

WHITE PAPER

The Decision Maker's Guide to Enterprise Linux

Executive Summary

Committing to an Enterprise Linux distribution has a long-lasting and far-reaching impact on organizations. Especially as they navigate more complexity and an ever-changing open source environment. Choosing the best Linux distro for your organization can feel daunting.

In our Decision Maker's Guide to Enterprise Linux, we evaluate the top commercial and free open source Enterprise Linux distributions. We discuss the key points decision makers need to consider before they commit.

Table of Contents

Overview of the Linux Distribution Landscape	3
Choosing the Right Linux Distribution	4
Enterprise Linux Distributions	5
CentOS Stream	6
OpenSUSE Distributions	7
openSUSE TUMBLEWEED.....	7
openSUSE LEAP	7
Arch Linux	8
Debian Testing	9
Fedora	10
Fedora CoreOS	11
CentOS Linux.....	12
Rocky Linux	13
AlmaLinux	14
Oracle Linux.....	15
Alpine Linux.....	16
Debian.....	17
Ubuntu Community Edition.....	18
Linux Mint	19
Paid Linux Distributions.....	20
Red Hat Enterprise Linux.....	21
SUSE Linux Enterprise Server.....	22
Ubuntu Enterprise	23
Amazon Linux 2.....	24
Closing Thoughts	25

A Brief History of Linux

Linux has one of the richest histories of any software product in existence. It emerged from humble beginnings, with the now apotheosized creator of both Linux and Git, Linus Torvalds, posting to a GNU community board about a small free OS he was working on in 1991. After that, in less than 10 years, IBM would invest a billion dollars into Linux for all IBM hardware platforms. After a meteoric rise, Red Hat, now IBM-owned, became the most successful open source company with its flagship Red Hat Enterprise Linux distribution, one of the most popular Linux distributions.

The popularity of open source would place Linux squarely at the feet of enterprises who wanted to squeeze more power and efficiency out of their hardware, while saving millions of dollars. Linux's success has also led to a large amount of fragmentation, with a diaspora of spin-off open source projects that now are their own top-level distributions, but who forked originally from GNU Linux.

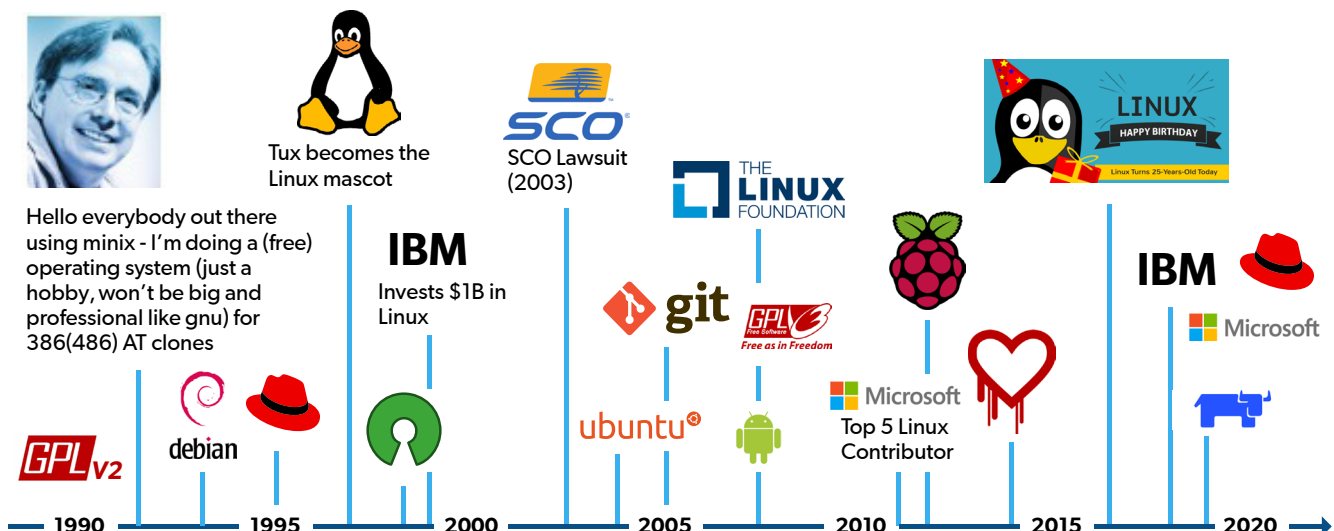
Overview of the Linux Distribution Landscape

Linux distros are a combination of the open source Linux kernel and a suite of supporting software (also known as packages) that facilitate the development and operation of applications. In general, the suite of packages come from other top-level open source projects added by

the community that supports the Linux distribution. For instance, distributions of Linux designed to be desktop operating systems might include a lot of desktop-focused tools like media players and a focus on the customizability of the UI. In this case, a desktop Linux operating system is the goal, and the included packages follows those presumed use cases.

It follows, then, that individual communities will make different decisions about which software to include with their distribution and prioritize different use cases for the flavor of Linux that they wish to build. Other Linux distribution examples are for security-minded professionals and enthusiasts, whereas others aim to be a straightforward, productivity-focused Linux experience.

Some Linux distros are built to support IT infrastructure, typically known as Enterprise Linux distributions. They are conceived to address needs that are specific to organizations that build their technology infrastructure on Linux and contain variances in the individual packages as well. Committing to a particular Linux distribution, especially when deployed at the scale needed by modern enterprises, has cascading and long-lasting impacts for the business at large, because every environment and every deployment is built and tested with what the operating system provides. Significant testing and tune up is required at the application level.



Open Source vs. License Cost and Vendor Lock-In

Among all Linux distributions, there are two distinct categories that cater to different user preferences: open source community distros and commercial distros.

An open source community distro is a collaboration between community members. It's a free open source Linux distribution that thrives under the watchful eye of individual contributors who dedicate time and expertise to its support and maintenance. There's also a community commitment to release life cycles.

On the other end of the spectrum, vendors commercializing open source Linux offer value in terms of accessibility and support for organizations. This value comes at a subscription or license cost and for the most part, vendor lock-in. Typically, commercial Linux vendors will offer technical support contracts and professional services in addition to defined release lifecycles.

Choosing the Right Linux Distribution

With so many good Linux distros – how do you decide? To help, we loosely categorized Linux distros and included a brief description with factors that should be considered when looking at the path forward, particularly from already EOL CentOS 6 and 8, or soon to be EOL CentOS 7. Even if you are not using CentOS today, this guide will help you become familiar at a high-level with different Linux distros.

To select your next Linux distro, we recommend you look at the open source community. Some distros stand out based on the number of users, size of the community, and number of releases. There are hundreds of open source Linux distributions providing different features. This guide examines some of the most used distros.

Viable Open Source Enterprise Linux Distributions

In the next sections, we cover details on Enterprise Linux distributions, and discuss their relative strengths and weaknesses according to the criteria listed below. Some, like license type, are objective. Others, like Stability and Ecosystem Maturity are more subjective, and present our informed opinion on a given distribution.

Areas of Analysis

License – An open source or commercial software's license defines entitlements such as redistribution, commercial use, etc. It's important to ensure that the license is compatible with your business policies regarding distribution and use.

Stability – An A-F rating of the stability of both the product from a hardware compatibility and software quality standpoint, as well as its community or commercial roadmap.

Ecosystem Maturity – An A-F rating of the breadth of software solutions providing a full enterprise-class ecosystem including distributed package management, cloud interoperability, remote desktop management, well-maintained integration components, etc.

DistroWatch Ranking – The 12-month popularity ranking from [DistroWatch.com](https://distrowatch.com) as of 8/29/2023, which measures the popularity of the distribution based on average user visits to each distribution page per day over the previous 12-month period.

Governance Model – This category assesses the practical governance model for the distribution or project. If a parent corporation representative is chair, we define it as "corporate-led." If a parent corporation representative is on the board, but not chair, we define it as "corporate-influenced."

OpenLogic Technical Support – Availability of commercial enterprise-grade technical support by OpenLogic.

Open Source Linux Distribution Comparison Matrix

Distribution	License	Latest Release	Supported Platforms	Distrowatch Popularity Ranking	Stability	Ecosystem Maturity	OpenLogic Technical Support
CentOS Stream	GPL2	9	x86_64, ARM64, ppc64le, s390x	NA	B	B	Yes
OpenSUSE Tumbleweed	openSUSE License, GPL	Rolling release	i686, ppc64, x86_64, ARM64, S390x, RISC-V	9	C	A	Yes
OpenSUSE LEAP	openSUSE License, GPL	15	ppc64, x86_64, ARM64, S390x, RISC-V	9	A	A	Yes
Arch Linux	GNU, GPL	2023-08-29 Rolling	x86_64	64	C	B	No
Debian Testing	GNU	2023-08-29 Rolling	amd64, aarch64, armel, armhf, i686, mipsel, mips64el, ppc64el, s390x	NA	C	A	No
Fedora	GNU GPL	38	x86_64, aarch64, ppc64le, s390x,	8	B	A	Yes
Fedora CoreOS	ASF2.0	38	x86_64, aarch64, ppc64le, s390x	NA	B	A	Yes
CentOS	GNU GPL	7	x86_64, ARM64, ppc64le, s390s	54	A	A	Yes
Rocky Linux	Clause BSD and various free software license	9	aarch64, ppc64le, s390x, x86_64	45	A	B	Yes
AlmaLinux	GPLv2	9	x86_64, aarch64, ppc64le, s390x	22	A	B	Yes
Oracle Linux	GNU GPL	9	x86_64, ARM64, IA-32, SPARC	88	A	B	Yes
Alpine Linux	GPLv2	3	x86, x86_64, ARMhf, ARMv7, AArch64, ppc64le, s390x	28	B	C	Yes
Debian Linux	DFSG-compatible	2023-08-29 Rolling	x86_64, ARM64, armel, armhf, i386, mips, mipsel, mips64el, ppc64el, s390x, RISC-V64	4	B	A	Yes
Ubuntu Community Linux	GNU GPLv2	2023-08-28 rolling	x86_64, ARM64, RISC-V, ppc64el, s390x, ARMhf	6	B	A	Yes
Linux Mint	GPL	21	x86_64	2	A	B	No

CentOS Stream

Derived from Fedora, CentOS Stream is the upstream, continuous delivered distro that tracks just ahead of Red Hat Enterprise Linux (RHEL) – and is the current open source Linux development priority for Red Hat and the CentOS community.

It is suitable for businesses who continuously build, test, and release their environments and wish to benefit from automated 0-day security patching and newer functionality.

CONSIDERATIONS

For those considering CentOS Stream, the decision comes down to both your preferences for your overall Linux ecosystem, and your current infrastructure. Everything that you expect inside a RHEL/CentOS ecosystem, such as package manager and virtualization options will still be available to you, and you’ll receive bug fixes and security patches on a faster schedule than what you are used to using CentOS Linux.



Website:	www.centos.org/centos-stream/
Package Managers:	DNF, RPM
Supported Platforms:	x86_64, ARM64, ppc64le, s390x
Governance Model:	Corporate-influenced Governing Board

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
CentOS Stream	GPL2	B	B	NA	Yes

openSUSE Distributions

The openSUSE Project, split by its Linux distributions Tumbleweed and Leap, is a community project that “promotes the use of Linux everywhere.” openSUSE’s community is its best asset, with a truly democratized process for committing code. Prolific contributors can be voted in as community members, and all community members vote on releases.

openSUSE TUMBLEWEED

If you prefer the SUSE Linux Enterprise Server ecosystem, the openSUSE community also offers a rolling-release Linux in the form of Tumbleweed. Just as in CentOS Stream, bug fixes and security patches will come earlier than in the comparative openSUSE Leap regular-release distribution. Tumbleweed also benefits from a large open source OpenSUSE community and its strong support for a wide range of desktop environments, software libraries, and tools. Tumbleweed is suitable for users who want a balance between having access to the latest software and maintaining a stable and well-tested system.

openSUSE LEAP

OpenSUSE Leap is the regular release edition of the open source OpenSUSE Linux distro. It combines the stability of a fixed-release model with the availability of up-to-date software packages. It aims to provide a reliable and user-friendly operating system for both desktop and server environments. OpenSUSE is generally considered to be stable for production use, and those familiar with the SLES, SUSE, and Slackware ecosystem will feel comfortable in this environment. OpenSUSE focuses on deployment simplicity, user-friendly toolchain, and cloud-readiness.



Website:	www.opensuse.org
Package Managers:	RPM, ZYpp, YaST, Zypper
Supported Platforms:	i686 (Tumbleweed only), ppc64, x86_64, ARM64, S390x, RISC-V
Governance Model:	Corporate-influenced Governing Board

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
openSUSE Tumbleweed	openSUSE License, GPL	C	A	9	Yes
openSUSE LEAP	openSUSE License, GPL	A	A	9	Yes

Arch Linux

Arch Linux is a lightweight and highly customizable Linux distro that emphasizes simplicity, minimalism, and a “do-it-yourself” approach. It is designed for experienced users who want to build a tailored and efficient operating system environment according to their specific needs. The Arch Linux rolling-release model provides continuous updates to the latest software packages and features without the need for major version upgrades. Arch Linux is popular among enthusiasts, power users, developers, and those who enjoy learning about and fine-tuning their Linux system.

CONSIDERATIONS

As a lightweight distribution, Arch Linux’s strengths lie in its simplicity. It allows users to add only the packages they need, which can be handy for teams that want to reduce overhead. All packages are managed using Pacman, a package manager written specifically for Arch Linux. Other communities support Arch Linux for ARM, PowerPC, RISC-V, and other platforms.

	
Website:	archlinux.org
Package Managers:	pacman
Supported Platforms:	x86_A
Governance Model:	Meritocracy

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
ArchLinux	GNU GPL	C	B	64	No

Debian Testing

Debian has a Testing branch, similar to a beta version, which is an intermediary stage between Debian’s unstable and stable branches. The Testing branch is intended for users that want a balance between access to newer software and a relatively stable system. Debian Testing gets new features and fixes before the stable Debian release, allowing users who are comfortable troubleshooting potential issues that might arise to do so.

CONSIDERATIONS

Debian Testing changes more often than [stable](#), but it is not completely [unstable](#). Security updates are not a priority, do not use Debian Testing if security is a concern.



Website:	wiki.debian.org/ DebianTesting
Package Managers:	dpkg
Supported Platforms:	x86_64, arm64, armel, armhf, i386, mips, mipsel, mips64el, ppc64el, s390x
Governance Model:	Meritocracy

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Debian Testing	GNU GPL	C	A	NA	No

Fedora

Fedora is a popular, community-driven Linux distro known for its emphasis on new features and technologies, open source collaboration, and strong ties to the upstream software development communities (RHEL). It aims to provide a platform for desktop, IoT, virtual machines, containers, and server users, offering the latest software while maintaining a balance between innovation and stability. Fedora users appreciate staying on the forefront of technology, contributing to open source projects, and experimenting with the latest software innovations.

CONSIDERATIONS

Fedora is a good choice for users that want the latest software and technologies. It’s particularly well-suited for developers, enthusiasts, and those interested in bleeding-edge features. With Fedora, there’s opportunity for development and experimentation. With its strong focus on open-source principles, regular updates, and a large community, Fedora is a good choice for staying at the forefront of Linux innovation.



Website:	fedoraproject.org
Package Managers:	RPM DNF, Flatpak, OSTree
Supported Platforms:	x86_64, aarch64, armhf, mips64el, mipsel, ppc64le, RISC-V, s390x
Governance Model:	Corporate-led, Governing Board

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Fedora	GNU GPL	B	A	8	Yes

Fedora CoreOS

The successor of Fedora Atomic Host (Project Atomic) and Container Linux after Fedora 29, Fedora CoreOS is a fully container-optimized distribution and offers three distinct update channels of its own: Stable, Test, and Next. Fedora CoreOS has a short life cycle, with new releases every 6 months.

CONSIDERATIONS

The main reason businesses choose to run Fedora CoreOS is they are running in OpenShift. Red Hat has positioned Fedora CoreOS to be the first-class citizen OS in OpenShift deployments.

In general, if you are running container workloads, it makes sense to start with a container-optimized distribution of Linux. These distributions contain “just enough” of the operating system core to support running small lightweight apps and/or microservices.



Website:	fedoraproject.org/en/coreos
Package Managers:	RPM DNF
Supported Platforms:	x86_64, aarch64, ppc64le, s390x
Governance Model:	Corporate-influenced, Governing Board

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Fedora CoreOS	Apache License 2.0	B	A	NA	Yes

CentOS Linux

CentOS, short for Community Enterprise Operating System, is a popular and free open source Linux distribution. CentOS is functionally compatible with Red Hat Enterprise Linux (RHEL) and is derived from RHEL.

There is currently only one supported version of CentOS Linux, CentOS Linux 7. It will remain community supported until it reaches end-of-life (EOL) on June 30, 2024. CentOS 8 reached EOL at the end of December 2021, and CentOS 6 reached EOL in November of 2020.

CONSIDERATIONS

OpenLogic will support CentOS Linux 7 well past that point, extending long-term support post EOL until 2029. For many businesses, this will be the lowest-risk option for the moment, giving them plenty of time to consider their go-forward Linux distro strategies. Migration and decommission environments take time with a lot of planning and testing. Having a post EOL LTS option that provides patches for high-severity vulnerabilities reduces risk and meets IT compliance for internal or external regulation. OpenLogic CentOS LTS is already available for CentOS versions 6 and 8.



Website:	www.centos.org/centos-linux/
Package Managers:	DNF, packageKit, RPM
Supported Platforms:	x86_64, ARM64, ppc64le, s390x
Governance Model:	Corporate-led, Governing Board

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
CentOS Linux	GNU GPL	A	A	54	Yes

Rocky Linux

Rocky Linux is a community-driven, enterprise-grade Linux distro designed to serve as a free and open alternative to CentOS Linux. It was created in response to the EOL announcement for CentOS. With a promise of bug-for-bug compatible to RHEL, Rocky Linux aims to provide a stable, reliable, and compatible platform for organizations and users that were previously relying on CentOS for their server infrastructure.

Despite recent restrictions on the availability of RHEL’s source code, Rocky Linux has reiterated its commitment to bug-for-bug compatibility.

CONSIDERATIONS

With several releases now under their belts, and a quickly growing user base, Rocky Linux has lived up to its early buzz. Release lag has been minimal so far, showing that the Rocky Linux community can deliver releases from RHEL source code.

The next big test for Rocky Linux will be their Rocky Linux 9.3 release. If they can maintain bug-for-bug compatibility with RHEL they are primed to build upon their quickly growing momentum as the top CentOS Linux alternative.



Website:	rockylinux.org
Package Managers:	DNF, Flatpak, Dnfdragora
Supported Platforms:	x86_64, ARM64, ppc64le, s390x
Governance Model:	Corporate-influenced, Governing Board

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Rocky Linux	3-clause BSD and various free software licenses	A	B	45	Yes

AlmaLinux

AlmaLinux is a community-driven, open source Linux distro created as a direct alternative to CentOS Linux. Like Rocky Linux, it was created in response to the EOL announcement for CentOS and community move to CentOS Stream. AlmaLinux aims to provide a reliable – it’s not bug-for-bug compatible, rather an application binary-compatible distro – enabling it to make applications run on AlmaLinux as seamlessly as in RHEL.

AlmaLinux has announced its intention to collaborate and contribute with the CentOS Stream community, while keeping AlmaLinux as an open source alternative for CentOS and RHEL.

CONSIDERATIONS

AlmaLinux was the first CentOS alternative to release a CentOS 8 and 9 replacement, beating out Rocky Linux. Unlike the Rocky Linux community leaders, AlmaLinux has not criticized Red Hat for the recent restriction to RHEL source code. AlmaLinux prefers a collaboration approach with the CentOS Stream community and Red Hat.

Post the recent changes to the availability of RHEL source code the upcoming AlmaLinux 9.3 release will show how similar or different it is to RHEL.



Website:	almalinux.org
Package Managers:	RPM
Supported Platforms:	x86_64, aarch64, ppc64le, s390x
Governance Model:	Corporate-influenced, Governing Board

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
AlmaLinux	GPLv2	A	B	22	Yes

Oracle Linux

Oracle Linux is packaged and freely distributed by Oracle, it is compiled from RHEL source code, replacing Red Hat branding with Oracle's name. It has been built for years, and, like CentOS is a binary-compatible rebuild of RHEL's RPMs. Oracle Linux is particularly tested and optimized to work well with Oracle's software offerings, making it a suitable choice for running Oracle databases and other application workloads.

Oracle has announced its commitment to continue building Oracle Linux despite the recent changes in availability of RHEL source code. They also joined SUSE and ICQ to form a new association OpenELA to share software components.

Like others, Oracle Linux features long-term support for 10 years on major releases, and offers commercial extended support for post-EOL versions.

CONSIDERATIONS

Oracle Linux is a viable option to migrate off CentOS or RHEL. It has been built for years, and like CentOS, is a binary-compatible rebuild of RHEL. Although the community at large is wary of adopting free software from Oracle, at the time of writing this report there is no technical reason not to consider this release.

Oracle's build process is stable and matches what administrators are used to in the RHEL ecosystem. It is compatible with the suite of software in that ecosystem, and RPMs built for CentOS or RHEL will, for the most part, install without error because of this binary compatibility.

It's up to businesses to decide whether they trust Oracle not to lock the operating system later. Oracle did make a similar move with Java in January of 2019, when it began treating Oracle Java 8 as an LTS product, and required businesses to engage in an enterprise support contract in order to keep using it in production.

ORACLE[®] Linux

Website: www.oracle.com/linux/

Package Managers: RPM

Supported Platforms: x86_64, ARM64, IA-32, SPARC

Governance Model: Corporate-led

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Oracle Linux	GNU GPL	A	B	88	Yes

Alpine Linux

Alpine Linux is a lightweight and security-oriented Linux distro designed for resource efficiency and containerization. It is known for its small footprint, speed, and focus on security measures. Alpine Linux is often used in scenarios where size and security are critical, such as in containers, IoT devices, and embedded systems. Alpine Linux is particularly suitable for scenarios where fast boot times, small memory usage, and strong security are required.

Only the latest release receives bug fixes, while prior releases within a two-year window only get security fixes.

CONSIDERATIONS

Alpine Linux is considered a business-class embedded Linux distribution primarily because of its focus on security, though its usability and efficiency are very good reasons to consider it as well.

Alpine Linux takes special steps to ensure the code you are running in your environment can’t be tampered with, which is its main selling point; but the choice of ‘apt’ as a package manager also ensures ease of use with existing ecosystem products.

You may choose to use Alpine Linux for its small footprint, security features, containerization capabilities, and other benefits, depending on your specific use case and requirements.



Website:	www.alpinelinux.org
Package Managers:	apk-tools
Supported Platforms:	x86, x86_64, ARMhf, ARMv7, AArch64, ppc64le, s390x
Governance Model:	Electoral

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Alpine Linux	GPLv2	B	C	28	No

Debian

Debian is known for its commitment to open source principles, stability, and extensive package management system. It serves as the foundation for various other Linux distros such as Ubuntu and Linux Mint. Debian is widely used in both desktop and server environments. It is a popular choice for users seeking a reliable and customizable Linux distro for a wide range of applications and use cases, including embedded systems.

Debian was released prior to Red Hat Linux, and not long after the initial release of GNU Linux. It’s incredibly popular amongst veteran Linux enthusiasts, and for many practitioners was the first flavor of Linux they used practically.

CONSIDERATIONS

Debian is a dependable and versatile Linux distribution renowned for its stability, extensive software repository, and commitment to free and open-source software principles. It has a robust package management system, a large and active user community, and support for various hardware architectures.

Debian is an excellent choice for both servers and desktops. Its strict adherence to security practices, frequent updates, and Long-Term Support (LTS) for stable releases make it a preferred option.



Website:	www.debian.org
Package Managers:	dpkg
Supported Platforms:	x86_64, ARM64, armel, armhf, i386, mips, mipsel, mips64el, ppc64el, s390x, RISC-V64
Governance Model:	Meritocracy

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Debian	DFSG-compatible licenses	B	A	4	Yes

Ubuntu Community Edition

Often referred to as simply “Ubuntu,” this distro is widely used, and a popular open source Linux distro known for its user-friendly experience, robust software ecosystem, and active community support. It is a solid choice for both desktop and server Linux. Ubuntu stems from the Debian distribution of Linux, and follows many of the directions of that community, such as the choice of the apt ecosystem for package management. Many AI-related packages are also included in the distro.

CONSIDERATIONS

Ubuntu Community Edition is a solid choice for both desktop and server Linux. Although it is sometimes criticized for its rigid design choices and feature set, it represents a powerful distribution that is safe for enterprise use.

Ubuntu releases operate under a development codename and are versioned by the year and month of delivery. LTS releases are in “General Support” for five years, and “Extended Security Maintenance” for an additional five years.

The distribution of Ubuntu is the same as Ubuntu Enterprise, so it’s very easy for enterprises to turn on and off an enterprise support relationship with Ubuntu should they choose that route.



Website:	ubuntu.com
Package Managers:	dpkg (APT), Snap, GNOME software
Supported Platforms:	x86_64, ARM64, RISC-V, ppc64el, s390x, ARMhf
Governance Model:	Community Council

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Ubuntu	GNU GPLv2	B	A	6	Yes

Linux Mint

Mint is an open source Linux distribution that aims to provide a stable and easy-to-use operating system experience for Linux newcomers and experienced users. It is based on Ubuntu and Debian, building upon their foundations while adding its own unique features and design elements.

Linux Mint emphasizes user convenience and a traditional desktop experience. Its focus on providing a comfortable transition for Windows users and its wide range of customization options make it a popular choice for desktop and laptop users.

CONSIDERATIONS

Linux Mint is a great choice for those transitioning from other operating systems, such as Windows or macOS, due to its familiar interface. With its Cinnamon desktop environment and robust software manager, Mint provides a polished and customizable experience. Additionally, Mint emphasizes user feedback and community involvement, making it a welcoming choice for newcomers and experienced Linux users alike.



Website:	linuxmint.com
Package Managers:	dpkg, Flatpak
Supported Platforms:	x86_64
Governance Model:	Structured Meritocracy

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Linux Mint	GPL	A	B	2	No

Commercial Linux Distributions

While mainstream commercial Linux vendors offer a lot of value, they do come at the cost of license expense and vendor lock-in. Typically, commercial Linux vendors will offer guaranteed support SLA/SLO contracts as well as enhanced maintenance and management services, such as patching and vulnerability management.

We will compare four of the most popular commercial Enterprise Linux variants in this section.

Enterprise Linux Distribution Comparison Matrix

Distribution	License	Latest Release	Supported Platforms	Distrowatch Popularity Ranking	Stability	Ecosystem Maturity	OpenLogic Technical Support
Red Hat Enterprise Linux	Commercial	9	x86_64, ARM4, ppc64le, s390x	59	A	A	No
SUSE Linux Enterprise Server	Commercial	15	x86_64, ARM64, ppc64le, s390x	131	A	A	No
Ubuntu Enterprise	Commercial	22	x86_64, ARM64, ppc64le, s390x, RISC-V, ARMhf	NA	A	B	No
Amazon Linux 2	Commercial	2	x86_64	NA	A	B	No

Red Hat Enterprise Linux

RHEL is a leading and widely recognized commercial enterprise-grade Linux distro known for its stability, security, long-term support, and comprehensive ecosystem. It offers various editions tailored for different workloads, such as servers, cloud, and container deployments. RHEL is based on CentOS Stream and Fedora.

Red Hat, now owned by IBM, provides extensive support, certifications, and professional services to ensure a reliable platform for critical business and government applications.

RHEL versions have 10 years of support, including full support, maintenance support, and extended support phases. Full support and maintenance support phases typically run five years each, with extended support for past-EOL versions available for those willing to pay a premium.

CONSIDERATIONS

A truly enterprise-grade Linux distribution offering stability, support, and security. RHEL is used on many mission-critical systems, data centers, and large-scale deployments where reliability is mandatory. It provides long-term support (LTS) and rigorous testing, ensuring a dependable and consistent environment from bare metal to cloud and IoT.

Technical support and access to enterprise-grade features are part of their subscription model. Lock-in to a vendor has to be an important consideration and with the variety of open source bug-for-bug compatible options going or moving away from RHEL has to be considered.



Red Hat
Enterprise Linux

Website:	www.redhat.com/en/technologies/linux-platforms/enterprise-linux
Package Managers:	RPM, Yum, DNF, Yumex, dnfdragora, GNOME software
Supported Platforms:	x86_64, ARM64, ppc64le (IBM Power), s390x (IBM Z)
Governance Model:	Red Hat product direction upstream from CentOS Stream

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Red Hat Enterprise Linux	Commercial	A	A	131	No

SUSE Linux Enterprise Server

SLES is the commercial counterpart to the OpenSUSE Linux distro and is backed by SUSE, a German-based multinational enterprise. It is an enterprise-focused distribution with a strong emphasis on reliability, scalability, and high-performance computing. It offers features like Systemd, Btrfs, and containers support, making it suitable for various server and virtual environments. There’s a SLES certified for SAP deployments and SUSE provides a range of support options and services.

Just like openSUSE, SLES focuses on deployment simplicity, a lightweight toolchain and ecosystem, and cloud-readiness.

SLES has a 13-year product lifecycle, with 10 years of general support followed by three years of long-term support. Major versions are released every three to four years, while minor versions (called “Service Packs”) are typically released yearly.

CONSIDERATIONS

SLES is a well-rounded and robust Linux distribution for enterprise scenarios. Its focus on stability, security, scalability, and long-term support makes it a trusted choice for organizations seeking a reliable platform for their critical workloads and applications.

With features like system rollback, enterprise-class support, and integration with SUSE Manager for efficient management and monitoring, SLES is well-suited for large-scale deployments. Its support for multiple hardware architectures and comprehensive certification with various software and hardware vendors make it a dependable choice.

Distributions of SLES are available in a range of sizes, from embeddable IoT-suitable images to large monolithic enterprise servers. SUSE’s Rancher as a containers’ platform complements SLES the way OpenShift complements RHEL.



Website:	www.suse.com/products/server/
Package Managers:	RPM, Zypper, YaST2
Supported Platforms:	x86_64, ARM32, ARM64, ppc64le (IBM Power), s390x (IBM Z)
Governance Model:	SUSE product direction upstream from OpenSUSE

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
SUSE Linux Enterprise Server	Commercial	A	A	131	No

Ubuntu Enterprise

Based on the open source Ubuntu community, Canonical provides commercial support and services for Ubuntu Enterprise deployments. Ubuntu Enterprise is known for its ease of use, regular updates, and compatibility with cloud environments. Ubuntu attracts front-end developers with easy-to-use features and a slew of programming resources, including AI libraries.

Canonical offers 5- to 10-year support, images in all cloud providers, and live patching functionality. They also offer LTS premium offerings that includes security patches for all their packages, over 2,300.

CONSIDERATIONS

Ubuntu Enterprise mimics the Ubuntu community distribution with some add-ons like commercial support, as well as a number of related paid services offerings. These services include builds of the OpenStack environment, hardware certification for hardware vendors, and Kubernetes implementations of Ubuntu.

Ubuntu Server Edition offers advantages such as ease of use, regular updates, and extensive community and commercial support options. It’s well-suited for tasks such as web hosting, virtualization, cloud computing, and software development.

Ubuntu integrates well with cloud services, containers, and modern DevOps practices, making it an attractive choice for enterprises looking to modernize their IT infrastructure.



Website:	ubuntu.com/download/server
Package Managers:	GENOME software, dpkg, Snap
Supported Platforms:	x86_64, ARM64, ppc64le (IBM Power), s390x (IBM Z), RISC-V, ARMhf
Governance Model:	Ubuntu product direction upstream from Ubuntu Community

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Ubuntu Enterprise	Commercial	A	A	131	No

Amazon Linux 2

Amazon Linux is a supported and maintained Linux distro provided by Amazon Web Services (AWS) for use on Amazon Elastic Compute Cloud environments (EC2). AWS provides Amazon Linux 2 as a no-cost, open-source operating system specifically designed for use on AWS. It's offered as pre-configured Amazon Machines Images (AMI) ready to use in AWS. It is designed to provide a stable, secure, and high performance execution environment for applications running on Amazon EC2.

Originally built from RHEL, the distro has changed and is developed in the open, with source code publicly available and distributed under open source licenses. Amazon Linux 2 is the second major version of Amazon Linux, it is specifically improved to run in Amazon EC2s with enhanced performance, tooling, and LTS.

Amazon Linux supports major version releases under active development for two years, followed by a maintenance phase of three years.

CONSIDERATIONS

Amazon Linux 2 is good choice for businesses and developers leveraging Amazon Web Services (AWS) infrastructure. As an AWS-optimized Linux distribution, it's designed to seamlessly integrate with AWS services and instances, including VMs and containers. It's well suited for cloud-native applications, microservices, and serverless computing.

Keep in mind that while it can technically be used outside of AWS, it may not be the most suitable choice for non-AWS environments due to its AWS-specific optimizations.

While AWS provides support for Amazon Linux 2, it may not have the same level of community-driven support and resources as other well-established Linux distributions. This could potentially result in slower response times for community-based assistance.

Distribution	License	Stability (Grade Scale)	Ecosystem Maturity (Grade Scale)	DistroWatch Ranking	OpenLogic Tech Support
Amazon Linux 2	Commercial	A	B	NA	No

	
Website:	aws.amazon.com/ amazon-linux-2Yum
Package Managers:	Yum
Supported Platforms:	x86_64
Governance Model:	AWS product direction

Closing Thoughts

Deciding on which distribution of Linux is right for your business involves a number of variables and factors. Taking the time to really understand each offering, what it can help your business achieve, and where you might find friction in implementation is key to succeeding with your next Linux distro. Make sure you consider your intended use cases, the skills required, and ease of use. Tooling such as package management are important considerations, and finally ecosystem and compatibility are key factors in your evaluation.

Life after CentOS may not look different to your organization at all, with RHEL or a derivative distro as a viable, familiar, and adaptable Linux experience, or you may want to pivot to a different Linux distro based on the information provided in this guide. Try out a few to see how well they align to your environment, skills, and resources.

Linux deployments tend to stay for a long time in an organization, and so the choices of Linux distribution that you make now are likely to impact your organization for years; or, if history serves as an example, even decades. It's worth the diligence to scrutinize the release according to the factors that we've laid out in this guide.

Seek a distribution model that reduces friction, while balancing a strong support model. Be sure the distribution and corresponding community has a solid future roadmap for features and viability. Pay attention to the community governance model, and their overall health indicators such as their commit frequency, and the speed at which they respond to security threats.

By being diligent in your analysis, you'll take advantage of all the benefits Linux can bring to your organization, including reduced TCO, increased innovation, and faster time to market, while balancing the extant risks and pitfalls.

About Perforce

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