

STATE OF LINUX IN THE PUBLIC CLOUD FOR ENTERPRISES

A study by Management Insight Technologies, sponsored by Red Hat

SOLUTION OVERVIEW

ACCORDING TO RESPONDENTS:

54%

of all applications running in public cloud infrastructure are running on Linux virtual machines (VMs)

65%

of enterprise Linux operating system deployments in the public cloud are paid

#1

commercial Linux distribution in the public cloud is Red Hat Enterprise Linux

SUMMARY

Linux® has become the de facto standard for highly available, reliable, and critical workloads in datacenters and cloud computing environments. It supports multiple use cases, target systems, and devices, depending on user needs and workloads. According to the Linux Foundation, nine of the top ten public clouds run on Linux¹. Every major public cloud provider—including Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), and Alibaba Cloud—offers multiple distributions of Linux in their marketplaces. In fact, nearly 30% of virtual machines (VMs) running on Microsoft Azure are Linux-based².

A 2017 study conducted by Management Insight Technologies and sponsored by Red Hat examined the preferences and characteristics in a Linux operating system (OS) distribution for public clouds. This survey included more than 500 cloud IT decision makers across North America and Europe, within organizations with 500 or more employees and across various industries.

According to this study, Linux has grown in importance in the public cloud among respondents, providing many of the same capabilities that have made it so popular in on-premise enterprise IT.

STUDY HIGHLIGHTS

Organizations are turning to Linux to deploy key public cloud workloads.

- Just over half of all respondents' public cloud applications are running on Linux VMs (Figure 3).
- Most respondents' enterprises plan to deploy one to two public cloud platforms (Figure 4).
- The most popular public cloud workloads last deployed on Linux by respondents were structured databases and web applications (Figure 5).

Respondents' requirements for enterprise Linux in public clouds are the same as those for on-premise deployments.

- Reliability, security, ease of deployment, and maintainability are the top rated capabilities for deploying a Linux operating system on public cloud infrastructure (Figure 6).
- 78% of respondents prefer paid, commercially supported Linux for their critical production workloads (Figure 7).
- 65% of respondents' enterprise Linux deployments in public clouds are paid and commercially supported (Figure 8).



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¹ "2017 State of Linux Kernel Development." The Linux Foundation. <https://www.linuxfoundation.org/2017-linux-kernel-report-landing-page/>

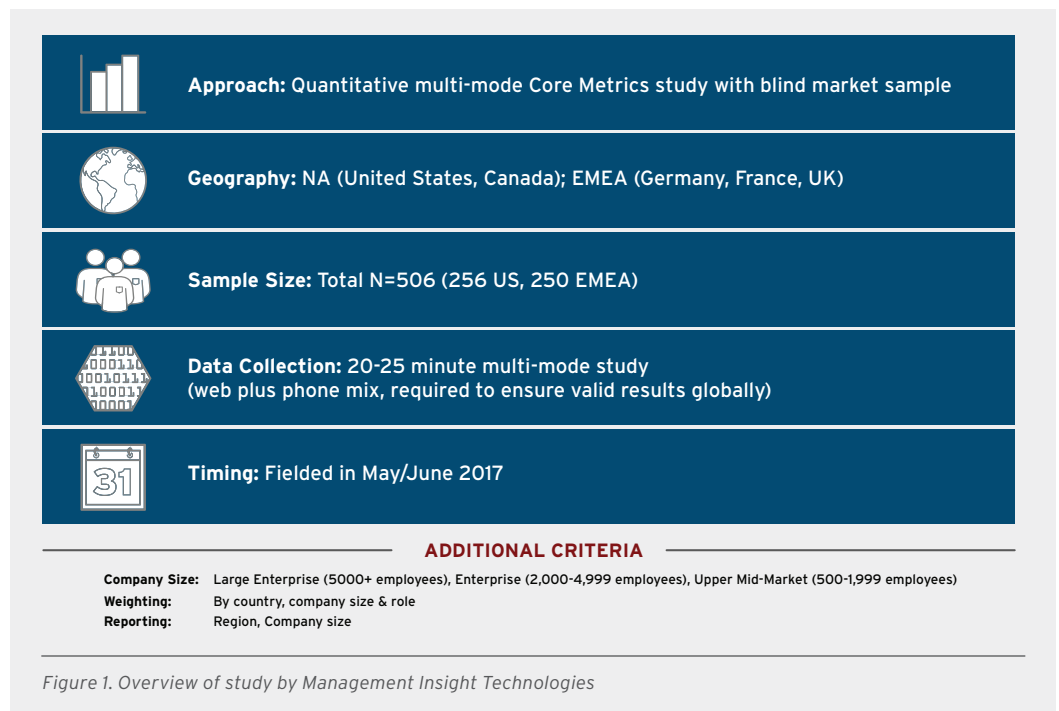
² "Microsoft by the Numbers." Microsoft Story Labs. <https://news.microsoft.com/bythenumbers/azure-virtual/>

Red Hat® Enterprise Linux continues to be perceived as the Linux market leader, translating to preference, consideration and selection in public cloud deployments.

- Red Hat Enterprise Linux is the market leader among respondents for current and new organization-wide application deployments, regardless of footprint (Figure 9).
- The #1 commercial Linux distribution in the public cloud is Red Hat Enterprise Linux, according to respondents (Figure 10).
- Red Hat was the most considered and selected Linux vendor among respondents (Figure 11).
- The top three reasons why respondents chose Red Hat Enterprise Linux for their latest public cloud deployments included (Figure 12):
 - Optimized for current workloads.
 - Certified and supported for use with enterprise applications.
 - Supports the broadest range of applications.

STUDY OVERVIEW

METHODOLOGY



PARTICIPANT PROFILE

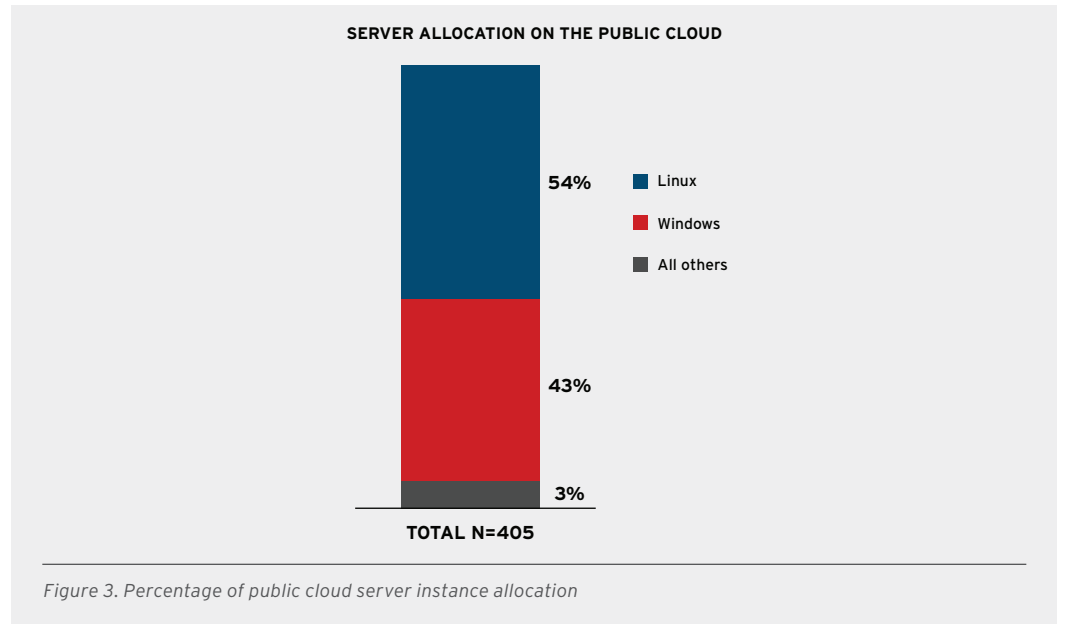
This study surveyed IT professionals in various industries, across North America and Europe, and organizations of various sizes—from upper mid-market companies (500-1,999 employees) to large enterprise (5,000+ employees). This survey was blinded and did not target Red Hat customers.

FIGURE 2 . ADDITIONAL STUDY PARTICIPANT INFORMATION

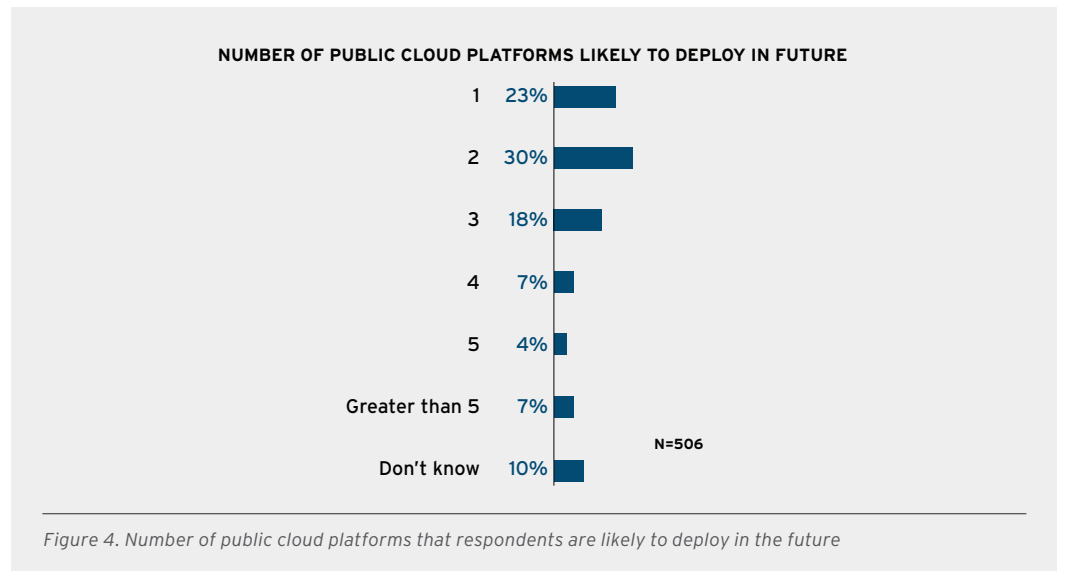
REGION		INDUSTRY	
North America	50%	Computing/technology/telecom	28%
EMEA	50%	Manufacturing/mining	16%
	N=506	Financial Services	14%
		Business/professional services	13%
COMPANY SIZE			
Upper mid market (500-1999)	20%	Retail/wholesale/distribution	9%
Enterprise (2000-4999)	30%	Healthcare	8%
Large enterprises (5000+)	50%	Public sector	8%
	N=506	Consumer/personal services	3%
		Entertainment/media/advertising	2%
DECISION MAKING AUTHORITY			
Solely responsibly	23%		N=506
Head of a team	21%	JOB FUNCTION	
Member of a team	41%	IT manager	26%
Provide input only	12%	IT professional	20%
	N=506	IT executive	17%
		Software development professional	9%
DECISION MAKING SCOPE			
Entire company	61%	IT security professional	7%
One or more divisions	14%	System administrator	5%
One or more countries or regions	5%	Software development executive	4%
One or more sites	10%	System architect	3%
One or more departments	6%	Engineering/R&D	2%
One or more workgroups or teams	4%	Business executive/senior management	1%
	N=223	Data center manager	1%
		Operations manager	1%
LINUX SERVER OS STATUS			
Deployed, production & test/dev	69%	DevOps professional	1%
Deployed, production only	15%	DevTest professional	1%
Deployed, test/dev only	9%		N=506
Active pilot or evaluation	3%	REVENUE	
Not deployed/evaluating, consider for future use	4%	Less than \$1M	0%
	N=506	\$1M to less than \$10M	3%
		\$10M to less than \$25M	5%
		\$25M to less than \$50M	5%
LEVEL OF LINUX SKILLS			
Operate Linux	68%	\$50M to less than \$100M	5%
Optimize and integrate Linux	56%	\$100M to less than \$250M	9%
Customize and modify Linux	50%	\$250M to less than \$500M	11%
Provide self-support for Linux	43%	\$500M to less than \$1B	15%
	N=506	\$1B to less than \$2.5B	17%
		\$2.5B to less than \$5B	9%
		\$5B to less than 10B	4%
		\$10B or greater	10%
		Don't know	7%
			N=506

STUDY RESULTS

PUBLIC CLOUD SERVER INSTANCE ALLOCATION



NUMBER OF PUBLIC CLOUD PLATFORMS LIKELY TO DEPLOY IN FUTURE



WORKLOAD SUPPORTED WITH LAST LINUX OS PUBLIC CLOUD DEPLOYMENT PUBLIC

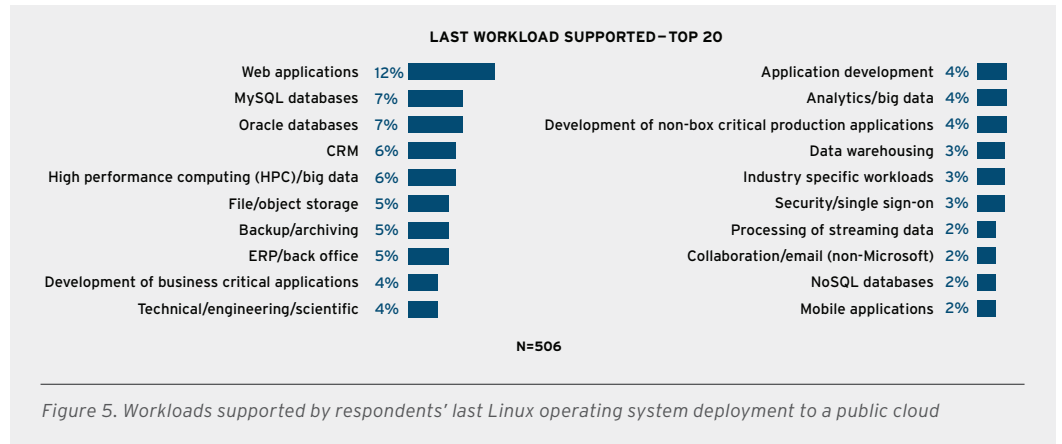


Figure 5. Workloads supported by respondents' last Linux operating system deployment to a public cloud

CLOUD DEPLOYMENT CAPABILITIES RANKED BY IMPORTANCE PAID VERSUS NO-COST

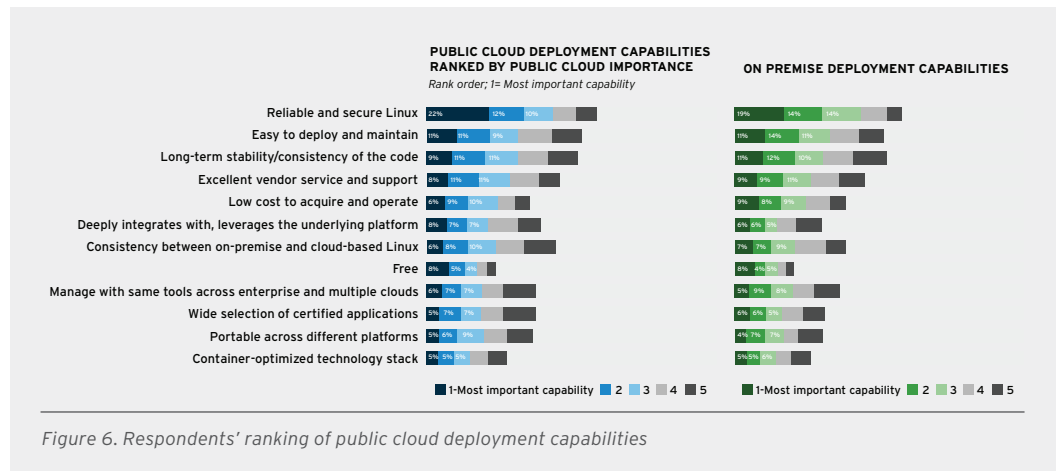


Figure 6. Respondents' ranking of public cloud deployment capabilities

LINUX PREFERENCE BY WORKLOAD TYPE

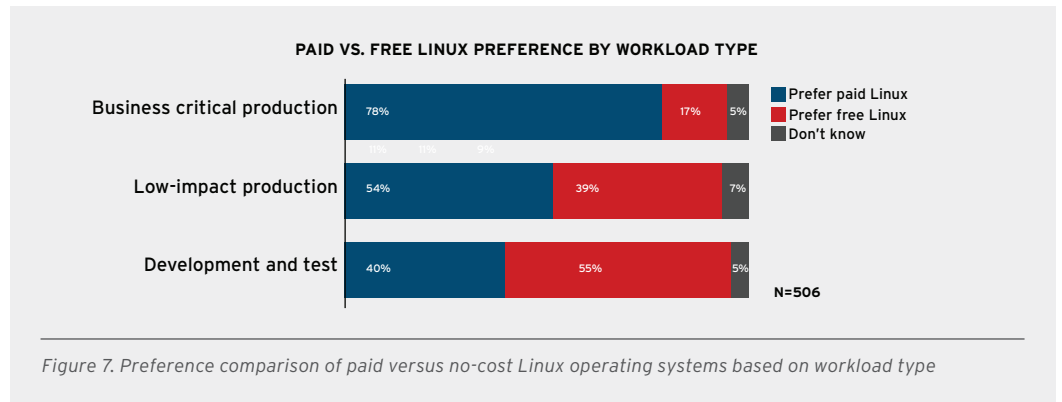
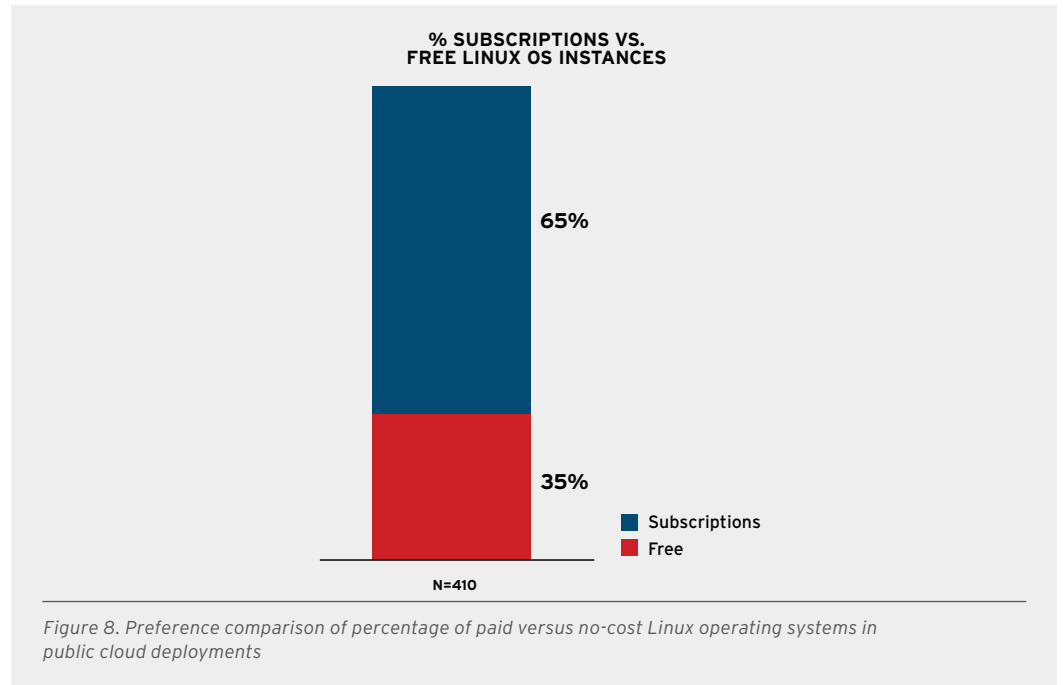
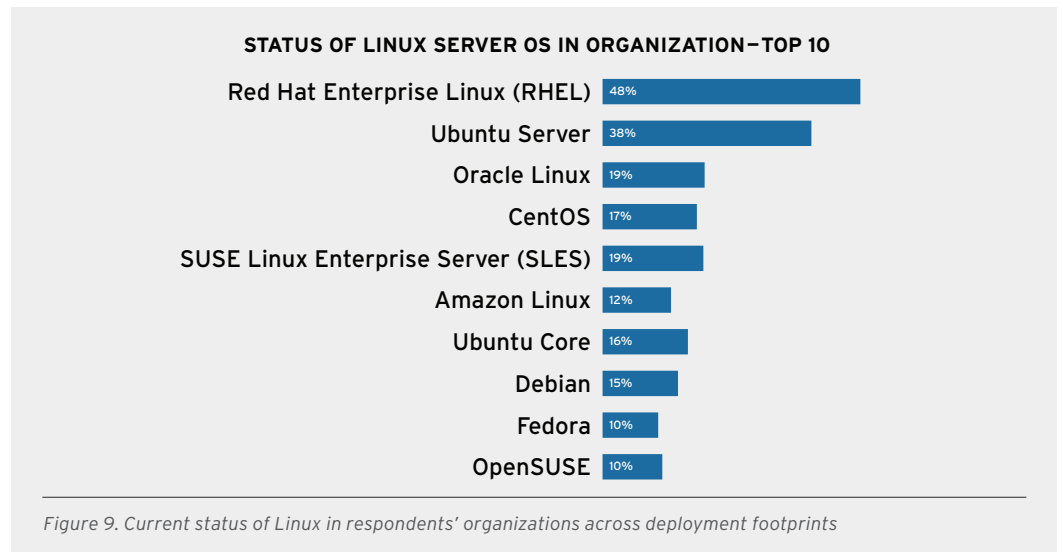


Figure 7. Preference comparison of paid versus no-cost Linux operating systems based on workload type

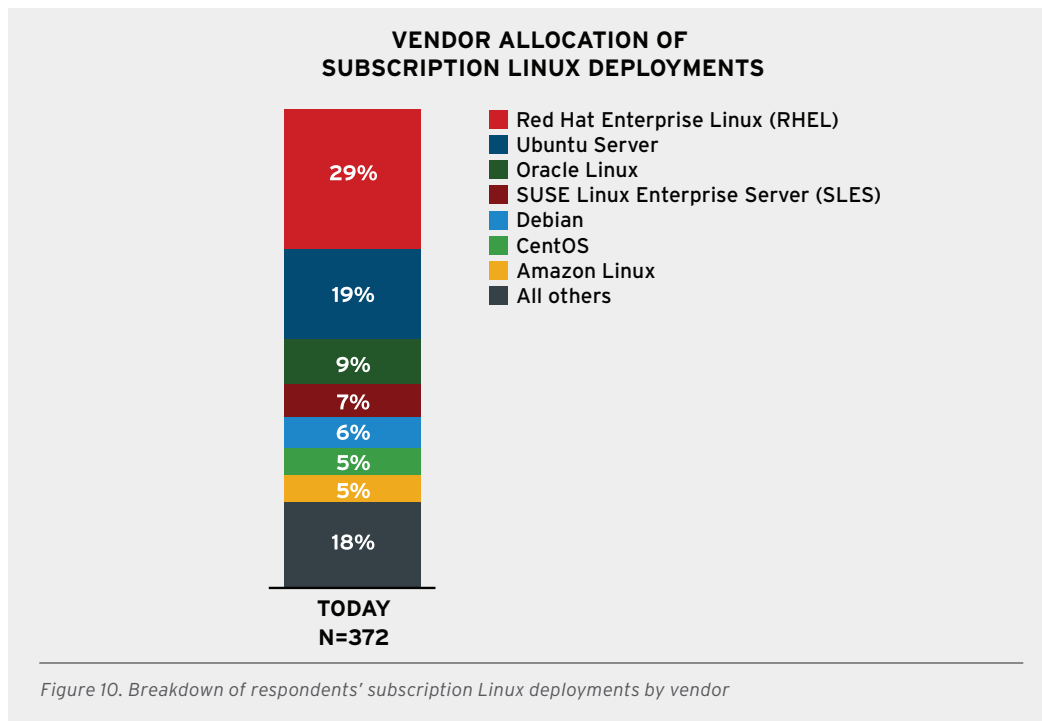
SUBSCRIPTION VERSUS FREE LINUX OS INSTANCES IN PUBLIC CLOUDS



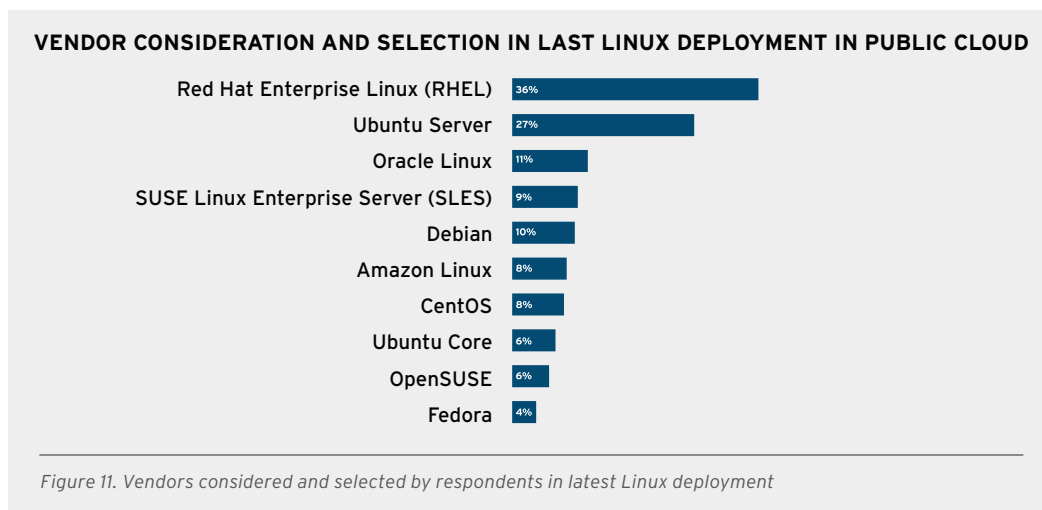
CURRENT STATUS OF EACH LINUX OS IN ORGANIZATION



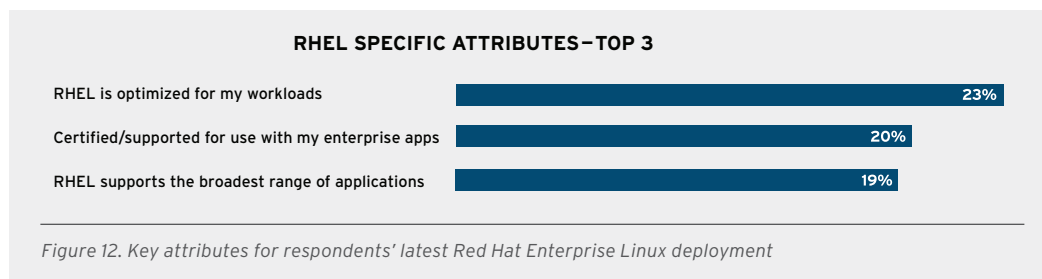
SUBSCRIPTION LINUX VENDOR ALLOCATION BY WORKLOAD ON PUBLIC CLOUD



VENDOR CONSIDERATION AND SELECTION IN LAST LINUX DEPLOYMENT



MOST IMPORTANT VENDOR-SPECIFIC ATTRIBUTES FOR LAST LINUX DEPLOYMENT



ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.



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