WELCOME!
831DEV
SALINAS VALLEY DEVELOPER MEETUP

Developing .NET CORE apps with Docker

831DEV | Cesar Rosales

Goals of this talk

+ For those of you new to .NET
+ For those familiar with .NET
+ Simplify docker (dev perspective)
+ Links for installs, slides, demo code

C#

.NET CORE

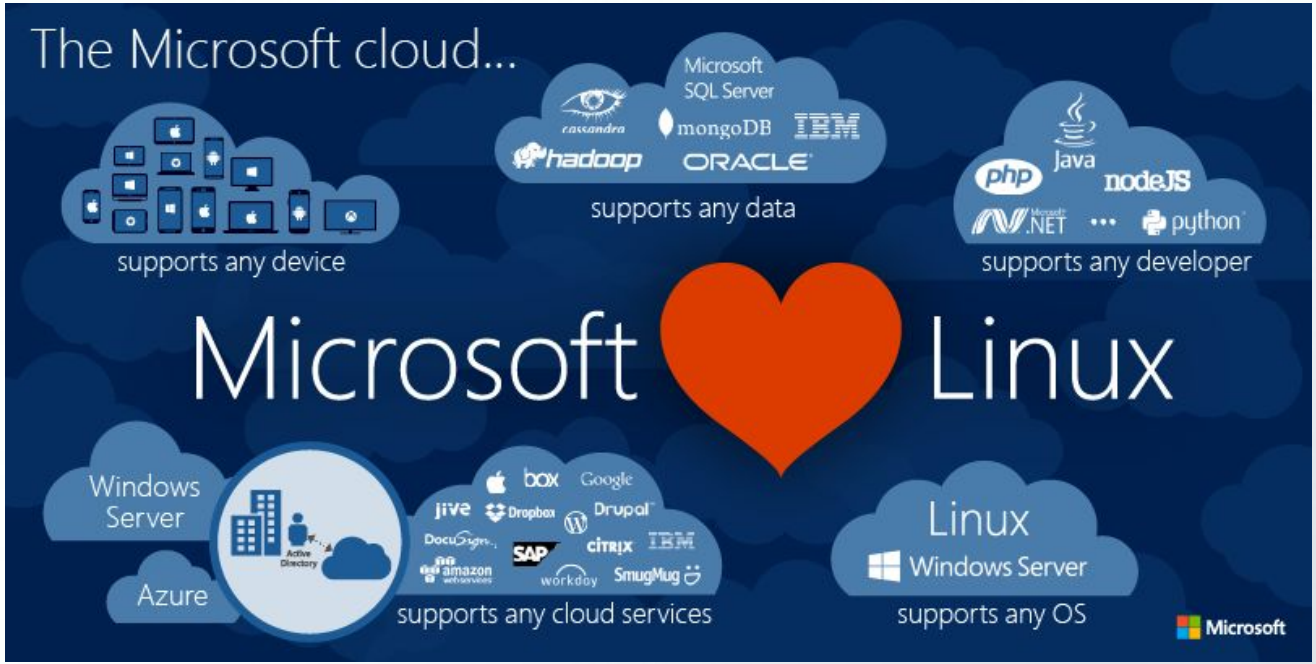
A super cool framework for writing web apps

.NET Framework

- By Microsoft in early 2000s
- Class libraries (FCL, BCL)
- Virtual machine environment (CLR)
- Languages (C#, VB.NET, F#)
- Application Development Frameworks
  - WinForms, WPF
  - WebForms (kinda legacy...)
  - MVC, WebApi

Why .NET needed to change

- Competition (Linux, Node, etc)
  - Proprietary in an Open-Source world
  - Windows-centric
- Machine-level dependency on .NET version
- Monolithic Framework
- Legacy class libraries (System.Web, WebForms days)


The Microsoft cloud...
supports any device
Microsoft SQL Server
cassandra
mongoDB
IBM
hadoop
ORACLE
supports any data
Java
php
nodeJS
.NET
python
supports any developer
Microsoft
Linux
Windows Server
Azure
Active Directory
box
Google
jive
Dropbox
Drupal
DocuSign
SAP
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IBM
amazon web services
workday
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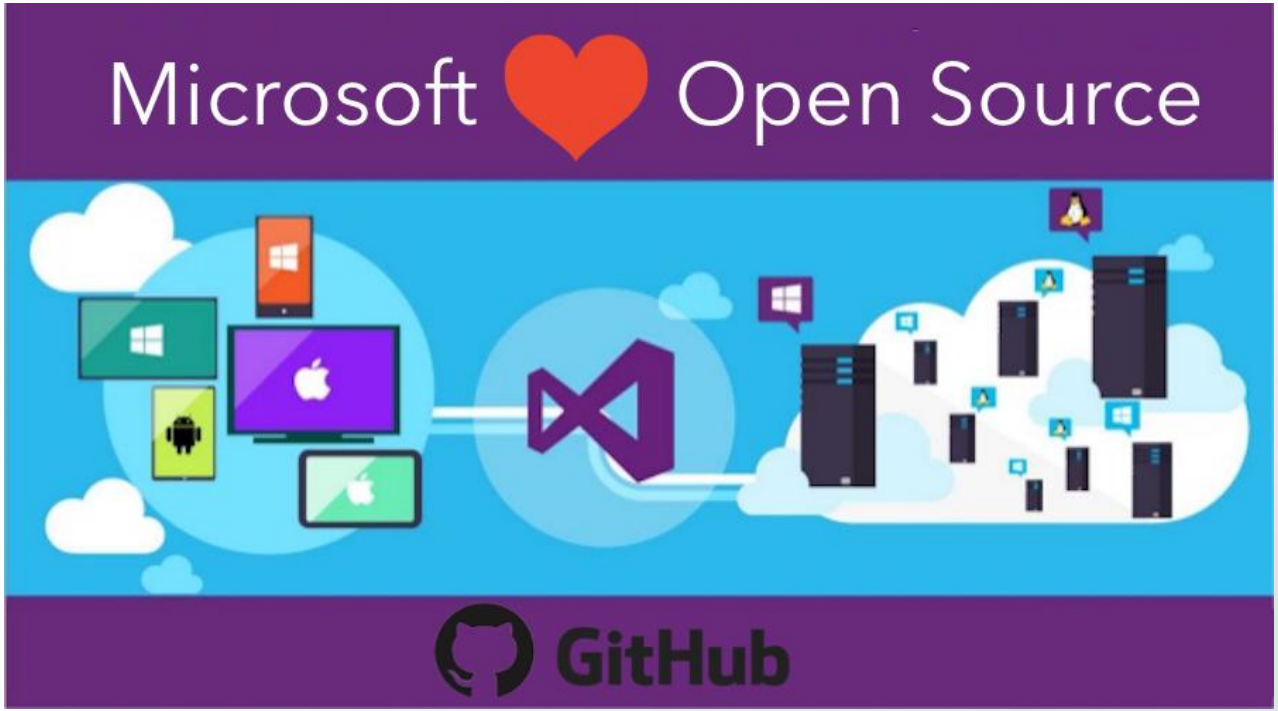
Microsoft
Open Source
GitHub

Meanwhile at....

Oracle America, Inc. v. Google, Inc.

From Wikipedia, the free encyclopedia

Oracle America, Inc. v. Google, Inc. is a dispute related to Oracle's copyright and patent claims on Google's Android operating system. In May 2012, the jury in this case found that Google did not infringe on Oracle's patents, and the trial judge ruled that the structure of the Java APIs used by Google was not copyrightable.[1][2][3] The parties agreed to zero dollars in statutory damages for a small amount of copied code.[4] On May 9, 2014, the Federal Circuit partially reversed the district court ruling, ruling in Oracle's favor on the copyrightability issue, and remanding the issue of fair use to the district court.[5][6] A petition for certiorari was denied by the United States Supreme Court on June 29, 2015. A second trial began May 9, 2016, in which Oracle sought US$8.8 billion in damages.[7] On May 26, 2016, the trial jury sided in favor of Google, ruling the action to be fair use.[8]

Oracle v. Google

Court	United States District Court for the Northern District of California
Full case name	*Oracle America, Inc. v. Google, Inc.*
Argued	April 16, 2012
Court membership	
Judge(s) sitting	William Haskell Alsup

Open-source MariaDB, a MySQL fork, challenges Oracle

MariaDB, the MySQL fork database management system, is throwing down the gauntlet to Oracle by forming a foundation to promote its alternative DBMS software.

Google quietly dumps Oracle MySQL for MariaDB

Linux distributors have been moving from Oracle's MySQL to its popular fork, MariaDB - and now Google is also moving to MariaDB.

A $1.6 billion startup that's aiming to take business from Oracle just filed to go public

Matt Weinberger
Aug. 15, 2017, 8:39 PM 17,993

FACEBOOK LINKEDIN TWITTER EMAIL PRINT

MongoDB, a database startup with over $300 million in venture capital financing, has confidentially filed to go public, reports TechCrunch.

At the time of its last private valuation in 2015, MongoDB was reportedly a $1.6 billion company.

"We believe Oracle is incredibly vulnerable because they've lost the developer's heart and soul" – CEO of MongoDB

Larry Ellison won't get paid any more equity unless he gets Oracle's stock up to $80

Becky Peterson

Sep. 6, 2017, 7:40 PM 28,007

FACEBOOK LINKEDIN TWITTER EMAIL PRINT

If Oracle CTO and renowned billionaire Larry Ellison wants to get any wealthier, he's going to have to do right by shareholders.

The company just revealed a new, 100% performance-based equity package for its two CEOs and CTO aimed at reducing

.NET Core

- Not a new version of .NET (coreCLR)
- Open Source
- Cross-Platform
- Unified web framework (MVC + WebApi. WebForms gone)
- Modular... everything is a dependency
- Superior benchmark performance

.NET Core

- Cloud/Container-native/optimized
- Leverages existing tooling (Npm, Bower, NuGet)
- New tooling, C# compiler, HTTP server
- Supplements (not replaces) .NET Framework

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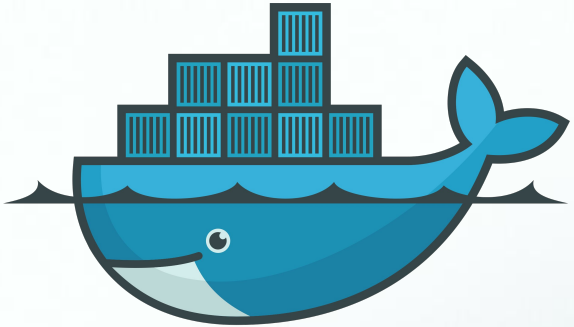


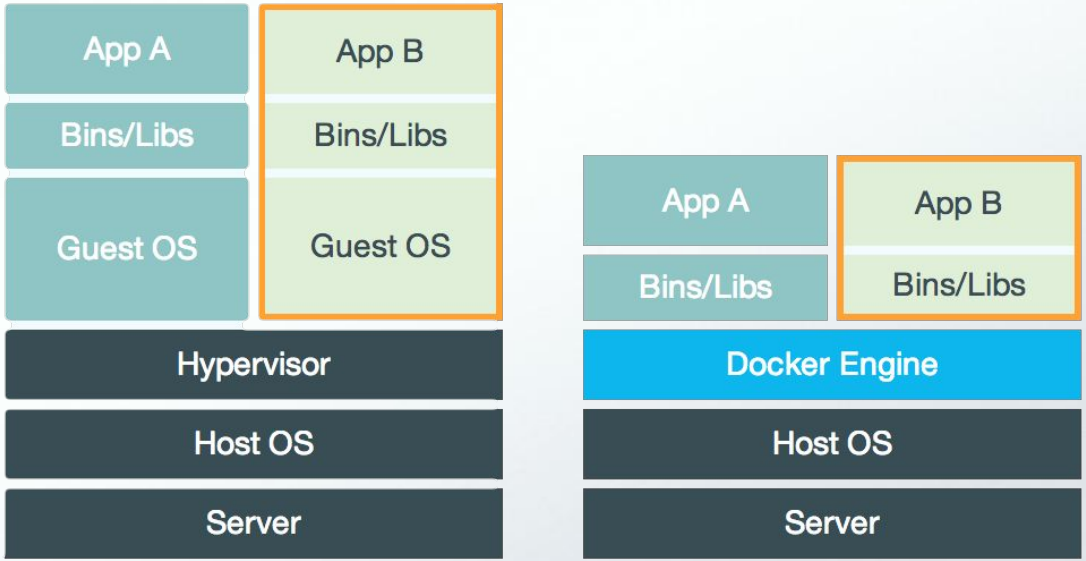
docker

A super cool way to deploy your app

About Docker

- A way to package your application and its dependencies into a single process
- Open-source
- Extends existing Linux containers tech
- If you're new to docker, think VM
- Workflow is similar to Git
  - Dockerhub > Github
  - Docker pull, push

Virtual Machine vs. Docker (Container)



Benefits of Container Technology

- Better use of resources
  - System resources
  - Admin resources
  - Money $$$
- Highly scalable (when needed)
- Better consistency across environments
- Makes developers happy

Major Docker Concepts For Devs

- Docker Image
  - Contains app/dependencies as an executable file
- Container
  - Instance of an Image (running/stopped)
- Dockerfile
  - Text file containing recipe for an image

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Thanks!

Any questions?

Tweet to me!

+ @cesar_codes