

Our Open Source Journey

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促进软件开发领域知识与创新的传播



实践第一 案例为主

时间：2015年12月18-19日 / 地点：北京·国际会议中心

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Agenda

- Microsoft history in Open Source
- Our Linux Journey
- .NET
- Azure and Open Source

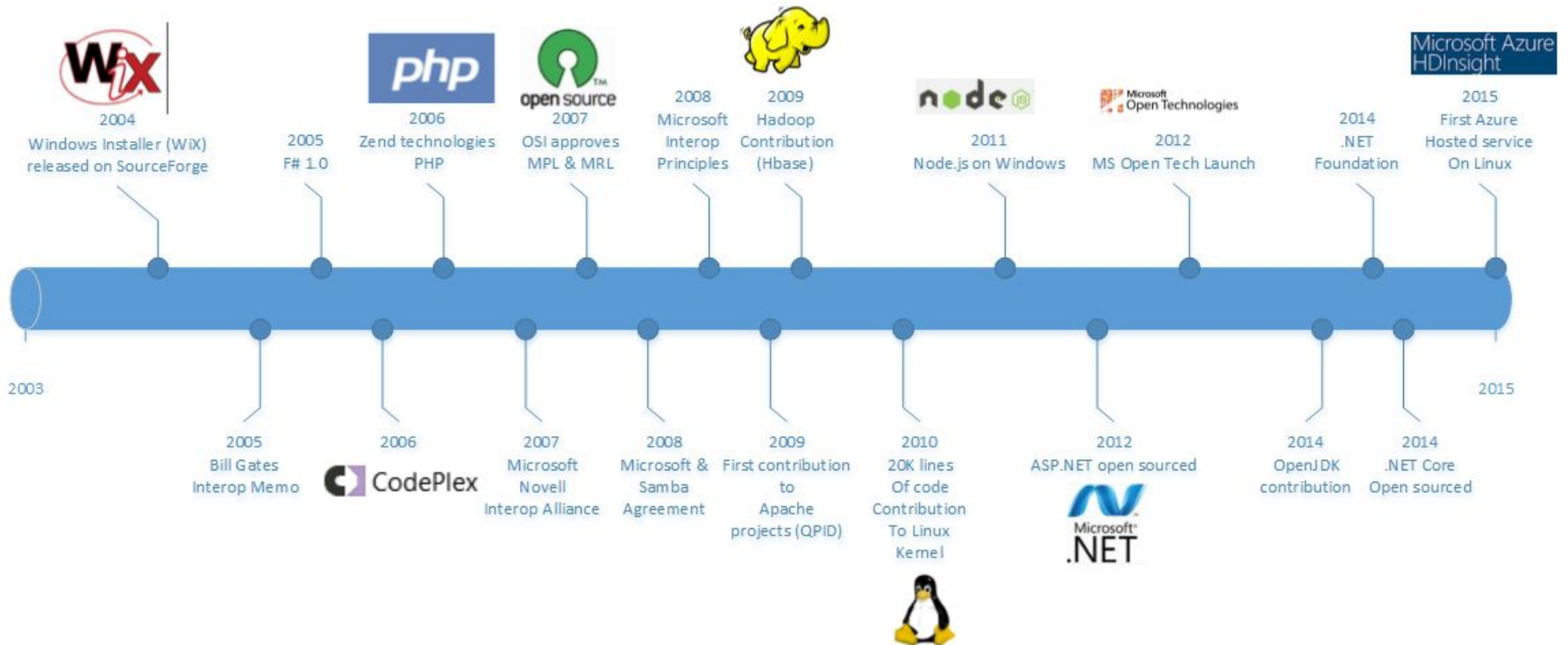


Microsoft and Linux: love is in the cloud

By [Openness Team](#) on October 21, 2014 at 3:00 pm

"Microsoft loves Linux." Yes, Satya Nadella said it with a sincere smile in yesterday's [cloud briefing](#) in San Francisco as he outlined how Microsoft is using Microsoft Azure, Office 365 and Microsoft Dynamics to [deliver the industry's most complete cloud](#).

10+ Years of Open Source Involvement



Over 1600 OSS projects in CodePlex and GitHub

Microsoft + Open Source Momentum



.NET is now OSS! This is monumental!
gigaom.com/2014/11/12/a-m...

Source: [Tweet](#) by John Papa (Google Developer Expert, Microsoft Regional Director and MVP)

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Microsoft to bring Office to more Android tablets, partners with 20 more Android device manufacturers

Anna Domanska | May 27, 2015 | Comments 0



Source: [Industry Leaders](#), May 27th 2015
"Microsoft to bring Office to more Android tablets, partners with 20 more device manufacturers"

James Niccolai @jniccolai · 19h
The turnaround is complete #mscloud
#MicrosoftLovedLinux



Source: [Tweet](#) by James Niccolai (IDG San Francisco Bureau Chief)

"Years ago, Microsoft's CEO described open source as a cancer. Times have changed. Just ask 22-year Redmond veteran and open-source proponent Mark Hill."

-Charles Cooper



Source: [Cnet Q&A](#) with Mark Hill by Charles Cooper

The Seattle Times Winner of Nine Pulitzer Prizes Business / Technology

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Originally published April 3, 2014 at 7:20 PM | Page modified April 4, 2014 at 5:12 PM

New openness at Microsoft conference for developers | Day 2 at Build

An atmosphere of openness and cooperation seemed to run through presentations at the annual Microsoft developers conference, something observers attributed to the company's new CEO.

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Source: [The Seattle Times](#), "New openness at Microsoft conference for developers | Day 2 at Build"

Active Participation

- Docker
- OpenStack
- Hadoop
- Zookeeper



Serena Service Manager



All About Microsoft

Mary Jo Foley

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Pigs do fly: Microsoft unleashes 20,000 lines of Linux code

By Mary Jo Foley | July 20, 2009, 8:58am PDT

Summary: *Nope, that's not a typo in the headline. Microsoft is releasing three Microsoft-developed Linux drivers to the Linux community for possible inclusion in the Linux source tree, the company announced on the opening day of the OSCON open-source conference.*

211

Comments

2

Tweet

0

Top Five Linux Contributor: Microsoft

By Steven J. Vaughan-Nichols | July 17, 2011, 1:45pm PDT

Summary: *While you shouldn't expect Windows to be open-sourced in your life-time, Microsoft—yes, Microsoft—is the fifth largest code contributor to Linux 3.0.*

Cats and dogs; apples and oranges; Linux and Microsoft. Two of these three things do not go together. Would you believe that Microsoft—yes Microsoft—was the fifth largest contributor to the soon to be released [Linux 3.0 kernel](#)? Believe it.

In a [Linux Weekly News](#) story, currently only available to subscribers, an [analysis of Linux 3.0 contributors](#) reveals that Microsoft was the fifth largest corporate contributor to Linux 3.0. While only 15h overall, that still puts Microsoft behind only Red Hat, Intel, Novell, and IBM in contributing new code to this version of Linux.



To be exact, Microsoft developer K. Y Srinivasan gets the credit for helping to improve Linux. Of course, as you might guess, neither Srinivasan nor Microsoft are doing this due to any particular love for Linux per se.

The vast bulk of Microsoft's contributions has been to its own [Hyper-V](#) virtualization hypervisor drivers. Hyper-V is Microsoft's 64-bit hypervisor-based virtualization system. It's Microsoft's answer to VMware and Linux's own native [Kernel-based Virtualization Manager \(KVM\)](#).



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Terms apply

SOFTWARE > OPERATING SYSTEMS

Microsoft no longer a top Linux kernel contributor

Mobile device makers taking a more active role

By Neil McAllister, 16th September 2013



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Latest webcast from The Reg : [The DC you have to the DC you need](#)

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[Torvalds: 'We're not doing Linux95 ... for a few years, at least'](#)

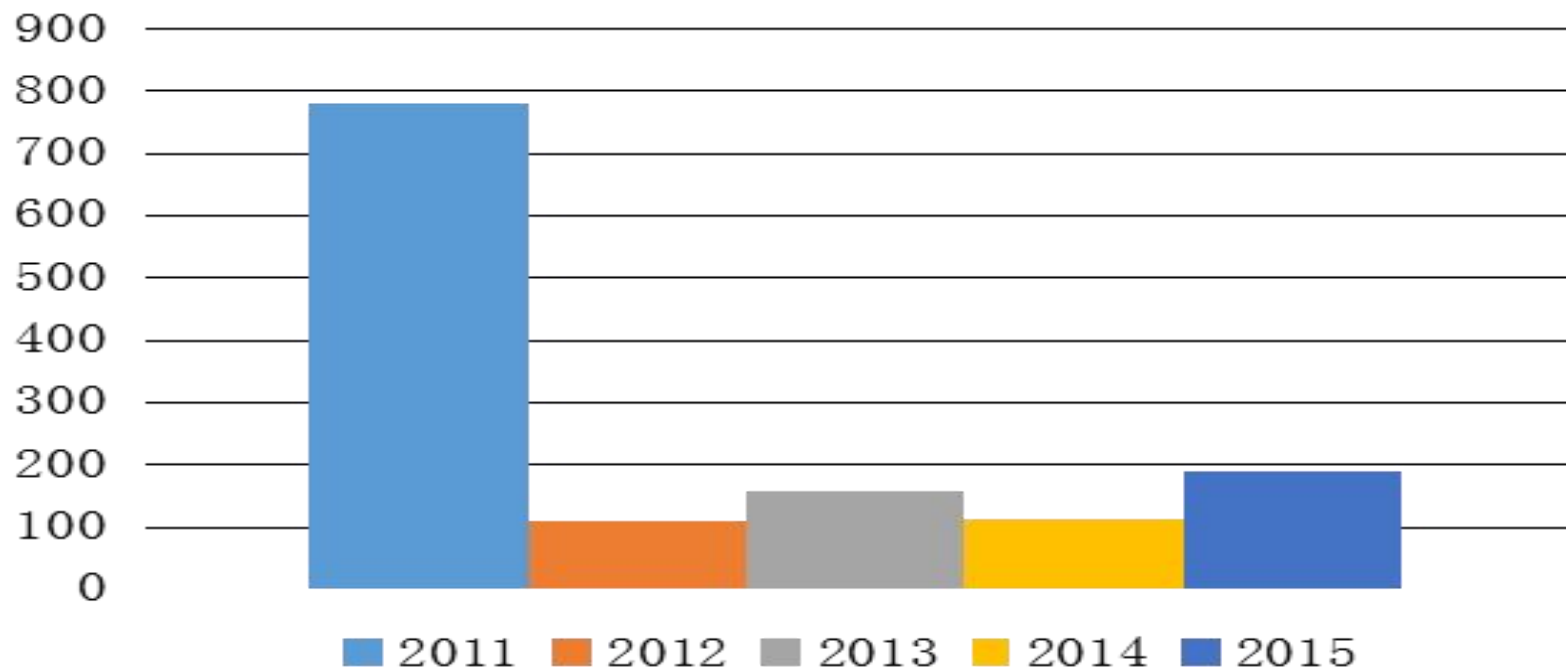
[Dear Linus, STOP](#)

After making headlines with its unexpectedly voluminous contributions to the Linux kernel in 2012, Microsoft has all but disappeared from the Linux development scene, according the latest report from the Linux Foundation.

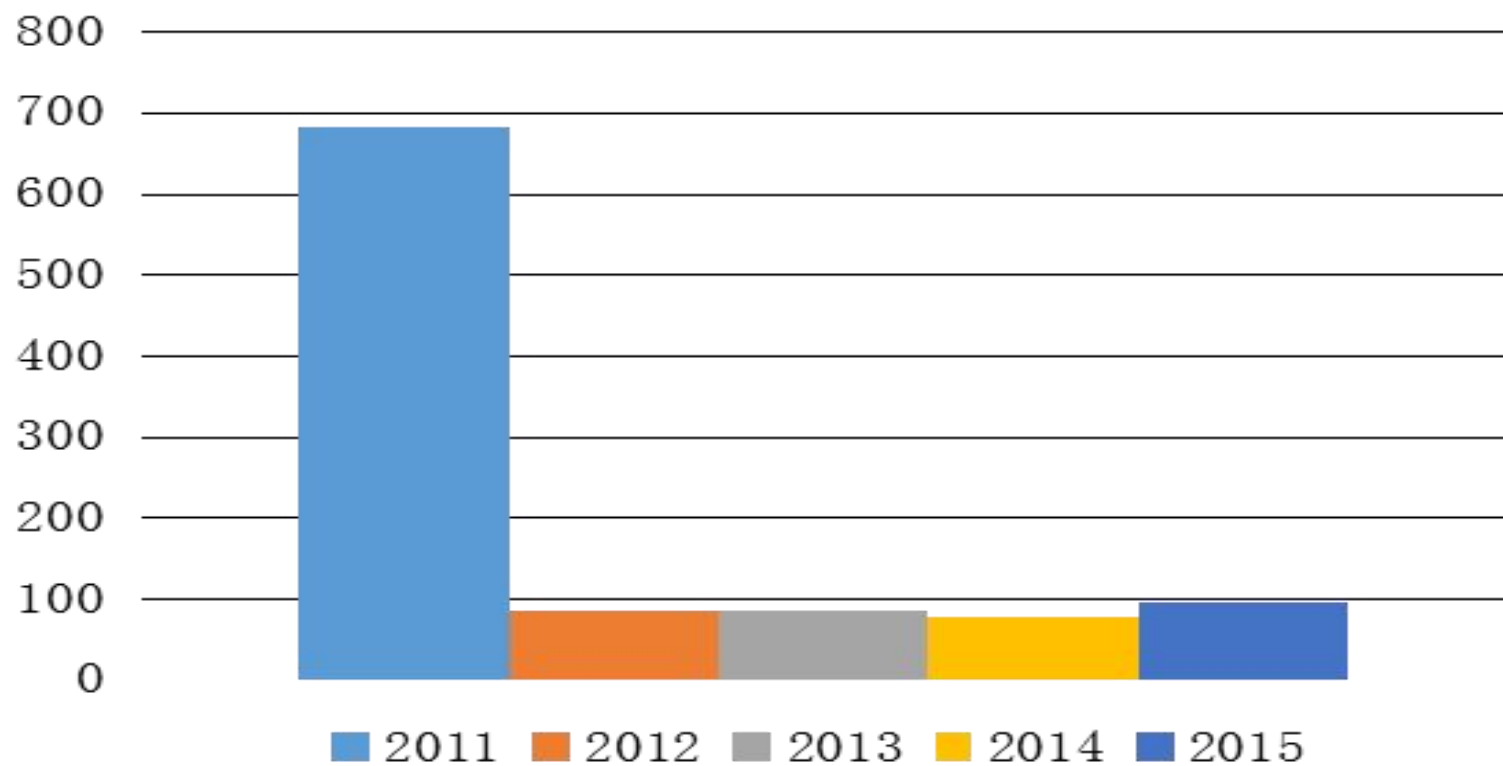
The [last edition](#) of the Foundation's annual Linux kernel development report saw Microsoft break into the top 20 companies to have made kernel contributions, at number 17. That meant Redmond contributed around 1 per cent of all changes during the period studied. In [this year's report](#), however, Microsoft is nowhere to be found.

That's not entirely surprising, given that Redmond's contributions logged in the 2012

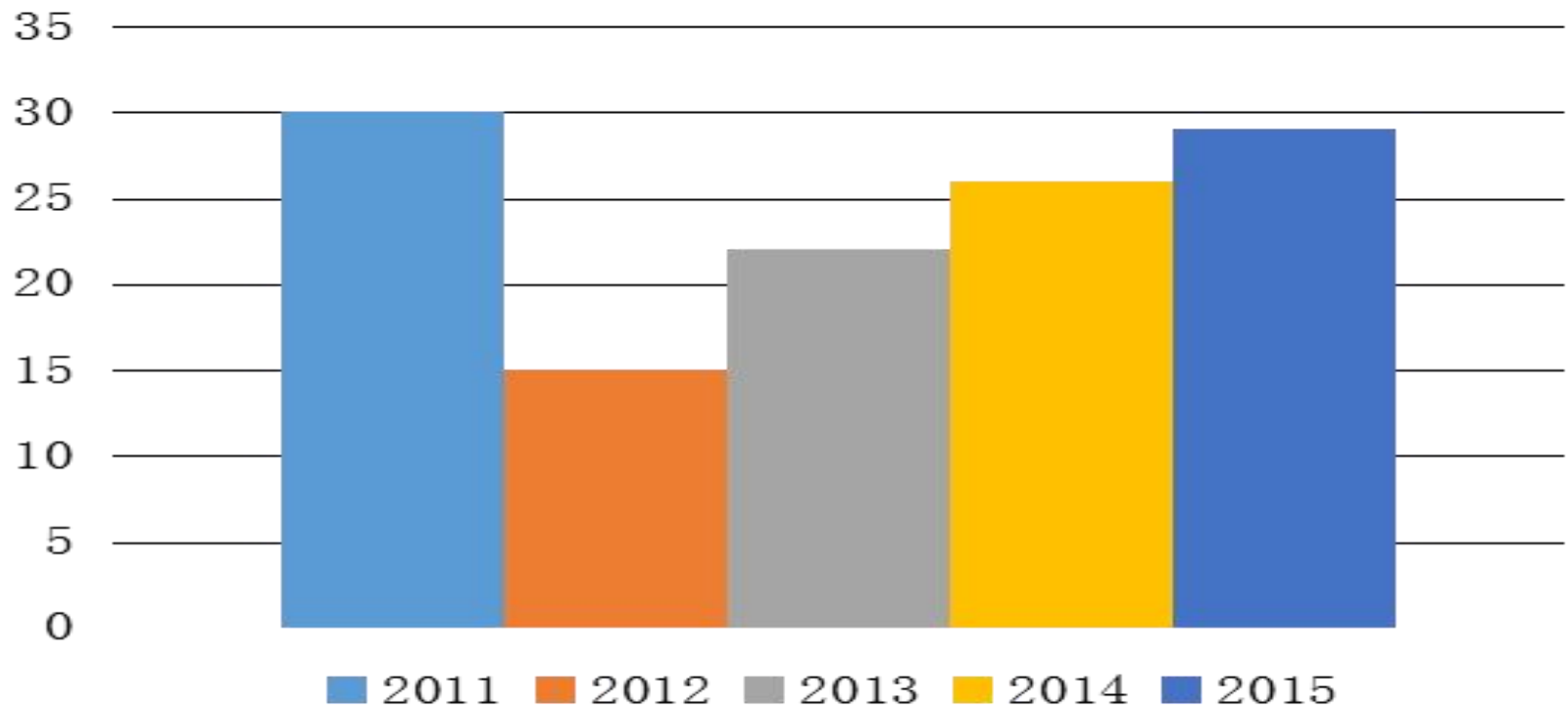
Total Hyper-V Related Linux Patches



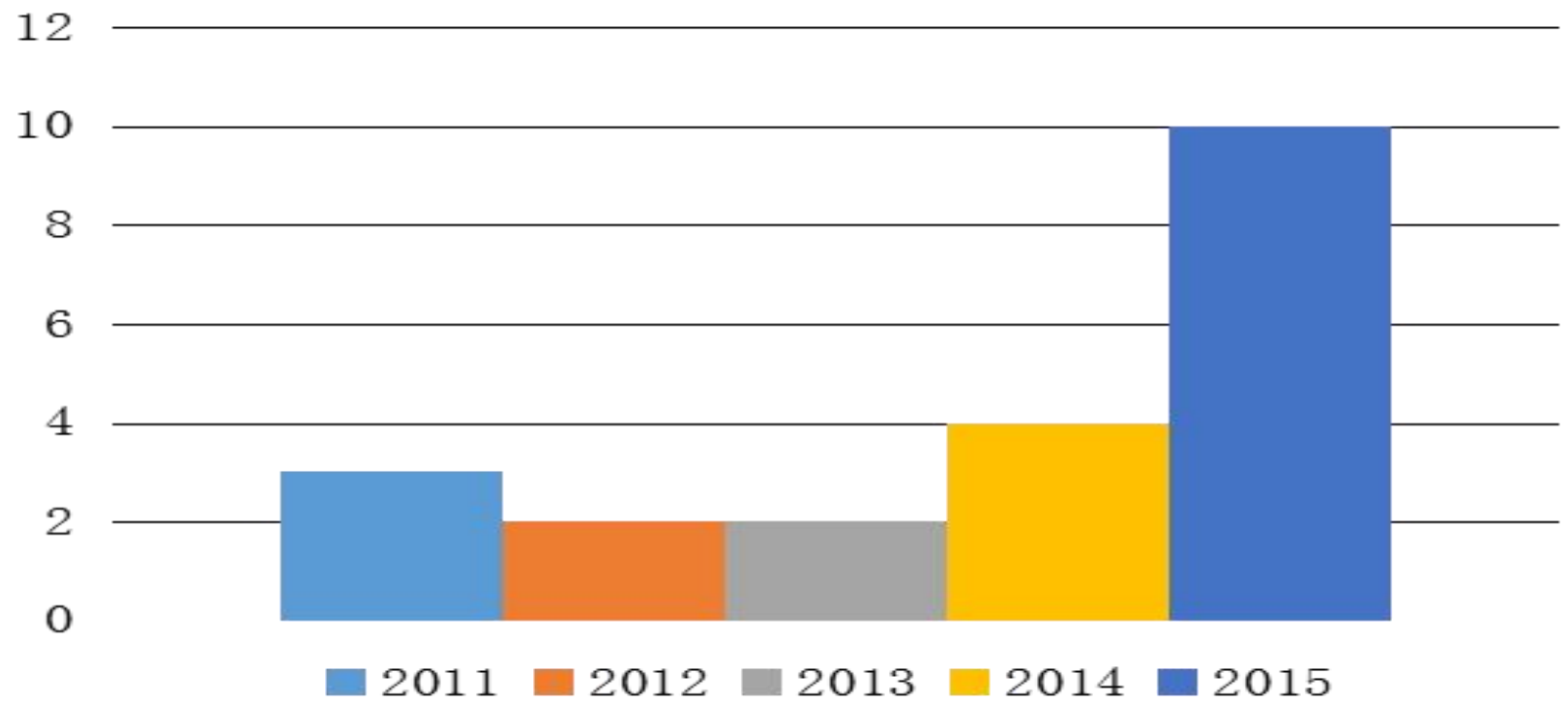
MSFT Patch Contribution



Total Unique Comitters



Unique MSFT Committers



Current State

- MSFT Linux code contribution has reached a steady state
- Linux community very comfortable working with us on supporting Linux on Hyper-V
- Hyper-V support fully integrated in the upstream kernel
- Linux Kernel community seeks our feedback/input on a variety of issues

Current State

- Hyper-V support broadly available in a range of commercial Linux Distributions:
 - Ubuntu
 - SLES
 - RedHat
 - CentOS
 - Other RedHat/Debian derivatives
 - Oracle Linux
 - Chinese Distros

Key Learnings

- Importance of educating management about the Linux community and development processes
- Need for being responsive on the Kernel Mailing Lists
- Getting used to having the code reviewed in the open

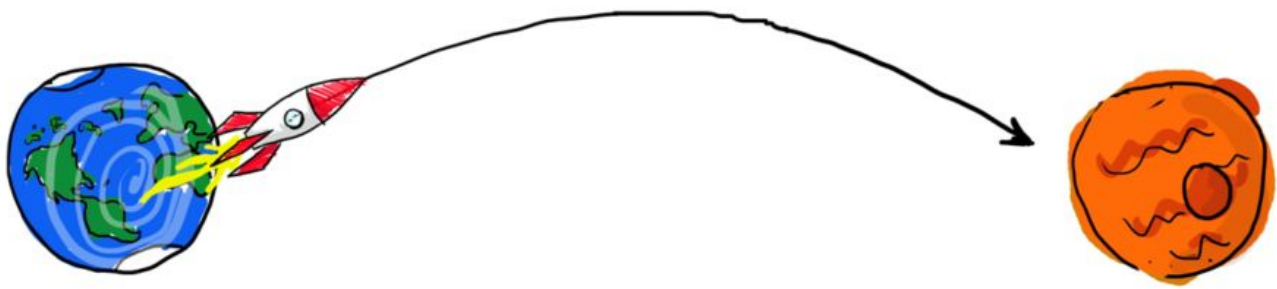


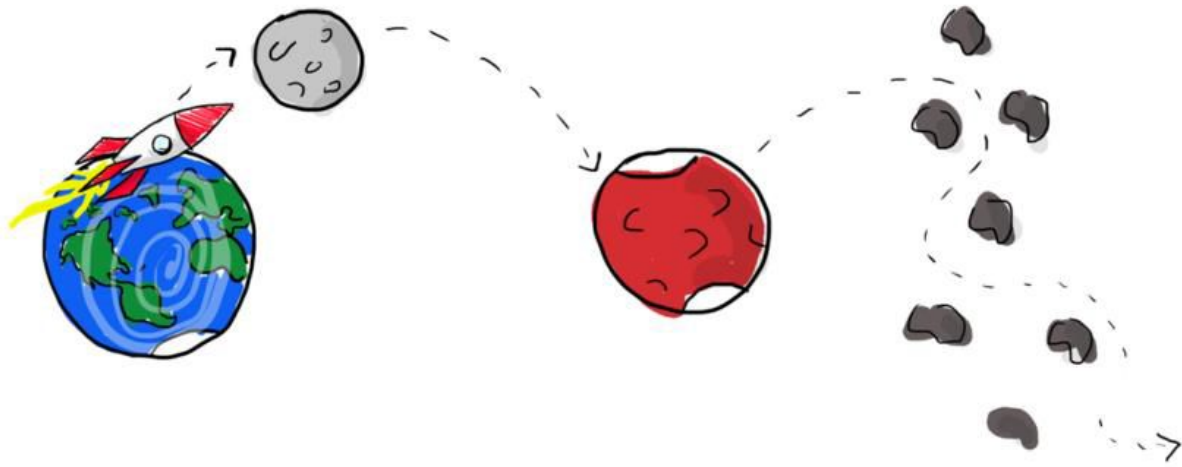
Microsoft .NET's Voyage into Open Source

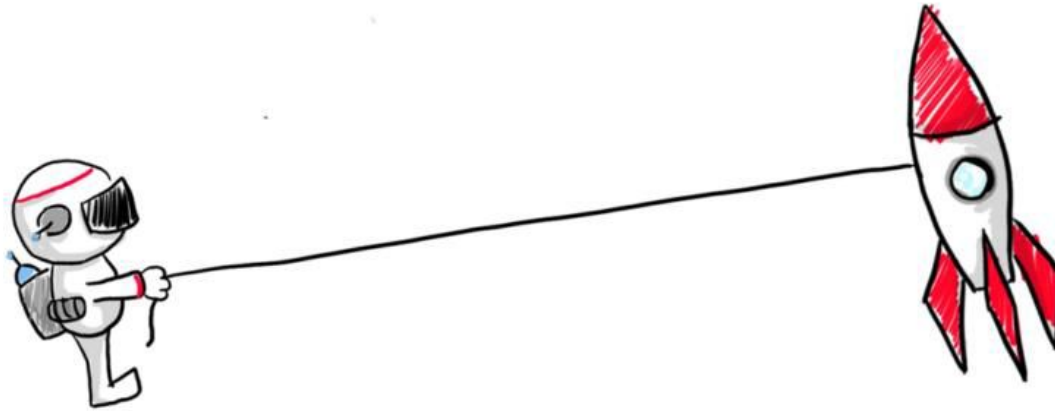
Kasey Uhlenhuth

.NET & Managed Languages
@kuhlenhuth









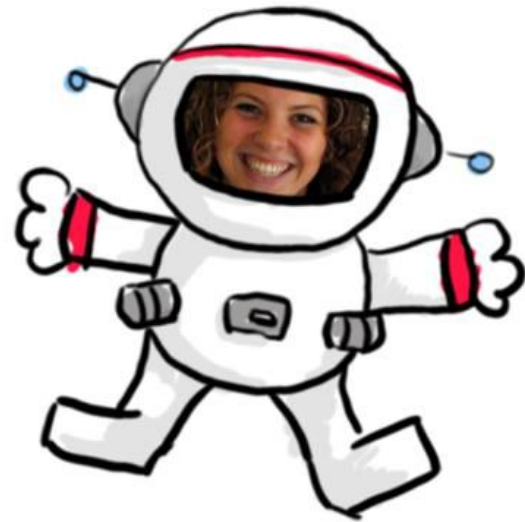
(1) Maintaining Product Direction

(3) Distributed Teams

(2) Salaried & Passionate Contributors

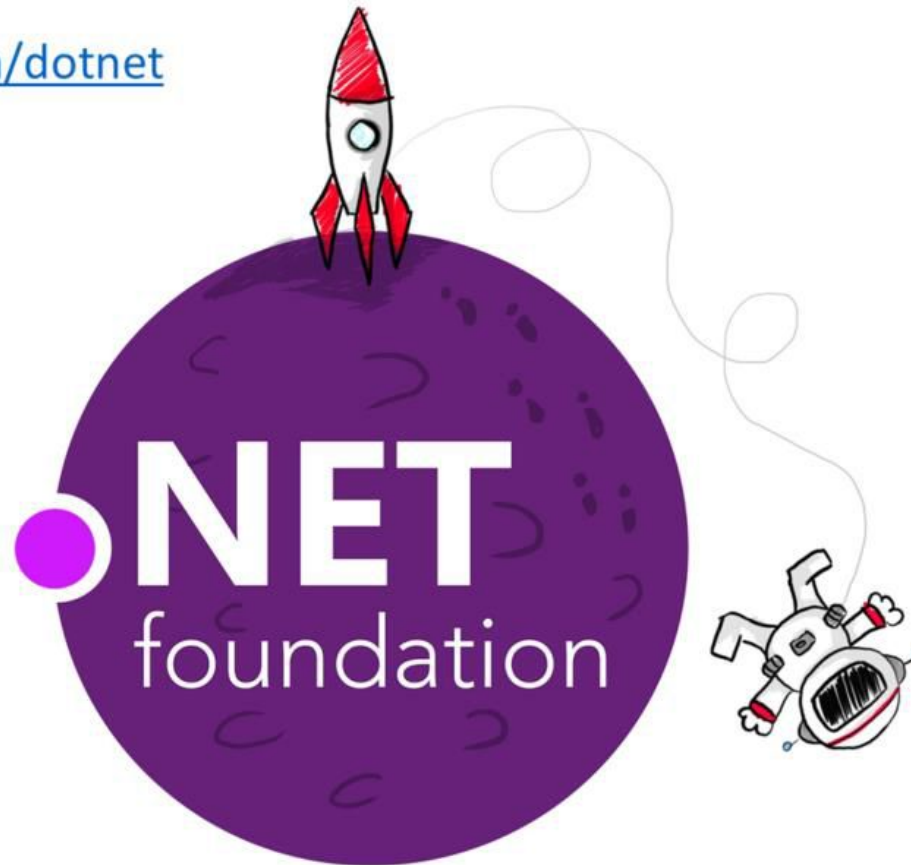
Today's Itinerary

- 1. How we set out on voyage & where we are today**
- 2. Our approaches to navigating these tensions**
- 3. Look at how well efforts have gone so far and where we want to do better**



<https://github.com/dotnet>

@dotnetfdn

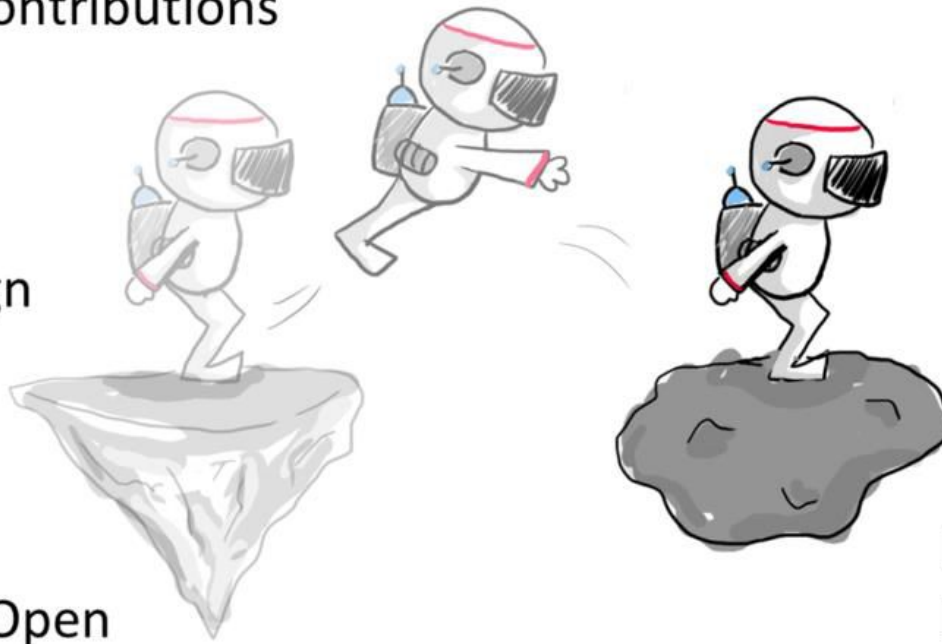


Go To Community

Source Open +
Limited Contributions

Adopt
Community
Workflow (“fully
open source”)

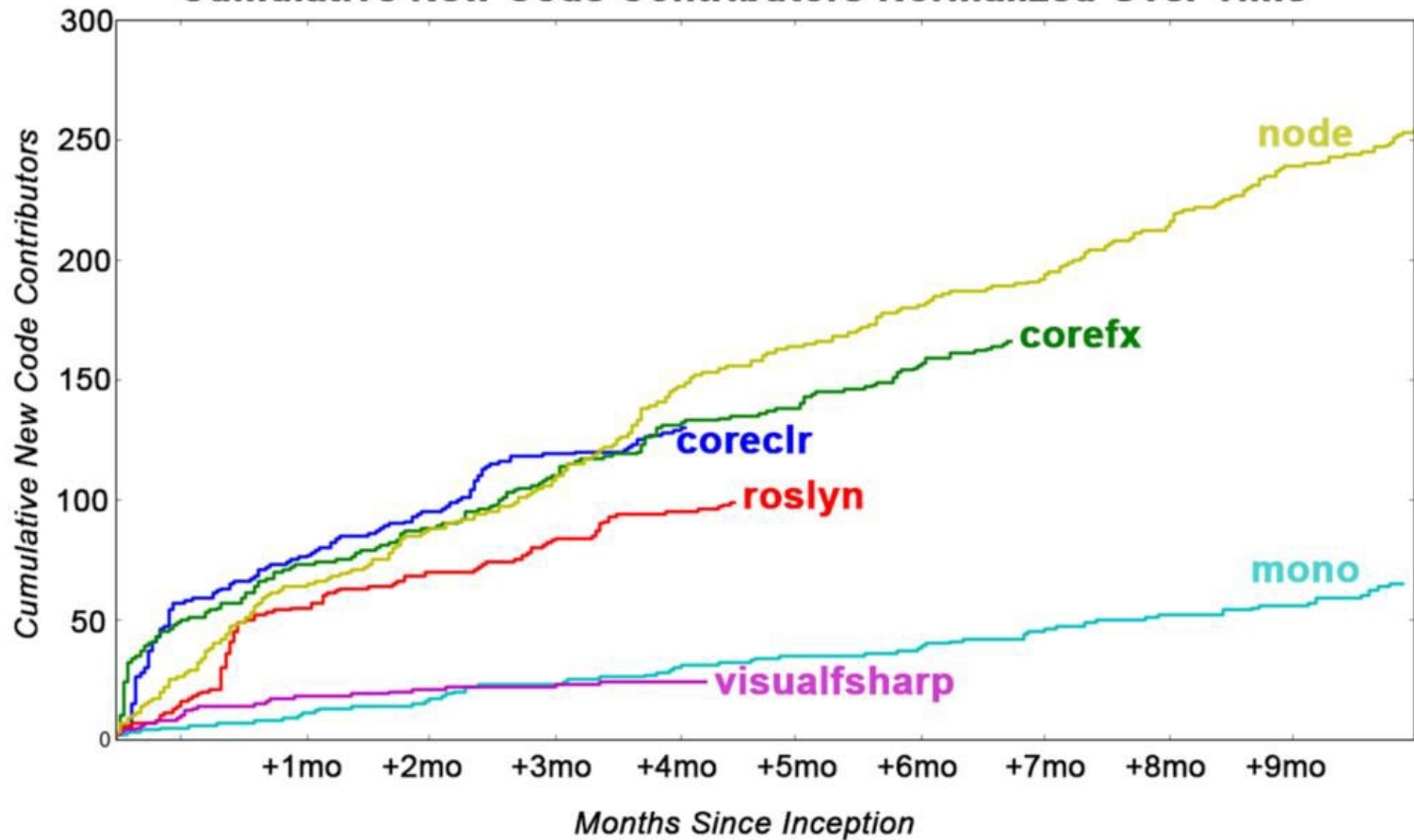
Open Design
Notes



Source Open

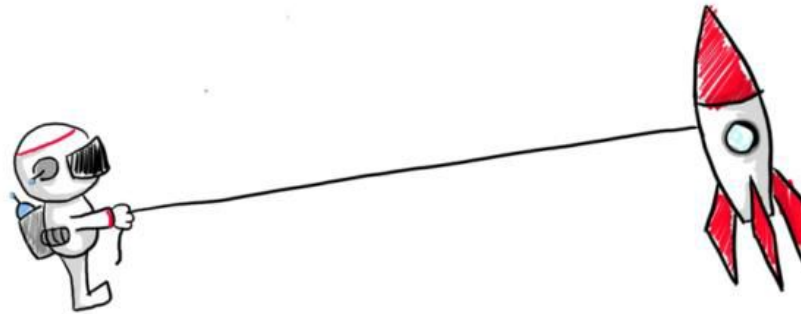
Improve
Documentation

Cumulative New Code Contributors Normalized Over Time

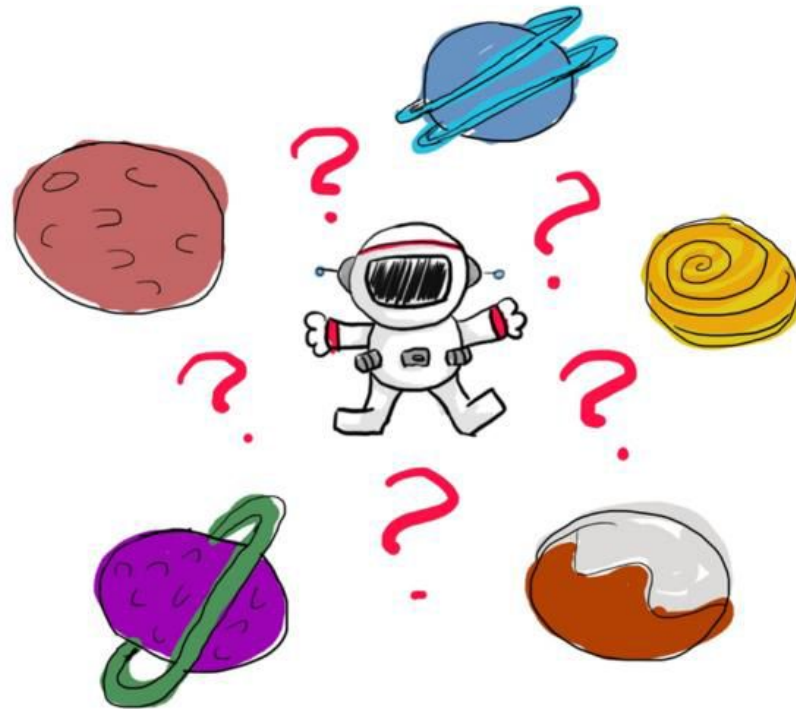


3 tensions

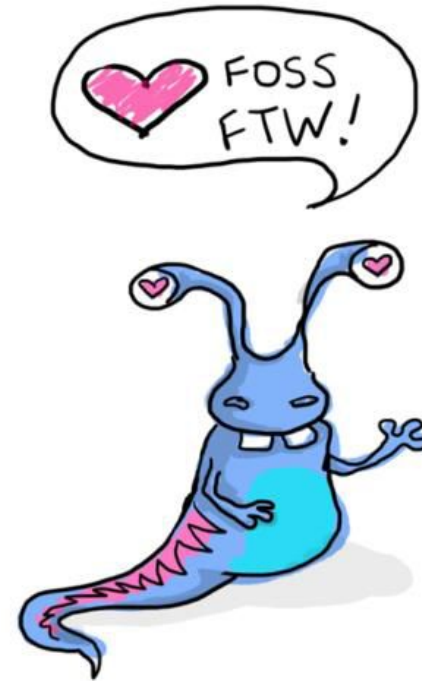
of open product development



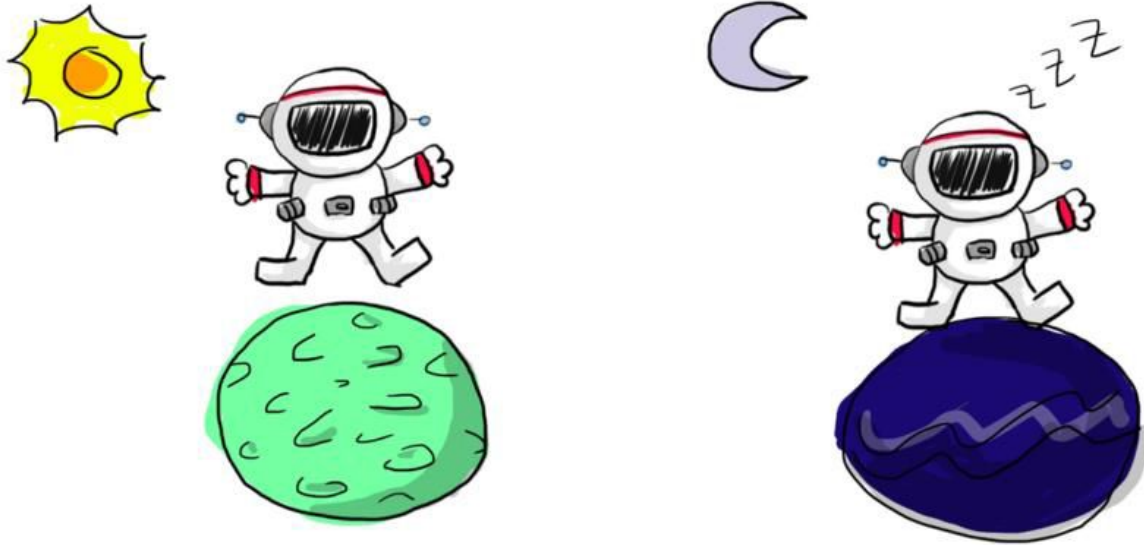
(1) Maintaining Product Direction



(2) Salaried & Passionate Contributors



(3) Distributed Teams





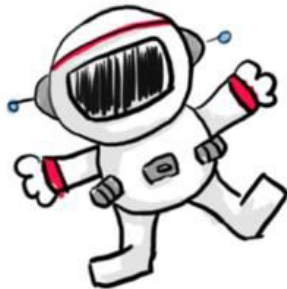
Fostering
Community

“I believe that everybody deserves a certain amount of respect, on day one, without me even knowing the person.”



“Provide the submitter with actionable feedback.”

Don't be a jerk.



“**Be a role model.** The first response to any pull request should express that we're grateful that the submitter spend time on our project.”



75%

PRs first responded to within 1st hour of publication

78%

PRs closed within 3 days

32%

We are a team.

Issues first responded to within 1st hour of publication

34%

Issues closed within 3 days

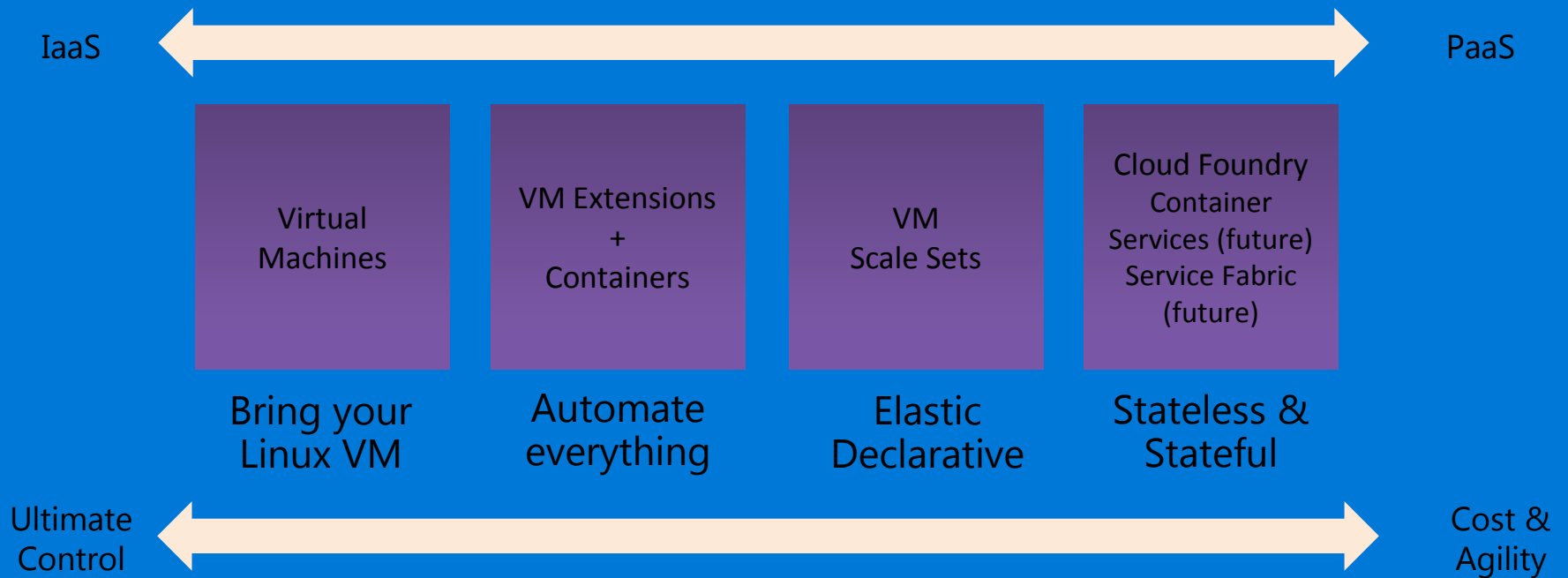
Linux on Azure

- ✓ Our customers want it!
- ✓ 1 out of 4 VMs run Linux & open source
- ✓ Enterprise grade cloud leadership
- ✓ Only true hybrid cloud



➔ Our goal is to be the most complete and *open* cloud

Linux in Azure



All running in your Linux OS, leveraging the skills and tools you have, in Azure's hyperscale platform

Azure-Endorsed Marketplace Linux Images

Partner created, Microsoft tested

Standard Images

Customers to contact Linux vendor/partner for Linux support
Azure-related issues supported by Microsoft

Premium Images

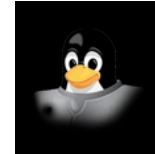
Microsoft engages the Linux vendor/partner on behalf of the customer for support

Currently only SLES 11 SP3 & 12

More coming soon!



CoreOS



Oracle
Linux



openSUSE



Debian



OpenLogic
CentOS-based



Canonical
Ubuntu

More



SUSE Linux
Enterprise Server



Coming Soon!

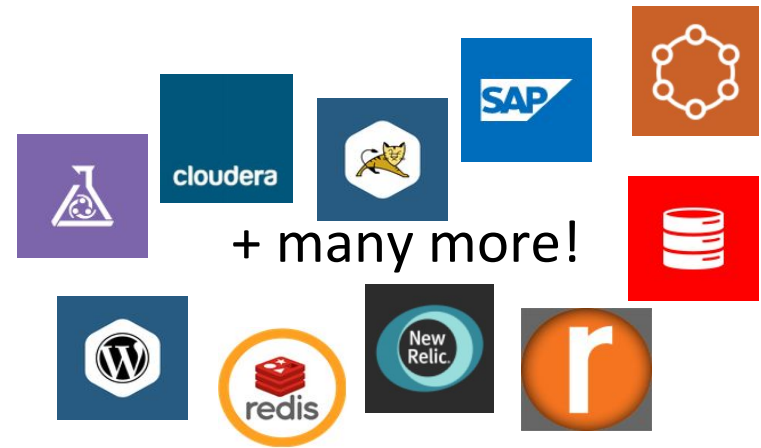
Other Linux and FreeBSD Images in Azure

Azure Marketplace

Partner created and uploaded images

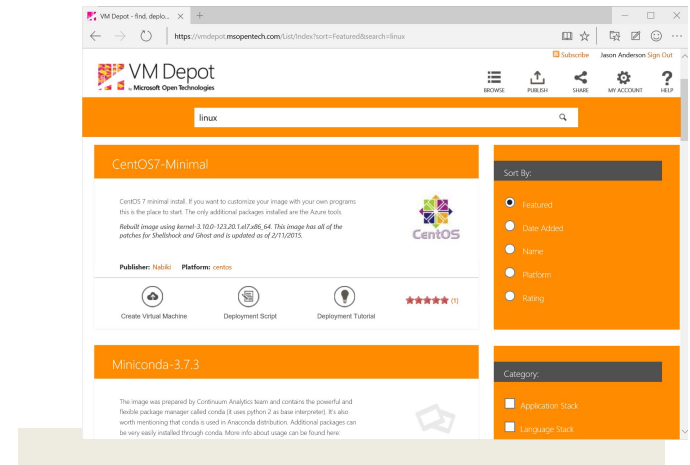
Validated

May be complete solution stacks or “vanilla” OS images



VM Depot

Community created images made available through the VM Depot website for download, or browse/upload directly from Azure portal



Bring Your Own Linux Image (BYOI)

Virtualize your OS on Hyper-V

- Install LIS if needed

Install the Microsoft Azure Linux Agent

Configure your VM for Azure

Azure is an Open Cloud

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Languages,
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Management



Operating
systems



Ecosystem Provided



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ANSIBLE



SALTSTACK

libcloud
jclouds



VM Depot
by Microsoft Open Technologies



freeBSD®

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your own

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- Daily backups for 30 days with no additional charge on backup storage
- Provide 20+ monitoring metrics such as CPU %, QPS, etc. and logs
- MySQL 5.5/5.6 compatible, supporting familiar client tools and libraries
- Support data sync from on-prem MySQL to enable hybrid scenarios

More details on <http://www.windowsazure.cn>

Azure D14, vs AWS c3.8xLarge

Note:

Azure D14 CPU: **16** vCPUs of E5-2660 0 @ 2.20GHz, on two NUMA nodes

AWS c3.8xLarge CPU: **32** vCPUs of E5-2680 v2 @ 2.80GHz, on two NUMA nodes

QUESTIONS?

kys@microsoft.com