



Legacy Modernization Survey

Results show SOA-enablement trend, accompanied by popular misconceptions

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Results show SOA-enablement trend, accompanied by popular misconceptions

As technology publication *z/Journal* confirms, up to 80% of U.S. data is still stored and processed on mainframe systems. To gather additional insights on real-world mainframe usage, plans, and concerns, *z/Journal* conducted a survey across a variety of industries.

Goal of Survey

The survey was intended to help IT staffs make informed decisions about their mainframe application strategies so they can meet increasing demands for extending these enterprise-critical assets. It was

What is Legacy Modernization?

Legacy modernization is the practice of updating aging applications and systems to interact with newer technologies. While the scope of a modernization effort is not always fixed or well defined, IT staffs typically strive for greater application agility so they can rapidly respond to business requests for change.

designed to identify significant trends in mainframe modernization practices, such as service enablement. That way, IT decision makers can have tangible examples of technologies that might work in their enterprise.

The insights gleaned from the survey were of particular interest to Attachmate because we specialize in solutions that help IT staffs extend

and modernize their mainframe applications. This paper presents the results of the survey, which was completed in September 2009. It leads with the responses concerning projected lifecycle of legacy applications and includes level of organizational demands for mainframe modernization, role of service-oriented architecture (SOA) in the enterprise, and the potential role of SOA in the modernization effort. To provide context for the results, we also include the information obtained about respondents' demographics, industries, and IT environments.

Summary of Results

A quick review of the survey results indicates a high interest in mainframe modernization. The majority of responding enterprises either have a modernization plan in place or would like to have one in place. More than 75% of respondents stated they have a goal to modernize one or more of their legacy applications and 50% said they have a set time frame for doing so.

Also salient in the results is the correlation of SOA to legacy modernization. SOA enablement is considered important across the board. More than 75% of respondents said it would be important to include their existing applications in an SOA deployment. Filtering for size by annual revenue, the percentage of enterprises planning on SOA as a method for legacy modernization stays consistent. This shows that organizations from small to large consider SOA enablement as a viable and desirable modernization method.

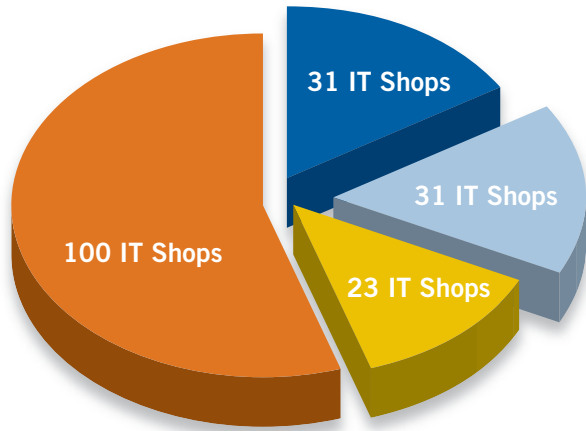
Perhaps the most noteworthy survey revelation is the prevailing attitude of IT professionals when it comes to actually leveraging a legacy application and including it in an SOA. While the clear majority of responders stated SOA enablement is part of their modernization plans and only 2% think it is unduly risky, fewer than 20% think the time commitment would be tolerable. This leads us to conclude that while SOA is considered ideal for keeping enterprise assets current, IT staffs lack the tools to yield a clear and rapid ROI.

In fact, the survey results highlight an obvious problem facing most IT shops: While SOA is recognized as an important piece of the puzzle for pursuing legacy modernization, that recognition runs counter to the perceived difficulty of actually implementing SOA. From that we conclude most IT shops would benefit from a smaller-scale SOA enablement plan, or one that can be deployed in a series of discrete steps with exponential value realized along the way.

Tabulated Results

For a compilation of responses, see the text and graphics on the following pages.

How many legacy applications is your enterprise dependent on?



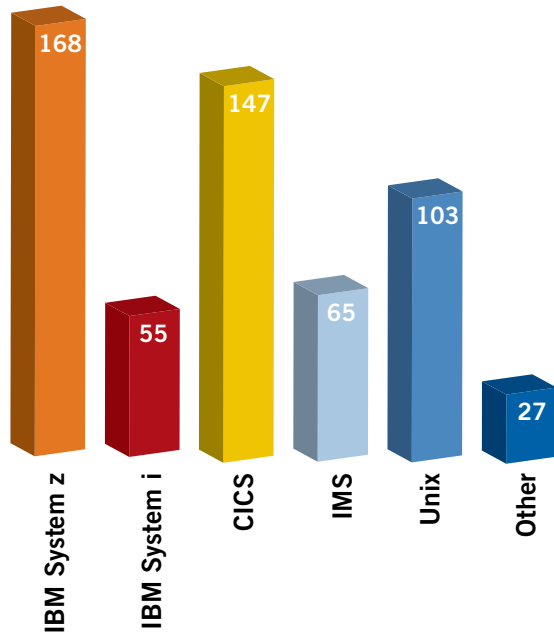
Number of Legacy Applications



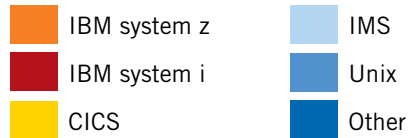
These results provide a clear sign that legacy applications are both prevalent and likely to be in use for the long term.

With more than 50% of the survey respondents showing pervasive use of legacy applications, and two-thirds with more than eight legacy applications, it is highly unlikely that a successful migration from these applications is feasible in the foreseeable future.

Which legacy platforms are you using in your IT environment?



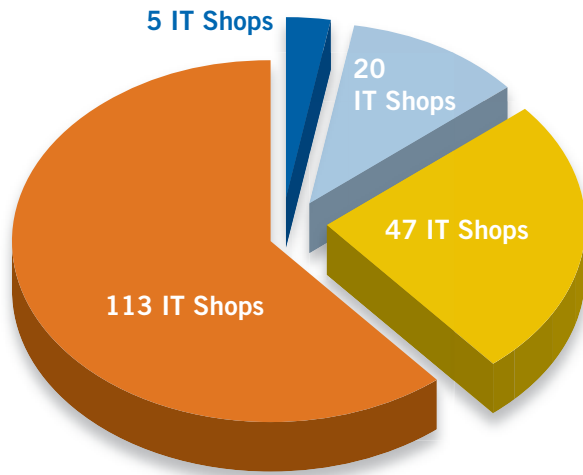
Legacy Platform / OE



Not surprisingly, IBM is the dominant platform for legacy applications. This is true of hardware systems (upwards of 90% of survey respondents) as well as prevalent operating environments.

CICS was found in almost 80% of the IT shops. This is useful to note as improving sets of tools for these dominant platforms may help alleviate many issues associated with 'legacy' applications.

What is the anticipated lifecycle of your legacy applications?



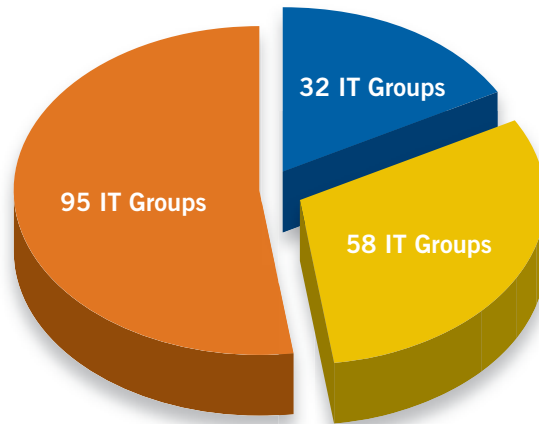
Legacy Lifespan

- Less than a year = 5 IT Shops
- 1 - 2 years = 20 IT Shops
- 3 - 5 years = 47 IT Shops
- Longer than 5 years = 113 IT Shops

These results provide more concrete data on the lasting power of legacy applications. A full 85% of the respondents project legacy application use of at least 3 to 5 years, with more than 60% projecting more than 5 years.

These legacy application timelines may even lengthen as the availability and use of market-provided tools continue to improve the usefulness of the legacy applications in existence.

Rate the demand on IT to make more efficient use of your legacy applications.



Demand

- **Low** – legacy apps are useful the way they are
- **Medium** – legacy apps are somewhat useful the way they are
- **High** – constant pressure to modernize

Demand for improvements in the use of legacy applications is intense. Fewer than one-third of respondents feel their legacy applications are useful as-is, while more than half are under continuous pressure to modernize.

Given the high prevalence and long-term nature of legacy applications found, this data shows strong demand for enhancing legacy applications to improve their usefulness to the business.

Do you have a plan for modifying your legacy applications?

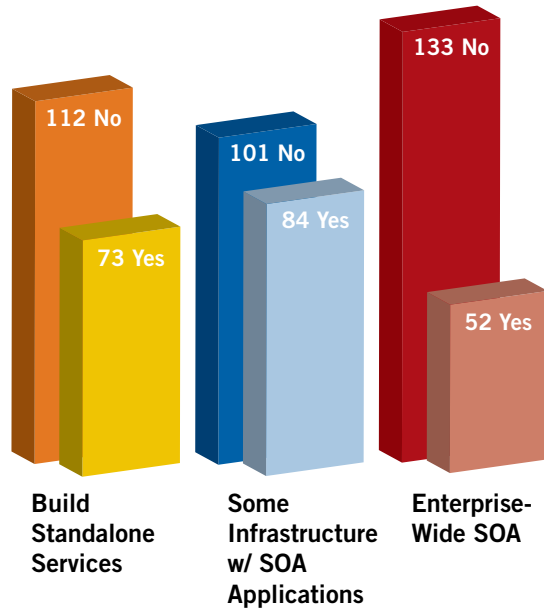
No Timeframe	Yes Strategy in Place	Yes, But Strategy is not Place	No
Goal to replace	68	47	69
Goal to modernize	91	48	46

With a Timeframe	Yes Strategy in Place	Yes, But Strategy is not Place	No
Goal to replace	56	56	73
Goal to modernize	74	50	61

In a nutshell, this chart shows the following:

- Legacy modernization plans are a bigger part of IT strategy than legacy replacement.
- Most IT shops, with or without an implementation time frame, expect to use legacy modernization methods as the preferred way to keep legacy applications in line with business demands.
- This trend is strongest with IT shops that have actual plans in place to address their legacy application issues.

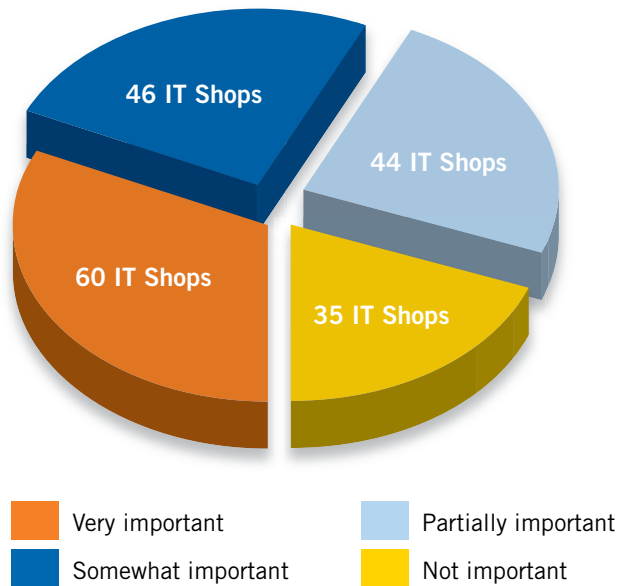
Do you currently have an SOA architecture in place?



This data points to the sporadic use of a ‘formal’ SOA in the enterprise. Fewer than one-third of respondents have an enterprise-wide SOA in place, while the majority do leverage a services approach. 55% and 40% respectively use a partial SOA infrastructure or just make services available.

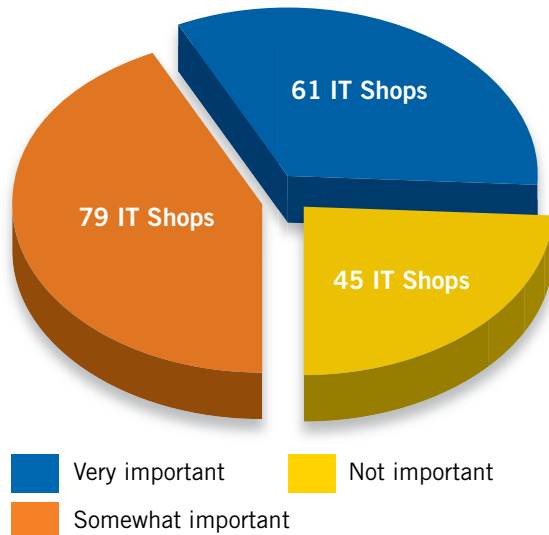
The results indicate a trend for a bottom-up services push, with top-down SOA initiatives being less pervasive.

How important is an SOA approach for your enterprise applications moving forward?



The number of affirmative responses to this question correlates directly with degree of importance. The largest category, *Very important*, is 33.4%, with only 18.9% of respondents seeing no importance.

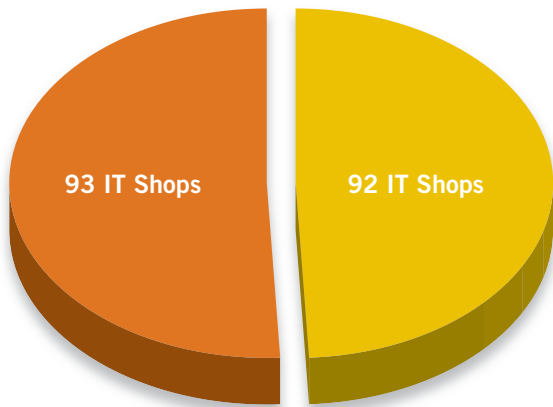
How important is it for your existing applications to interact with an SOA deployment?



For existing applications we again see that the majority – 75% – assigns importance to the use of existing enterprise applications in an SOA. 33% see it as *Very important* while less than 25% do not think it is important.

This set of responses maps directly to the previous chart, which highlights SOA as an important approach for modernizing all enterprise applications. Furthermore, it demonstrates that IT shops see a need and use for SOA, but must account for their existing inventory of applications.

How important is legacy-controlled information to the success of an SOA deployment?



Importance of legacy in SOA

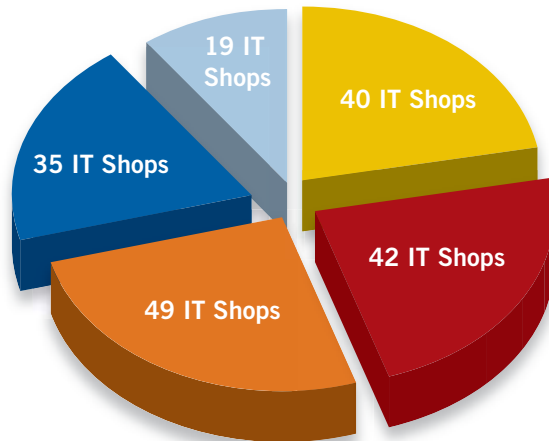
Very important Somewhat important

This set of responses correlates to the previous two sets; i.e., it assigns significant importance to legacy information in an SOA implementation.

So, to recap responses to the last three survey questions:

- More than three-quarters of the survey sample consider SOA an important approach for their enterprise applications.
- More than three-quarters of the survey sample think SOA is an important consideration for their existing applications.
- More than half of the survey sample think that their legacy applications are critical to an SOA success.

Assuming an inventory of legacy apps, what percentage are viable for inclusion in SOA?



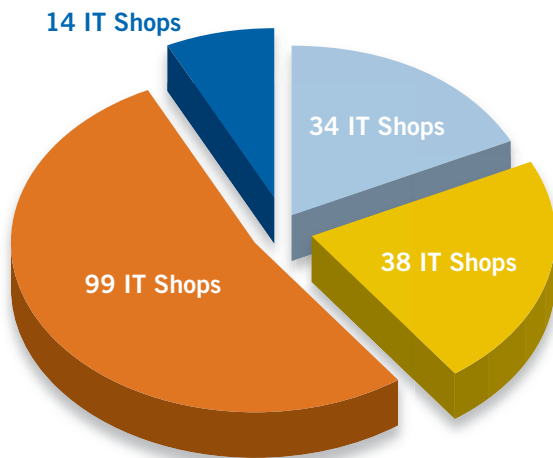
Viable for inclusion in an SOA

Less than 10% 51 to 75%
10 to 25% More than 75%
26 to 50%

This data shows that the current inventory of legacy applications is not currently suited to be used in an SOA. More than 70% of responders think that fewer than half of their legacy applications are viable, as-is, to participate in an SOA.

This points to a major constraint of legacy applications: they are not easily used beyond their initial intended audience. While demand for use is strong, current application readiness is not.

Given the economy, which describes your plans for keeping pace with technologies?



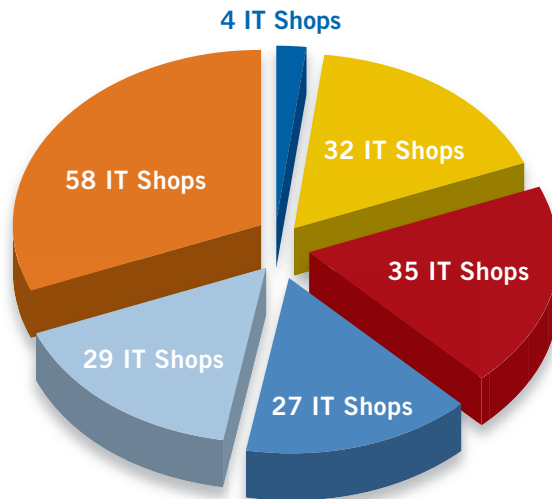
Plan

- Phase out mainframe systems
- Rebuild mainframe applications
- Service-enable mainframe data and apps
- Other

This data shows a strong correlation between using an SOA and keeping legacy apps current. More than half of the responders plan to use a services strategy to keep legacy applications current with technology. Responses for rebuilding represent about a fifth and phase-out less than that.

This indicates a strong belief that a services approach will accommodate the technology pressures on the large and lasting inventory of legacy applications.

What is IT's opinion regarding involvement of legacy applications in an SOA?



Opinion

- Too risky
- Too time-consuming
- Too costly
- Too complex
- Too low a return
- All of the above

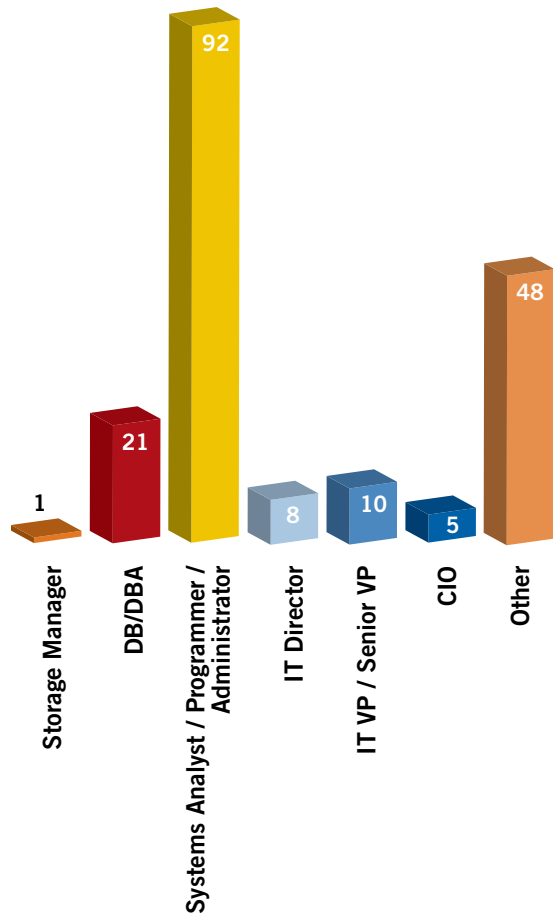
This is probably the most important data point when acknowledging the importance assigned to SOA and legacy applications in the enterprise. While only 2% consider SOA-enablement too risky, 98% see it as either too time-consuming, too costly, too complex, too small a return, or all of them.

This gives insight into the difficulty most IT shops have in pursuing a viable modernization strategy. Importance and plans for SOA-enablement are clear in the responses, but the ability to justify such a project to the business is not.

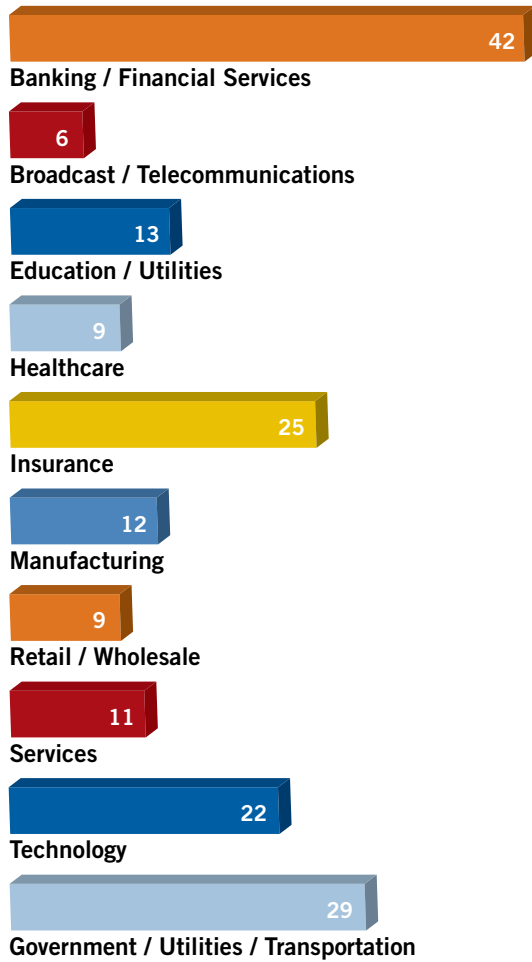
Demographic Data

The following charts show demographic information and are self-explanatory.

Which of the following best describes your job function?

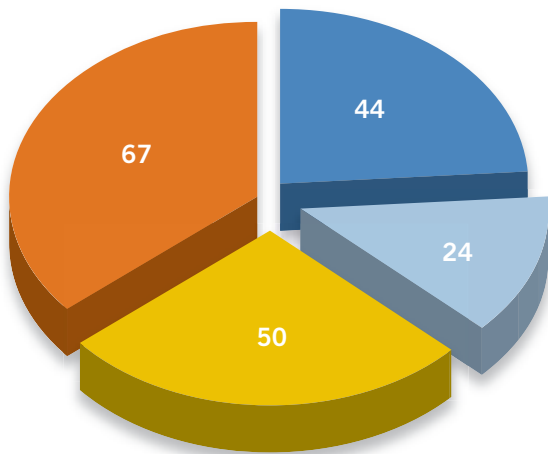


Which of the following best describes your organization's primary industry?

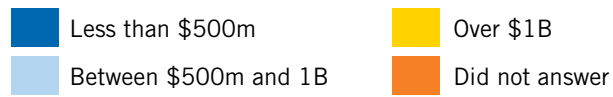


What is your organization's approximate annual revenue?

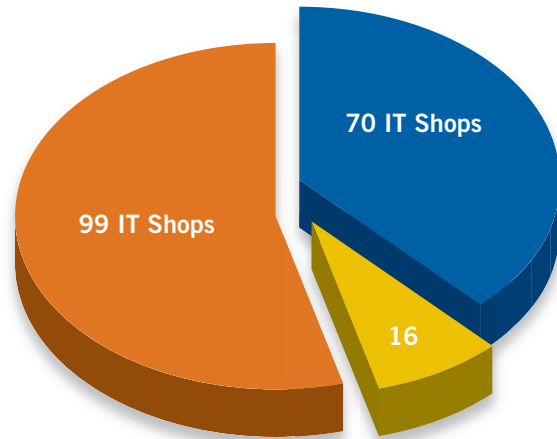
Number of Corporations



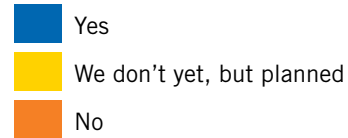
Revenue



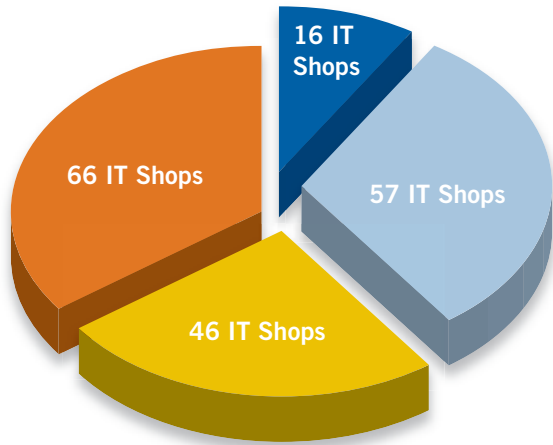
Does your organization use Linux on System z in test or production at this time?



Linux on or planned



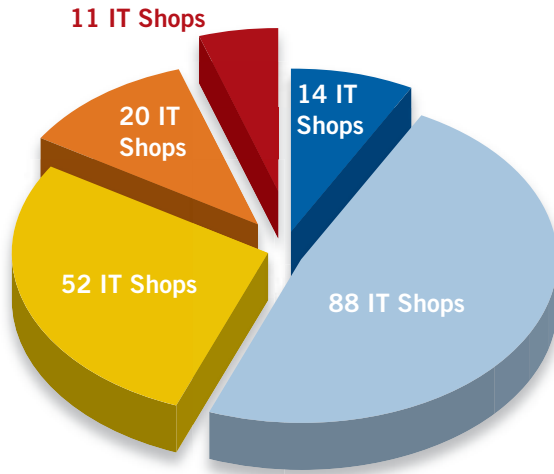
Of your legacy application inventory, what percentage support terminal usage?



Percentage of Terminal Applications



What percentage of legacy apps are not for terminal users, but are client/server apps?



Percentage of Client/Server Applications



Recommendations

It's readily apparent from the survey that mainframe application modernization has become an increasingly urgent issue across all industries. Although SOA enablement is a proven strategy for accomplishing the task, many enterprises are at a stall point in adopting it; mainly because IT groups have not been able to make a strong business case for it.

Justifying an SOA approach to upper management is not as hard as it might seem. The key is to focus on small steps. In fact, SOA is most effective when it's done in discrete, self-contained segments. That's how you get the rapid ROI needed to convince reluctant decision makers.

Furthermore, a new generation of quick and economical application-level SOA enablement products could change the way organizations view

mainframe modernization. When evaluating these products, be sure to look for a noninvasive solution that can service-enable all types of mainframe and enterprise host functionality. Also desirable would be the use of industry standards such as web services, J2EE, and .NET to automatically generate reusable services. Above all, make sure any SOA enablement solution you choose will minimize risk while speeding up your application integration, application development, and workflow enhancement.

z/Journal Survey Details

This report contains a statistical analysis of the Mainframe SOA Survey conducted by z/Journal. The results include answers from all respondents who took the survey in the 29-day period from Aug. 13 to Sept. 11, 2009. A total of 185 completed responses were received during this time.

About Attachmate

Attachmate delivers advanced software for terminal emulation, application integration, and secure communications. Our NetIQ business provides solutions for automating IT processes and managing performance, security, and compliance of distributed IT. With our technologies, more than 65,000 businesses worldwide are putting their IT assets to work in new and meaningful ways. www.attachmate.com.



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