What is the difference between an OS and a Framework?

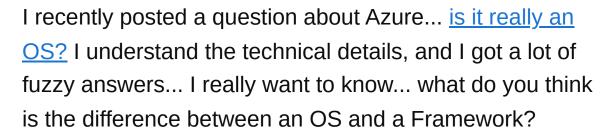
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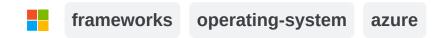






Just for reference, Azure will be built on top of Hyper-V servers and the virtual machines will be running vanilla Windows Server 2008. It will run services that creates a cloud on top of the many virtual machines which is called Azure. Windows is calling Azure an OS.

I am trying to understand how to define the difference between an OS and a framework.



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edited May 23, 2017 at 10:30



asked Nov 24, 2008 at 23:53



Brian Genisio

48.1k • 16 • 128 • 168

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Operating System: The infrastructure software component of a computer system



<u>Framework</u>: A re-usable design for a software system (or subsystem).



By these definitions it seems to me, that an operating system can be built using a framework, and a framework can be built to interact with an operating system.



<u>Singularity</u> is an example of an experimental OS that is built using managed code.

Framework is a very broad term, it can be used to describe many types of subsystems. It could even describe an operating system.

Operating System is more specific, it implies facilitation of interaction with a computers or group of computers hardware layer, through the use of human user interfaces. I think Azure fits this description.

answered Nov 25, 2008 at 0:12



Jim Burger **4,537** • 1 • 26 • 27



It's up to marketing - I don't think the terms have a definite meaning any more.

2

Is a **JVM** a framework? What if it's running on a raw **uC** or even an **FPGA** - is it an **OS**?



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edited Jan 8, 2015 at 15:39



Mike DuPont

49 6



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answered Nov 25, 2008 at 0:24



Martin Beckett

96k • 28 • 195 • 268

cool explaination! besides, I also feel like the main(int argc, char *argv[]) of C/C++, is a mechnism for users to register a *callback* into the *framework* called *OS*.

– pambda Jan 21, 2019 at 8:23



An OS is the thing that directly interfaces with the machine, be it virtual or real. It has to expose syscalls that handle input devices, output devices, sound, networking, and all the other things that we take for









granted these days. It also often provides some kind of UI which uses these services to make it easy to use/useful for an end-user. It needs to have device drivers to work with video cards, sound cards, etc. (Once again, these can be virtualized).

A framework is... something built on top of the OS. It, too, exposes an API, but they are often not so low-level as the one the OS exposes.

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answered Nov 24, 2008 at 23:56

Claudiu
229k • 173 • 503 • 697

This is how I feel too... so, why do you think Microsoft is calling Azure an OS? – Brian Genisio Nov 24, 2008 at 23:58

i'm not sure... i'll have to look into it later – Claudiu Nov 25, 2008 at 0:07

A framework is simply a reusable software design. The operating system is itself, software. Who said the two are mutually exclusive? – Jim Burger Nov 25, 2008 at 0:35







frameworks provide api contracts that oses usually don't - meaning they sit *atop* the os, hide and manage the differences, and consequently give you that platform independence goodness that can broaden our target audience







A framework thought to be as a development environment, a helping platform for further developments and you can work additively to create some other application using components of framework, while OS is system software is an environment to operate a system.



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answered May 16, 2013 at 21:53



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