Cloud Automation

Who am I ?

Tabalwor®

MODSOFT

Provides Cloud Services Management and engineering consultations.

Cloud Automation

And some python

Why do we need this ?

Why not just use ssh & ftp ?

Hello, We have noticed that one or more of your instances are running on a host degraded due to hardware failure. i-666XXXXX

The host needs to undergo maintenance and will be taken down at 12:00 GMT on 2011-05-13. Your instances will be terminated at this point. The risk of your instances failing is increased at this point. We cannot determine the health of any applications running on the instances. We recommend that you launch replacement instances and start migrating to them.

Feel free to terminate the instances with the ec2-terminate-instance API when you are done with them.

Sincerely,

The Amazon EC2 Team

Infrastructure as Code

“We should be able to build our infrastructure without **manual** ssh.”

“Deployments should be hands-free.”

Completely

“Server instances should not live for a long time.”

Where to store data ?

- Block storage services like AWS's EBS and DO's Block storage.
- Object storage services like S3.
- Redundant databases.

Infrastructure as Code

Python ?

Python

For “Javascript” Devs

Installing Python

- For Unix Based Systems
- For Windows Systems

Python 2 vs Python 3

Basic Hello World

```
console.log(“Hello, Geeks”);
```

First Python Code

```
print “Hello, Geeks”
```

Variables

```
var x = 1;// Integer

var y = “String”; //String

var z = true; //Boolean
```

Variables

```
x = 1 // Integer

y = “String” // String

z = True // Boolean
```

Function

```
function sayHi(name){
    console.log(“Hi ”+name);
}
```

Function

```
def sayHi(name):

    print “Hi ”+name
```

Loops

```
for(var x = 0; x < 10; x++){
    console.log(x);
}
```

Loops

```
for x in range(10):

  print x
```

Loops

```
var numbers = [“One”,“Two”,“Three”];

for(var x = 0; x < numbers.length, x++){

    console.log(numbers[x]);

}
```

Loops

```
numbers = [“One”,“Two”,“Three”]

for number in numbers :

    print number
```

If statements

```
var x = 10;

if(x > 10){

    console.log(“more than 10”);

}else if (x < 10){

  console.log(“less than 10”);

}else{

  console.log(“Equals to 10”);

}
```

If statements

```
x = 10

  if x > 10:

      print “more than 10”

  elif  x < 10:

    print “less than 10”

  else:

    print “Equals to 10”
```

TAKE ONLY WHAT YOU NEED TO SURVIVE.

Fabric

Provider Independent

Introducing Monitoring: Insight into your infrastructure at no additional cost. Learn More!

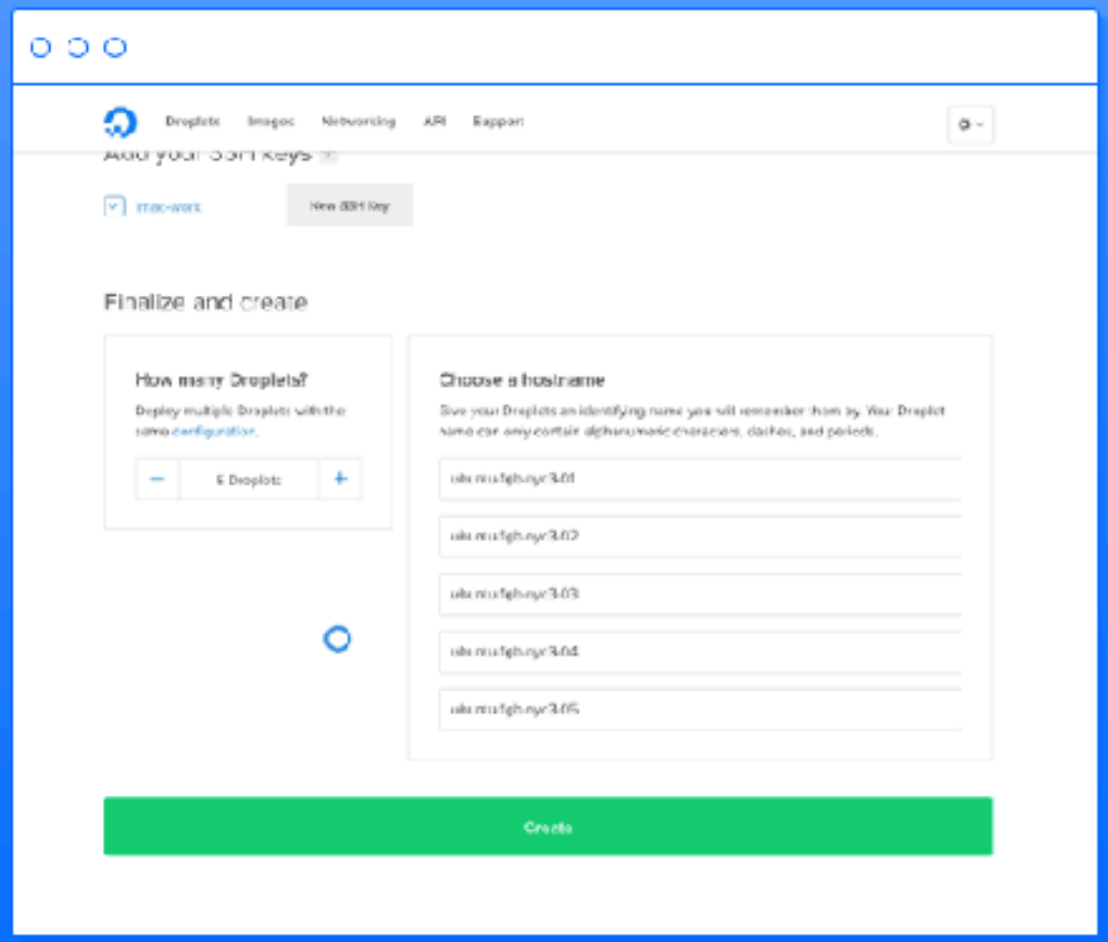
Cloud computing, designed for developers.

Email Address

Password

Create an Account

By signing up, you agree to the Terms of Service.



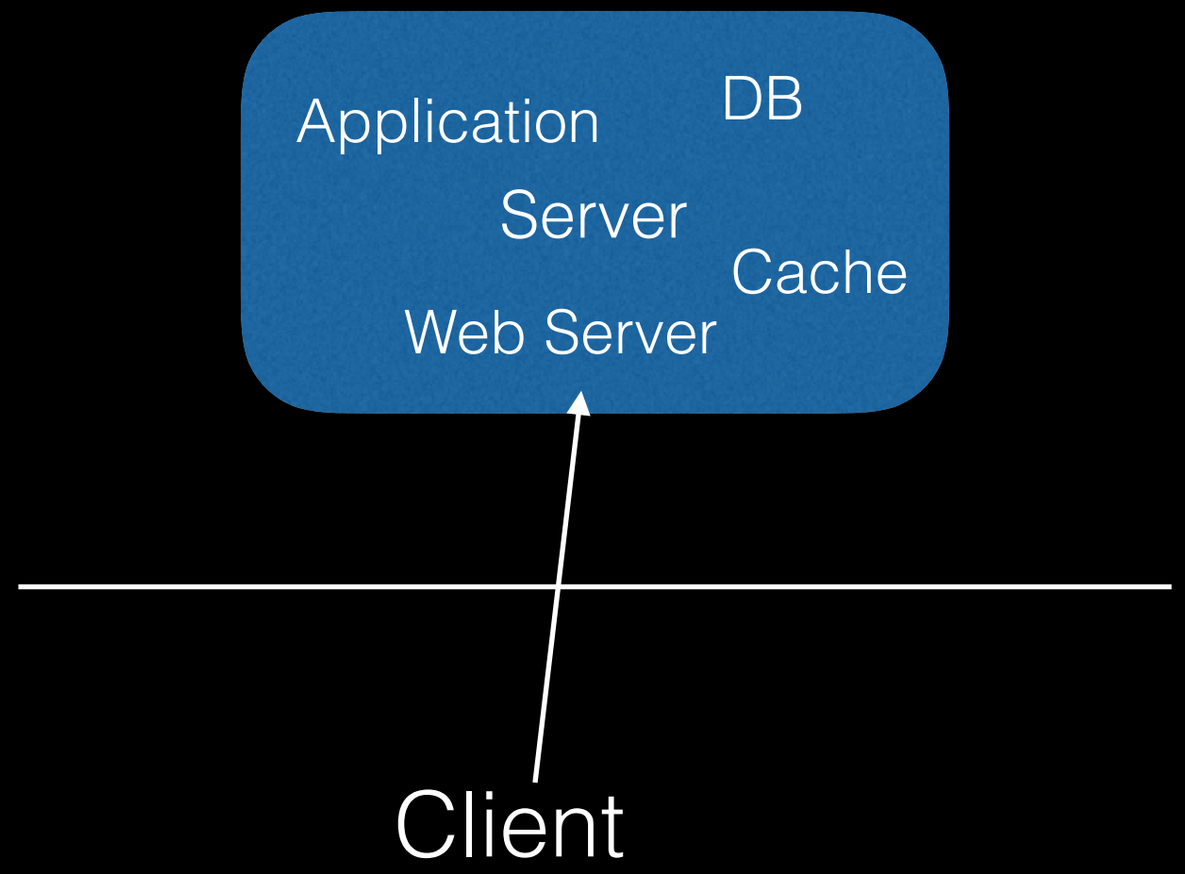
Why DigitalOcean ?

- Simple products.
- Simple pricing.
- **Good api.**

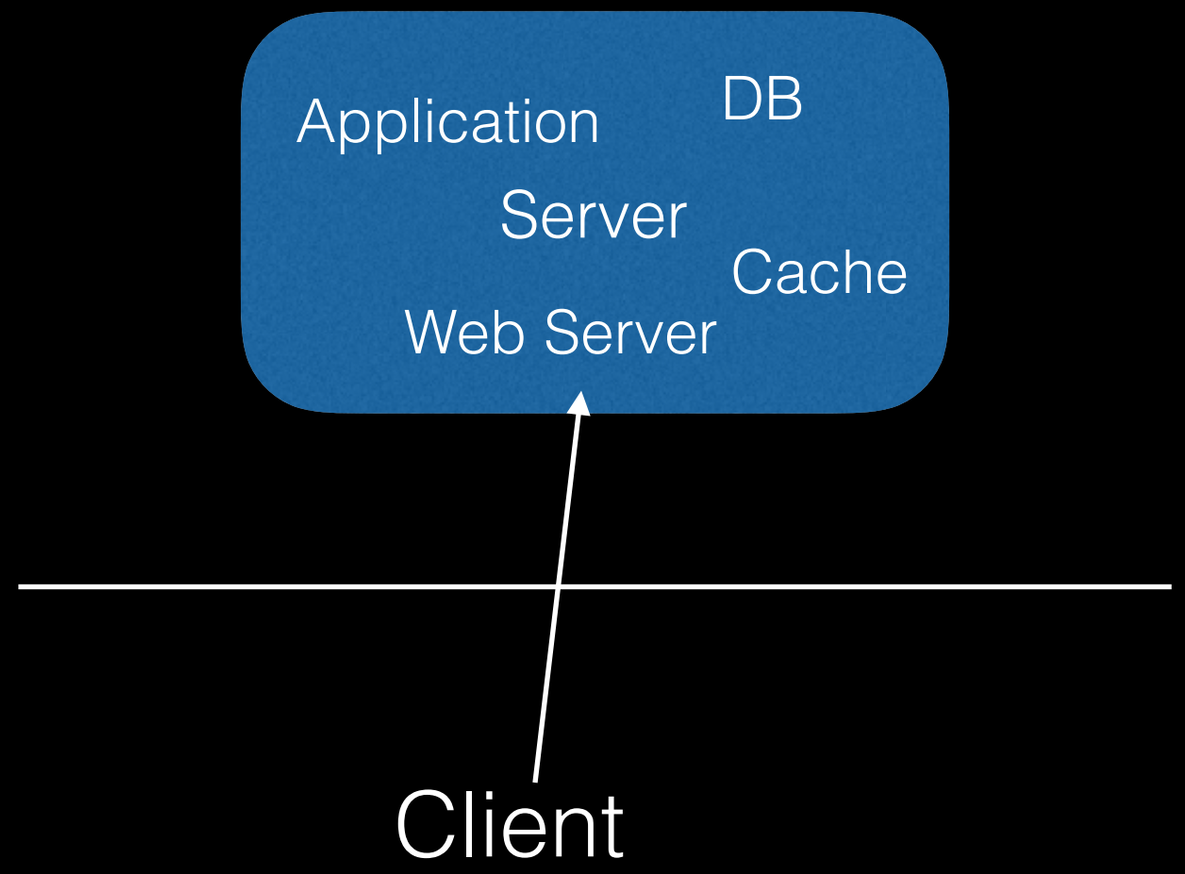
Deployments

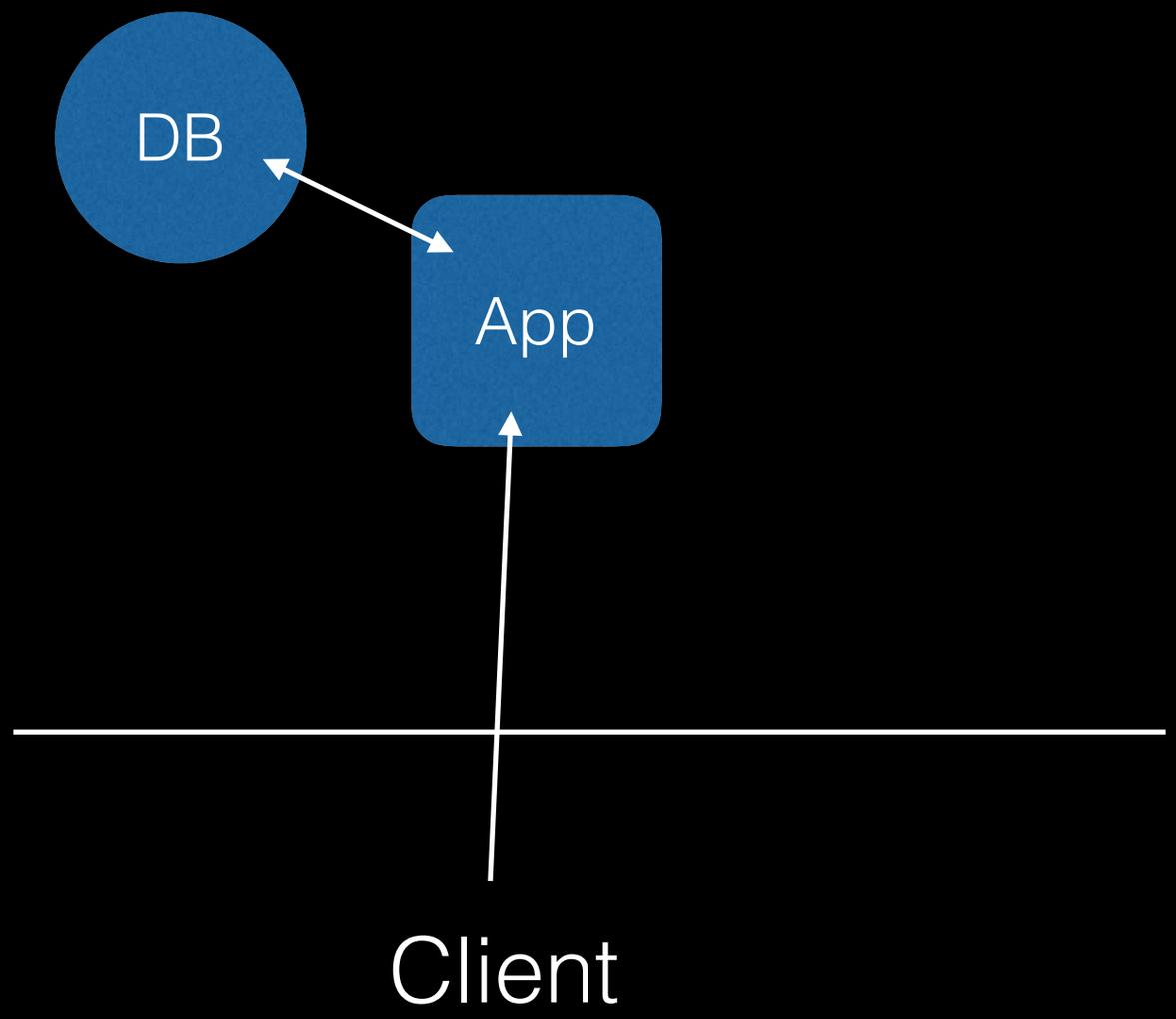
- One Server in-place deployments.
- Multi-server in-place deployments.
- Multi-server reversible deployments.
- Multi-server Blue/Green deployments.

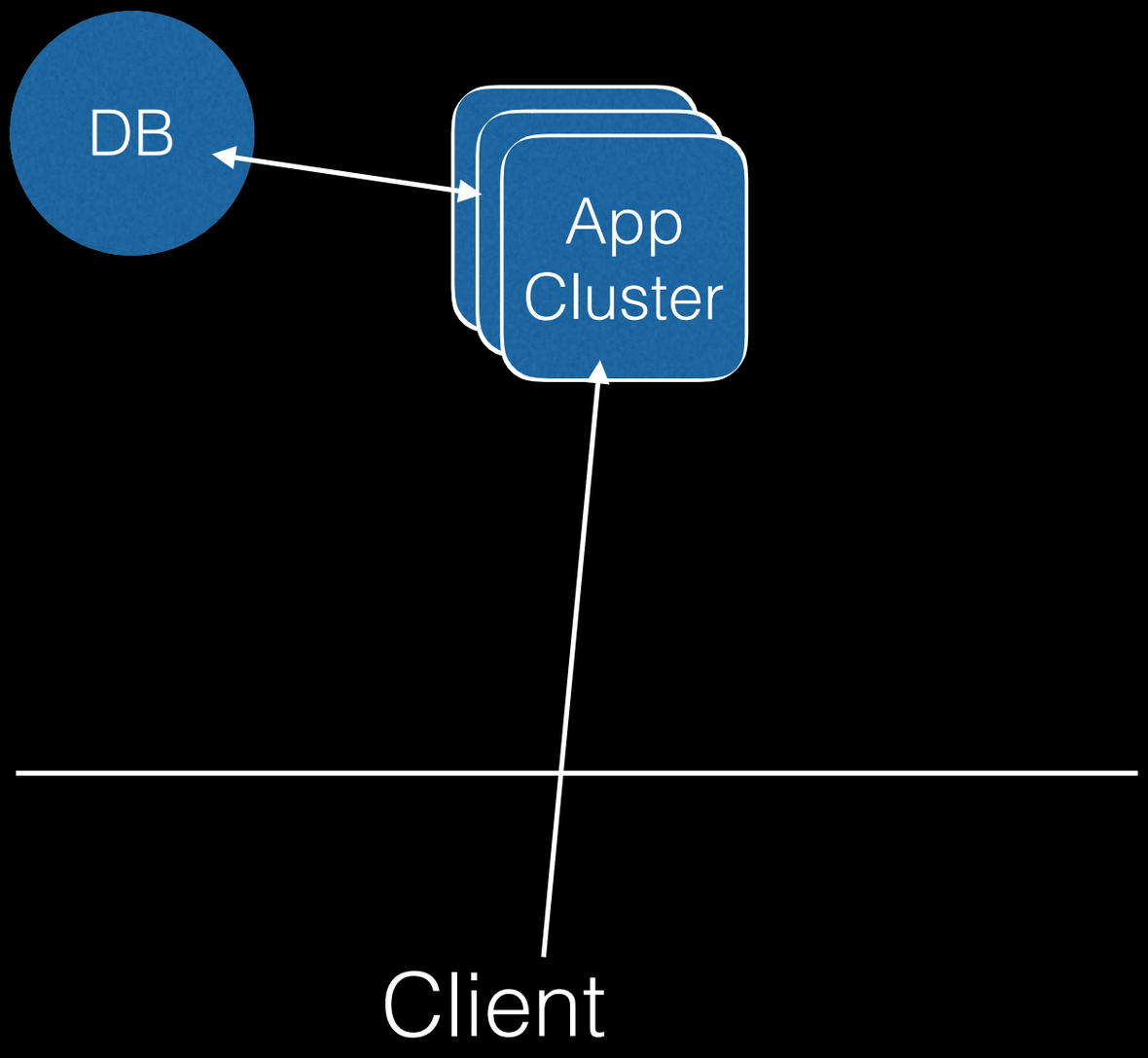
One Server Deployments

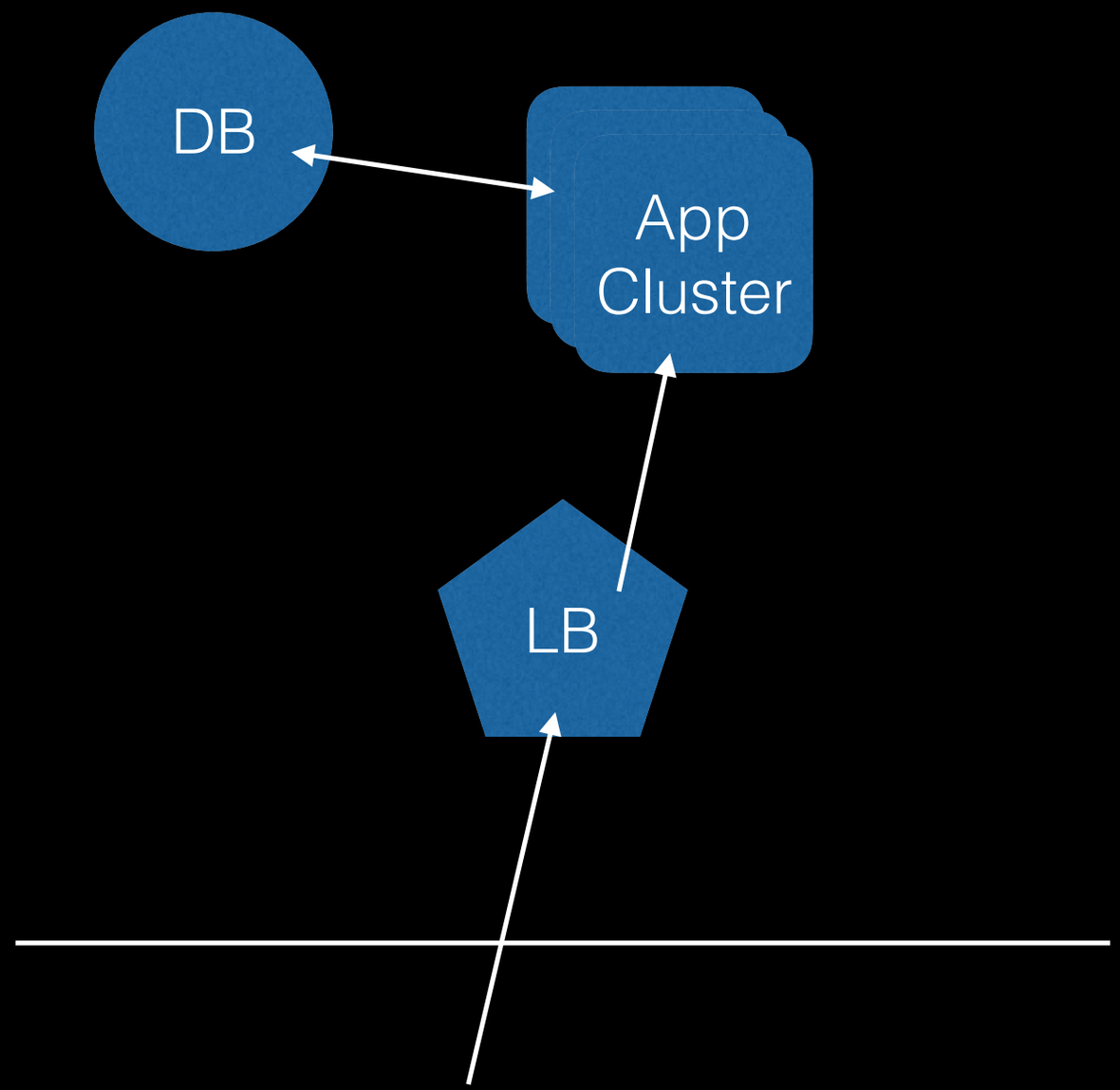

Application
Server
Web Server
DB
Cache
Client

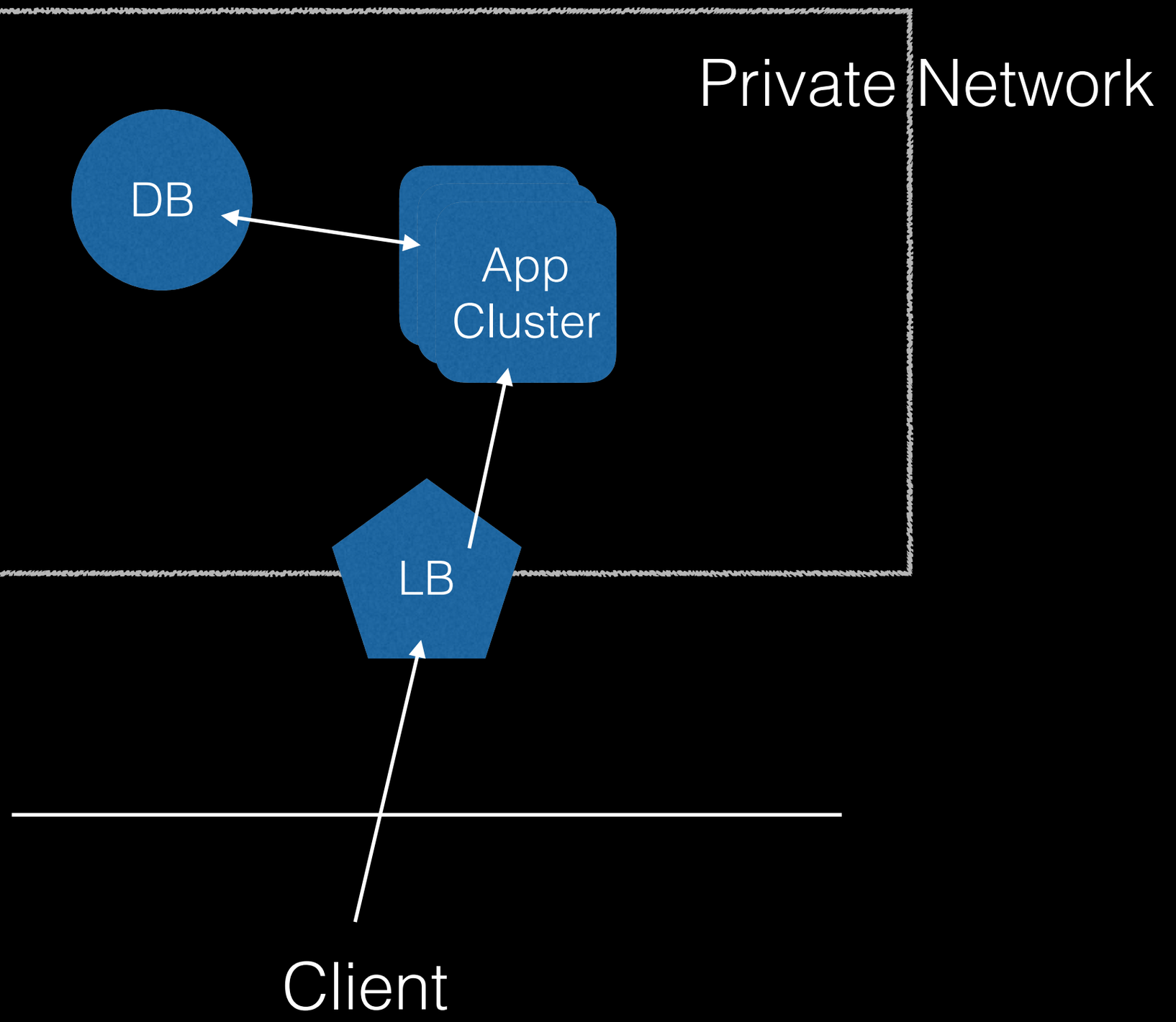
Multi Server Deployments


Application
Server
Web Server
DB
Cache
Client


DB
App
Client


DB
App
Cluster
Client


DB
App
Cluster
LB
Client


Private Network
DB
App
Cluster
LB
Client

Load Balancer

Making our deployment

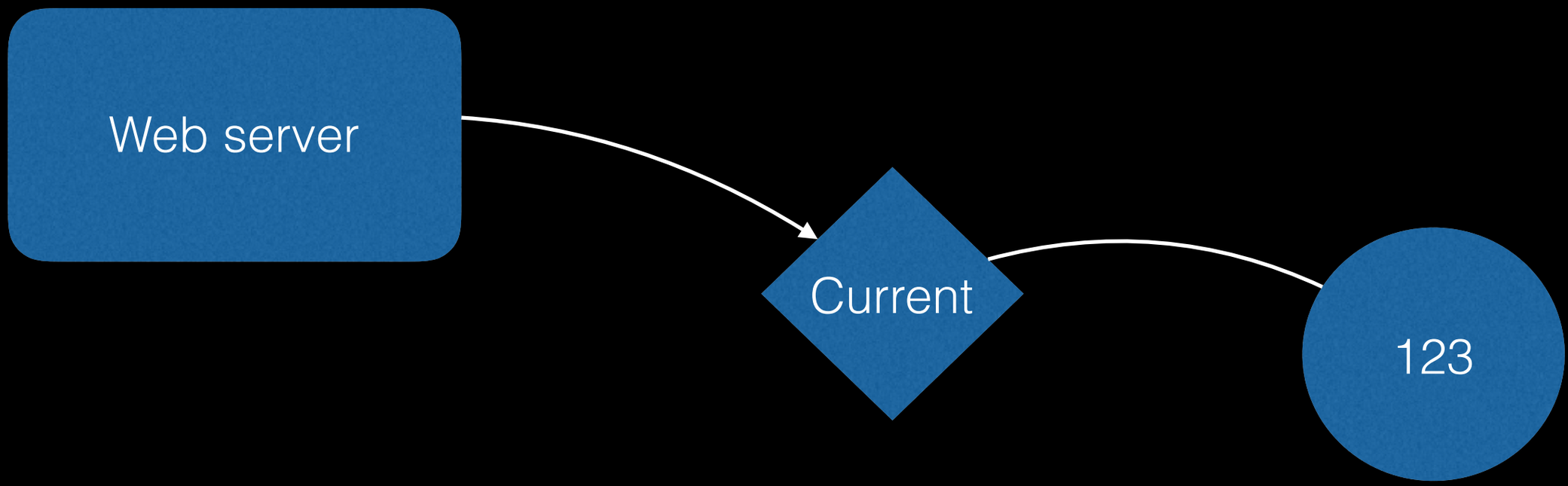
Reversible

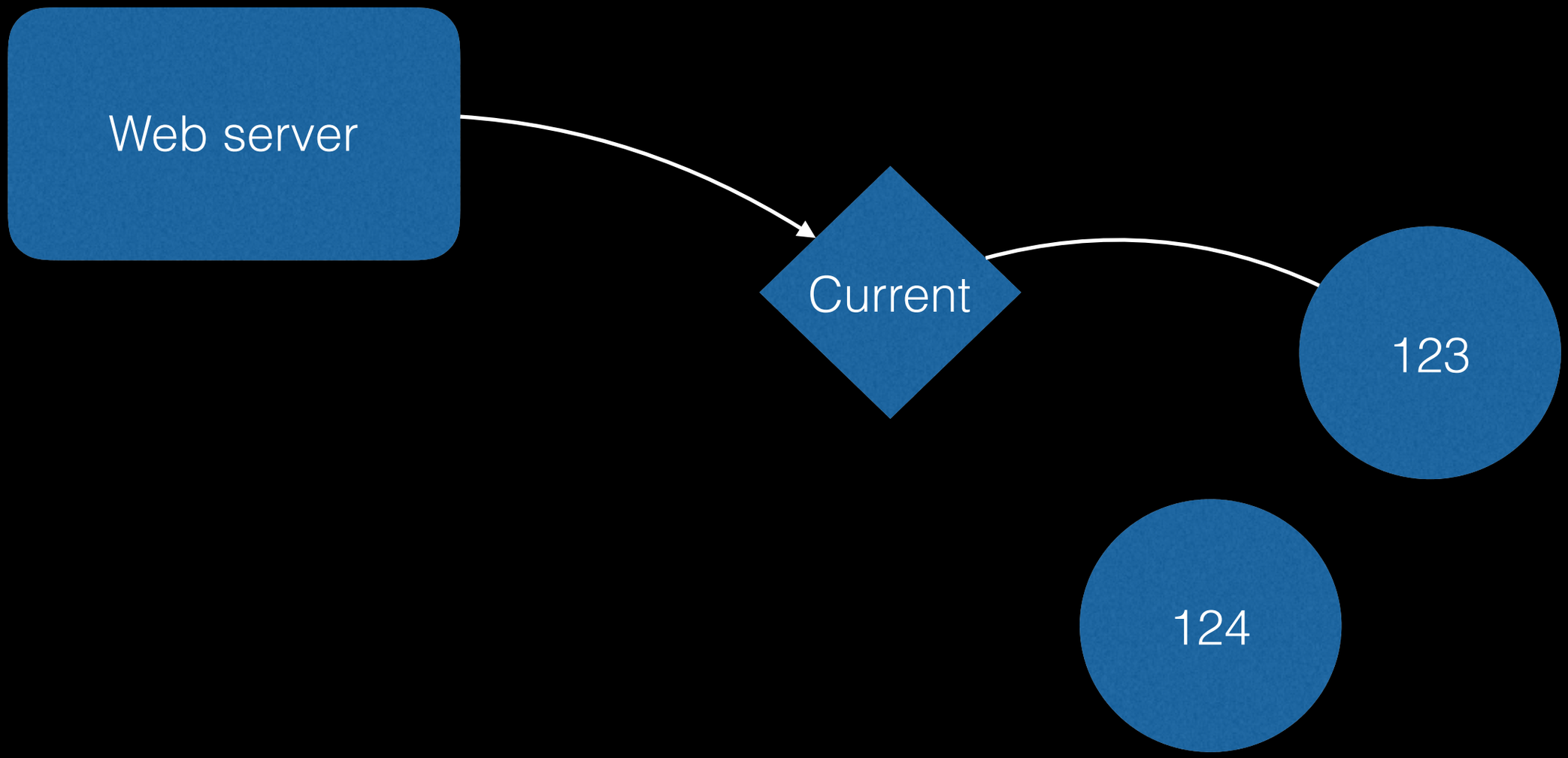
Initial deployment

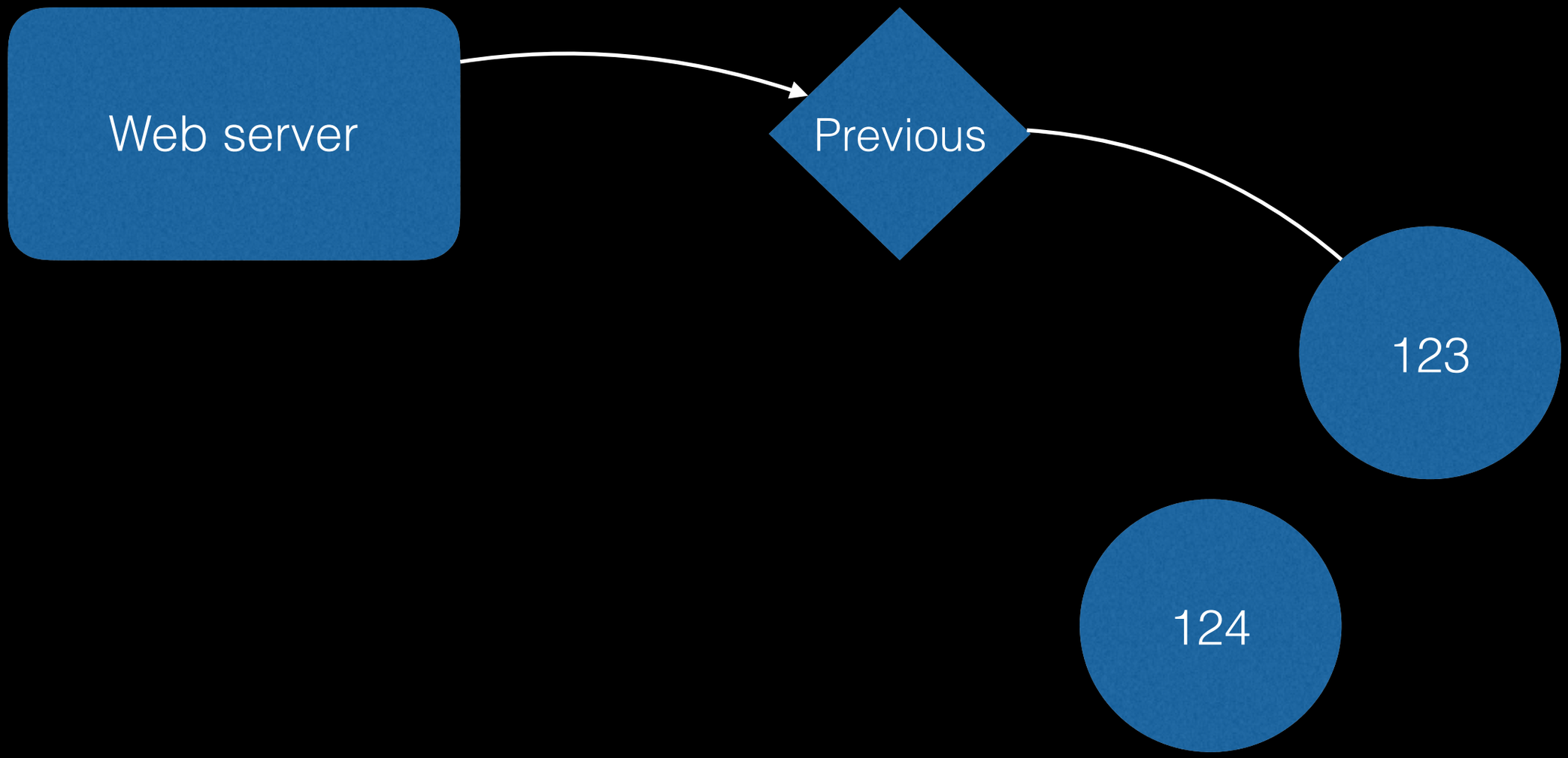
1. Clone repo in new directory
2. Create an symlink for that directory named “current”
3. Point web server to the symlink

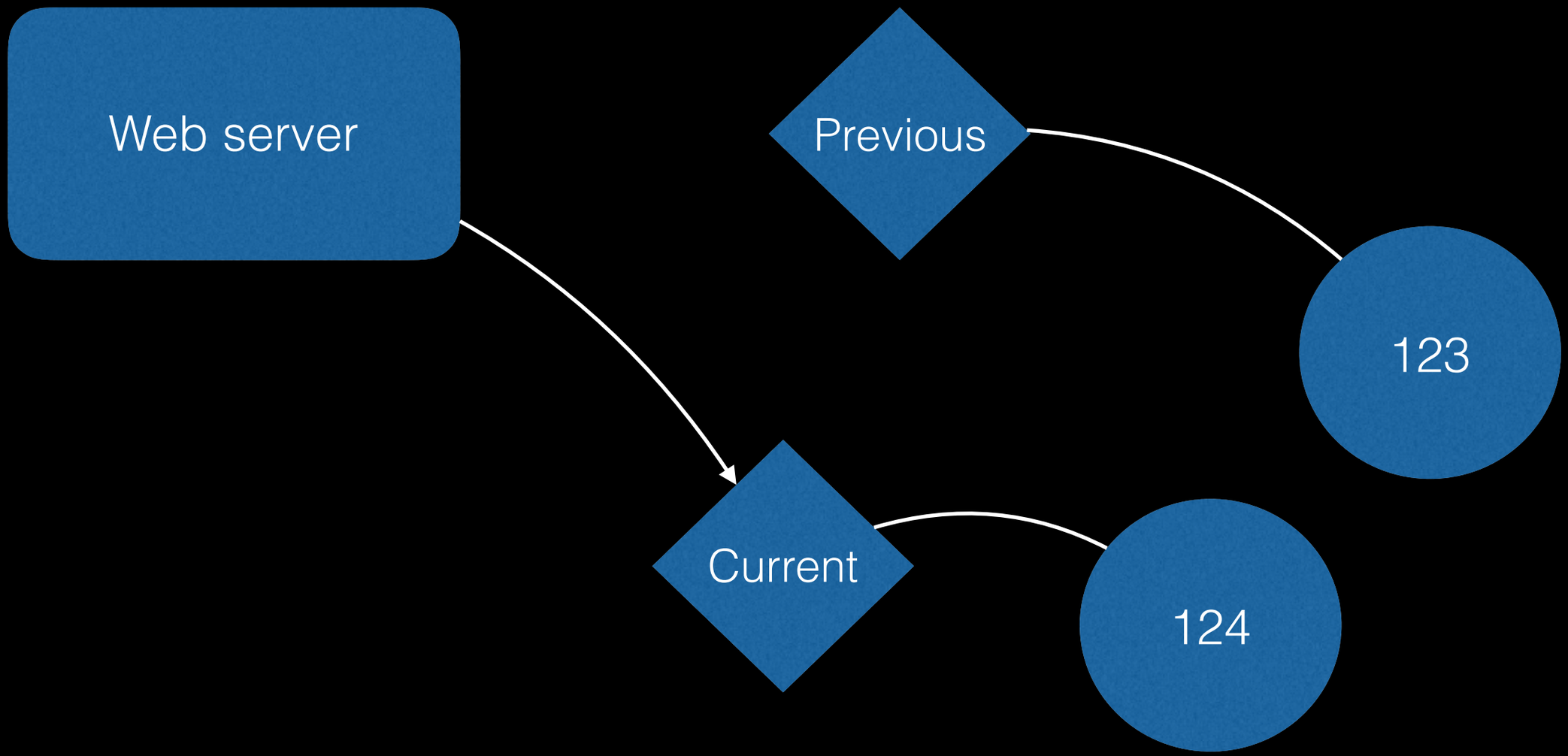
new deployment

1. Clone repo in new directory.
2. Renamed the “current” symlink to “previous”.
3. Create an symlink for the new directory named “current”.
4. Reload web server.


Web server
Current
123


Web server
Current
123
124


Web server
Previous
123
124


Web server
Previous
123
Current
124

Thanks :)

@hussam_almarzoq