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Head in the Clouds, Feet on the Ground. Modernizing Enterprise IT with Cloud Integration Technology

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[Slide# 1, 2, 3, 4]
Title slides

I'm Zeb Mahmood. I'm responsible for Product Management & Strategy at a company called, SnapLogic (www.snaplogic.com). SnapLogic is based out of the Silicon Valley. We're funded by Andreesen Horowitz. And our founder is Gaurav Dhillon. Gaurav is well known by his previous venture, Informatica that he founded in the 90's and is now a 2 billion dollar company. SnapLogic is in the business of Cloud Integration.

And today, I will talk about firstly why we need to modernize the integration middleware space. What's pushing us to look outside the traditional integration technologies. And then I'll talk about how to address the problem. So let's get going.

[Slide# 5]
Going green. Everybody is either going green, or wants to go green. Because it is the right thing to do. However, if going green means that you waste less energy, conserve natural resources, and reduce the pollutants that you create. Then by immediately replacing your SUV with a Prius, or replacing your Edison bulbs with energy savers… Replacements, replacements, replacements! In the short term, replacements, in fact, are bad for the eco system… Your SUV ends up in a landfill. Factories use energy to build energy saving appliances for you. So if going green meant saving money or helping the environment, you've exactly done the opposite.

However, in the long term all these things do make sense. Right? I think we can all agree to that point.

Now, to me, moving your systems from on-prem to the cloud is like going green. If the current on-prem systems work just fine. Your most economic strategy is to just maintain those.

But moving to the cloud has long term benefits! Of course it does. And I'm not going to get into the details of why. Just wanted to point out the eventual conclusion

[Slide# 6] Cloud forecast
In the foreseeable future at least, most enterprises are going to be a mix of on-prem and cloud. And therefore, it is absolutely critical that you have data shared across these very different systems.

[Slide# 7] STATE OF THE UNION
So let's see what's keeping the IT architects awake at night? What's happening in their current setup that's so problematic? What's changed in the IT landscape as far as data integration is concerned?

[Slide# 8] Traditional On-Prem applications
The traditional on-prem applications of the 90's were CRM, ERP, eCommerce, PLM… and so on. I know I have MDM in their as well. Which really came to light in 2000's but the point is that is its style, it resembles the enterprise applications of the 90's.

So these applications were being integrated with specialized integration middleware technologies like ETL, EAI, ESB… in fact, mostly a combination of all of these.

[Slide# 9] Inside ETL/ESB/EAI
All of these were built for integrating applications that preferred batch jobs, at scheduled times, exchanging structured data

For example, in the IT department of a grocery retailer, a nightly job that extract product attributes from an ERP system and loads them into the MDM system. The data attributes are structure data. Products have SKU, Name, Ingredients, and Price i.e. a scheduled nightly job, transferring structured data.

[Slide# 10] Enterprise Cloud
The vendors targeted the business owners. The LOB. Not the IT guys. So the initial investment was in building product

functional capabilities and very little attention was given to having data from these applications shared with other on-prem, or even other cloud applications.

I'll give you an example, SuccessFactors, which was acquired for what a billion or so by SAP. Great product, but did not have an API till about a year ago. The integration was through bunch of CSV files.

[Slide# 11]
And those that do provide integration e.g. SFDC. They rollout of 3 releases a year!! Unheard of in the traditional on-prem world. How do you expect IT to keep up with that?!

[Slide# 11] Consumer Cloud
In mid 2000's the consumer cloud became popular. It made penetration into the enterprise. Companies today want to track how many LIKEs they have on their FB page. And even if you don't agree with value of that. Think of amazon's consumer reviews. No one can question the value of consumer reviews to the vendor's business. It's an excellent excellent insight into what your customers are saying about your product that directly and immediately impacts your sales.

[Slide# 12] 3 V's of consumer data
Volume – peta bytes!
Velocity – streaming rates
Variablity – not structured at all!

Remember, traditional integration technologies don't work so well with unstructured data and that too streaming.

[Slide# 14, 15] Big Data
Kind of related to the previous one. But when I say Big Data here, I mean mostly machine generated data. That no human being can possibly analyze with traditional BI tools.

Today, inspite of all the hype Big Data is still in its early stages. What most companies have done is that they've started capturing Big Data in Hadoop. What they have not done much about is what to do with that Hadoop cluster!

[Slide# 16] Requirement: Share data

[Slide# 17] Spaghetti
Sure you can integrate using traditional technologies. Sure you can just build custom inetgrations. Hand coding. But you end up having a spaghetti mess.

[Slide# 18] DISLIKE
Several point to point integrations. And these are inflexible integrations. When Salesforce.com and other cloud vendors are rolling out 3-4 releases a year, these integrations go out of date before seeing the light of the day!

[Slide# 19] Inside DISLIKE

[Slide# 20]
What went wrong?

[Slide# 21] Hand coding

[Slide# 22] Traditional integration technologies
like ETL, EAI, ESB are expensive, point to point solutions. Hard to maintain.

[Slide# 23] Say NO to hand coding, and NO to usage of traditional integration tools

[Slide# 24]
Sure for some integrations these tools are still the best option. But for most integrations that go across, like on-prem to consumer cloud etc. These don't make sense!

[Slide# 25] A short story about St. Paul's Cathedral….
The current structure was built 300 yrs ago. It has withstood test of time. It survived the German bombing in WWII.

But today's IT architects don't have the time to build such structures. And more importantly, such structures are not needed anymore. By the time you get done building the structure the user requirements have changed.

Today's IT needs Lego blocks. Build quickly whatever it is that you like using Lego blocks. Modify, extend, as needed quickly and easily. Respond to the user needs immediately!

[Slide# 26]

So what to do? Let start talking about the solution now.

[Slide# 27] Cloudify your data!

[Slide# 28]
In between the lines what I'm suggesting is that you have an integration platform that works for all these variations of data.

[Slide# 29] Project: CLOUDify
On one side you have the traditional on-prem systems. Your ERP, CRM, PLM, MDM systems.

On the other side you have the cloud systems. SFDC, NetSuite, Taleo, RightNow, Twitter, Yammer

[Slide# 30] On-prem integration options
For the traditional systems the most common integration options are: Database, file access, or API.

[Slide# 31] Cloud integration options
Web Services: SOAP, REST
File based: ftp pver a csv, xml, or json file

[Slide# 31] About REST

[Slide# 33] Plan for the journey ahead

[Slide# 34] Enterprise architects checklist
There are a few things that you must look for when selecting the new integration technology that you choose. Or build for that matter.

[Slide# 35] Loosely coupled connectors
I worked at IBM for 8 years. We used to have our product releases that were 9-18 months apart. And that was fine. It still is. No one rollsout upgrades to platform more frequently. But integrations can not wait that long. So you must have connectors as pluggable components!

[Slide# 36] More on connectors: SDK
No vendor can keep up. What's needed is an SDK that can be used to develop and extend the connectors that eco system.

[Slide# 37] Re-usable integration patterns

IBM is replacing Siebel by SugarCRM

[Slide# 38] Elasticity
It’s the nature of the cloud!

[Slide# 39] Monitoring
Across systems!
Prevention and detection.

[Slide# 40] Value added services e.g. API calendar

[Slide# 41] Features of traditional integration technologies
- Data formats
- Protocols: Old and new
- Security: Web based authentication like OAuth
- Granular deltas
- Event based scheduling

[Slide# 42, 43, 44] Go forth and CLOUDify!

[Slide# 45] Data Sharing across the enterprise
On-prem — Cloud — Big Data
Share data that is location, implementation and format independent

[Slide# 46] LIKE
Makes everyone happy!
Less pain for the IT guy.
More gain for the business!

[Slide# 47-52] Go around the peace sign
No matter where the data comes from. What it looks like. Or where it resides. It can, and should be shared across the enterprise!

[Slide# 53] End result: Peaceful co-existence of all the different style of data.

[Slide# 54] End slide.