



+



amazon
web services

[@d danailov](#)

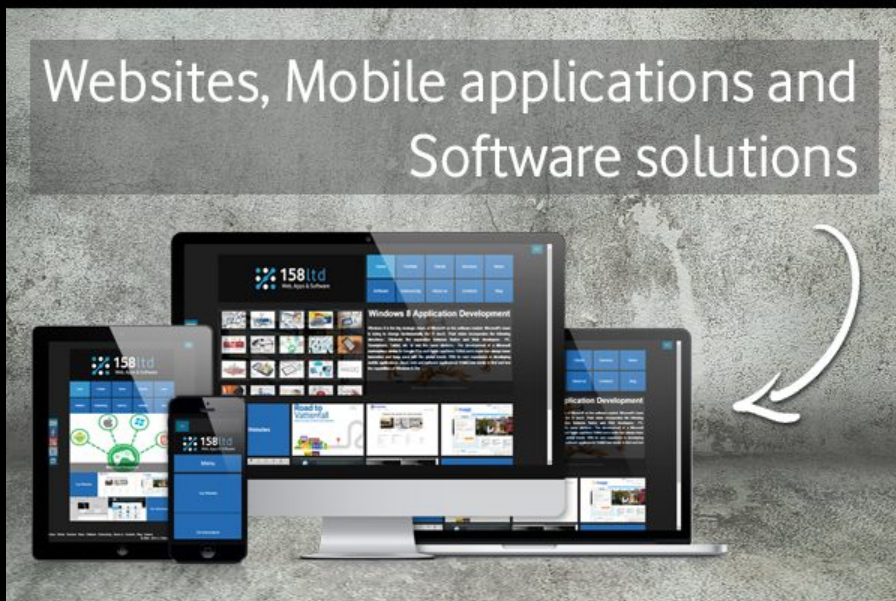


Topics Today

- What is Microservices ?
- Microservices Architecture
- Microservices Benefits
- Service Failure
- Vagrant
- Amazon
- Demo



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The Nginx logo is displayed in a bold, green, sans-serif font. The letters are thick and have rounded terminals. The 'G' is particularly stylized, with a hexagonal shape on its left side. The 'i' has a simple dot, and the 'x' is formed by two intersecting diagonal strokes.

Image source: https://upload.wikimedia.org/wikipedia/commons/thumb/c/c5/Nginx_logo.svg/2000px-Nginx_logo.svg.png

Dentist waiting room



Image source: <https://s-media-cache-ak0.pinimg.com/736x/49/0e/f4/490ef423bc021325e9298d1db3f11af4.jpg>

O'REILLY®

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NGINX

Building Microservices

DESIGNING FINE-GRAINED SYSTEMS



Sam Newman

Microservices

Martin Fowler

<http://martinfowler.com>

@martinfowler

<http://thoughtworks.com>

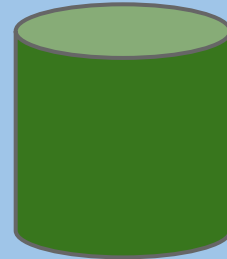
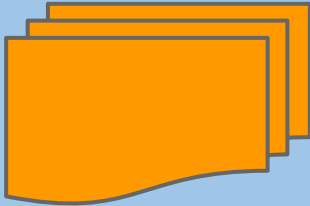
Perfect World



Image source: <http://nerdapproved.com/wp-content/uploads/2015/07/everything-is-awesome.jpg>

Failure is Everywhere

Monolith



What is Microservices ?

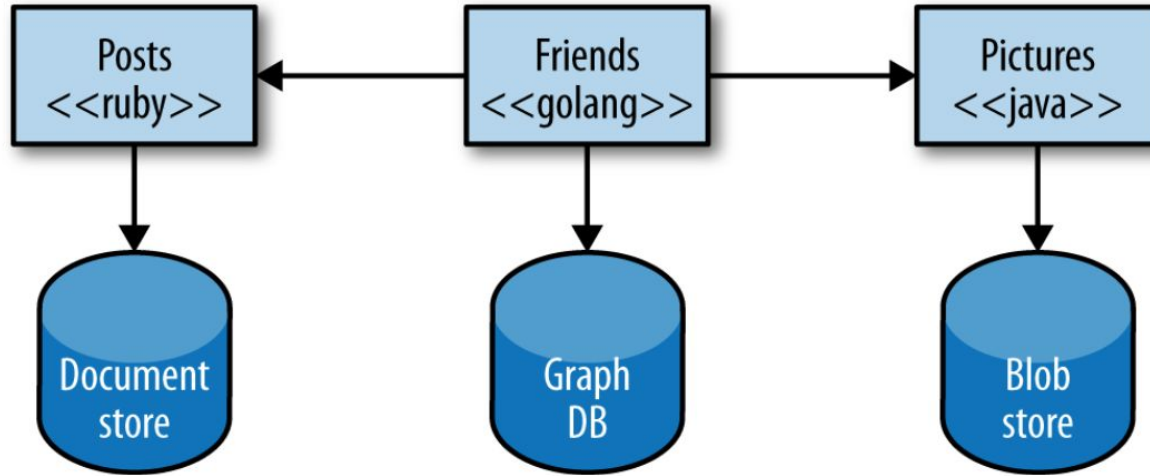
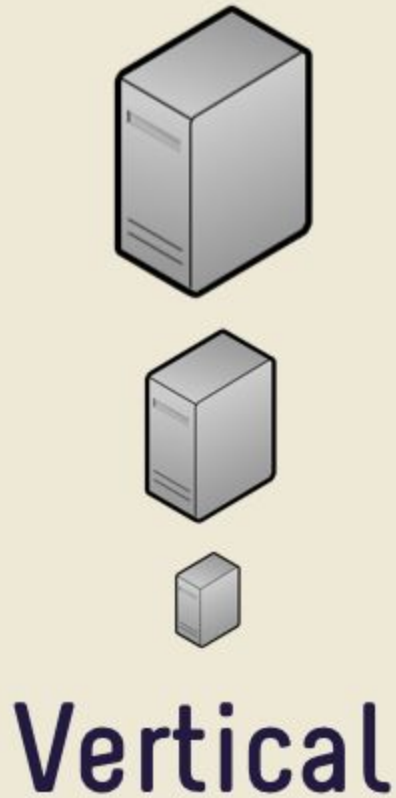


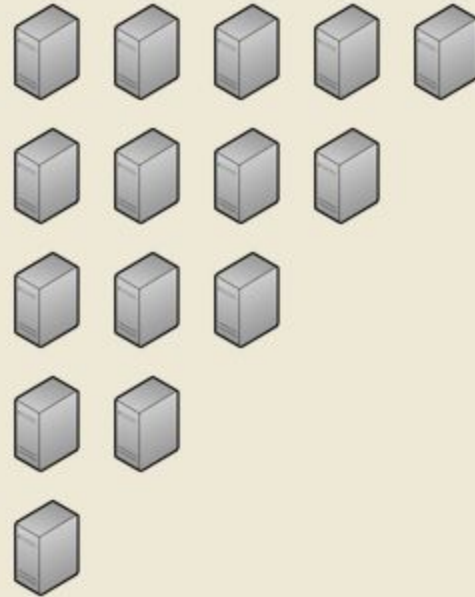
Figure 1-1. Microservices can allow you to more easily embrace different technologies

Microservices Benefits ?



vs.

Horizontal



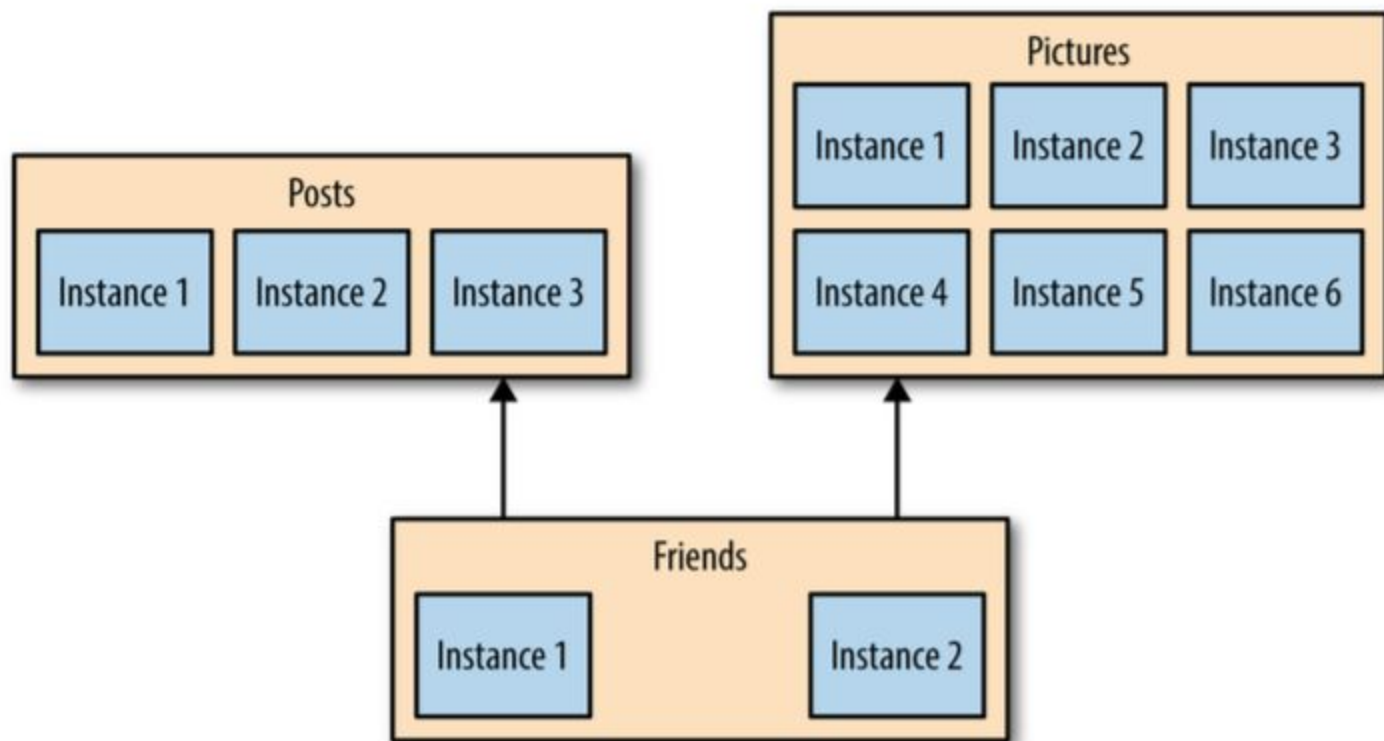


Figure 1-2. You can target scaling at just those microservices that need it

Microservices Architecture

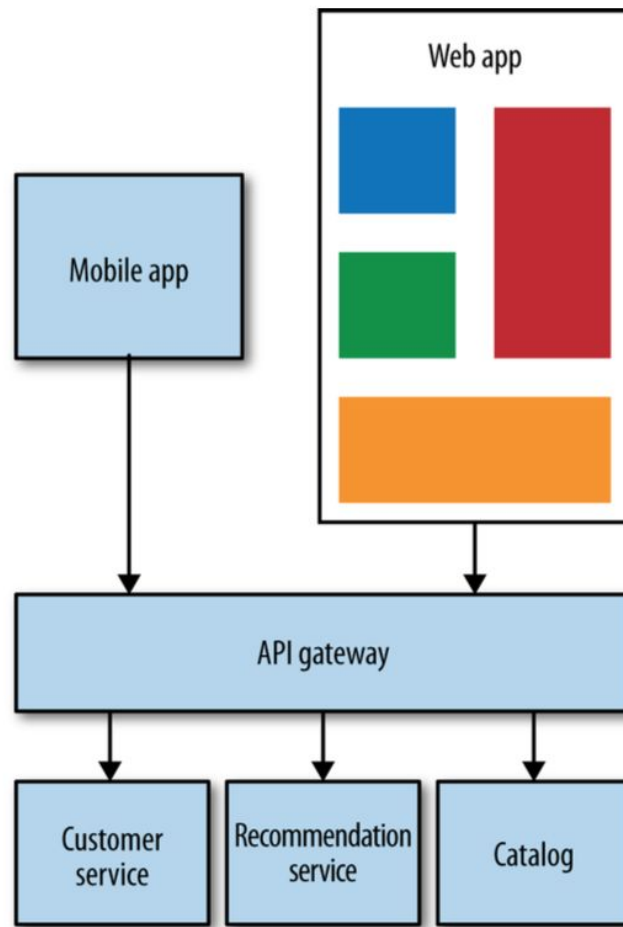


Figure 2-9. Using a single monolithic gateway to handle calls to/from UIs

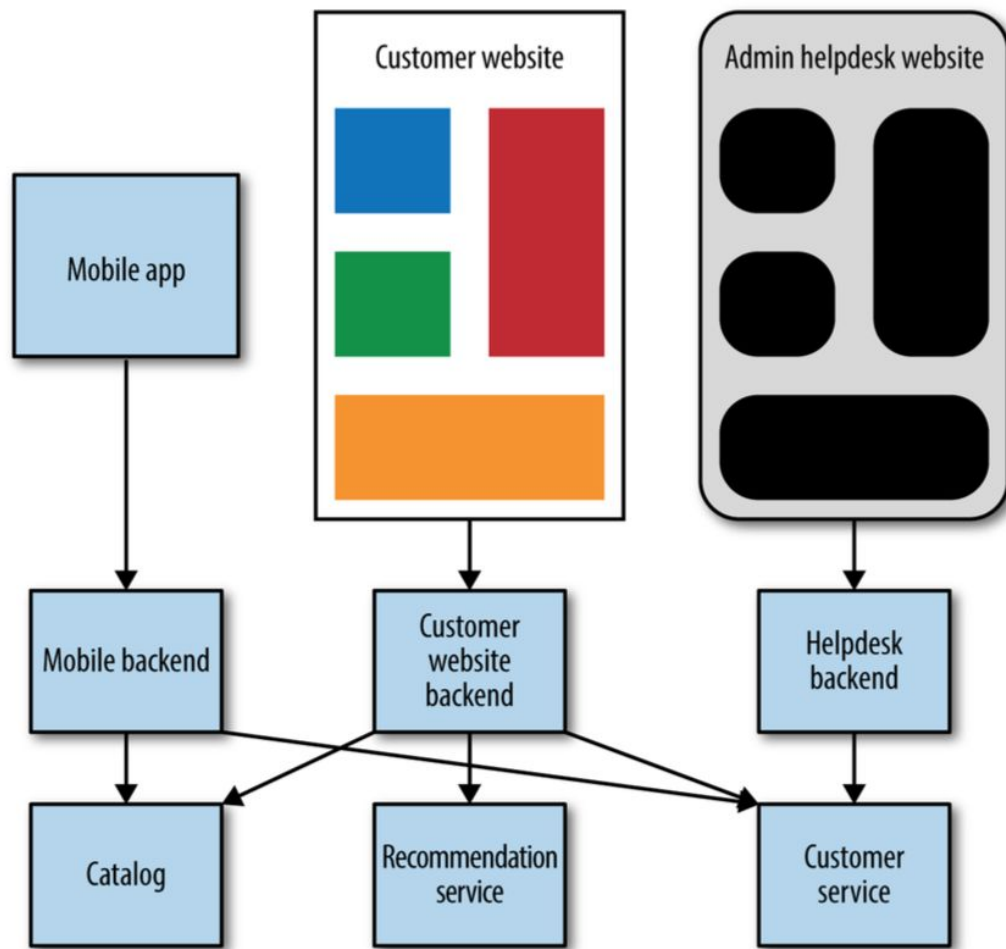


Figure 2-10. Using dedicated backends for frontends


Failure is Everywhere

Watch TV shows & movies anytime, anywhere.

Sorry, Netflix is not available in your country yet.

Enter your email & we'll let you know when Netflix is available.



Secure Server  Use of your email is subject to our [Privacy Policy](#)



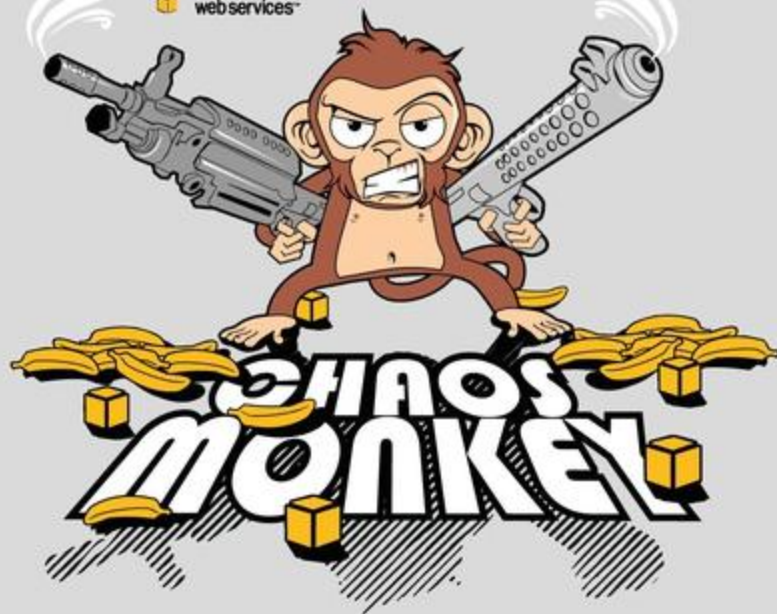
• Watch on your TV, phone, tablet, and computer. •



• TV shows & movies streamed instantly over the Internet •



No commitments, cancel online anytime



Monolith

Simplicity

Microservices

Monolith

Simplicity

Microservices

Partial Development

Monolith

Simplicity

Microservices

Partial Development

Availability

Monolith

Simplicity

Consistency

Microservices

Partial Development

Availability

Monolith

Simplicity

Consistency

Microservices

Partial Development

Availability

Preserve Modularity

Monolith

Simplicity

Consistency

Inter - module refactoring

Microservices

Partial Development

Availability

Preserve Modularity

Monolith

Simplicity

Consistency

Inter - module refactoring

Microservices

Partial Development

Availability

Preserve Modularity

Multiple platforms

Automation



Image source: <https://simplyssatea.files.wordpress.com/2013/01/questionmark.jpg>

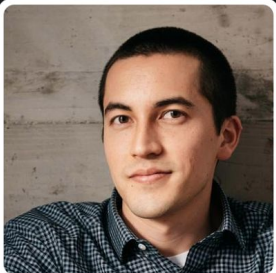
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```
8 > var stop uint32 = 0~
7 ~
6 > var walkFn depgraph.WalkFunc~
5 > walkFn = func(n *depgraph.Noun) error {~
4 >     // If it is the root node, ignore~
3 >     if n.Name == GraphRootNode {~
2 >         return nil~
1 >     }~
0 ~
1 >     // If we're stopped, return right away~
2 >     if stop != 0 {~
3 >         return nil~
4 >     }~
5 >     // Add the orphan dependencies~
6 >     graphAddOrphanDeps(g, modState)~
7 >     // Add the orphan module dependencies~
8 >     graphAddOrphanModuleDeps(g, modState)~
9 >     // Add the provider dependencies~
10 >     graphAddResourceProviderDeps(g)~
11 >     // Now, prune the providers that we aren't using~
12 >     graphPruneResourceProviders(g)~
13 >     // Add explicit dependsOn dependencies to the graph~
14 >     graphAddExplicitDeps(g)~
15 >     // Setup the provisioners. These may have variable dependencies,~
16 >     // and must be done before dependency setup~
17 >     if err := graphMapResourceProvisioners(g, opts.Provisioners); err != nil {~
```



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Mitchell Hashimoto

@mitchellh

Founder of @HashiCorp. Creator of Vagrant, Packer, Serf, Consul, Terraform, Vault, Nomad, and Otto. Lover of open source. Automation-obsessed developer.

San Francisco, CA

about.me/mitchellh

Joined January 2008

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1 18

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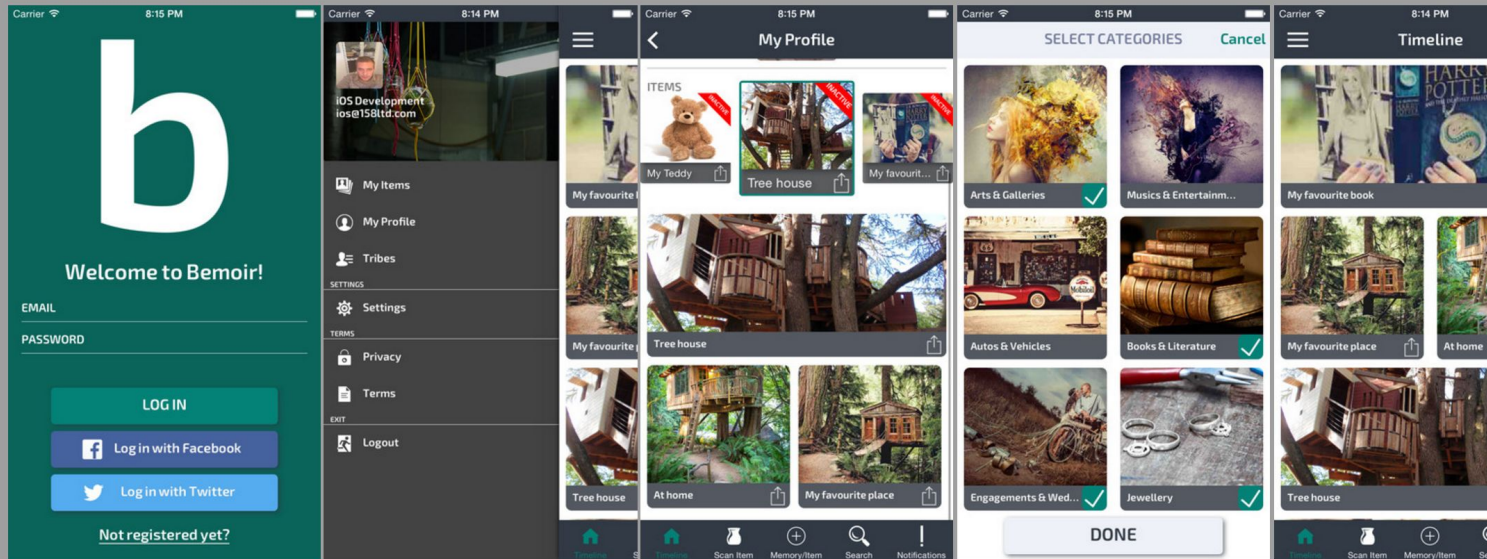
#SpookyBands

#HTGAWM

#Scandal



Video source: <https://www.youtube.com/watch?v=WfmRFNpgEp8jpg>



Website

Google Play

Apple Store

A tool to build **development**
environments based on virtual
machines

Focused to create
environments that are similar
as possible or identical with
production server

Created by
Mitchell Hashimoto

Written in Ruby

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Packer is a tool
for creating
machine and
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for multiple
platforms from a
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amazon web services
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Advantages

Partial Development

Disadvantages

Advantages

Partial Development

Disadvantages

CORS

Advantages

Partial Development

Disadvantages

CORS

New Pattern

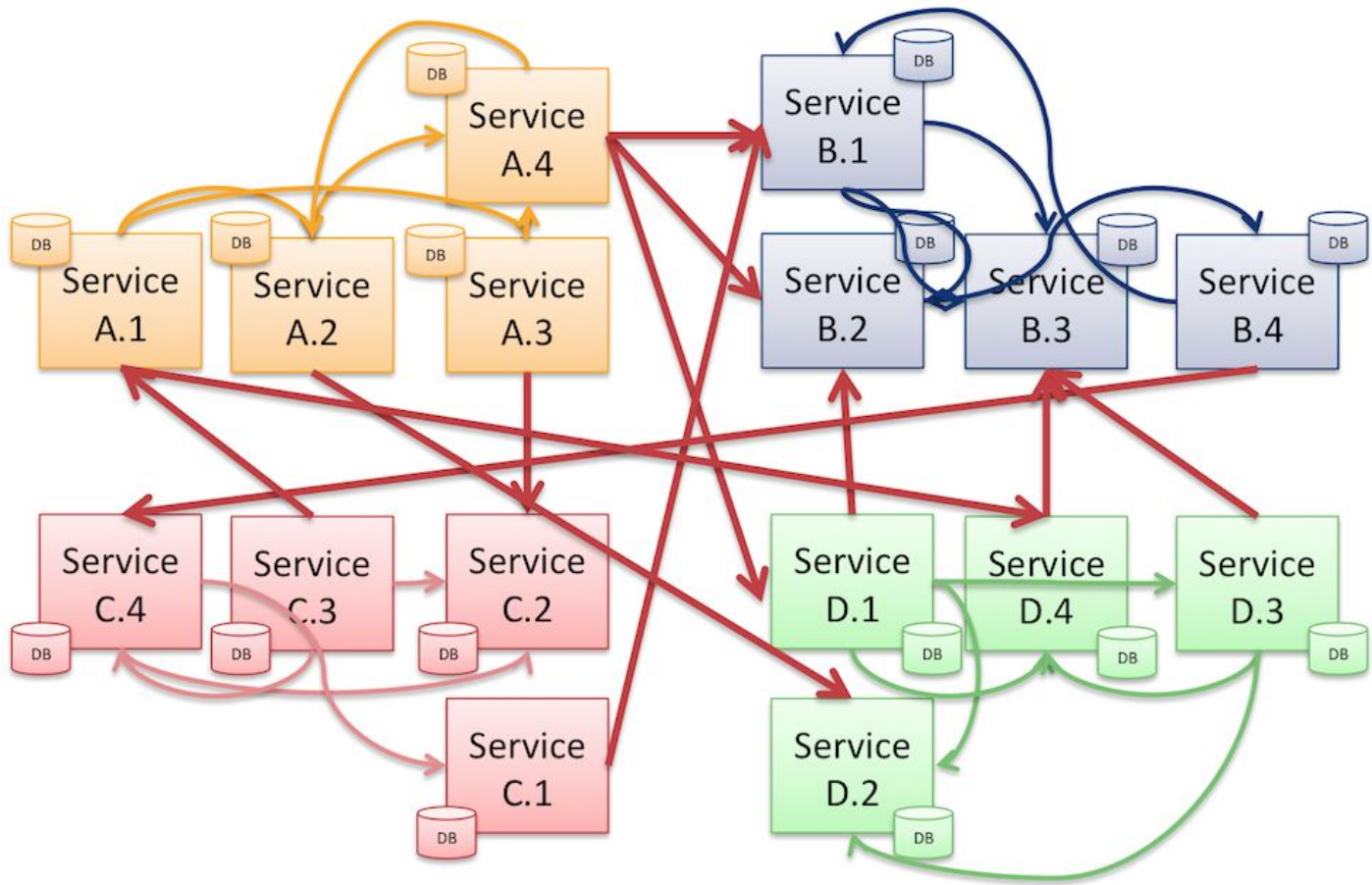


Image source: <https://www.tigerteam.dk/wp-content/uploads/2014/05/monolith-sliced-up-into-microservices.png>



Heroku

AWS

Image source: <http://thenewstack.io/wp-content/uploads/2015/09/heroku.png>

Advantages

Partial Development

Multi Platform

Disadvantages

CORS

New Pattern

Advantages

Partial Development

Multi Platform

Disadvantages

CORS

New Pattern

Cloud

Advantages

Partial Development

Multi Platform

Cloud

Disadvantages

CORS

New Pattern

Cloud

Advantages

Partial Development

Multi Platform

Cloud

Disadvantages

CORS

New Pattern

Cloud

Hardware

Advantages

Partial Development

Multi Platform

Cloud

Faster Setup

Disadvantages

CORS

New Pattern

Cloud

Hardware

GitHub Gist

Image source: <https://gist.github.com/dimitardanailov>

Demo

Front End

Amazon

Vagrant

Angularjs

Nginx

Back End

Azure

MongoDB

Asp.Net MVC

Vagrant and Docker

Should I use Vagrant or Docker.io for creating an isolated environment?



I use Ubuntu for development and deployment, and have a need for creating an isolated env.

793



I am considering either Vagrant or docker.io for this purpose? Can anyone help me with the pros and cons, or a comparison of both of these solutions?



618

[vagrant](#) [docker](#)[share](#) [edit](#) [flag](#)

edited Jan 27 at 16:24



Community ♦

1

asked May 20 '13 at 10:05

[murtaza52](#)

10.2k • 19 • 42 • 89

asked 2 years ago

viewed 162606 times

active 2 months ago

protected by [Community](#) ♦ Jul 30 '14 at 12:12

This question is protected to prevent "thanks!", "me too!", or spam answers by new users. To answer it, you must have earned at least 10 [reputation](#) on this site.

10 Both are combinable now: docs.vagrantup.com/v2/provisioning/docker.html – [Alp](#) May 14 '14 at 7:33

118 Could we **not delete this**, folks? Perhaps it's off-topic and could be *closed*, but with long answers from the authors of both tools (and 90k views), this is valuable and doesn't deserve deletion. – [Jeremy Banks](#) ♦ Jan 27 at 18:20

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9 Answers

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