The Linux kernel powers everything from IoT devices to the highest performing supercomputers. Linux Foundation research reveals that, as of 2017, the Linux operating system runs 90 percent of the public cloud workload, has 62 percent of the embedded market share, and 99 percent of the supercomputer market share. Its versatility - powered by openness - is perhaps Linux’s greatest strength. Due in part to this versatility, Linux often serves as the glue across enterprise architectures, helping to preserve investment as new computing paradigms emerge.

In the 2018 State of the Open Mainframe Survey, we see this mechanism in action. Respondents are embracing the cloud as well as DevOps practices to increase agility and control costs. Yet they are not doing away with the Mainframe, not by a long shot.

More than 9 in 10 respondents have a positive impression of mainframe computing overall. And 86% of respondents indicate that Mainframes are either extremely or very integral to their organization's ability to remain competitive.

The purpose of the study was to:

- Provide insights into current users’ perceptions of mainframe technology in general, and Linux on the mainframe specifically
- Gauge current and planned usage/consideration of mainframe technology in general, and Linux on the mainframe specifically
- Identify perceived gaps, barriers and myths/misperceptions around Linux on the mainframe specifically

The research and analysis was conducted by Research Collaborative, an independent third party research provider.
Users and Non-users Agree on Linux on Mainframe’s Strengths

There are many perceived benefits to LoZ – availability and scalability chief among them. Interestingly, even respondents who don’t use LoZ recognize the platform’s many advantages.

Not surprisingly, reducing cost is a top factor, with more than half of respondents saying that cost is a top-3 factor when evaluating platforms.

Performance and security are also important – particularly for IT pros and those in the Info/Tech industry. With Linux on Mainframe excelling in these areas, we expect enterprises to continue perferring it for existing and emerging critical workloads, such as blockchain.

Cloud Adoption and the Mainframe

A commanding majority of survey respondents view the cloud as an augment to the mainframe, not a replacement for for it.

The survey confirms that a primary driver of cloud adoption is cost and flexibility. But our analysis indicates that technology professionals recognize many mainframe strengths when considering where to deploy.
Cloud solutions are not seen as comparable to mainframe for security or other benefits, though cloud is appreciated for its greater flexibility in adding power or scalability.

**Beliefs About Cloud vs. Mainframe  All Respondents**

- **Cloud Solutions are at least as secure as mainframes**: Agree (net) 79%  |  No opinion 16% | Disagree (net) 5%
- **Cloud Solutions typically provide all the benefits of MF without the cost**: Agree (net) 74%  |  No opinion 18% | Disagree (net) 8%
- **Over the long run, cloud solutions are far less expensive to maintain**: Agree (net) 58%  |  No opinion 28% | Disagree (net) 15%
- **It is significantly easier to maintain a cloud solution**: Agree (net) 57%  |  No opinion 21% | Disagree (net) 22%
- **It is much easier to stay current with software on cloud**: Agree (net) 46%  |  No opinion 26% | Disagree (net) 28%
- **Cloud solutions cost significantly less to implement**: Agree (net) 43%  |  No opinion 28% | Disagree (net) 28%
- **Cloud solutions provide much greater flexibility in adding power or scalability**: Agree (net) 33%  |  No opinion 20% | Disagree (net) 47%

Even those respondents that self-identified as cloud users see the cloud as an augment to, not a replacement for, mainframes. Cloud users question whether cloud solutions are as secure as mainframes or provide the same benefits without the cost.

**See Cloud Solutions As...**

- **Replacement for mainframe**: 84%
- **Augment to mainframe**: 16%

“We are increasingly seeing our clients operating in a mix of on-premise and hybrid cloud environments. Regardless of their infrastructure, clients are looking for service-based functionality that empowers development teams, both mainframe-specific and broader enterprise developers, to provision, test, integrate, deliver and secure applications with agility and flexibility. The reality is that service-based is the future of the platform.”

- David Stokes, VP Mainframe Business Unit, CA Technologies
Conclusion

Pundits have predicted the death of the mainframe for years. Our survey reveals that Linux on the Mainframe joins familiarity with security and reliability. We see in our survey that even with the numerous cloud options available today, IT professionals recognize the many strengths of mainframe and expect to continue relying on it.

The Open Mainframe Project will continue to invest in training, education and application compatibility. This work ensures a vibrant ecosystem of modern Open Source applications, talent and services for Linux on the Mainframe. Learn more at www.openmainframeproject.org