ALL400s 2022 IBM i Survey Summary

The results of the recent ALL400s survey provided more than a few surprises, and some solid hints at what could soon become trends on the platform. The evenly spread-out demographics of the respondents also helped sharpen the picture, making the answers and trends clearer than some of the other surveys done for our community. Still, there's always a risk that, demographically-speaking, having a self-selected group of respondents could easily skew the results one way or another. Fortunately they were so well-balanced this time so we don't have to worry about skewed results.

A few quick demographic highlights will show you what I mean –

- Roughly 70% of the companies who participated in the survey were located in the US. The rest were spread out around the world. This matches up nicely with the actual distribution of systems.

- The size of the companies represented by the respondents was evenly split between small, medium, and large companies.

- All age groups had a significant representation.

- All job titles were represented, with about 2/3 being from below the management level and 1/3 being above it.

The only demographic that might be a little off is industry representation, and even then with only one industry in particular – the healthcare industry. It appears to have had fewer responses than would be expected based on all of the articles, blogs and forums out there. This could be due to IBM i losing ground in that industry (Watson's failure); it could be due to the survey just not reaching as many people who work in that industry as it did for people working in other industries, or it could be due to some other unknown reason.

One of the reasons the survey might have turned out to be more balanced in general than others of this type is simply because more people took it. The number of respondents in those other surveys was typically 500 or less, nearly 25% less than the number of people who took this one. I'll drill down into the demographics more at the end of this article but since answers and trends are what most people will be looking for let's jump right in.

Q. Aren't RPG programmers old and grey-haired, well past their prime?
A. No. People under 50 accounted for 28% of the RPG programmers. The 50-59 year-old age group had 36% of the respondents in it. Add them together and you get 64% of the pool being on the mentally active side.

I don't know the level of enthusiasm everyone in the 50-59 age group has but I do know that when I belonged to it I couldn't have treaded water or refused to learn new things even if I wanted to – the companies I worked for wouldn't have allowed it.

There's no escaping the fact that the age groups tilt heavily towards the upper end of the spectrum though, which brings up a question that's been floating around in the form of a rumor for a little while now.

Q. Are 20% of RPG programmers going to retire within a year?
A. No. This wasn't a slim margin call - the answer was a definite no.

A total of 628 people answered the question about when they were planning on retiring. There were 46 who said they were already retired or semi-retired so we can subtract them from the count, leaving us with 582 people whose retirement plans are critical to companies who rely on the IBM i.

Only 4% said they are planning on retiring within a year. A lot of experience would be walking out the door with those people though so it's important to know the retirement plans of the remaining 96%.

If we look into the crystal ball to see what we're facing long term based on the survey, over 75% of RPG programmers said they're not planning on retiring for at least 6 years. That goes up to 82% if we include those who said they plan on retiring in 5 years. Bottom line, that means retirements aren't something companies should panic over but they should make reasonable plans to handle them.

Before moving on to the next set of questions and answers I'm going to add a few notes about the survey.

1. Every question was optional. Very few of the 659 who took the survey answered every single question so most questions will have fewer respondes than the total number of people who took the survey. (The number of people who answered each question is shown on both of the detail reports.)

2. When it comes to questions about products and services, the first 3-5 answers will almost always be the most popular and the ones you should look into if you're in need of that product or service. Most of the other answers will usually have one or two people who gave those answers.

   Occasionally there was a middle group of answers that fell somewhere in between the top and bottom groups. In those cases you should probably check out the vendors in the middle group too if you need the product or service the question is about. There are a lot of legitimate reasons they could have landed in the middle group, many of which aren't negative. (Being located in a single region or country would be one example of a non-negative reason.)

3. The answers always imply 'according to the survey'. I don't keep repeating that phrase because it should be obvious. If this article goes off on a tangent in some places then I'll make sure it's clear I'm straying and what source(s) I'm using for the tangent. I only do it a few times and when I do it's because the answer needs clarification.

Now back to the answers.

Q. What programming languages are currently the most popular on the IBM i?
A. In addition to RPG, CL and SQL, the languages used most at the moment are XML, JSON, Java, Javascript, and HTML

Even though SQL shows up as number 1 in the rankings it's not really number 1. It only looks like it is because RPG was broken out into its various versions. Merging all of the versions into 'RPG' would put it into first place.

I'm going to go off on one those tangents I warned about earlier. This one is based both on personal experience and what I see on the job boards.

The smaller a company is the less likely it will be that they'll actually need to find someone with experience in any of the additional languages listed above. Programmers at small companies tend to stick with their primary language, usually RPG, and only use another one if a large customer requires it. This is most likely to happen if EDI or FTP is being used at the company, in which case XML might be required either coming or going by a customer.

Larger companies are more likely to need people who know one of the additional languages. They're not immune from the 'high bus factor' issue if they don't cross-train too. (A 'high bus factor' means a company will be in trouble if one of its programmers gets hit by a bus.)

End of tangent.

Q. If I'm an RPG programmer, what other language(s) should I learn?
A. Either Java or Javascript should be your first pick (assuming you already know SQL). They took the top two positions in the question about what language(s) companies are going to standardize on. HTML, Node.js, Python, PHP, .Net, C#, and COBOL, were next in the rankings, in that order.

The last language in the group, COBOL, might turn out to be a dark horse with a rising trajectory if the migration of companies from IBM Z to IBM i seen in another set of answers becomes a trend. Those companies will be bringing COBOL with them because it makes migrating easier.

It's important for programmers and companies to keep in mind where the platform as a whole is heading. Programmers so they can find jobs. Companies so they can find more people who can fill openings as they arise.

Q. Is anyone migrating to the IBM i?
A. Yes. There's not a flood of migrations in this direction but they exist.

Companies who migrated to IBM i usually came from IBM Z or SQL Server platforms. Not enough companies have migrated from either platform to call it a trend yet but as Power Servers become more powerful we might see the IBM Z migrations become a trend. Migrating to IBM i would lower their costs and be relatively easy to do because they'd be going from a COBOL environment to a COBOL environment. For the most part only the control languages would have to be changed.

Q. Are companies rushing to migrate off of the IBM i?
A. No, not in reality. Roughly 50% of the 645 people who answered this question said their company has no plans to migrate off of the IBM i.

That still leaves 50% who gave some other kind of answer though, and that's why I included 'not in reality' in the answer. The answers people gave have to be put through some sort of reasonability test. Personally I wouldn't count companies who said 'Maybe', 'Eventually' or 'In the planning stage' at all. There's really no telling what they might decide to do as IBM comes out with new releases. I wouldn't count 'Unknown' as anything either. If you do decide to count everything that sounds like it sorta, might be a migration then it comes out to about 50% of the people who responded saying their company planned to migrate off of the IBM i.

Tangent.

Based on the number of companies I run across when updating the ALL400s Company List each month, 50% doesn't pass the reasonability test. If we eliminated 203 of the 645 companies who had vague plans to migrate that leaves 442 companies in the baseline. 73% of those said they had no plans to migrate; the remaining 27% said they were going to migrate sometime in the next five years. I'd argue that the 12% who said they were going to migrate within 5 years fall more into the hopeful group than the realistic group, and go with 15% as a more accurate reflection of the number of companies who will successfully migrate off of the platform over the next 3 years. If IBM's claim of 100,000 companies being on the platform is right, that still leaves a high number of losses. No matter how you look at it if you lose 15,000 customers over 3 years you have a 5% attrition rate per year. That's a lot of customers to lose.

End of tangent.

Q. Why did companies say they're migrating off of IBM i?
A. The number 1 answer is that "it's too hard to find RPG programmers". "Modernization" and "Moving to the Cloud" took the 2nd and 3rd places, respectively. (Presumably "Moving to Cloud" meant moving to some other platform on the cloud.)

The #1 answer didn't come as a surprise at all. "It's too hard to find RPG programmers" is something we hear all the time.

Another tangent, based on the last six months I've spent trying to help companies fill RPG programmer opening, the problem can be looked at two different ways.

The first is to look at it as a business model issue, not an RPG programmer shortage issue. Companies who insist on having programmers work on-site have a much harder time filling opening than those who allow remote programming.

The other way to look at it is that RPG programmers are creating the shortage themselves because they refuse to relocate the way they would have when they were younger. They're older now, which means they'll have locked themselves more tightly into their communities and be unwilling to move.

The bottom line is - If a company requires programmers to work on-site it will have a hard time finding RPG programmers; if it lets them work remotely it won't have a hard time finding them. It's as simple as that.

End of tangent.

There was one surprising answer to the question (at least it was to me). This is the first time I've seen 'Off-the-shelf applications we want aren't available for the IBM i' being given as a major reason for migrating. It was surprising because I haven't seen anyone point out that specific applications they need aren't available for IBM i. There are over 7,000 people in my network so I would have thought at least one of them would have mentioned it during the last 6 years of the ALL400s project.

Many of the other reasons people gave for migrating off of the IBM i could be grouped together in a generic group – someone somewhere didn't know what the IBM i can do. Most of the time upper management was the 'someone'. No one took the blame for management not knowing.

I'm going to skip over the results from question 8 on the survey because it was really only included to help vendors who work in the system upgrade niche forecast how high or low the demand for their products or services might be this year compared to previous years.

Onwards to the next question.

Q. What's the best security product for IBM i?
A. IBM and HelpSystems (Powertech / StandGuard) took the top two spots.

Some of the products mentioned in answers to this question don't sit on the IBM i itself. (I should have clarified the question by asking about 'native' security products but it's too late now.)

Raz-Lee's iSecurity (SEA is the North American reseller), is the only product I've worked with in the middle group and it would be on my list of recommendations.

A word about the products and services that show up in middle group of answers to these questions.

If there's a middle group with a reasonable number of votes then I'll highlight the ones in it that I'm familiar with in case you need to add more to your list to check out. That doesn't mean that the ones I don't highlight are bad, it just means I don't know anything about them. In fact there's only one question on the survey where companies showed up that I've had experience with and wouldn't recommend. That question, 'What consulting company have you been the most satisfied with', comes later on near the end of the survey.

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Q. What ERP packages are used the most on the IBM i?

A. If the answers people gave were rolled up into the vendors who sell them, because most sell more than one ERP package, we'd end up with 3 top vendors – Oracle (JDE World, EnterpriseOne), SAP (Business Suite, S/4HANA), and Infor (too many packages to name). The only other ERP in the top 10 was JDA.

.   If your company is going to implement an ERP package there's a few things you should know about the top 3 vendors.

SAP is trying to move everything to S/4HANA which runs on Linux on Power. That gives it a proprietary language on a proprietary database, something the rest of the IT world is moving away from. It's Business Suite product running on IBM i won't be supported after 2025.

Oracle has the best accounting modules of the three, but it's also the most expensive.

Infor has so many different ERP packages you'll have to do a lot of research to find out which one is best for your industry. On the bright side its packages are usually the least expensive of the three.

Tangent.

When it comes to applications for specific industries you might want to consider one of these products based on the industry your company is in - Manhattan Associates for Supply Chain packages, Jack Henry and Fiserv for Banking, Trimble for Transportation and Logistics, and either Medhost or McKesson for Healthcare packages.

I've used PRMS and Mozart, various versions of JDE World, MacPac and Movex.

Movex, now Infor's M3, would be my top pick for companies in the manufacturing industry.

JDE World has been certified for IBM i version 7.4; Infor's M3 should be certified fairly soon if it hasn't already been by the time this article is published. I haven't looked into the status of any of the others, or even whether or not they're still being sold.

This link will take you to more information on ERP packages that are available on IBM i - https://www.ibm.com/support/pages/erp-solutions-ibm-i

End of tangent.

Q. What's the most popular backup solution?
A. Backup tapes, IBM BRMS and Mimix were the clear winniners, taking the top three positions. (Notice the question doesn't say the 'best' backup solutions. It's an important distinction.)

PowerHA was further down in the rankings. Based on what I've heard and read it's probably undercounted on the survey.

Q. What do most companies use for HA/DR (High Availability / Disaster Recovery)?
A. Mimx, Backup Tapes, and IBM PowerHA were the top three relevant answers. (Again, keep in mind this is based on the most popular solution, not necessarily the best solution.)

When I qualify something as being a 'relevant' answer it means I'm excluding answers like 'Not Applicable', 'Unknown', etc…)

Precisely, formerly Syncsort, provides several products ranked fairly high for this question so if you're in need of an HA/DR solution they might have a single point of contact for those products (Mimix, Quick-EDD, and iTera). Maxava HA, LaserVault, and Vault/400 show up in the middle of the rankings and are well-known within the community. If you don't like dealing with huge vendors then you might feel more comfortable dealing with one of these vendors instead.

Q. What's the most popular cloud hosting company?
A. 'None' was the most frequent response, coming from 39% of the companies.

That means a lot of companies haven't moved to the cloud yet. It doesn't help much if you've already made the decision to move to it though.

AWS, MS Azure, and IBM were the top three relevant answers.

Although it might not be shown by the rankings other well-known cloud providers in the IBM i ecosystem are Connectria, Skytap, RZKH, Meridian, iTech Solutions, Abacus Solutions (owned by Fresche Solutions now), and Cerner.

Q. What are companies moving to the Cloud?
A. Here again, the top two answers don't help much – 'Nothing' and 'Don't Know'. 'Everything' came in third. Translated into something that makes sense, this means 17% of the companies responding plan to move everything off-premise and onto the cloud.

After those top three answers, the responses can be broken down into individual pieces. Backup, disaster recovery, high availability, testing, EDI, and Development are the pieces. They ranked in the same order they were named.

Q. What consulting companies are people the most satisfied with?
A. The top 3 companies, by a wide margin, were IBM, iTech Solutions, and Fresche Solutions.

Profound Logic comes in low in the rankings which is kind of surprising because it's probably the number 1 vendor when it comes to modernizing user interfaces.

Tangent.

I'm familiar with some of the other consulting companies on the list and wouldn't have any problem recommending these:

- Midrange Dynamics
- Programmers.io
- Eradani
- M.A.P. Technologies
- Briteskies
- Seiden Group
- Tembo Technology
- iAge
- Treeline
- BVSTools

Fortunately the few vendors I definitely wouldn't recommend didn't show up anywhere in the rankings.

End of tangent.

Answers to the 16th question on the survey will only be interesting to vendors in the outsourcing niche. It asked which aspects of the SDLC companies were considering outsourcing. For the record, 'No help is needed' was the top answer, by a long shot. Development came in a distant second.

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I spoke about the survey's demographics turning out reasonable just by chance at the beginning of this article. Now that I've summed up the answers to its major questions I'll finish up with a closer look at those demographics.

Location. Only 384 people had a chance to say where their company was located because I only realized the need to add the question after 250 people had already taken the survey. Even so, the global spread came pretty close to the way common wisdom would have predicted. The U.S. was in first place with 67% of companies located there. It was followed by Canada, the United Kingdom, France, India and Germany, Italy and Spain. Overall most of the companies were located in North America. Europe held second place for the number of company locations.

Company size. 41% of the companies had 500 or fewer employees; 53% had more than 500 employees. If companies with 500 to 1,000 are considered midsized and those with more than 1,000 large, then 14% of the companies were midsized and 39% were large. Any way you look at it the spectrum of company size is pretty well covered.

Industries. Manufacturing came out on top, with 20% of the responses coming from manufacturing companies. That industry was followed by Finance/Banking, Retail, Software Companies, Distribution, and Transportation/Logistics each had over a 10% share in the rankings, followed closely by Insurance and Healthcare. That sounds like a fair representation of the IBM i ecosystem in the real world.

Roles. This demographics checks to make sure upper management is represented. Close to 48% of the responses came from Developers and System Analysts, as expected. 20% of the responses came from people who had job titles of IT Manager or higher (126 of the 605 responses). Upper management was represented fairly.

Age groups. Based on public articles, conversations on forums, and word-of-mouth you'd expect everyone who works on the system to be ready to retire. 65% of the responses came from people who were nowhere near retirement age (408 hadn't reached the age of 60 yet, 178 hadn't even reached 50).

Conclusion. This article is only my personal interpretation of the results from the 2022 ALL400s IBM i survey of course. The results themselves can be found here - https://all400s.com/assets/Survey7A.pdf Others are welcome to draw their own conclusions based on their experience in the IBM i ecosystem.

I didn't cover the 5 open-ended questions here. They'll be addressed in another article after I organize, categorize and rank the answers to them.