





# Spinning up a micro-service

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https://github.com/yaacov/AP-2017-OpenShift

## Technologis

**OVirt** - Virtual machine (VM) is an emulation of a computer system.

**Docker** - Containers are a way to package software in a format that can run isolated on a shared operating system.

Kubernetes - A system for management of containerized applications.

**OpenShift** - Built around a core of Docker container packaging and Kubernetes container cluster management, OpenShift is also augmented by application lifecycle management functionality and DevOps tooling.



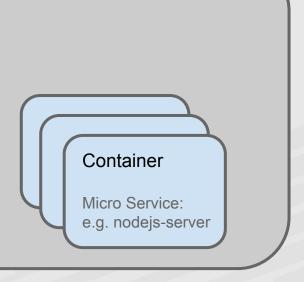
# Agenda

- [ Quickly deploy an OpenShift cluster ]
- The OpenShift console.
- Set up a microservice from code.
- Real-life useful service set.



## The Demo Environment

VM: OpenShift master IP: 192.168.122.164 master.example.com nodejs.example.com mservice.example.com mohawk.exmple.com





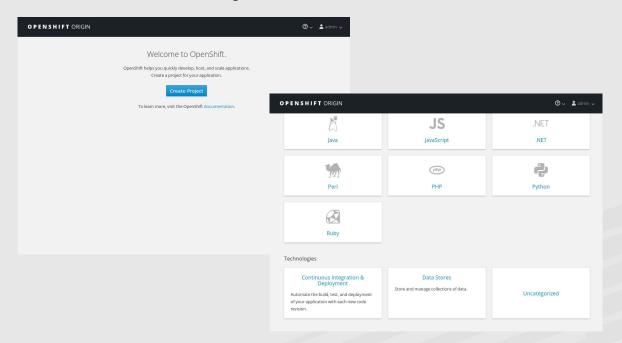
# Deploy OpenShift cluster

- Bring your own (BYO) virtual machine (VM).
- Bootstrap, set network, ssh, software repositories.
- Use a deployment management tool.
- Ansible helps you describe machine configurations in a declarative language,
   bring machines to a desired state, and keep them there through automation.





# Demo: The OpenShift console





## Demo: The OpenShift console

- Create a new project "example"
- Create a new service "Node.js + MongoDB"
- Show route to the service



## Demo: microservice from code

#### Micro Server Code:

```
start_time = str(datetime.now())
def do_GET(self):
    # Send message back to client
    message = "Started at {}\n".format(start_time)
    # Write content as utf-8 data
    self.wfile.write(bytes(message, "utf8"))
```



## Demo: microservice from code

### The new-app command:

- oc new-app <source repository>
- oc new-app <container image>
- oc new-app <openshift template>

### Example:

- oc new-app git://192.168.122.1/home/yzamir/Projects/mservice
- curl http://mservice.example.com



## Demo: useful service set

Template file (mohawk.yaml):

kind: Template

apiVersion: v1

metadata:

name: mohawk

annotations:

"openshift.io/display-name": Mohawk Metrics



### Demo: useful service set

- Spinning up microservices using a template.
- Setting a group of symbiotic microservices.
- Using this microservices as a part of a full application.







## Links:

OpenShift Origin:

https://www.openshift.org/

Slides and Code snippets:

https://github.com/yaacov/AP-2017-OpenShift

Mohawk:

https://github.com/yaacov/mohawk

ManagelQ:

http://manageiq.org/



# Questions?



