

IBM Digital Video Services

SWG V 5004 – z13 Whiteboard – Value of IBM z13

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Scott: Hello, this is Scott Harris, the worldwide leader of System z software enablement, and I'm joined today by Jim Gideon, who will be jumping in at different points in the discussion that we're having here today. Doing it a little bit differently because we've done a number of times and we thought this format might be a little bit better for you.

The purpose of this whiteboard is really to facilitate a discussion on z Systems and really with the announcement of the z13, IBM's commitment to the platform as a whole. You can use this whiteboard for any of the other z Systems offerings, whether it be the z196 or the z114 or previous models. Okay, let's get started here with the whiteboard.

Thanks for taking the time today to have this discussion. As we talked and we were setting up this meeting, you wanted to talk about some of the challenges that you're having, and we'll talk about those in light of the technology issues that you're working or are planning to do. There are often a number of alternatives when you're considering where to put the workload and for that reason I'll share with you an approach that we found successful with other customers called the Right Fit Methodology. We also have the latest information on the IBM z Systems z13 and I'll share that with you and how using that in a right fit decision and methodology can really help to align your workloads to the appropriate environments. Then we'll talk and close out with some next steps to see where we can further help you better understand and better utilize our technology. So let's get started.

What we're finding today is that most companies we work with have an infrastructure that's a mix of systems, whether it be host systems or distributed systems that run in either a centralized or a decentralized manner. And because we have all these heterogeneous environments coupled with the dynamics of the business environment, many organizations are facing some challenges. So let's take a look at some of those challenges that we found CIOs and CEOs _____ companies are facing.

First off, is the challenge of data. And we're seeing a tremendous growth in the amount of data, but also in the types of data that we're getting. Data is coming from a number of different sources more than ever before and it's how we integrate and drive business decisions with that data that's presenting our businesses with challenges. Our businesses are being asked to deliver new services to meet market, customer or internal user demands, as well as leveraging both modernization technology and new technology. While at the same time we're being asked to deploy these new services, we're being asked to deploy them in a way that meets the required qualities of service objectives. The third challenge we labeled as efficiency, but when we think of it it's really doing more with less. And it's about making the most of your IT funding such that whether it's your infrastructure or your human resources or your capital, but maximizing the operational efficiency of those resources. And last, but certainly not least, is

reducing or mitigating risk. We live in an environment that's very complex and we have a lot of compliance and security requirements that we need to address. With more users, devices, and more things connected in this world, the number of risks continues to grow and it becomes difficult to understand how to implement a secure infrastructure. Are those the challenges that you're facing?

Jim: Scott, let me jump in here. This brings up a very important point, I think that needs to be made. The purpose of the whiteboard is to start a conversation between you and the customer and guidelines to that, so be sure that you ask that question and really almost pause on it where – to give the customer a chance to answer that and that will start your conversation on this whiteboard, which is, as I said, the most important part.

Scott: Thanks, Jim. And it's a good time – a good point to mention that in the study guide in the sales kit we do ask you to – encourage you, I should say, to ask your customers a lot of questions and you'll find those in the study guide.

So getting back – following up on those challenges, we're next going to move into discussing some initiatives that we're seeing our customers undertake and that Gartner is also seeing our customers undertake to address some of these challenges.

The first one is in the area of analytics. Customers are looking to get more value from their data and hence organizations are increasing the use of business intelligence and the analytics technologies throughout the organization, whether it's leveraging for sales, marketing, account payable, customers, IT operation, analytics is being embedded in every part of the organization and it's becoming a high priority for many organizations. The second initiative that we see, second and third I would say, is in the area of mobile and collaboration. As you're familiar with, we're seeing more and more mobile and remote workers today and all these have changing preferences and a multitude of a number of devices that they use to connect to the environment. This is presenting some critical challenges with a distributed workforce that's – and people need to be contacted anywhere they are located there's an increased need to provide a secure and reliable collaboration environment across the enterprise. And the last, and not least, initiative is cloud computing. And studies indicate that 80 to 90% of enterprises are doing something with cloud computing today, whether that's leveraging a public cloud, a software as a service, infrastructure as a service or platform as a service or putting two – using the hybrid or a private cloud environment. The cloud has become an important way to enable IT to be more efficient, addressing that efficiency challenge, and to help them rethink the way they provide services, whether it's new services or extending current services to new customers. And underlying all of these initiatives is the fact that customers are concerned about security and applying security around all their new initiatives.

Jim: Scott, you bring up a very good point right now and that's the focus that IBM has on CAMSS. And that's exactly what we're talking about right here. And if you look at it, the location of data becomes very important. You've got to have access to the data somehow to do your analytics. Are you creating data marts? Well, let me tell you. That can be an expensive cost to create the data marts and run it offline. What about your mobile? Does your customer's customer get upset if they deposit a check and they can't see the balance increase in their checking account? They need to have realtime data on their mobile transactions. And cloud computing, the same time, is you've got to have the data. Now are you shipping the data off somewhere to a public cloud or are you keeping it local where you can access it? And regardless of where that data is, security becomes the utmost issue.

Scott: Yeah. And that, Jim, leads us right into our next area, which is – you talk a lot about applications and the applications that you listed perform certain functions, whether it be financial, ordering, providing a dashboard for employees, all applications have functions that they do and that they perform. We want to take that a little further and really laying out this approach on understanding where your applications should run and we want to look at how those application should be.

And the first characteristic we want to look at is scalable. How capable is the infrastructure to scale to meet the growth in demand of users, data, transactions, and to scale without major changes to the application? The second area is the area of dynamics. What is required to add or move – remove resources and how quickly can those resources be brought online without taking the system down? Is there any way to automate this? And what happens, in an example, when you're currently running, deploying an analytics application, support 60 users and you hear a rumor in the hall that the executives want to expand the population to over 6,000 managers. Can the system scale up easily to meet this demand? Can the changes be implemented in a reasonable manner or is it going to take days, weeks or months? Probably not acceptable in this environment where customers are not very patient.

Okay. Let's take a look at some of the other characteristics that you might experience and you might consider when making a decision on what platform to load your workload to. Availability. Is the application critical to your operation? If it goes down will you start losing money and customers very quickly? Are there any RTO or RPO mandates that you have to meet? Other consideration, performance. Will the infrastructure provide the performance required for dealing with the complex environment, whether it be from data or users or all the different types of data that you have today? And many customers are expecting and users are expecting instantaneous response. We've talked a couple times already about security. What exposure are you will to take in your environment? Are there any applications or network infrastructures that you have to secure? Can the

infrastructure meet all your internal and external requirements? And is it an infrastructure that'll help you manage compliance? That gets to our last area.

How will you be able to manage your system and adding – whether it be adding new applications or workloads or managing the cost, space, power, cooling? Does your environment provide a way to address some of staffing resources that you have? Can you automate any of it? Use any industry standards? Well – go ahead, Jim.

Jim: Scott, at this point I'd like to jump in and reemphasize that that with – in the area we're talking about in z Systems, we're not talking about additional processors when you grow your business. We're talking about adding functions within the same box. So your cooling cost and all does not change just because we got more workload on the system.

Scott: That's, again, a great point, Jim, and we'll get into – one of the later pages we'll get into a discussion about how z13 does address these initiatives and address these characteristics in a later slide, so appreciate that.

So when we're looking at all these characteristics, we're really balancing them. The balance is really happening between affordability. How much can you pay to address some of these characteristics versus the quality of the service? What qualities of service do you expect in your environment? And what – we use an analysis called Right Fit, and it means finding the best platform and platform infrastructure to support the types of workload you have, whether it's analytics, mobile, cloud, security. It's really looking at the total cost of operations or ownership based on the cost of the hardware, the software, as well as the quality of the service, these characteristics that we have, and any other cost that that environment drives.

Well, let's take a look at z Systems and I'll give you a feel about how z Systems can help your organization in regards to these characteristics.

z Systems is known for its rock-solid availability, was designed to have 99.999% availability, which is less than five minutes of downtime. And we've had customers that have gone decades without the system going down. It's really why the top 25 of the world's – top 25 world's banks use System z or z Systems family of solutions. In the area of performance, z Systems has the fastest processors in the industry today. And in addition, z Systems capability such as query acceleration, which Swiss Re saw when their queries were accelerated by over 1000% by adding the IBM DB2 Analytics Accelerator. With Systems z's shared everything environment, System z can scale up, scale down, and very easily manage things automatically within the business rules that are provided. That's why Nationwide was able to decrease their provisioning time by over 80% by consolidating their workloads. And is z System secure? Well, it's security that the platform is known for because its intrinsic security and privacy for transactions

and sensitive data has helped customers enable their infrastructure and secure their data today. In fact, BlueCross BlueShield of Tennessee stated, our business is a very large – in a very large extent is built on trust and having IBM secure encrypted systems helps build that trust with our customer. Another customer, IZB, after performing a number of penetration tests called System z the safest box in their environment. System z, in fact – in regards to the dynamic characteristic, z Systems automatically moves compute resources when the business demands them. With advanced workload management, System z – z Systems makes sure that applications have the resources they need without impacting service delivery. It incorporates what we call extreme virtualization. And it's really how the Queensland government Department of Transportation was able to meet their scaling and resiliency requirements. And last, in the area of manageability, z Systems have features to assist in the managing of the systems, which includes adding processors without interrupting the system. For the zEC12, IBM announced zAware, which provide analytics for z/OS to predict a problem before it occurs. And today, z Systems have the capability to manage a large number of partitions, LPARs, and allow you specific how much each system is given.

Okay. Now let's take a look at z13 and where it extends some of the capabilities that we have today.

In the area of performance, System z has increased throughput by adding parallelism with new instructions; 10 terabytes of memory, which is three times that of the EC12; encryption and coprocessors on same chip with the z13 processors is another example. And then saw that we increased availability. We talked about the IBM zAware when we talked about z Systems. Well, IBM has extended that and now that's available for Linux, as well as z/OS. In regards to performance, the throughput has increased 40% from the z13 – from the zEC12 to the z13. The Linux has increased over 32% because of the increase in memory of 10 terabytes and the additional channel capacity. z13, because of this increase, makes it an ideal environment for running analytics, as well as heavy transactional workloads. And the z13 with 141 CPUs can support over 8,000 virtual machines providing the scale up and scale out capabilities in one system. And with z System capabilities we're able to dynamically manage resources on these 8,000 servers. In addition, from a security perspective, I mentioned earlier that z13 employs multiple integrated cryptographic coprocessors on each central processing chip, which allows System z to better handle the sensitive keys that are required by applications and operating systems today. And, of course, System z continues to maintain the EAL5+ certification. And lastly, we've announced a statement direction for GDPS for Linux and an enhanced zAware that provides the operations with the ability to determine when a problem is going to occur sooner.

Okay. Now let's take a look at a couple customer examples. The first one, mentioned earlier, Swiss Re. They were performing data analytics for over 2.6 billion transactions and records with the IBM DB2 Analytics Accelerator. And

when they implemented that they saw a 70% improvement in query response time. Queries that previously ranged from 25 seconds to 90 minutes were now taking eight seconds or less. And the solution delivered five times the performance at 75% lower cost. That's a three-year TCO compared to the competition.

The next example is a wonderful example, the University of Barrie, which has implemented a set of services to help local businesses adopt new cloud models. The first business is in the area of the fish market. Fishermen can use a touchscreen, it's installed on their boat, to describe the kinds of fish being caught. If that type of fish is required in the market, the solution starts an electronic auction. The system automatically defines how much quantity the fisherman should bring in and who they should distribute it to, which helps make the supply chain more efficient and reduce waste. In the area of product quality, University of Barrie has worked with the wine market helping them to source grapes more effectively and improve product quality. And the last component or last business that they work with, a logistics and delivery service, which now incorporates components installed on trucks, as well as Linux on z System server. The server monitors the trucks in realtime, helping the truck company avoid damaging transported goods and improving shipping time for products from eight to four hours.

And the last example that we have is FNB, First National Bank of South Africa. They really had a need to address the mobile environment for their customers, linking the transaction engine and data with the mobile devices and doing more with less and doing it faster. The increased throughput of System z and z Systems has allowed them to be able to use the mobile environment – have the mobile environment integrate into a single footprint. They have more than 250 million mobile banking transaction all operating with less than 30 milliseconds end-to-end response time.

And IBM extends – IBM z13 extends System z's – z Systems ability to meet critical information requirement and deliver a right fit for your high priority workloads enabling you to deal with the challenges and address the initiatives that we talked about today. First, in the area of data, System z allows you to drive more insights into your data, giving you a platform, which will enable you to integrate large amounts of data and data types into a single platform and keeping your source data where it is and leveraging the analytics strengths of the z Systems as an analytics hub. z Systems allows you to deliver more services in a timely fashion because of the capabilities of z Systems and the qualities of services that we talked about being security, availability, resiliency, and performance. And also being able to leverage existing workloads along with new workloads and make these available within the cloud, allowing you to integrate them with mobile technologies. And System z, as we talked about, allows you to have a more efficient operation, helping you to maximize the use of your operating and capital expense. The ability to resource efficiency by running

thousands of workloads in a single machine will really help drive your direct cost down and help you to reduce the number of personnel required to manage that environment. And we've talked extensively about how System z provides the most secure environment for your business today.

Based on what we've talked about and identified it's key challenges, there are number of things that we can do to help you, as a next step, better understand where you can use IBM's products, and namely, the IBM z System z13.

Jim: Scott, at this point I think that we have an excellent opportunity to kind of go back and summarize how System z is the ideal CAMSS box. I mean we've got cloud, we got the enterprise grade Linux, we got GDPS for Linux, we now have the zAware that helps you with your availability with Linux. You have analytics. The location of data is very important to that and to mobile. The system of record, we own the system of record and that's what needs to be brought out, I think, is a summary in your discussion with your customer.

Steve: Thanks, Jim. And this is a good time to remind folks on the call as we wrap up the recording that what we're doing here with these whiteboards is providing you with a framework for a discussion. We've included some customer examples. We've included some examples of qualities service, some characteristics. You need to think about what's going to have the most impact with your customers to drive you to that next step. We want it to be a 20 to 30 minute discussion, at most, highlighting the value of the platform. But again, what characteristics are important to your customer are the ones you want to highlight and where you want to get those customer – find those customer examples.

So again, encourage you to use this whiteboard, as well as any of the other whiteboards that we have created as learning resource to learn a message so that you feel confident when you meet the customer, whether it be at lunch or in a conference room or in the elevator going up to a meeting and you hear them say they're not sure of the value of the platform. Hopefully this will give you the confidence that you need to have that discussion and keep our customers on this best of breed platform, the z Systems. And you may have heard Jim and I, we've worked in this space for a little while, still say System z. And as you know, that's the old family name that we haven't quite gotten out of our minds yet. But we are transitioning to z Systems and, of course, the new model is the z13. So best of luck selling and thanks for taking the time today to listen to this recording.

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