# Windows Server Containers and DSC

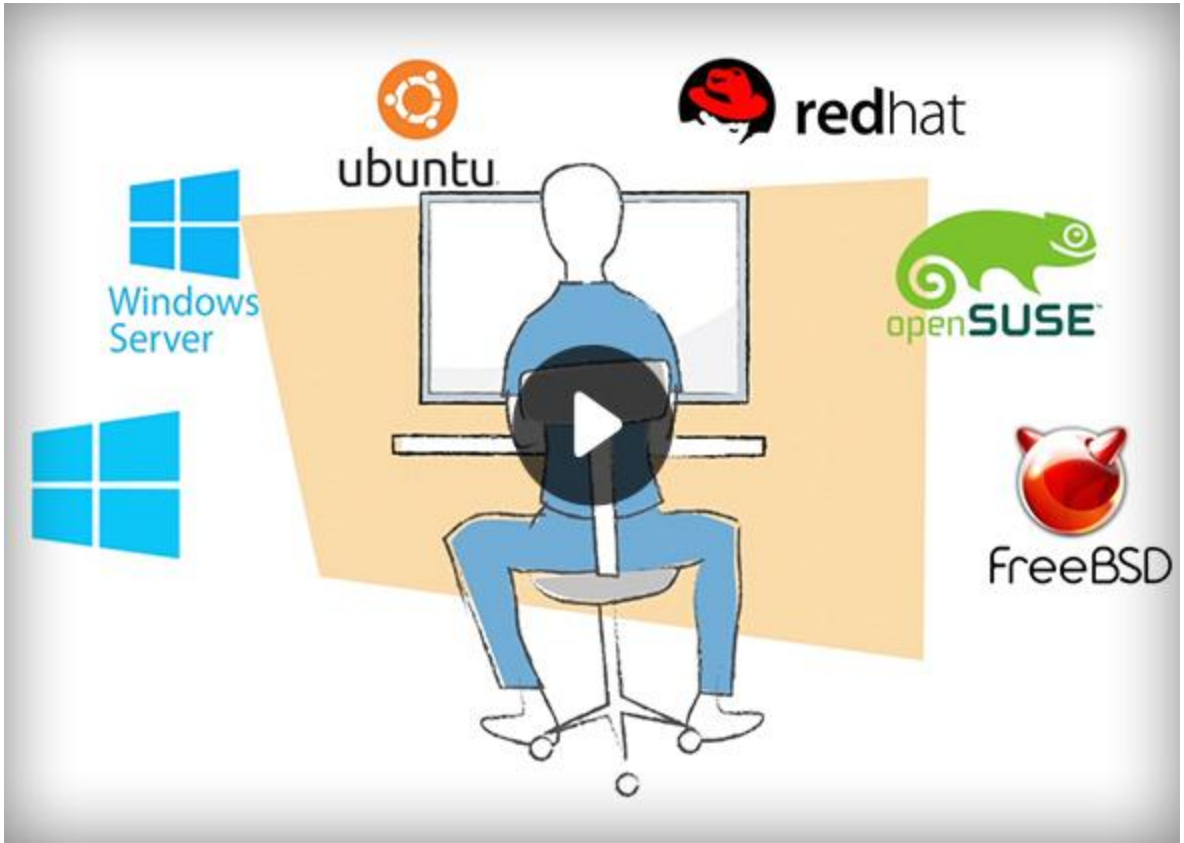
# whoami

The goal:

To allow devOps teams to deploy their Application/API on a live running system within seconds of commit.

perfect
strangers?

# Server OS virtualization 2006 - 2016

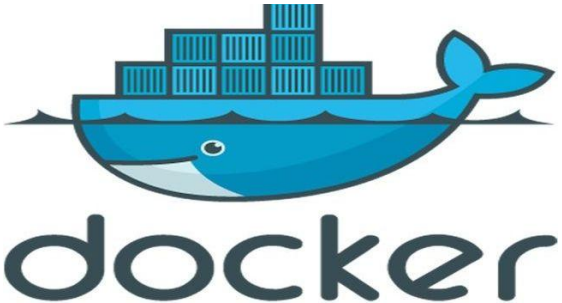


Server virtualization mentality:

Here's everything, i’m sure within this stuff is exactly what you need somewhere.

Container mentality:

Here’s the bare essentials, tell me what you need.

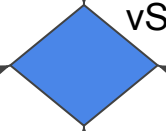


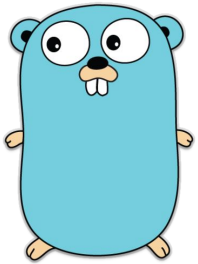
- Own Firewall
- Own NIC
- Shared Kernel

HTTP 81

HTTP 83

Container Host
192.168.137.239



Microsoft

ASP.NET

python™

django

500:8080

81:80

83:8000

# How we achieve our goal

The idea:

Github repositories are the one source of truth and define the *complete* layout of your Application/API.

```
version: '2'

services:
  web:
    build: ./web
    networks:
      - new

  worker:
    build: ./worker
    networks:
    - legacy

  db:
    image: mysql
    networks:
      new:
        aliases:
          - database
      legacy:
        aliases:
          - mysql

networks:
  new:
  legacy:
```

Example:
Using docker compose to define the complete layout of a container and its associated environment

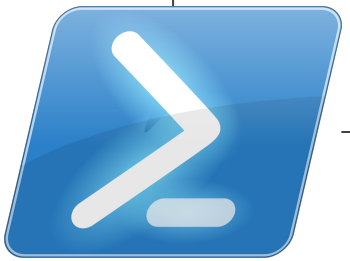
# Our Desired State is the current version number of the Dockerfile on Github. If that changes the container should rebuild.

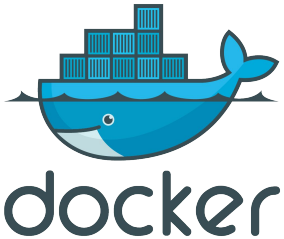
15 lines (9 sloc) | 371 Bytes

Raw Blame History

```
1  #Define the base image we'll be building everything else off of...
2  FROM microsoft/sample-golang:windowsservercore
3
4  #Give it a label
5  LABEL Description="DevGOApp" Vendor="bundyfx" Version="1.7.5"
6
7  #
8  #These files and folders will be imported into the docker image and be available for us to use.
9  #
10
11 ADD /webserver.go /go/src/webserver.go
12
13 CMD go run C:\go\src\webserver.go
```

# How this works?





```
    node ("localhost")
    {
        ContainerDeployment 'WebContainer' {
            ContainerName = 'webdev'
            PortMapping = '86:80'
            ProjectRootPath = 'C:\git\iis'
            ContainerImage = 'mywebapp'
            ProjectType = 'iis'
            SlackWebHook = "$SlackWebHook"
            GitProjectURL = 'https://github.com/bundyfx/ContainerDeployment.git'
            Ensure = 'Present'
        }
        ContainerDeployment 'DevGoContainer' {
            ContainerName = 'godev'
            PortMapping = '88:8000'
            ProjectRootPath = 'C:\git\golang'
            ContainerImage = 'mygolangapp'
            GitProjectURL = 'https://github.com/bundyfx/ContainerDeployment.git'
            SlackWebHook = "$SlackWebHook"
            ProjectType = 'sample-golang'
            Ensure = 'Present'
        }

    }
```

# Demo