

# System Fundamentals resources

## What is a server

### foss market

Public servers on the Internet

[https://en.wikipedia.org/wiki/Usage\\_share\\_of\\_operating\\_systems#Public\\_servers\\_on\\_the\\_Internet](https://en.wikipedia.org/wiki/Usage_share_of_operating_systems#Public_servers_on_the_Internet)

Technologies Overview

<https://w3techs.com/technologies>

Frequently Asked Questions

<https://w3techs.com/faq>

OS Market Share and Usage Trends

<https://web.archive.org/web/20150806093859/http://www.w3cook.com/os/summary/>

Usage of operating systems for websites

[https://w3techs.com/technologies/overview/operating\\_system/all](https://w3techs.com/technologies/overview/operating_system/all)

### processor dies

Intel to Keep Its Number One Semiconductor Supplier Ranking in 2020

<https://www.icinsights.com/news/bulletins/Intel-To-Keep-Its-Number-One-Semiconductor-Supplier-Ranking-In-2020/>

Top Semiconductor Sales Leaders – 1Q2020

<https://anysilicon.com/top-semiconductor-sales-leaders-1q2020/>

### x86

Linus Torvalds Switches To AMD Ryzen Threadripper After 15 Years Of Intel Systems

[https://www.phoronix.com/scan.php?page=news\\_item&px=Torvalds-Threadripper](https://www.phoronix.com/scan.php?page=news_item&px=Torvalds-Threadripper)

Linux 5.7-rc7

[https://lore.kernel.org/lkml/CAHk-=whan1CiRtcgBt-5SkW-ga\\_GeLH5+AO26RmK7vOA5yw9ng@mail.gmail.com/T/](https://lore.kernel.org/lkml/CAHk-=whan1CiRtcgBt-5SkW-ga_GeLH5+AO26RmK7vOA5yw9ng@mail.gmail.com/T/)

Compiling a Benchmark for RISC-V

<https://www.youtube.com/watch?v=Q0jHbGQY9u0>

CPU 2020 Benchmarks

<https://www.anandtech.com/bench/CPU-2020/2974>

### numa

INTRODUCTION 2016 NUMA DEEP DIVE SERIES

<https://frankdenneman.nl/2016/07/06/introduction-2016-numa-deep-dive-series/>

NUMA DEEP DIVE PART 1: FROM UMA TO NUMA

<https://frankdenneman.nl/2016/07/07/numa-deep-dive-part-1-uma-numa/>

NUMA Deep Dive Part 3: Cache Coherency

<https://frankdenneman.nl/2016/07/11/numa-deep-dive-part-3-cache-coherency/>

NUMA - Local memory

<https://stackoverflow.com/questions/7850862/numa-local-memory>

### enterprise-class servers

FUJITSU Server PRIMERGY

<http://www.fujitsu.com/global/products/computing/servers/primergy/>

Huawei Unveils Industry's Highest-Performance ARM-based CPU

<https://www.huawei.com/en/press-events/news/2019/1/huawei-unveils-highest-performance-arm-based-cpu>

## AMD INTEGRATED ENTERPRISE SERVERS

<https://www.icc-usa.com/products/enterprise-servers/amd-integrated-enterprise-servers/>

GIGABYTE shows Cavium ThunderX2 ARM Server Portfolio

<https://www.youtube.com/watch?v=FMviiJaPHIE>

## enterprise-class mobos

GIGABYTE C621 WD12 IPMI SERVER MOTHERBOARD

<https://www.gigabyte.com/FileUpload/Global/KeyFeature/1141/index.html>

ASRock Rack E3C246D4I 2T ASPEED AST2500

<https://www.servethehome.com/asrock-rack-e3c246d4i-2t-mitx-xeon-e-2200-review/asrock-rack-e3c246d4i-2t-aspeed-ast2500/>

ASRock Rack X570D4U 2L2T ASpeed AST2500 BMC

<https://www.servethehome.com/asrock-rack-x570d4u-2l2t-review-amd-ryzen-server-motherboard/asrock-rack-x570d4u-2l2t-aspeed-ast2500-bmc/>

Supermicro представила две серверные материнские платы для ADM EPYC

<https://www.hardwareluxx.ru/index.php/news/hardware/mainboards/42429-supermicro-is-launching-two-server-workstation-motherboards.html>

Supermicro X11SCL IF ASPEED AST2500 And Dual Intel LAN

<https://www.servethehome.com/supermicro-x11scl-if-mitx-server-motherboard-review/supermicro-x11scl-if-aspeed-ast2500-and-dual-intel-lan/>

Tyan Tomcat EX: The First AM4 Ryzen Motherboard with Management Control

<https://www.anandtech.com/show/12962/tyan-tomcat-ex-the-first-am4-ryzen-motherboard-with-management-control>

## low-cost

Socket AM4

[https://en.wikipedia.org/wiki/Socket\\_AM4](https://en.wikipedia.org/wiki/Socket_AM4)

AMD Desktop CPU Share Overtakes Intel on PM for the First Time in 16+ Years

<https://www.hardwaretimes.com/amd-desktop-cpu-share-overtakes-intel-on-pm-for-the-first-time-in-16-years/>

## lights-out

Out-of-band management

[https://en.wikipedia.org/wiki/Out-of-band\\_management](https://en.wikipedia.org/wiki/Out-of-band_management)

Intelligent Platform Management Interface

[https://en.wikipedia.org/wiki/Intelligent\\_Platform\\_Management\\_Interface](https://en.wikipedia.org/wiki/Intelligent_Platform_Management_Interface)

Explaining the Baseboard Management Controller or BMC in Servers

<https://www.servethehome.com/explaining-the-baseboard-management-controller-or-bmc-in-servers/>

BMC

<https://www.gigabyte.com/Glossary/bmc>

AST2500

[https://www.aspeedtech.com/server\\_ast2500/](https://www.aspeedtech.com/server_ast2500/)

## unices

List of BSD operating systems

[https://en.wikipedia.org/wiki/List\\_of\\_BSD\\_operating\\_systems](https://en.wikipedia.org/wiki/List_of_BSD_operating_systems)

Comparison of BSD operating systems

[https://en.wikipedia.org/wiki/Comparison\\_of\\_BSD\\_operating\\_systems](https://en.wikipedia.org/wiki/Comparison_of_BSD_operating_systems)

About MirOS

<http://www.mirbsd.org/about.htm>

Gentoo/Alt

[https://en.wikipedia.org/wiki/Portage\\_\(software\)#Gentoo/Alt](https://en.wikipedia.org/wiki/Portage_(software)#Gentoo/Alt)

## UNIX history

Porting Linux to the DEC Alpha: The Kernel and Shell

<https://www.linuxjournal.com/article/1178>

SVR4 or BSD?

<https://www.unix.com/unix-for-advanced-and-expert-users/7653-svr4-bsd.html>

Jon “maddog” Hall talks Unix and Linux history

<https://www.youtube.com/watch?v=EZMA3Ge144U>

## Operating systems

### kernels

Mach (kernel)

[https://en.wikipedia.org/wiki/Mach\\_\(kernel\)](https://en.wikipedia.org/wiki/Mach_(kernel))

illumos

<https://en.wikipedia.org/wiki/Illumos> <https://www.illumos.org/>

Comparison of OpenSolaris distributions

[https://en.wikipedia.org/wiki/Comparison\\_of\\_OpenSolaris\\_distributions](https://en.wikipedia.org/wiki/Comparison_of_OpenSolaris_distributions)

SmartOS

<https://en.wikipedia.org/wiki/SmartOS>

OmniOS

<https://omniosce.org/>

### user-lands

Debian\_GNUkFreeBSD\_FAQ

[https://wiki.debian.org/Debian\\_GNU/kFreeBSD\\_FAQ](https://wiki.debian.org/Debian_GNU/kFreeBSD_FAQ)

oracle/solaris-userland

<https://github.com/oracle/solaris-userland>

The End of libc5: A Mini-Interview with H.J Lu

[https://linuxgazette.net/issue32/tag\\_libc5.html](https://linuxgazette.net/issue32/tag_libc5.html)

Linux libc

[https://en.wikipedia.org/wiki/GNU\\_C\\_Library#Linux\\_libc](https://en.wikipedia.org/wiki/GNU_C_Library#Linux_libc)

Software stali uses and/or might adopt

<https://sta.li/technologies/>

suckless linux base utils

<https://git.suckless.org/ubase/>

suckless unix tools

<https://git.suckless.org/sbase/>

Clang

<https://wiki.gentoo.org/wiki/Clang>

Init system

[https://wiki.gentoo.org/wiki/Init\\_system](https://wiki.gentoo.org/wiki/Init_system)

No systemd

<https://nosystemd.org/>

The Package System

<https://crux.nu/Main/Handbook2-3-Package>

### **distributions**

Rolling release

[https://en.wikipedia.org/wiki/Rolling\\_release](https://en.wikipedia.org/wiki/Rolling_release)

Devuan

<https://www.devuan.org/>

Free GNU/Linux distributions

<https://www.gnu.org/distros/free-distros.html>

NetBSD 9.0 release process has started

<https://mail-index.netbsd.org/netbsd-announce/2019/07/31/msg000301.html>

### **embedded**

OpenWRT Project

<https://openwrt.org/start> <https://en.wikipedia.org/wiki/OpenWrt>

Wind River Linux

[https://en.wikipedia.org/wiki/Wind\\_River\\_Systems#Wind\\_River\\_Linux](https://en.wikipedia.org/wiki/Wind_River_Systems#Wind_River_Linux)

Yocto Project

<https://www.yoctoproject.org/> [https://en.wikipedia.org/wiki/Yocto\\_Project](https://en.wikipedia.org/wiki/Yocto_Project)

Linux on embedded systems

[https://en.wikipedia.org/wiki/Linux\\_on\\_embedded\\_systems](https://en.wikipedia.org/wiki/Linux_on_embedded_systems)

### **window managers**

i3 - improved tiling wm

<https://i3wm.org/>

dwm - dynamic window manager

<https://dwm.suckless.org/>

ratpoison: Say good-bye to the rodent

<https://www.nongnu.org/ratpoison/>

Use X11 without a window manager

<https://github.com/patrickhaller/no-wm>

List of tiling window managers for X

[https://en.wikipedia.org/wiki/Tiling\\_window\\_manager#List\\_of\\_tiling\\_window\\_managers\\_for\\_X](https://en.wikipedia.org/wiki/Tiling_window_manager#List_of_tiling_window_managers_for_X)

MATE Desktop Environment

<https://mate-desktop.org/>

KDE neon

<https://neon.kde.org/>