OPEN MAINFRAME PROJECT

What Does Today's Buyer Think about Mainframe? Study Results from the Open Mainframe Project

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Perception of Mainframe

Anecdotal mainframe comments

- “They still make mainframes?”
- “Mainframes are old, clunky machines running old text based applications people can’t get rid of”
- “Spending more money on mainframes is a waste”
- “Modern distributed architectures are the way forward”
- ”Enterprises are moving to the public cloud”

and so on…

We want real data!

- As a collaborative initiative, the Project seeks to facilitate the sharing of information and ideas across the mainframe community, to develop shared tool sets, resources and technologies, and to educate and advocate for open source mainframe solutions in the broader market.
- Now 18+ months underway, the Linux OMP seeks information from mainframe users around their perceptions, behaviors, and outlook so as to inform Linux communications strategies and provide an exploratory basis for separate research being conducted among non-mainframe users in 2018.
- Within that context, the objectives of the research are to:
  - Provide insights into current users' perceptions of mainframe technology in general, and Linux specifically
  - Gauge current and planned usage/consideration of mainframe technology in general, and Linux specifically
  - Identify perceived gaps, barriers and myths/misperceptions around mainframe technology and Linux
  - Understand the impact of the cloud on mainframe and Linux usage
  - Profile users on key characteristics
- The research and analysis was conducted by Research Collaborative, an independent third party research provider.

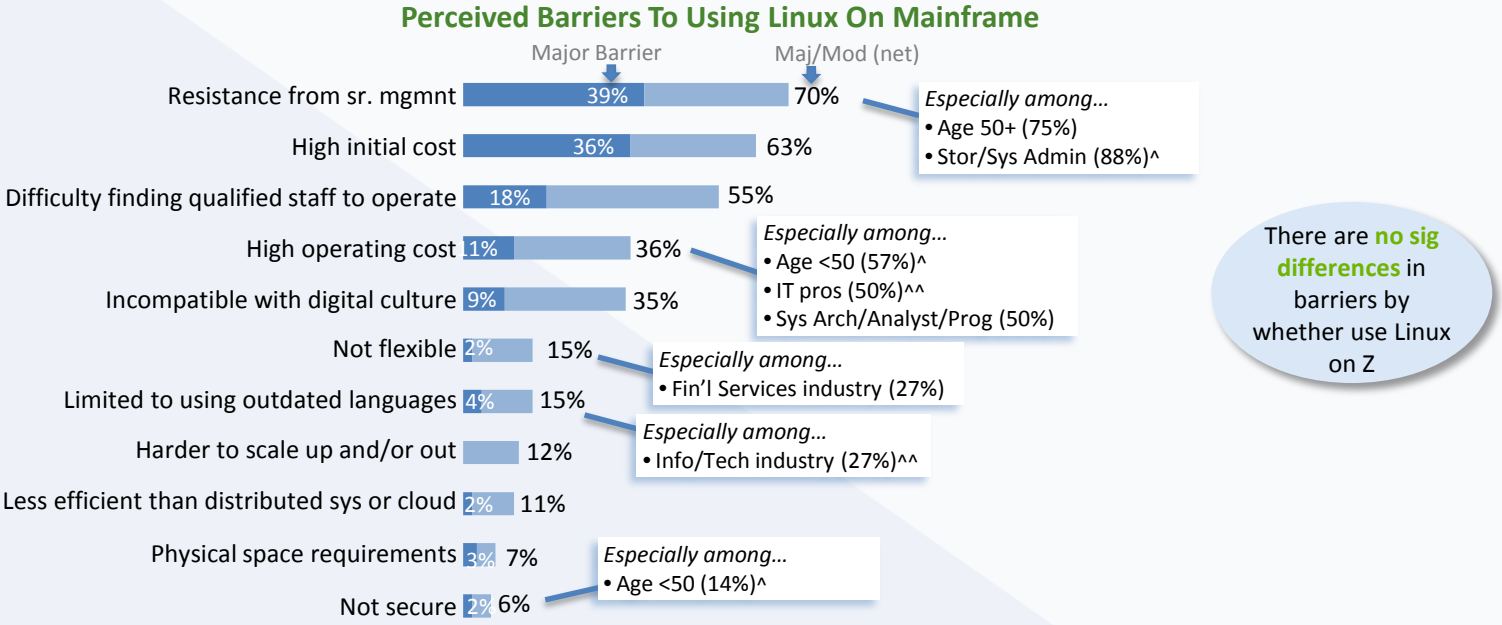
Let's break the myths

Myth 1: There are significant technical barriers to using Linux on mainframe versus other architectures, which is the main reason not to use Linux on mainframe

FACT: Mainframe bias is a much larger barrier to usage versus technical incompatibilities.

Perceived Barriers of Linux on Z

- Resistance from Senior Management and high initial costs are the main barriers to penetration of Linux on Z within organizations – for both users and non-users.
  - Staffing is another notable, though less pressing, concern.



^ Sample size small (n<50) ^^ Sample size very small (n<30); interpret cautiously

Q3.5. To what extent, if at all, do you see the following as barriers to using Linux on Mainframe technology?

Even those leaving the platform don't see technical deficiencies

Selected Perceptions

	Stable/ Investing	Migrating
% Agree		
Linux on Mainframe is not as mature as X86	13%	31%
Linux on Mainframe cannot support the same applications other Linux platforms run	32%	51%
% Maj/Mod Barrier to Using Linux o Z *(top 3 in each seg)*		
Resistance from Sr. Management	54%	92%
High initial cost	57%	72%
Difficulty finding qualified staff	52%	60%

Maturity and application not seen as a platform concern

Biggest concerns are management bias and cost

What are the Facts?

- People using mainframes don't see technical gaps between Linux on Mainframe versus Linux on any other architecture.
- Management bias is most prevalent, likely because of hardware cost and staffing concerns.
- Those using Linux on mainframe are seeing it as the path to leveraging mainframe's advantages.

"Linux on the mainframe is identical to Linux on an Intel machine or on my laptop or on my little ARM platform on the little development boards I have sitting around here. It's the same thing. It works the same. It runs just as well."

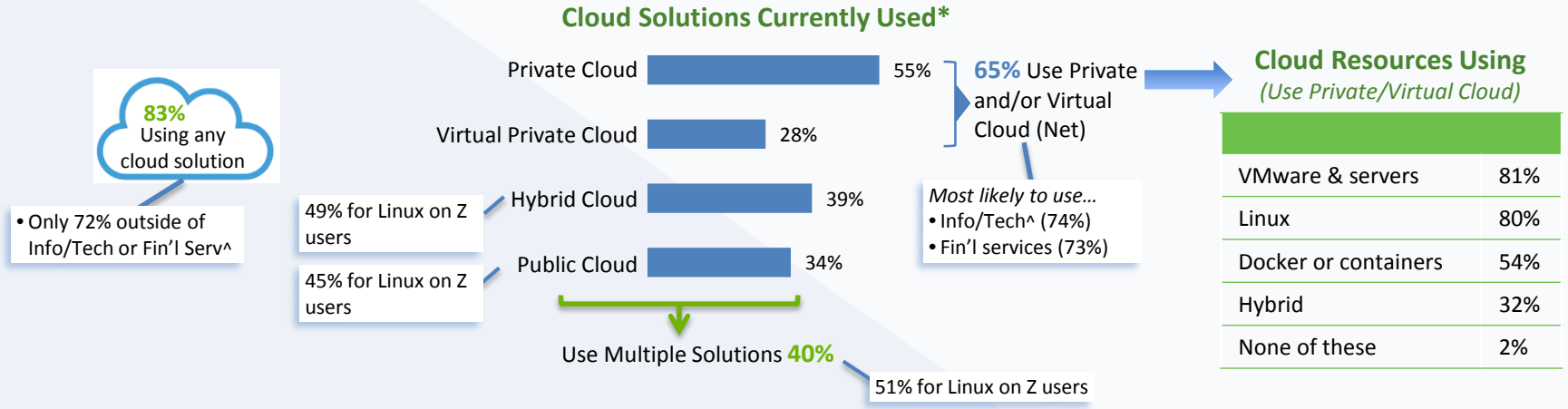
- Greg Kroah-Hartman, Fellow, Linux Foundation

Myth 2: Mainframes are being replaced by “the cloud”

FACT: Enterprises are moving to hybrid architectures for their computing needs

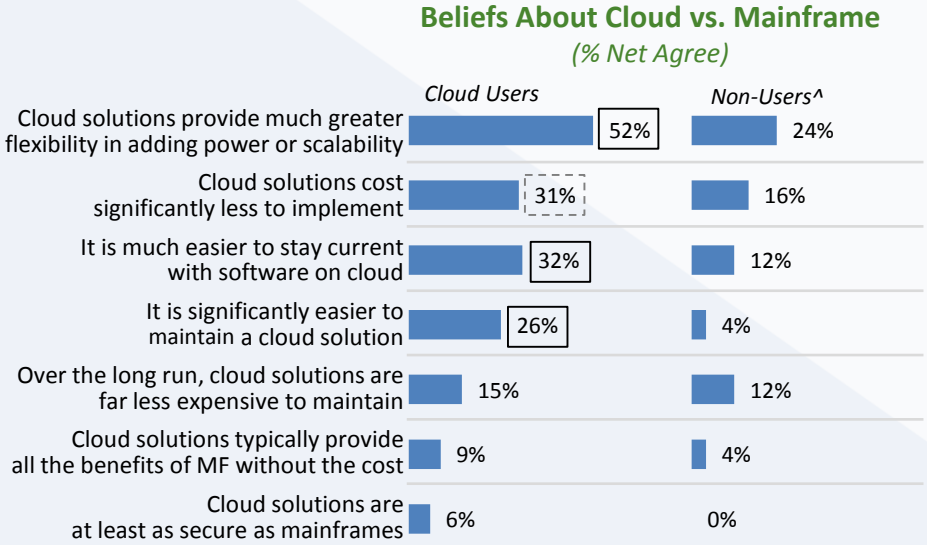
Usage of Cloud Solutions

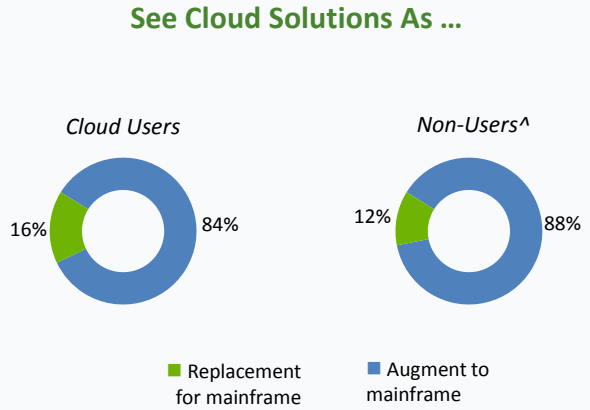
- More than 4 in 5 respondents report that their organizations are using a cloud solution – typically a private or virtual private cloud.
  - Linux on Z users are particularly likely to use hybrid or public cloud in addition to private solutions.
  - Respondents from Financial Services and Info/Tech industries are more likely than others to use the cloud.
  - Linux and VMWare are most widely used to enable cloud solutions.



Perceptions of Cloud vs. Mainframe

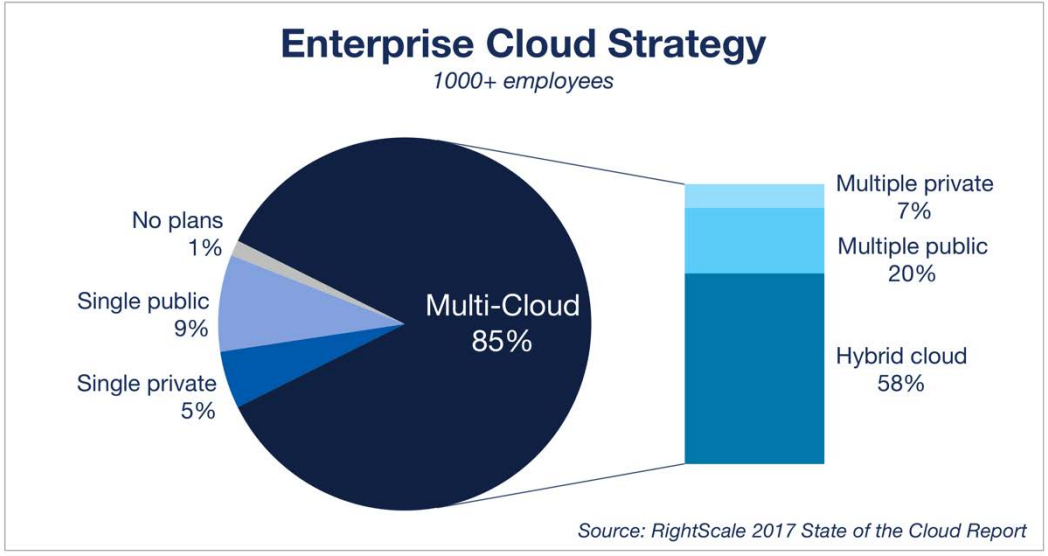
- Not surprisingly, cloud users are much more upbeat about the cloud than non-users – particularly around flexibility, staying current with software, and maintenance.
  - However, they are no more likely to see the cloud as a replacement for mainframe technology.
  - Even cloud users do not widely believe the cloud "provides all the benefits of mainframes without the cost".





What are the Facts?

- Hybrid/Private cloud computing is clearly the path forward
- Mainframes fit into the hybrid/private cloud dynamic
- Cloud replacing mainframe is false
- Linux is a key unifying technology for cloud across the organization



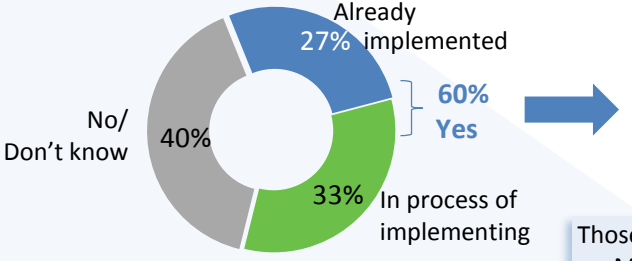
Myth 3: Mainframes and dev ops don't mix

FACT: Dev Ops is being done successfully on Mainframe, making it a first class citizen in hybrid infrastructures.

DevOps + Linux on Z

- DevOps is an untapped opportunity: many respondents say their firm is implementing DevOps but few say they are leveraging Linux on Z for this purpose.
  - Linux on Z users are more likely than non-users to be leveraging Linux on Z for DevOps, but at 36%, usage for this purpose is relatively low.

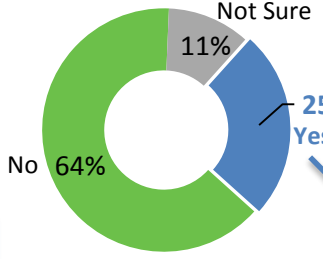
Whether Organization Has Implemented DevOps Environment*



Those using **Virtual/Private Cloud** are
- MORE likely to have implemented DevOps (69% Yes) ….

but are
- LESS likely to have deployed Linux on Z to support it (71% No)

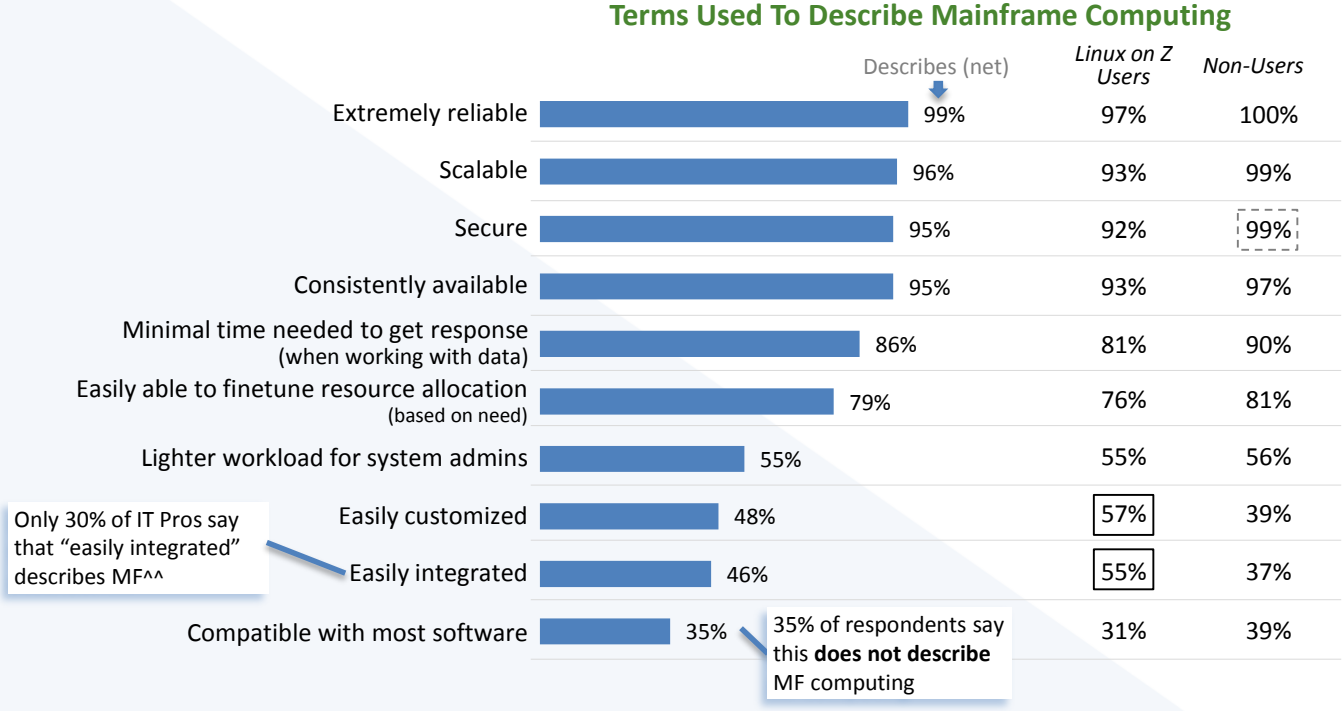
Whether Leveraging Linux On Z To Support DevOps Environment*
(Among Those Whose Org Has/Is Implementing DevOps)



Higher among…
- Those who use Linux on Z for at least some workloads (36%)

Perceived Benefits of Mainframes

- Mainframes are widely seen as reliable, scalable, secure and consistently available.
  - There is some question as to whether they are compatible, easily integrated and customized – particularly among Linux on Z non-users.



What are the Facts?

- DevOps is the norm for application deployment
- Linux is seen as an ideal deployment platform and well supporting DevOps
- But, Linux on mainframe is not considered for DevOps
  - And mainframe in general is better known for hardware capabilities/strengths vs administrative each and interoperability.

Key Takeaways

- Incompatibility between Linux on mainframe and Linux on other architectures is largely a myth
  - But there are some gaps, where the Open Mainframe Project looks to focus
- Enterprise computing architectures are hybrid, leveraging public cloud and private cloud in corporate data centers as it makes sense for the application
- Mainframes are best suited for high transactional use cases or those needing high security, with workloads in data analytics emerging.

What is Open Mainframe Project's role?

- Mitigating the staffing gap
  - Bring mainframe into standard Linux/Dev Ops admin's skill set
  - Showcasing the stories of those working with mainframe in their career.
  - Further investments into internship program.
- Closing the gaps for dev ops tooling
  - Focus support on IaaS tools and containerization
  - Showcase stories of hybrid cloud management with mainframe as part of the infrastructure
- Reframe the conversations around mainframe
  - Change "either-or" perception of mainframe in cloud world
  - Showcase ideal workloads for mainframe.

Thank you!