Architect Keynote: The Future Is Well-Architected

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Speaker E - 5.02%

Speaker F - 4.18%

Speaker G - 6.37%

Speaker H - 7.96%

Speaker I - 6.05%

Speaker J - 8.67%

Notes:

- Fourth annual architect keynote here at Dreamforce. Thanks to all of you community group leaders like Rachel. In Slack, we work with all of our architect community groups leaders. Scan the QR code or get out your phone. Let's work together in Slack. We'd love to celebrate you up here next year.

- Salesforce has several innovations coming that are going to help you be more adaptable. Data cloud second generation packaging comes in. How will the business go on in times of crisis? How do we build independent functionality that can live on as a package?

- Let's take a look at the future of release management in data cloud and CRM. Go ahead and scan the QR code. Our panel will be out here in just a few minutes. We want your questions.

- You can't use those data cloud sandboxes if you don't have data cloud in production. The next thing you want to do is authenticate your connector so that you can start ingesting data from various data sources. Why did we build it this way? It's not a bug. It's by design.

- Zane: We've adapted our alm to use CRM and data cloud sandboxes. What do we need to do to get this all added? Zane: Once we do, we're ready to go ahead and deploy from source.

- We have one last audience submitted question, and this is for executive Srini. What I think will really surprise us is how good they are at not only reasoning but also connecting with other intra agency agents outside. Sort of autonomous networks growing across humans and agents and throughout the enterprise.

Speaker A

00:00:00

Hello, architects. Architect. Curious. And everyone here in San Francisco and joining us all around the world for the fourth annual architect keynote here at Dreamforce. Yes, it is a delight and a joy to be able to say that and to be here with you today. And I have to start with all of the gratitude I have for all of you. We would not be here together at this keynote, having these architectural conversations if it wasn't for all of you. This community started this movement and we are all here today. And all of these pictures on this slide are just a slice of the success that we've seen over this past year. Thanks to all of you community group leaders like Rachel, who I'm looking at right now, but who's also up on this screen leading the architect community group in Los Angeles. New community groups springing up from Hyderabad to Casablanca to Montreal. We love seeing your success. And of course, there are trailblazers that are bringing well architected and architectural best practices all around the world. And if you don't see yourself up here and you're thinking, well, I run an event that could use some architect content, or I ran a workshop, how do I get on this slide? You should join us. In Slack, we work with all of our architect community group leaders, every community dreaming organizer who wants architect

content. This group is for you. Scan the QR code or get out your phone. Type away. The shortcode works as well. Tell us about your group, tell us about your event, and let's work together in Slack. We'd love to celebrate you up here next year. And keep your phones handy. I see a lot of people getting that QR code. We're going to ask you to do that a few times today because we need all of you to help us build this show because we're on a journey together. I think we've all seen some flavor of this slide. And on the surface, it looks like the story of Salesforce's innovation, the more than two decades of wave breaking, changing technology that we brought to the enterprise. But there's two more stories that I think are important to talk about here, and I want to take a moment to do that because we haven't just been innovating for the enterprise behind the scenes, Salesforce has also been innovating our own architecture. And we've also been investing in all of you. Architects have been a key part of our journey all the way along. As we know, back in 2011, we formalized the certified technical architect program, but that was in response to the expertise in the field. The individuals that were showing that over and over again in truly challenging enterprise circumstances, they could deploy the core CRM technology in ways that scaled in ways that drove tremendous success. And now the Certified technical architect program is one of the most respected technical credentials in the industry today. But as we did things like, yeah, you can clap. Thank you, CTA's. Thank you for all that you do. We have some new CTA's in the room today. But it isn't just architects and technology. As I said, we've been reinventing our own technology. And all of you in the room know this because you've been with us as we introduced breakthroughs like chatter or Salesforce, one for mobile. Behind the scenes, we were also working on how our platform could handle near real time data exchanges, changing our own infrastructure. With the rise of hyperscalers and sensibilities like data residency, we had to reinvent our core monolith and release an innovation that we call Hyperforce. And now 86% of our customers, more than 86% of our customers are either on a hyperforce instance or using services on hyperforce. And you have been there with us. And of course, when we released data cloud, it's more than just another name, another cloud, it's a new kind of data store alongside our traditional relational database. And we're going to take a look at that petabyte scale data, unstructured data, zero copy data, now harmonized through metadata so that it's truly interoperable with that core platform you've been building on for decades now. It's reportable, it's actionable, and you're changing your designs to get the most of that technology. And that is the moment that we're in today. Agent Force isn't just another name. It's a set of technologies that we all are going to be able to use alongside our existing investments. The platform that, you know, the apps that your business and users run on, and of course, the data throughout the enterprise now with powerful, generative AI technology. And this is the moment that we're talking about right now. And I think in this moment, architecture has never been more important. And in fact, I'm sorry to say we are not yet autonomous agents. You all are still very, very much required to drive success because as a company, Salesforce may be delivering you a set of technologies and tools and capabilities that together create agent force, but you are still the people that are making the responsible decisions, guiding your teams and your

stakeholders to the right use cases, figuring out what does it mean to be agentic and auditable in our regulatory climate, in our region with our risk profile. What does it mean for the stakeholders that we serve to have agentic experiences that are highly accurate but respect the privacy and trust that they expect from us? Those are still the decisions you're going to have to make. And that's why we made well architected, because this isn't a mystery. Even as technology and paradigms and tools change, giving us all the opportunity to learn to update our approaches, we know that the North Star that we're aiming at, the standards that our architecture needs to meet, actually doesn't change. We know that our solutions have to protect data and stakeholders and truly be trusted. We know that the whole reason we love working with technology isn't just for technology's sake, it's for the fact that when you build something and your business uses it, your stakeholders use it. Seeing that value delivery is the heart of why we do what we do. And it's the heart of what makes smart technology investments easy. And of course, sometimes things don't go to plan. Or once in a generation, disruptive technologies enter the marketplace and we have to adapt. Just like Salesforce has continually been willing to disrupt and adapt our own technology to let greater innovation come to market. That's what we all have to do as architects and that's what we're going to talk about all day today. We're going to talk about how you are going to make the future well architected right here, right now with the latest technology from Salesforce. And we aren't just going to show you at a surface level, we're going to take you into the technology, show you how it was built and let you hear directly from the architects building those features. So are you ready for this? Yes. All right, let's start with that foundation that all of our solutions need to meet, being trusted, protecting data and stakeholders. And to give us this chapter, please welcome my friend and colleague Mark Braga, senior director of technology right here at Salesforce.

Speaker B

00:07:09

Thank you everybody. Thanks for being here. Fourth architect keynote, can you believe it? All right, this is going to be the most fun, most interactive keynote that we've had yet for the architects. And I'm going to start by talking about trust because it's more important now than ever. And trusted solutions protect your data and they protect your stakeholders. You can see there's a lot to consider when we talk about building trust into your solutions. And a lot of this you already do. It's part of your job. You secure your, you protect the data inside of your and then you monitor and secure whatever the users are doing when they're in. But what about legal adherence and accessibility? Are you taking care of that? Those are architect responsibilities too, and it's part of well architected. There's a lot to consider here, but we have your back. Salesforce is releasing new innovation, new features, new products, all the time to help you make your solutions trusted. Like external client apps, we all rely on connected apps as, uh, the foundational layer for our secure integrations, while external client apps are the next gen connected apps. Purpose built for second generation packaging and source driven development. And

data masking for Genai helps you be compliant by letting you mask field level data right at the trust layer and event log objects. You might have seen that in the last keynote. Helps you better understand the reliability of your solutions without looking through CSV files, debug logs, third party apps, you now have that in an object. And with the help of lots of you in the room, data cloud and genai patterns and anti patterns are now part of well architected. So thank you for giving us that expertise and helping make that happen. You can go to architect dot salesforce.com and see that now. So we're going to show you lots of these data cloud features throughout. And I said this is going to be interactive, so in order to be interactive, we need you to be involved. So take your phones out, scan this QR code, keep that page up throughout the session. Today, we want to hear your questions. You're going to see lots. We're going to go deep into new features and we want to have your questions because we're going to bring all the experts back up at the end of the keynote on stage to answer them live. You all ready? We're going to get to the fun part now. The light boards are back, so let's go see how to build data security into data cloud and CRM, um, with my colleague Susannah Playstead at all a boards.

Speaker C

00:09:35

Thanks, Mark. I'm here with Srinathurapati, who's one of the architects who actually built data cloud. And we're going to break down data security for you right now.

Speaker D

00:09:46

Hi, Susanna. It's great to be here.

Speaker C

00:09:48

So this is going to be awesome. So let's sort of give folks, um, some grounding, because a lot of the architects in the room probably are very familiar with CRM. So let's start there. We know that our record level access in CRM is driven primarily. Bye. Two things. Our owners on the records themselves and the role that that owner has and where that role is within the role hierarchy and then we of course have an additional layer of controls, things like wide defaults and of course, field level security. And altogether, these levers are, uh, what make up our role based access controls within Salesforce. But we know that the data cloud architecture is inherently different. So how do we handle data security in data cloud?

Speaker D

00:10:35

Yeah, so in data cloud, users are not directly inserting or updating, um, these records. Also, like, we are not just dealing with CRM data here. The data could be coming from external systems too. So there's no record owners now. And also the scale is much, much higher. So let me start from the beginning. So in data cloud, use data streams to ingest the data into data cloud, which creates data lake objects, dlos. So this data could be coming

from your CRM orgs, or you could connect to your external data using ingestion or zero copy federation. Once data lands into data cloud, in data lake objects, you can use data cloud's powerful harmonization layer to map this data to canonical representations, which creates data model objects, dmos. After that, you can logically segregate this data into data spaces. So you could do this by brand or department. It depends upon your business needs. So let's say we have like two data spaces, DS one and DS two.

Speaker C **00:11:50**

And this is how we segregate that data. Yes, but let's dig in and talk a little bit about the difference between data segregation and what we can cover there and those fine grained access controls for data security itself. What's happening there.

Speaker D **00:12:05**

So with data spaces, what you get is you can configure macro level access to the data, but what you need is fine grain access control to support fine grained access control at the scale of data cloud, we are introducing attribute based access control ABAC. So how this works is first you create tags to identify what kind of data it has.

Speaker C **00:12:31**

And maybe like the sensitivity of the data.

Speaker D **00:12:33**

Yes, and don't worry, data cloud is going to help you create these tags using gene experiences.

Speaker C **00:12:39**

Awesome.

Speaker D **00:12:40**

Once you tag the data. So you associate those, uh, tags with data lake objects, data model objects, and also the fields within those objects. Once you tag your data, then you create policies.

Speaker C **00:12:55**

And we can apply those policies directly, like you said, to this metadata abstraction. And I think. Right, like, let's pause here because this is a huge deal. We're not just talking about CRM data, we're talking about that external data in large volumes, of course. But it could be structured data. It could be, um, unstructured data too. And what about if it's our zero copy data yes.

So this is the power of the harmonization layer which I talked about, right? Like once you bring the, connect the data external data to using zero copy, like they are represented as salesforce objects, data lake objects and data model objects. So whatever you define here applies to them. That data too.

Speaker C **00:13:32**

That's awesome. That's really, really powerful. So we know that when we're dealing with data, we also talk a lot about encryption as architects. And we have a, um, whole set of tools within CRM, things like Salesforce Shield where we can, uh, encrypt our data using our customer managed keys. If uh, you have an external key management system, maybe AWS, KMS, you can of course bring your own key as well. How does encryption at rest work in data cloud?

Speaker D **00:14:00**

So in data cloud, data is always encrypted at rest by default. But in addition to that, we are integrating with shield encryption too, so which will allow customers to manage their own keys. And in the future we are also going to support like bring your own key too.

Speaker C **00:14:17**

That's awesome. And same shield because again, it's that same metadata platform.

Speaker D **00:14:22**

It's just one platform.

Speaker C **00:14:23**

Just one platform. And speaking of that, we haven't yet talked about our AI solutions and we of course need to cover that. It's Dreamforce 24. So luckily with our AI solutions, again, that one platform, record level access is respected in AI. We don't need to worry about it. What about with data cloud?

Speaker A **00:14:42**

Check.

Speaker C **00:14:43**

Check. Awesome. Uh, object and field level access though, with CRM we've got it covered. Check with data cloud as well. And encryption at rest. If we configure our encryption, it's taken care of in AI.

We already talked about it.

Speaker C **00:14:55**
Check. Awesome. But we know that we need additional controls when it comes to AI. Right. We're, um, giving some of our most secure data. We are maybe potentially moving it outside the salesforce trust layer, which is why we have something called maybe you want to talk a little bit about it.

Speaker D **00:15:12**
So we have this Einstein trust layer.

Speaker C **00:15:14**
Yes, you've heard a lot about it, right? But we're going to break it down a little bit more. So we have our trust layer and um, there's a lot of magic that works on how it actually functions. Right. Give us the technical breakdown of that magic.

Speaker E **00:15:30**
Yeah.

Speaker D **00:15:30**
So before we send any data to LLMs, what we do is like, we will use like sophisticated machine learning model to identify if there is any, uh, PI data, uh, or PCI data and then replace that with like some placeholder text. And then when we get the responses back from the LLM. We'll replace it back again with the original text before we send it to the user.

Speaker C **00:15:52**
Right. And that's the masking and the demasking that you heard a lot about when we first launched all of these great generative AI features, but just released, as Mark mentioned, you're able now to choose which fields to mask as well if you have unique company requirements that you want to set before you actually send that data out to the LLM. But as architects, we know that you can't just trust us.

Speaker A **00:16:16**
Right?

Speaker C **00:16:16**
You don't just take our word for it. You need to trust, but verify. So how can we do that?

So we log all of these calls, which are going to the LLM. Like, we take the masked and unmasked data and then log this data, uh, into data cloud again, which is the feedback.

Speaker C **00:16:32**
Awesome. So your audit data, your feedback, how you're interacting with the LLM, that's all saved in data cloud.

Speaker A **00:16:39**
Yes.

Speaker D **00:16:39**
And then you can use this now to build reports, dashboards, to verify.

Speaker C **00:16:44**
Verify, right. In CRM. Um, again, that one lovely platform. So that is how you build data security into CRM, data cloud, and of course, AI. Back to you, Zane.

Speaker A **00:16:56**
Oh, uh, thank you so much, Susanna. And thank you, Srinivas, for staying around. He's gonna be back to answer your questions. I love seeing that even though the data structures are different, even though the sensibilities between CRM and data cloud are different, you're gonna be able to use the right security paradigm to still have the access controls that you need to keep that security intact across both of those areas, which I think is really powerful. But it's not just about trust. That's the foundation where we all begin. But like we said, the reason that technology is powerful is when you deliver value, when you make it easy for the business to get what they need out of their investment, and to be our guide about ways that you can start doing that even better today. Please welcome Nevia van Right, principal architecture evangelist right here at Salesforce. Take it away, Nivea.

Speaker F **00:17:43**
Thank you, Zane, and thank you to all of you. It is always a pleasure to be in the company of fellow architects and friends as we talk about easy solutions that deliver value fast and over time. As architects, we have a lot to think about. We need to consider strategy of our solution. We need to think, are we designing with efficiency in mind? And we also need to create helpful experiences for our users. In addition to that, we need to consider the integrity of our data. So there's a lot to consider here as architects. But no worries, Salesforce is continuing to deliver innovation that makes it easy for you to continue to be intentional, engaging and automated. You heard all about agent force this week. We're

also building a solution for you to create customized agents based on your use case. And no worries if your business is not quite ready for that level of customization. We're delivering pre built solutions for you with agent force sales coach, an agent force service agent. And there's a lot more. We're also giving you AI techniques in retrieval, augmented generation. That is a mouthful. So you'll hear me say rag or r A G. With this AI technique, you can take your data, your customized data, either structured or unstructured, and put it directly into your LLM M prompt, which is great because it helps improve the accuracy of your results. In addition to that, you do not need to spend time training your models, which is great. So I've told you all about it. How would you like to see it? I love that. But before we do, I want to remind you to submit your questions because we want to hear from you and we have the experts coming that can address some of your questions. So please do, if you haven't already, scan the QR code and input your questions. But uh, without further ado, let's go see how to build efficiency into AI based automation with my colleague at the lightboard, Tom Letty.

Speaker G **00:20:19**

Thank you, Nivea. I'm um, here with Claire Chang, who's the vice president of software engineering at Salesforce. Claire, welcome.

Speaker H **00:20:25**

Thank you. Thank you for having me here.

Speaker G **00:20:27**

Thanks, Claire. Uh, let's talk about how to build efficiency into our AI based automations. So let's say that we've got our customer data in our CRM system in Salesforce, and we've got some data in the form of maybe knowledge articles that are stored as PDF's that are outside kind of down here. And we want to be able to use this information in our AI based automations. So how would we do that? How would we get that data ready?

Speaker H **00:20:56**

Um, since the customer is already in Salesforce, the first thing we want to do is to connect those data in PDF files in data cloud so we can have uh, agent force and AI access it.

Speaker G **00:21:10**

Okay. And we're loading these into a DLO in a way that's kind of similar to the way that we'd load any other data, right?

Speaker H **00:21:17**

Correct.

But this is unstructured data. So I'm going to guess that there's some additional processing we're going to need to use to do before it will be searchable, right?

Speaker H **00:21:25**
Exactly. And the first step is data chunking, okay.

Speaker G **00:21:29**
And chunking is breaking the text down into smaller pieces of text, is that right?

Speaker H **00:21:34**
Well, uh, what you described is a very common and basic chunking method. There are many other chunking strategies which play a very important role in the quality of search, right? So instead of only the basic chunking, we also introduced advanced chunking. So we bring in the um, enriched and augmented chunk with extracted and summarized information. So one example for you, like, what question can be answered by this chunk?

Speaker G **00:22:04**
Oh, okay. And then after chunking, what happens next?

Speaker H **00:22:09**
Yeah, so after chunking, we are going through further data transformation, right? To make it searchable. So now on, um, data cloud, we support a hybrid search, right? Which means we combine the best out of the vector search as well as keyword search. So let's talk about vector search first. The chunks are going through a embedding model, and this is where we vectorize the data, which means we convert the text into numerical vectors, which has a semantic meaning, okay?

Speaker G **00:22:40**
And so semantic, that means we can search by meaning in addition to our lexical search, which is searching by keyword, right?

Speaker H **00:22:46**
Exactly right. So the vectors generated from our m embedding model is going to be saved in the vector database on, um, data cloud. And uh, at the same time as we talked about, chunking also goes to our keyword search algorithm. So landing here. So one more thing I do want to mention is we are also going to bring in knowledge graph, which is going to handle more complicated and complex data and uh, search queries. So let me put a dotted line since this few knowledge graph.

Wow.

Speaker A **00:23:27**
Okay.

Speaker G **00:23:27**
So we're going to have a lot of different ways to do these searches and then hybrid searches altogether as well. So, okay, so that's getting our data into the database to make it ready to be searchable. Let's think about what this is actually going to look like for a user, though. So let's say we've got one of our agents, like sales coach or service agent, and we've got a user that asks a question, what's going to happen next?

Speaker H **00:23:50**
All right, based on the question and um, the context, the agent is going to leverage his powerful reasoning engine to identify the topics and, uh, actions.

Speaker G **00:24:09**
Okay? So we've got our, uh, context, our topics and our actions. And then how are we going to determine what specific data, uh, to use though from here?

Speaker H **00:24:19**
Oh yeah, there are so many different ways to get that. And we recommend using prom builder. This is where you already be able to connect your CRM data and your business data and unstructured data from data cloud. So, yeah, so we are going to use a prompt template here, identify which structured and unstructured, uh, data we are going to use along with the instructions.

Speaker G **00:24:40**
Okay, so retrieving structured data seems pretty straightforward from CRM because it's going to be similar to how we'd retrieve it in a flow, for example, like declaratively. Right?

Speaker H **00:24:50**
Correct.

Speaker G **00:24:50**
What about retrieving this unstructured data?

Speaker H **00:24:54**

Great question. So when the agent identifies the topic and actions earlier, it also constructs a search query. The search query are going through the retrievals, which calls the query service on data cloud, fetching the most relevant chunks based on the incentive relevancy across vector, keyword and future knowledge graph.

Speaker G **00:25:16**

Okay. All right, so we've got our prompt template and it's got the prompt, it's got the structured data and the unstructured data that we've combined together. And so the next step from here is we're going to augment our prompt, is that correct?

Speaker H **00:25:31**

Yes. All right, so the augmented prompt is going to be sent to large language model through our agent and then generate a final response.

Speaker G **00:25:44**

Okay. All right, so if we take a step back here, we've got, we're retrieving our data, we're augmenting our prompt, and we're generating a response. So we've got retrieval augmented generation, is that right? Okay, but we're not done still, right? Because once that generation comes back, we still have some additional things that we're going to want to do.

Speaker H **00:26:06**

Is that, uh, right, correct. Once the generation comes back from the large language model, our user will have the ability to give a feedback. Right. So how relevant and what's the quality of the feedback? And we save all of this feedback in data cloud, as you heard from Senna and Srinivas earlier, the same feedback is going to be available for you. Not only that, we also save the entire data exchange in the feedback table. So later you can use the salesforce report to audit the interactions.

Speaker G **00:26:38**

Nice. So we can exchange the end to end, uh, exchange between the users and the LLM, and we can audit everything using Salesforce reports. That's awesome. And that is how you build efficiency into your AI based automations.

Speaker A **00:26:54**

Right.

Speaker G **00:26:55**

Thank you, Claire. And I'll throw back to Zane.

Thank you so much, Tom. And thank you Claire. And Claire's going to come back to answer your questions at the end of the keynote. But I love seeing not just the fact that we can audit, we saw that as part of the trust chapter, but the fact that the entire transaction is saved. So the whole reason that we're building these agentic experiences is to in theory, drive a business outcome. And you can report on that, you can audit that, you can hold your models accountable, your agents accountable for their business value, which I think is truly transformative. But we're not done because you need to know how your solutions can truly keep transforming. We talked a lot about how Salesforce has been transforming, but how are you going to be truly adaptable today and tomorrow? Well, I've got a friend and a colleague, Justin Piehowski, lead architecture evangelist at Salesforce, and he's going to talk to us about how. Take it away, Justin.

Speaker E

00:27:50

Awesome. Well, thanks, Zane. Right now I'm thinking back to 2011, my boss called me into his office and said, justin, I'm going to buy this salesforce thing. Do you think you could set it up for me? I figured it out, I loved it. And just a year later, I decided to pivot my career towards becoming a Salesforce architect. So what a thrill it is for me to be up on this stage, in this room at this keynote with all these incredible salesforce architects. So as architects, we have a lot on our mind. Things like incident response, how are we going to react when things don't go as planned? Continuity planning. How will the business go on in times of crisis? And package ability, how do we build and develop independent functionality that can live on as a package? So when it comes to being adaptable in the well architected framework, we usually break it down into two sections, resilience and composability. And the good news, architects, is that Salesforce has several innovations coming that are going to help you be more adaptable. Okay, so first I want to call out scale test load generation. So we all know about scale tests. Little clunky, little bit of a black box. Well, now as part of your testing strategy, you can do your scale tests right within the context of Salesforce. But testing is just the beginning. Now we have to deploy right? And that's where data cloud second generation packaging comes in. You can now build data cloud apps using a source driven approach. And finally, do I even need to say it? It's like it's jumping off the screen at you. Data cloud sandboxes. I knew you'd be excited for that one. All right, want to take a look at how release management is going to work? All right, great. So, um, you're just about to see, uh, my peers come out again and work on this um, but first I want you to get your phone back out, if it's not already out. Go ahead and scan the QR code. Um, because as we go through, uh, this work here and you see how data cloud and CRM release management works, we want your questions. Our panel will be out here in just a few minutes. All right, so let's take a look at the future of release management in data cloud and CRM. Susanna, back to you at the light board.

Speaker C

00:30:46

Thanks, Justin. So I am here for our final light board demo. Um, and I have a very special

guest with us, Ching Ching Liu. Hey, Ching Jing, how are you here? So if you don't know Ching Ching, she's been with Salesforce, an architect working on a lot of our amazing products. Started with Salesforce one, I believe, on our mobile team. And now we're lucky enough to have her working on our data cloud products. So we are going to talk about, as Justin said, all about your alm with CRM and data cloud because data cloud sandboxes are really exciting. I think a lot of folks have been waiting for them for a while, but we want to get into the nitty gritty of how you're actually going to use them and set them up. So I'll set the scene. We have our production, we have CRM with lots of data, lots of metadata, and we, of course, have data cloud in our production. Just an important thing to point out, right? You can't use those data cloud sandboxes if you don't have data cloud in production. Correct. And there are a couple of steps that we're going to need to take before we provision our sandbox to make sure that it's ready. So what do we need to start with?

Speaker I **00:31:47**

So the first thing you want to do is turn on the sandbox, data cloud feature in your production. It's an important thing to do before you provision your sandbox.

Speaker C **00:31:55**

Makes sense because if we don't do this, when we provision, we're not going to have all those data cloud sandbox.

Speaker I **00:32:00**

Exactly.

Speaker C **00:32:00**

Okay, so we've done that. Now we're going to provision our sandbox. And this works just like you would provision a sandbox even if you didn't have data cloud. But when you provision, since we're using a full sandbox for CRM, we of course are going to have our full set of data that comes over. We are going to have our metadata and no surprises here. Right? This is working as expected. But what happens with data cloud sandboxes?

Speaker I **00:32:29**

Okay, with data cloud sandbox, there are a few additional steps you want to do. So the first thing you want to do is you want to activate your data cloud in your sandbox. And after you do that, all the metadata that you copied from your production to a sandbox.org will start appearing.

Speaker C **00:32:49**

Got it? So metadata like our data streams and our connectors.

Speaker I **00:32:53**

Exactly. And then that's just metadata. The next thing you want to do, you want to authenticate your connector so that you can start ingesting data from various data sources, like your CRM data source into your sandbox. That's when the data start to appear.

Speaker C **00:33:10**

Awesome. And I'll pause here because folks might be wondering, is this a feature? Is it a bug? Why is it working this way? Why do I have to take that extra step? So why did we build it this way?

Speaker I **00:33:20**

So let me first make it official. It's not a bug. It's by design. Okay. The reason we choose to do that is we want to give the customer the choice, the decision on, uh, what data is for the testing on sandbox and for you to choose which connector you want to authenticate to start ingesting the data.

Speaker C **00:33:37**

That makes sense. So why don't we introduce another factor into, um, this scenario that we have. So imagine a lot of customers, uh, might be using a tool like data mask. We have requirements, um, sometimes where we might need to anonymize or pseudo anonymize our data in a sandbox so that when we open it up to developers, maybe a, um, partner, they're not getting access to the actual customer data. So if we were using data mask, which we would have installed in production, where would this fit in with our data cloud sandbox?

Speaker I **00:34:10**

Okay, how that fit in is once you turn on the data mask on production and you provision the sandbox, you want to run the data mask process on your sandbox before you authenticate the connector because that's when you trigger the data ingestion. If you do that step, all the data ingested from your CRM.org into your sandbox will be best as you want it.

Speaker C **00:34:32**

Got it. So that's a perfect example of why we designed it this way. Exactly. Okay, so now our sandbox is ready for us to create some new metadata in. So I'm going to first make sure that I have DevOps center because I'm following well architected best practices and

using not based development, but I'm using source based development. So I'm going to go ahead and create my work item in DevOps center to track all of the things that we're going to create. So what should we build today?

Speaker I **00:35:01**

Okay, so let's build up a good data cloud, um, feature here. So first thing, let's create a new data stream. We'll ingest from some new, bring your own lake data stream, bring your data in. We'll then create, say, a new calculated insight to get some insights into the new data we're ingesting. So after that, let's go to the CRM side to create a data cloud trigger flow that it will be actionable based on the changes in your calculating insight. We'll also create some LWC components to display the insight right onto contact record home.

Speaker C **00:35:34**

I love that.

Speaker I **00:35:35**

Cool.

Speaker C **00:35:35**

So once we've tested it, right, we're going to test it, make sure it's working as expected in our sandbox when we're ready to add it to our work item. What do we need to do to get this all added?

Speaker I **00:35:46**

Okay, so the first thing that you want to do for the data cloud metadata is you want to create a data kit that wraps around all your data metadata that manage the dependencies. In this case, the kathling site, depend on the data stream and the DMO maps to. And then you go to the CRM site and add the CRM metadata, as you normally do, into the work item.

Speaker C **00:36:07**

Awesome. And then once we do, we're ready to go ahead and deploy from source, right? We're not deploying from to here. And just like that? Just like that, we've adapted our alm to use CRM and data cloud sandboxes. Back to you, Zane.

Speaker A **00:36:25**

Thank you so much, Susanna.

Thank you.

Speaker A **00:36:27**

Ching ching. I know. Surprise. I'm over here. What will happen next? I love seeing that in data cloud, dependencies are going to be managed for you. I don't know any of my other packaging friends out there, but it's going to be nice to have a little bit of backup, right? Yeah, I heard the woots. Yes. That's awesome. So in a moment, our experts are going to be back because we've had an action packed day looking at all across the principles of, well architected, the tactics and the technology that you're going to use to bring this to life. And I'm going to welcome five very special experts to the stage in a moment. But at first, last second to scan the QR code. Get it now, because we're about to transition to an amazing panel, we're going to welcome back Srinivas and Ching Ching and Claire. So they're going to come, um, up to the stage and thank you, Susanna, for making sure nobody gets lost on the journey from the light board. And we're going to also welcome up two new special guests that you haven't seen yet today. Please welcome Srini Talapargata, chief engineering officer of Salesforce. Welcome to the Archicad keynote, Srini. And of course, beside him is Doug Scott, whose title may be EVP availability engineering at Salesforce. But I want to tell you a little bit about Doug because he's an 8th year veteran of Salesforce and he was an architect leader and a product leader on things you might have heard of called, like, I don't know, the app exchange, the force.com platform. So we are very honored to have you with us today. Doug, welcome to the keynote. Okay, so not only have all of you been sending questions, but some architecture leaders from the community have gotten a few sneak peeks and they've been working on some questions for the expertise. And I happen to be standing right next to one of those leaders in the community. Hi, Krist.

Speaker J **00:38:20**

Hello.

Speaker E **00:38:21**

How are you doing?

Speaker A **00:38:21**

I'm good. You're gonna take this mic so that we can all hear you. So this is Christ, Valentin, and why don't you tell us a little bit about your role in the community, what you do, and, um, who's your question for?

Speaker G **00:38:31**

Yes. So I'm a technical architect with cognizant. And my question is for Claire. So, Claire, retrievers look pretty cool.

Can you tell us more about the.

Speaker G **00:38:44**

Process for creating retrievers in data cloud and what else they could be used for?

Speaker H **00:38:51**

Sure. Uh, first of all, it's working like a magic. This is not a joke. A retriever is going to be automatically created when you generate a search index on data cloud. You can customize it and use it in many different ways. For example, you can use it in prom builder, just like how you choose the CRM record or flows from the resource picker, you will be able to see Einstein search. That's the retriever. And you can customize which field you want to filter by and how many results you want to return. You can also use the retriever in your code or in your flow.

Speaker A **00:39:32**

That's awesome. I love that control. It'll be right available in the builder experience as well. That's really powerful. I happen to be standing next to another leader. Shelly, you want to stand up? So, Shelly Souza, welcome to the architect keynote. Why don't you mention what it is you do? And, um, who's your question for? My name is Shelley Sousa. I'm an enterprise architect with Cobank and my question is for Srini. So we're now starting to understand and see what we can do with AI agents and how we deploy them. What should architects stop doing in the era of AI agents?

Speaker J **00:40:07**

It's a great question. Um, so what I think definitely is what you shouldn't stop doing is following the well architected principles. That definitely has to happen. Uh, I think like any other paradigm shift, um, what you have to remember is like previously, you should let the LLMs or the reasoning engine do lot more of the heavy lift. If any of you have been using copilots, you know, either the developer assistant or anything you learn, you know, you need to do try to. This is a new pattern, uh, of programming. And so what you should stop doing, I think as architects is to say, hey, it's like the previous question was on retrieval. There are some things which previously you had to write all these SQL queries and like, you know, some of those we don't need to do. It's little bit like, hey, when we started high level programming like Java, nobody does Malloc or like, you know, releasing memory and all, like, you understand, like, so similarly. So what I want you to understand, what you shouldn't do is try to apply the same paradigms with the new tool. The way you do that is a follow the architectural principles. The same concepts happen, but you apply them differently. And the best way to do that is to play around with the tool, with agent force and then link it. That's what I would suggest.

I love that. Don't be afraid to let go of some of the old ways and lean into the new. I'm standing next to Jillian Reynolds. Hello, Jillian. Welcome to the keynote.

Speaker H **00:41:40**
Thank you.

Speaker A **00:41:41**
Uh, why don't you tell us a little bit about yourself and who's your question for?

Speaker C **00:41:44**
Yes, I'm Gillian Reynolds. I am a salesforce CTA and I'm an enterprise architect with. And my question is for Ching Ching. Um, can you share with us some specific things that you think that we as architects should be thinking about right now as we're designing DevOps workflows that include data cloud?

Speaker I **00:42:03**
Yeah, I would say, um, the first thing that, um, as Zane just said, that is remember to use Datakit. Datakit is your friend here where we will essentially. Currently we only support change set, but we are planning to support, um, um, better kind of spider and dependency so that we manage the deployment sequence and dependency for you and have that wrap around all the data method, including retrievers and search indexes so that you can manage the exact change deployment you wanted.

Speaker A **00:42:32**
Excellent. We have an audience submitted question, and this one is for, I will say expert Srini, are there considerations for data cloud and CRM security in a multi.org scenario?

Speaker J **00:42:44**
Thank goodness. It's much training.

Speaker D **00:42:47**
It's a very interesting question. So with data cloud one, what we made, uh, is that we understand that most of our Salesforce customers have multiple orgs. So with data cloud one, you can connect the same data cloud instance to multiple Salesforce orgs. And then you can use this data cloud instance to put all your data in, harmonize this data, and then you can segregate this data, as I mentioned before, into data spaces. And then you can share these data spaces back to your uh, individual orgs. And before that you can do all the tagging and all of those things that will flow along with this. And then once the data space is shared with your orgs, you have different users in these different orgs. So you

define policies granting access to these different users in your orgs.

Speaker A **00:43:36**
So with data cloud, truly it can be one shared data cloud, but with the privacy and filtering and segmentation that you need across that multi.org scenario.

Speaker D **00:43:45**
Exactly.

Speaker A **00:43:46**
That's amazing. Uh, we have another audience filtered question. That's why I have my phone out. And this one is for Doug. Doug, what keeps you up at night in an era of AI agents and salesforce architecture? Uh, short answer, shrinny, but um, long.

Speaker J **00:44:03**
Answer, I'm sleeping well, because Doug is here.

Speaker A **00:44:08**
Obviously there's like protecting the data at the boundary, outside the boundary, processing it for bias, toxicity, ethics, hallucination, all those things. But I actually feel pretty good about where we're at right now, uh, from a industry standard wise, but also salesforce, I think that the tools are there. So actually shrinking does keep me up. So when he was talking about the new things, you need to think about in terms of allowing the machine to run, that is absolutely accurate. But on the flip side, you have to audit. Mhm. Get the feedback, validate that it's working appropriately so that the model is true and proven and continues to improve. And I think a lot of what we'll find down the road as we progress through this journey is about data quality. That the input is going to affect the output, the input to the prop is going to affect the output of the response and the quality of data that we're feeding the LLMs will also play into that heavily. Um, so keep an eye on it.

Speaker J **00:45:07**
Yeah.

Speaker A **00:45:08**
We have one last audience submitted question, and this is for executive Srini. Srini, any speculation on things that agents might be able to do that we aren't even thinking about yet.

I think it's a great question. Um, you know, uh, one of the privileges I have is work with different great teams. And then usually I spend Fridays in Palo Alto with our AI research team and every Friday my head gets blown because I'm thinking, oh, everything I thought I knew is totally changing again. First of all, I would encourage all of you to see the Salesforce AI research blogs we published. Most of it. The thing which is happening, um, the way I think this is going to happen is the tagline for the conference with humans, with AI agents, agent force brings success together. So what I think uh, is people like me, you know, uh, exec Srinis have a lot of personal assistants. We got coos who are handling it, we got minders doing it. So there are two aspects. Like why does my executive assistant is really good? Because she knows like my preferences, she knows, she's tracking, she understands what works, like how to correct the information and stuff like that. So this is a personal thing, uh, but it also has to have a lot of trust. Then there is organizational agents which are trying to understand what are we learning. What I think we will see is a series of agents. And what you will be surprised is how these agents are coordinating what I call intra or coordination. So if you have bunch of agents, agents trying to allocate to agents, but also agents allocating to humans and humans allocating to agents, that's one. And what I think will really surprise us is how good they are at not only reasoning but also connecting with other intra agency agents outside. I think this is where I think we are simulating actually. Um, and we have published lot of these things. It's still early days, but I think the speed at which the learning curve of these agents is happening and they're learning is what I think is going to surprise us.

Speaker A **00:47:25**

Sort of autonomous networks growing across humans and agents and throughout the enterprise.

Speaker J **00:47:30**

Yeah. And the subtle thing which all of this is still, this is why the architectural principles, if you really look at, if you follow the APIs, if you expose a good API catalog and I, so some of those basics which are things, separation of duties and all that is why I'm saying the basic architecture principles will work. Maybe you won't write so many if then else statements correct. So I think as architects one of the, especially this group has to understand some of the basics of separating all your functionality into these business chunks with self contained, repeatable reentrant code and pieces, expose them into catalogs and let the agents do some of the heavy lifting in terms of reasoning and all. And I think that's where this is going.

Speaker A **00:48:17**

I love let agents do some of the heavy lifting. You heard it here. So if we didn't get to your question, thank you, panel. Don't go anywhere. If we didn't get to your question, don't

worry, because you're going to be able to bring home everything you've seen today. First of all, we have another QR code for you. This is a little gift. It will take you to architect dot salesforce.com. all of the diagrams that you saw our experts building over the course of the day today, they're for you. You can take them home. You can get your whole team on the same page on, um, what the architecture realities are. So that's there for you. And the other gift will be coming in the next few weeks, all of the questions that you've submitted. We're going to continue working with our experts and across our team to answer your questions on YouTube and LinkedIn live and the architect blog. So stay tuned. We're going to answer all of your questions. Thank you so much for joining us here. We hope you have an amazing dream fest tonight and an amazing rest of your dreamforce. Take care.