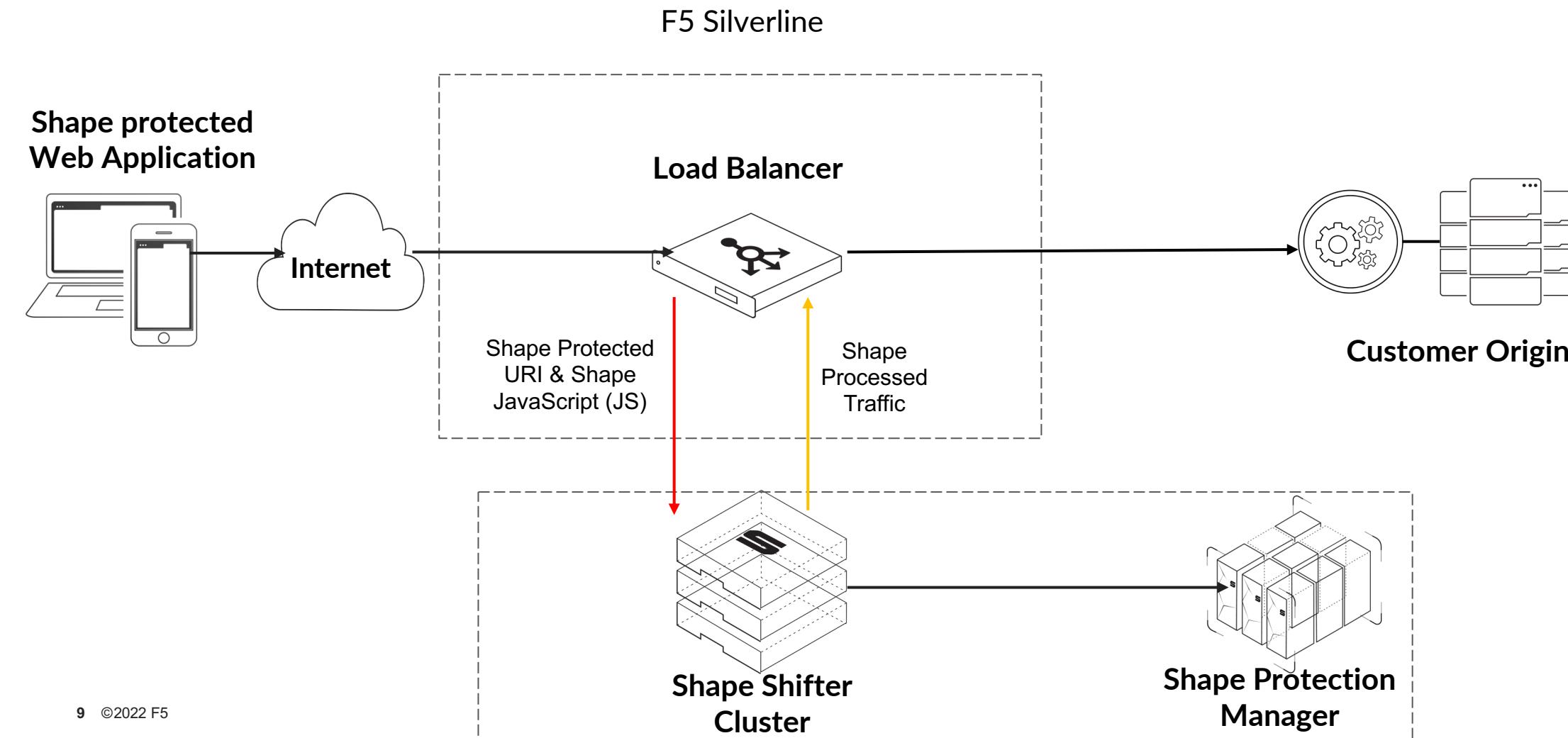


What are you even talking about?

Building blocks of a process.



High Level Architecture - w/ Shape Inline



What are you *talking* about?

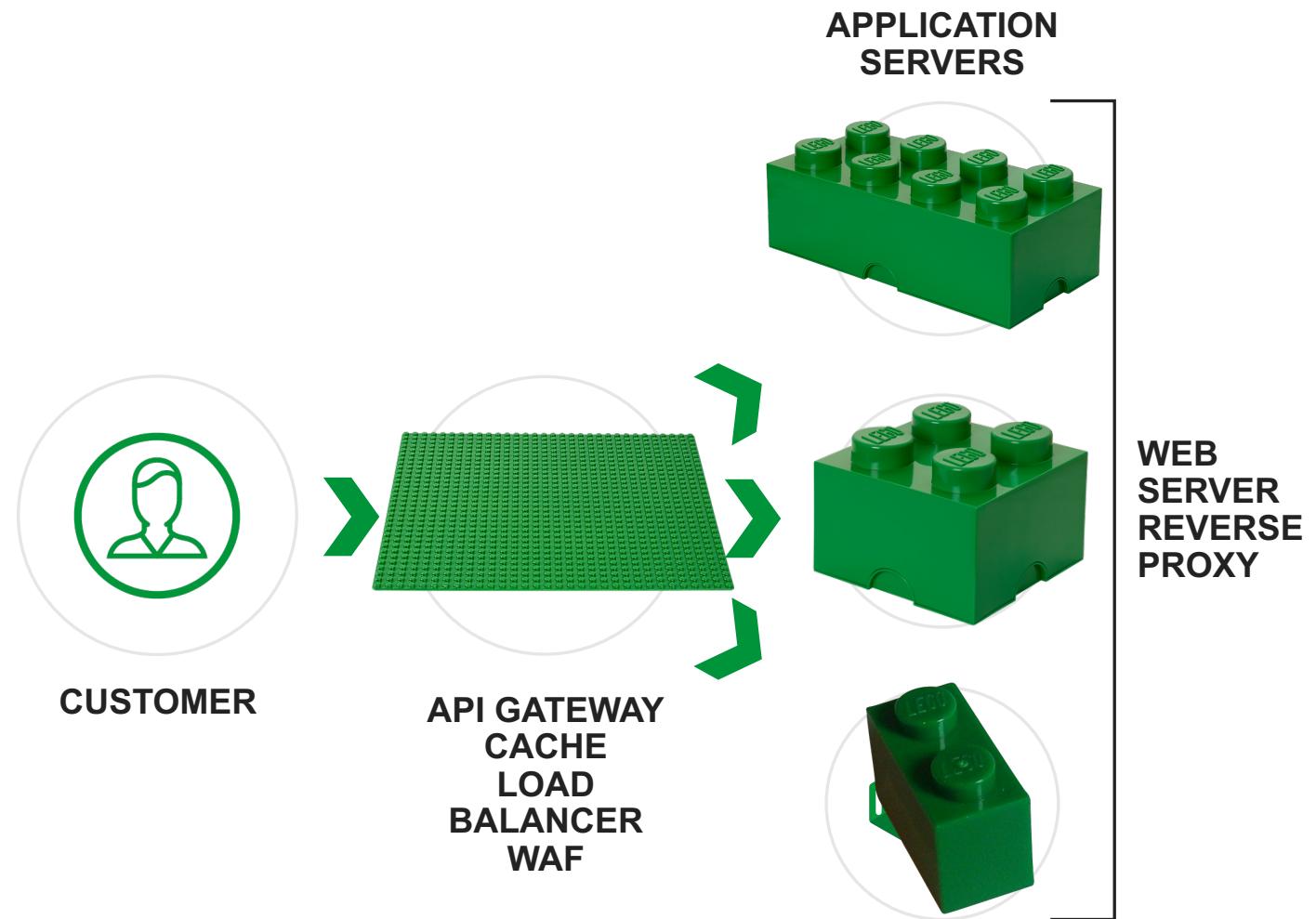
- What exactly is the “building block” here?
 - A switch? A router? A subnet? A VLAN?
 - A server? A VM? A container?
 - A team? An engineer?
 - A business process? A development practice?
 - A method()? A database?
 - A microservice?

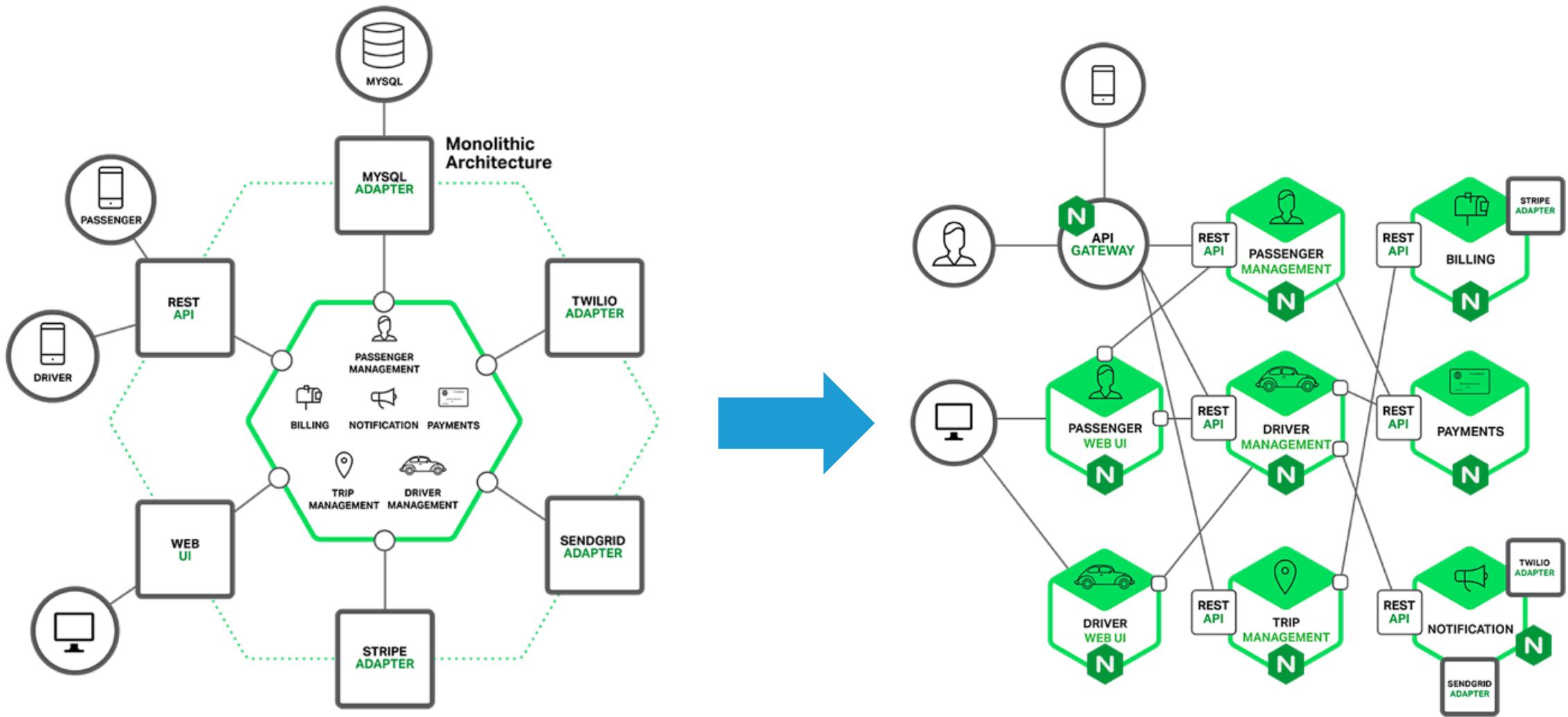
Our “building block” is an application node or application delivery node. This could be an entire microservice, or a compute node in that microservice.

App Delivery Building Blocks

UNIVERSAL BUILDING BLOCK

- Load balancer
- Content cache
- Web server
- Security controls
- Dynamic modules
- Monitoring
- High availability (HA)
- Kubernetes Ingress controller
- Programmability
- Streaming Media





Building block size

METRIC	BigIP	NGINX	Orders of Magnitude Diff
Disk (smallest footprint)	37GB (VMDK)	17.6MB (container)	-3 (1/1000)
RAM (smallest footprint)	4GB (VM)	4.8MB (container)	-3 (1/1000)
Connections (lowest model max)	3000	Millions	3 (10^3)
Bandwidth (lowest model max)	25Mbps	Gbps	2 (10^2)
Config	Imperative (commands)	Declarative (code)	Priceless

Imperative vs Declarative

Imperative

Take 5 steps forward, turn right, run forward for 5 seconds, paint the wall in front of you.

Oh by the way I hope you started in the right place.

Declarative

Current state? **Don't care.**

Here is what I want it to be.

Imperative vs Declarative

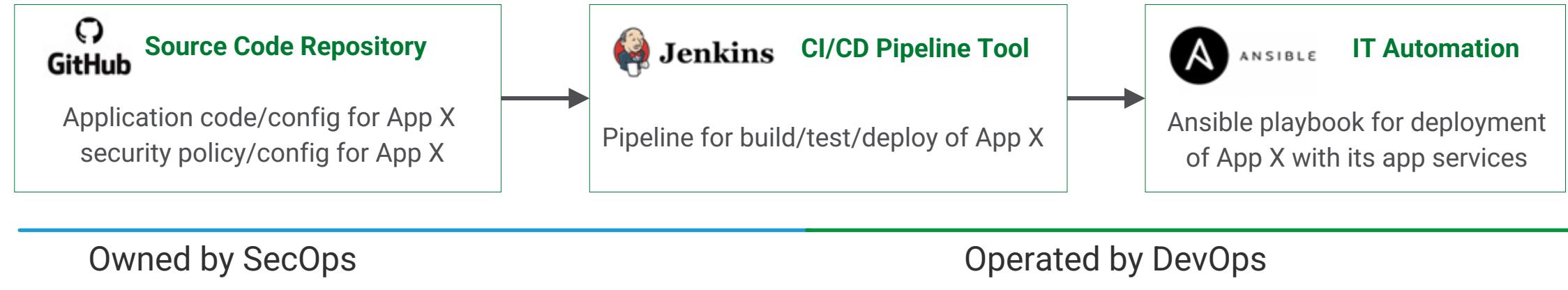
Imperative

You describe the process.

Declarative

You describe the end result.

Declarative Policy Helps CI/CD Motion



```
{  
  "entityChanges": {  
    "type": "explicit"  
  },  
  "entity": {  
    "name": "bak"  
  },  
  "entityKind":  
  "tm:asm:policies:filetypes:filetypestate",  
  "action": "delete",  
  "description": "Delete Disallowed File Type"  
}
```

Ready?



“Demo” (Get it?)



