

# **IBM Digital Video Services**

SWG-5004 zSystems for Analytics

**IBM DIGITAL VIDEO SERVICES**



Rebecca: Hello, everybody. Thank you for joining us today for the z Analytics whiteboard enablement session. My name is Rebecca Wormleighton. I'm part of the Business Analytics organization and am responsible for our Business Analytics and STG Go-to-Market Strategy and Sales Enablement Support Strategy.

So let's go ahead and get started. So first of all, before we jump into the whiteboard and providing you with the guidance on how to deliver the whiteboard, I just want to do a little bit of setting the stage for everybody. So first I want to cover our objectives, and then what I want to do is quickly talk about what we need to do to prepare to deliver this whiteboard as successfully as possible.

So first of all, our objectives. This whiteboard has been created as a cross-brand initiative. We've pulled together resources from both sales, technical sales, marketing and product management from all three brands – from STG, from the IM organization, from the BA side – to ensure that we are all telling and in agreement on the best way to tell this story. So this whiteboard has been designed specifically to help you introduce the conversation of, why System z for your analytics? It is not intended to answer every single technical question that could possibly arise. It should be used to help you identify the entry points or starting points for opportunities for analytics on zSystems, as well as to help you identify your next steps to move forward and progress your opportunities.

So the other key thing to remember is, this whiteboard has been designed with the expectation that you'll be customizing it based on each individual specific customer you may be presenting to. So with that being said, as you prepare to present this or take a customer through this whiteboard, it's best if you can come to that with at least a basic understanding as to what the customer is doing around analytics today – maybe what their current analytics initiatives are or projects are, what they've got planned for the future so we understand where they're going, what they've done in the past that has been successful for them, and equally as important, what they've done in the past that has been not successful for them. It's with that in mind that we can really customize this presentation and help them solve their key challenges in their overall analytics journey.

The other key thing that I want to talk about before we jump into the whiteboard is the audience for this whiteboard. Traditionally, especially on the zSystems side of the fence, we have spent much of our time talking to our System z advocates, so those are those individuals across your organization or the customer's organization that know and love and breathe zSystems. But luckily for us from an analytics perspective and looking for opportunities on zSystems, we have multiple entry points that we're able to take advantage of. The key one here is really that analytics delivery team, so please don't confuse those with the line of business. So this is the team that, if you will, sits in the middle between our actual line of business, those people that are actually using analytics within their day-to-day jobs and benefiting from the capability. These are the people that support the line

of business and work with IT to deliver against the business' requirements. It's really that audience that we have designed this whiteboard around. Those individuals likely have no understanding of System z and the role or the potential role that it could play within their analytics. So as I said, the objective of this particular whiteboard is to help those people understand why what they're doing today is maybe not going to be sufficient to meet our future requirements and today's requirements for analytics and how zSystems can play a role in helping them in their analytics journey. So again, we don't want to get into a \_\_\_\_\_ conversation. We really want to talk about this at a high level.

So with all that being said, what we're going now is I'm actually going to take you through the whiteboard that we've designed as a team, and so for the purposes of this discussion, I'm going to go relatively through the whole whiteboard. Of course, when you yourself are delivering it with a customer, you would be stopping much more and interacting and really turning this into a two-way conversation. But for the purposes of teaching, I'm going to take you through generally the whole whiteboard, with a few thoughts here or there just to point out some key points. So I'll be playing the sales rep for today's discussion. My customer is Bob. So we're going to go ahead and get started.

So Bob, thank you very much for joining us today to talk about the world of analytics and what it means to your organization. I think you can probably agree analytics is becoming really one of the most strategic and important initiatives that our organization is faced with today. In fact, we did a recent study with MIT and we actually found that, for most organizations that we surveyed – 58 percent, in fact – are citing analytics as one of the key tools that's going to give them the competitive advantage that they need moving forward. In fact, in that same survey, we found that, for the organizations that were successful with their analytics initiative, we found that they could outperform by 220 percent. So it's no surprise to see that this increased interest and awareness of what analytics can do for your business is driving a tremendous amount of importance towards our analytics strategy, so as we're embedding analytics into the fabric of our organization, putting it into the hands of all users, we're now at a point where we've got to design our strategy around analytics to support way more users, way more data, if we're actually going to be successful.

So what I want to do now is really talk to you about how you can simplify your analytics infrastructure to meet both your requirements around your data, as well as around your reporting, your query, today and into the future.

So for any analytics initiative, regardless as to the particular use case, of course, it starts with data, and in most cases that is our production data. So this is the core information that is truly driving our business, that understands the inner workings of our business, and it's with that information that, if accessed in a timely and meaningful way, we can truly understand our business and make educated decisions on how best to proceed. But, of course, there's lots of challenges that

we're faced with today in accessing and utilizing that data, so what I'd like to do now is take a couple minutes to discuss how organizations are actually leveraging that data and some of the challenges that they face and look at how that aligns with you and your organization.

So as a bit of a level set, what I want to do, though, before we jump too far into this, is kind of look at quickly the different kinds of analytics that we have available to us today that, as we look to support today's requirements, that we need to be able to support. So the first one that I want to talk about is our ad hoc or complex analysis. So this is really your traditional business analytics that's really been used to support you understanding your business, your customers and your operations. So what does it mean to support an ad hoc or traditional business analytics initiative? So, of course, the first thing that generally is done as an organization, we're going to take our production data and we're going to put that in some sort of a data warehouse, data mart, and we're going to use an ETL tool to do the transformation and the loading of that data into that data warehouse, and then we're going to have any number of business analytics tools that will be used to access that data. Now, of course, each different department across your organization is probably going to have their own version of this – their own data warehouse, they're using their own ETL tools, and often their own business analytics tools.

The other aspect of analytics that I wanted to kind of discuss as part of our discussion today goes to real-time or operational analytics. This is really a new requirement that we're seeing surface across many organizations as we look to put analytics in the hands of all workers, including those on the front lines. We recognize that applying analytics to each and every single business decision that we make can be extremely beneficial to us and to our organization. So much the same as what we did with our ad hoc reporting and analysis, with operational analytics, we're still taking our data from our production system, bringing it down into this time more of an operational data store. We're still using our ETL tools to do that. In this case, we maybe have our business analytics tools that are going to allow us to report on and analyze that information. But more often than not in this scenario with operational analytics, we're also doing predictive or statistical analysis of that data, often in real-time. So the quicker that we can analyze that data and understand it and apply it to each and every decision, ultimately the more successful we're going to be.

So what we've just sketched out is a relatively simple diagram of what I would say is actually a very complex environment, especially when you take a step back and look across your organization at all the different analytics initiatives and deployments that are likely taking place. Again, we recognize the importance of analytics – everybody wants to do it – so we've now got these environments all across your organization, so what we're seeing is that complex is really just turning into a lot of complexity. And to be honest with you, it's that complexity is just going to continue to evolve and grow as we embark on our analytics journey.

In fact, think of big data. We're all in a position now where we're looking to bring all kinds of \_\_\_\_\_ mobile data into our infrastructure, and how are we doing that today? Well, we're building even yet another element into our analytics system, so we're building our Hadoop systems that is taking all that data, and those Hadoop systems have yet another set of hardware and software that need to be maintained and managed in order for our analytics tools, which, again, may be existing ones or yet another tool that we're bringing into our infrastructure in order to access and understand that data.

So first of all, what I would recommend at this stage for everybody when you're talking with your customers, we really want to get alignment or agreement with our customers. So I would suggest at this stage, once we've established the two analytics environments, we've established the complexity associated with managing all those multiple environments, I think it's important that you engage with Bob to make sure that they're also in alignment.

So Bob, does this look familiar to you? Are you seeing this kind of analytics initiative across your organization, and is this how it's currently built and supported?

So we want to create that connection with Bob, our customer, to gain agreement. So once we've done that, we now want to start talking about the challenges. So as we look at this environment, what I want to do now is start to have a look at some of the challenges that you're likely to be faced with with this current model that we've developed in order to support our various analytics initiatives across the organization.

So the first one that I want to talk about is time, so time is an interesting one from two different perspectives – so first of all, time from a data perspective. If you look at the time that it takes with this current model to access the latest and greatest data, it can often be an issue or a challenge for many of our customers, because the way we've designed it, we've got to take our data, maybe we're transferring it from production to our data warehouse overnight, so we're not able to actually analyze it until the next day. The other challenge that we may see around time would be associated with the time it actually takes us to respond to our changing business requirements. Our world is evolving at a rapid pace, and as an organization, we need to be able to deliver against new business requirements in a timely and efficient manner, and the way in which we've designed our analytics infrastructure often makes it quite a time-intensive process to meet new business requirements.

The other big challenge that I wanted to talk about is focused on performance. So there are potential performance issues across this entire thing, so performance from the perspective of making sure that we can transfer the data in a timely and efficient manner from a query, from a response time – everything. Literally every aspect of this has got specific performance requirements that need to be

considered if we're going to be successful and actually deliver upon the business' requirements, so we need to address each one of those potential roadblocks – and that can be, of course, time-consuming and very costly.

The other big challenge that we're seeing for many organizations today is really centered on reliability, so reliability again from two different perspectives – of course, the data perspective. As we move data across various systems, being able to ensure that we're accessing the right data is of the utmost importance. We can't have different departments try to make the same decision but using data sources to direct those decisions. And then reliability from a system performance perspective. As we integrate analytics into the fabric of our business, the availability of that system is of the utmost importance. It's now got to be up and running 24/7.

The fourth big challenge that we're seeing for our customers is centered on security. When we look at what we're trying to do with analytics, we're accessing, if you will, I believe, our most strategic corporate asset that we have, which is our data across our organization. So when you look at the challenges that you're faced with, you've got data in multiple locations, we've got to look at who's accessing that data, what they're doing with it. And then, of course, you've got the security around the tool itself that's presenting that data. You're putting analytics into the hands of all users across the organization, so you've got to make sure that that information doesn't get leaked out to the wrong sources, so security is really becoming a huge challenge for us from an analytics perspective.

So for everybody listening, again, this is another great opportunity to engage with your customer as you go through this section and understand where they are having issues, where they are having some of their challenges. They maybe don't have all of these challenges, but I can guarantee that they have one. So as you go through, engage with your customer. Ask them how they're addressing some of these challenges, if they're currently having these challenges, and this is going to really help you identify your next steps and opportunities at the end of this whiteboard.

So let's continue. So it's against this backdrop that I want to introduce to you zSystems as it relates to your analytics initiative. By leveraging zSystems for an analytics initiative, what we're going to be able to show you is that we're going to be able to dramatically reduce the overall complexity associated with your analytics, and in doing that, it's going to have an immediate impact on your ability to meet the business' requirements around analytics. It's going to enable you as an organization to be able to leverage your existing investments across your organization. And I think one of the most important areas, as we're going to discuss, is it truly does future-proof you. In other words, we recognize that, of course, our requirements around analytics do not stop here. They're going to continue to grow and to evolve. So by leveraging zSystems, we can be confident

that we're going to be able to meet today's requirements as well as those requirements that come into the future.

So now what I want to do is kind of dig a little bit deeper as to exactly how we can leverage zSystems our two different analytics initiatives, so let's first look at our operational analytics requirements. So again, when we look at operational analytics, we're embedding analytics into the fabric of our organization and being able to apply it often in association with our production data, so by leveraging zSystems, we are able first to be able to eliminate the requirement associated with having a disparate operational data store. We can tightly integrate our analytics with that production system. And even for those that still require a separate data store on zSystems, we can do that. We can confidently integrate our operational data store and our transactional systems. We can also, based on the recent introductions that we've had around Hadoop, we can now colocate your big data sources also alongside your production data, all in one centralized, integrated system. And then, of course, when we look at operational requirements with our business analytics tools, likely we're going to have to be able to support a huge volume of more users than we've ever had to in the past, so leveraging zSystems' scalability and performance, we can deploy those analytics, again, directly colocated within our integrated infrastructure for analytics. And then finally, one of the key analytics capabilities associated with operational is really being able to predict our next best actions. So within zSystems we can actually integrate our predictive analytics directly within our production system, so we're not having to rely upon the various other external sources to do so. So again, with System z, we can bring all that together on one single integrated platform.

But what I'd like to do now is actually talk to you about a couple examples of some customers who have done just that, so let's start with Swiss Mobiliar. So here's a customer that was really looking to improve their overall customer service across their organization, and what they found is their current way of doing it, they were unable often to run the types of queries that they needed to, or at least in the timeframe that they could. So by leveraging zSystems for their analytics initiative, they were able to actually—in 90 percent of their queries, they were able to do it 25 percent faster. And, in fact, with 50 percent of their queries, they were actually able to do them 100 times faster. So what that meant for them is, they were able to reduce their processing time from five hours down to, in some cases, just 20 seconds. So again, they were now able to answer questions that they couldn't before, or at least not in the timeframe that the business required.

The other organization that I wanted to share with you is an actual electric utility organization. So they had a little bit of a different challenge, so they actually had over ten different systems that they were trying to integrate data together to, but they were running into challenges associated with poor data quality, high latency, high cost. So by leveraging zSystems, they were actually able to consolidate those ten systems into one, and as a result of that, and by leveraging our DB2 analytics

accelerator, they were able to provide much faster access to that data so they could not only enhance their reporting performance in general, but they were able to improve their fraud detection as well as, of course, improve more queries.

So some fantastic examples that we're starting to see come out from our customers of how we can really improve our operational analytics initiatives leveraging zSystems.

But as we've mentioned, we also have our ad hoc reporting requirements, and much the same as our operational, leveraging zSystems, we can eliminate the requirement for our various data marts/data warehouses. And, in fact, of course, leveraging the scale and performance of zSystems, we could actually build one consolidated enterprise data warehouse if that's what we chose. Or if we wanted to maintain individual ones, we can still colocate those data warehouses/data marts all on a single integrated zSystems platform with our transactional data. And then, of course, leveraging once again the scale and performance of zSystems, we can integrate our business analytics tools directly on the System z platform with confidence knowing that we can support the volume of users that we need.

There's one quick example that I'll just bring in here, and that's actually our own internal business analytics competency center. For those of you that aren't familiar with IBM Blue Insight, it's a fantastic example of truly what's possible. We are today supporting over 400,000 named Cognos BI users on a zSystems box. They are accessing over 650 different data sources across the organization, supporting over 500 different projects. So for customers looking at the value of leveraging zSystems for their analytics for their ad hoc reporting, this is a great story of truly what's possible.

So the other example that I wanted to take you through today was Miami-Dade. So Miami-Dade is another fantastic example of what is possible leveraging zSystems. Miami-Dade is a long-time customer of Cognos BI. They were truly at that point that we talked about where they recognized the strategic importance associated with analytics. They knew that that's where they wanted to go, but unfortunately they didn't have the budget or the resources to support the volume of users in this growing need. So \_\_\_\_\_ a point where they identified zSystems as the mechanism to help them do that, so they chose to move their analytics to there, and they were actually able to move their existing analytics over to zSystems in only 11 days. So for those of you, or Bob, if you're concerned about the complexity of zSystems, we can be confident that this is something that we can accomplish with you. And the great thing about what we did with Miami-Dade is their ability to continue to grow and expand that investment and put analytics now into the hands of even more users across their county, which has been absolutely superb.



So what I want to do now is talk about, what does all this really mean to you against the challenges that we know that you're facing? So first of all, from a time perspective, as I said, we've seen our customers be able to provide much faster access to their data by colocating their analytics strategy with their production data, but we've also seen them be able to reduce their time to value quite significantly. As our requirements for analytics grow, as we identify new opportunities to leverage analytics across the organization, we see customers being able to reduce their time to value, from upwards of 24 weeks to six months down to three weeks, so a significant amount of value. The faster, of course, we can do our jobs or use analytics, the more productive we're going to be.

The other area that we're seeing significant improvement is around our performance. In fact, leveraging our analytics capabilities on the zSystems platform, we have proven to be able to accelerate our queries by over 2,000 times. So what does that mean to us? It means that we can answer questions that we often couldn't in the past. Because there was too much data, it was too complex, we couldn't get the answers that we wanted, and now for those customers leveraging zSystems, they truly can. The other big change we're seeing from a performance perspective stems into our operational analytics and our ability to integrate our predictive analytics with our production data. We have proven that we'll be able to score in real-time over 12,000 transactions per second. And for you, Bob, leveraging System z to run your transactional applications and interact with your business, the ability to support that volume makes real-time scoring now something that is an option and available for you to consider that it likely wasn't in the past.

The other key challenge that we address head-on is, of course, reliability. We all know that System z or zSystems was designed specifically around providing the reliability that our transactional business applications demand. Well, now we can extend that reliability to our analytics strategy both from the perspective of the data and ensuring that we could build a single source of the truth so we can ensure that everybody's accessing the right data, but also from a reliability perspective to, again, our analytics tools and the solution itself. So we can now provide that five 9s availability that has become so important to our transactional systems and apply that to our business analytics strategy as well.

And then the final area is security. So I think, as we all know, zSystems has been designed with security in mind, and our ability to apply that level of security both to our data as well as to our applications is becoming more and more important than ever before. So there's a true opportunity for you to leverage these systems to address your key requirements across your organization.

So leveraging zSystems, we can now confidently be assured that we can reduce the complexity and the overall cost associated with zSystems, and we do that by eliminating all those additional areas and points that we need to manage and bringing it together into one integrated strategy for your enterprise as it relates to

analytics. And, of course, the key thing here is being able to start where your most pressing challenge demands. We recognize, Bob, that you can't go and tear apart your entire infrastructure, rip and replace it today. We need to start at your most key challenge, your biggest challenge where you're going to get the biggest value for your organization, but recognize that we can continue to grow and evolve this to meet your increasing demands around analytics as the requirements change. So whether we're doing analytics of the data that's on z or off z, we can leverage zSystems to deliver the value that we're looking for.

So what I'd like to do now, Bob, is talk to you about next steps, and what I propose for next steps is we do just that. So we take a step back and look at your analytics across your organization, what projects you currently have underway, what challenges you may be faced with, and see if any of those are facing some of the challenges that we've just discussed today and work with you to understand if zSystems is the right platform of choice to address some of those challenges, as well as your future requirements.

So for everybody listening today, for those of you that choose to use this animated version of the training, this is where you'd end. Now, of course, for those of you that are leveraging a napkin or an actual whiteboard to tell this story, of course it becomes more difficult to erase the background. So when you get to this point in it, you could either hold your hands up to cover it, but you really want to emphasize the reduced complexity by having a single integrated platform that you are building with the solution.

So where do we all go from here? So very excited about this whiteboard. I think it is a great way to share our story. But, of course, we know you're going to need more, so to get more information from an internal perspective, there's a couple places. So for this whiteboard, please know that it will be available on Know on the Go in both the animated version as well as the teacher's guide, which is this recording. But if you need more information from there and want to look deeper into some of the entry points that would arise from this – whether it's ad hoc reporting, operational analytics, data consolidation, whatever – you can go to our z Analytics Community Resource Center, so this is truly your one-stop shop for anything and everything related to z analytics for both sales and marketing purposes. And then for an external customer, one of the places that we'd want to point Bob to or your customer would be our z Analytics Community on TechTarget, so this has been designed to help those business analytics decision-makers really understand the true potential and opportunity associated with leveraging zSystems for their analytics.

So with that, I'd like to thank everybody for listening, and good luck and happy selling.

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