In the pre-cloud era, hardware companies would run benchmarks showing how database and application performance ran best on their systems relative to competitors and previous generation boxes. They would make a big deal out of it and the independent software vendors would do a “golf clap” in the form of a joint press release. It [...]

In the pre-cloud era, hardware companies would run benchmarks showing how database and application performance ran best on their systems relative to competitors and previous generation boxes. They would make a big deal out of it and the independent software vendors would do a "golf clap" in the form of a joint press release. It was a game of leapfrog amongst hardware competitors that became pretty commonplace over the years. The Dell-Snowflake deal underscores that the value prop between hardware companies and ISVs is changing and has much more to do with distribution channels and the amount of data that lives on-prem in various storage platforms. For cloud-native ISVs like Snowflake, they are realizing that despite their cloud-only dogma, they have to grit their teeth and deal with on-premises data or risk getting shut out of evolving data architectures.

In this Breaking Analysis we unpack what little is known about the Snowflake announcement from Dell Technologies World... and discuss the implications of a changing cloud ecosystem landscape. We’ll also share some new ETR data for cloud and database platforms that shows Snowflake has actually entered the earth’s orbit when it comes to spending momentum on its platform.

**Frank Slootman – Will Snowflake Architect for On-Prem?**

Before we get into the news, here’s Frank Slootman’s answer to the question as to whether the company would ever architect Snowflake to run on premises:

> Forget it, this will only work in the public Cloud. Because this is how the utility model works, right? I think everybody is coming to this realization. I mean excuses are running out at this point. We think that people will come to the public cloud a lot sooner than we will ever come to the private Cloud. It’s not that we can’t run on a private cloud, it just diminishes the potential and the value that we bring.

[Listen to Frank Slootman comment on running Snowflake on-premises].

So you may be asking how do you square that circle because basically the Dell-Snowflake announcement is about bringing Snowflake to the private cloud, isn’t it?

Or is it?

Let’s dig in and find out.

**First, the News...**
Here's what we know. At Dell Technologies World, one of the more **buzzy announcements** at the very well attended conference (about 8,000 people or more by our rough estimates), was Snowflake will run analytics on non-native Snowflake data that lives on-prem; in a Dell object store. The storage will be Dell’s ECS to start with and eventually its software defined object storage.

Snowflake’s Clarke Patterson describes how it works:

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**So we’ve had in Snowflake a capability called external tables which we refer to, it goes hand in hand with this notion of external stages. Basically through the combination of those two capabilities, it’s a metadata layer on data wherever it resides. So customers have actually used this in Snowflake for data lake data outside of Snowflake in the Cloud up until this point. So it’s effectively an extension of that functionality into the Dell on-premises world, so that we can tap into those things. So we use the external stages to expose all the metadata about what’s in the Dell environment. And then we build external tables in Snowflake so that data looks like it is in Snowflake. And then the experience for the analyst or whomever it is, is exactly as though that data lives in the Snowflake world.**

[Listen to Snowflake’s Clarke Patterson describe how the Snowflake Dell solution works].

As Clarke Patterson explained, this capability of External Tables has been around in the cloud for a while — mainly to suck data out of cloud data lakes. Snowflake External Tables use file level metadata like name of the file and version...so it can be queried in a stage, which is just an external location outside of Snowflake – could be an S3 bucket or an Azure blob...and soon a Dell object store. Using this feature, the data looks like it lives inside of Snowflake. And Clarke is essentially correct that to an analyst it looks exactly like the data is in Snowflake – but there are tradeoffs.

The data is read only. Which means you can’t do DML operations – DML stands for data manipulation language - and allows things like inserting data into tables, deleting and modifying existing data. But the
data can be queried. However, the performance of those queries to External Tables will almost certainly be slower...users can build materialized views which will speed things up but at the end of the day it’s going to run faster in the cloud. You can be almost certain of that.

Sometimes organizations can’t or won’t move data into the cloud for a variety of reasons, like data sovereignty, compliance, security policies, culture...whatever. So with this solution, data can remain in place on-prem or it can be migrated into the public cloud for the full cloud native Snowflake experience.

What About the Compute Layer?

The compute today will be done in the public cloud. They really didn’t talk about the compute side of things. Remember one of Snowflake’s early innovations was to separate compute from storage so that you could more efficiently scale with unlimited resources when needed. And you can shut off the compute when you don’t need it. And everyone has copied that, including AWS with Redshift – although as we’ve reported not as elegantly. Redshift uses more of a storage tiering solution to minimize the compute required – but you can’t shut it off. And companies like Vertica with Eon mode have enabled this capability to be done on-prem. But of course you don’t have unlimited elastic compute scale on prem.

With solutions like Dell APEX & HPE GreenLake you certainly can start to imagine the ability to simulate cloud elasticity on-prem. Not full public cloud elasticity but it starts to get you there.

According to a Dell-Snowflake statement, “the companies will pursue product integrations and joint go-to-market efforts in the second half of 2022.” So that’s a pretty benign commitment from the two firms. But we’re left wondering...will Dell develop an on-prem compute solution and enable queries to run locally? Maybe as part of an extended APEX offering. We don’t know...not sure there’s even a market for that but it’s probably a good bet that Snowflake wants the data to ultimately land in the Snowflake Data Cloud. And if Dell can build a compute capability on prem to speed up queries it may further incentivize organizations to keep data in place. As well a set of standards to enable self-service infrastructure and federated governance will support distributed data architectures of the future.

What Were the Deal Dynamics?

It makes you wonder how this deal came about. You heard Slootman earlier saying “forget it” when we asked him about architecting for on-prem. And Snowflake has always been pretty hard core about getting data into its native Snowflake format to enable the best performance, data sharing and governance. But you can imagine that data architects are building out their data mesh and data fabric visions and they’re probably telling Snowflake – “hey if you want to be a strategic partner of ours you’re going to have to be more inclusive of our data that for whatever reason we’re not putting in your cloud.”

So Snowflake has to hold its nose and capitulate. The good news is it further opens up the company’s TAM. It’s also good messaging posture to convey inclusion of all data and ultimately it provides an on ramp to the cloud.

We’ll come back to that shortly.

Data Platform Performance Inside Dell Accounts

Let’s look a little deeper into what’s happening with data platforms. And to do that we’re going to bring in some ETR data and filter it by Dell accounts. There are 576 Dell accounts in the latest ETR survey.
Notably, as companies like Dell, IBM, Cisco, HPE, Lenovo, Pure and others build out their hybrid clouds, the cold hard fact is not only do they have to replicate the cloud operating model, but in order to gain flywheel momentum, they need to build a robust ecosystem that transcends their proprietary portfolios. The truth is these on-prem as-a-service offerings are barely into the first inning. And for the likes of Snowflake, they’ve had to recognize that not everything is moving into the cloud. So this is in our view an important first step.

One of the big areas of discussion at Dell Tech World was APEX, Dell’s nascent as-a-service offering. APEX is essentially Dell’s infrastructure-as-a-service cloud. And it’s no secret that database is one of the most important ingredients of infrastructure generally and cloud infrastructure specifically. This chart above shows the ETR data for data platforms in Dell accounts.

It’s a two-dimensional graphic with Net Score or spending momentum on the vertical axis and what ETR now calls Overlap – formerly Market Share – which is a measure of pervasiveness in the survey. The red dotted line at 40% represents highly elevated spending. The table insert shows the raw data for how the dots are positioned.

Snowflake Finally Comes Back to Earth

The first callout here is Snowflake. According to ETR:

After 13 straight surveys of astounding Net Scores, Snowflake has finally broken trend with Net Score dropping below the 70% mark among all respondents.

Now as you know, Net Score is measured by asking customers are you adding the platform new (that’s the lime green in the bar pointing from Snowflake in the graph); are you increasing spend by 6% or more – that’s the forest green; is spending flat (the gray); is your spend decreasing by 6% or worse (pinkish); or are you decommissioning the platform (bright red, which is essentially zero for Snowflake). Subtract red from green and you get Net Score.

Now what’s somewhat interesting is that Snowflake’s Net Score overall in the survey is a 68 – still huge –
but its Net Score inside Dell accounts, drops to the low 60’s. Nonetheless. This chart tells you why Snowflake. Its highly elevated spending momentum combined with an increasing presence in the market over the past two years makes it a perfect initial data platform partner for Dell. As well, Snowflake’s presence in Dell accounts is below the Snowflake average which gives Snowflake an incentive to capture more Dell customers and expand its TAM.

Dell & HPE’s Battle for As-a-Service Relevance

In the Ford versus Ferrari dynamic going on between the likes of Dell’s APEX and HPE’s GreenLake, we believe database deals are going to become increasingly important. Beyond what we’ve seen with this recent Snowflake deal.

Notice by the way in the chart above, HPE is on this graph with its acquisition of MapR, which is now HPE Ezmeral. But if these companies want to be taken seriously as cloud players they need to further expand their database affinity to compete. Ideally spinning up database as part of their superclouds that span multiple clouds and include edge data platforms. We’re a long ways off from that but Mongo, Couchbase, MariaDB, Cloudera, Redis...should be on the short list. And why not Microsoft. And what about Oracle?

To be continued in a future Breaking Analysis.

But we’ll leave you with this thought on the topic. There are many people, like John Furrier, who believe that Dell is playing with fire in this Snowflake deal because he sees it as a one-way ticket to the cloud. Here’s what he said this past week on theCUBE:

> Well, I mean, I would say that that’s a dangerous game because we’ve seen that movie before, VMware and AWS.

>> But don’t you think that was the right move for VMware John?

> At the time, but if you don’t nurture the relationship AWS will take all those customers, ultimately, from VMware.

[Listen to John Furrier’s warning to Dell about the Snowflake deal].

How is VMware Cloud on AWS Faring in Market?

Let’s take a look at what the data says about how VMware is doing in cloud after its early missteps?
Breaking Analysis: What You May Not Know About the Dell-Snowflake Deal

Above is the same XY graphic – spending momentum on the Y and pervasiveness on the X. Same table insert that plots the dots and the breakdown of Dell’s Net Score granularity at the bottom in the colors.

As usual you see Azure and AWS up and to the right – with Google well behind in a distant third – but still in the mix. So impressive for Microsoft and AWS to have both that market presence and such elevated spending momentum. But the story here is the VMware Cloud on AWS and VMware’s on-prem cloud – like VMware Cloud Foundation (VCF). They’re doing very well in market.

Notice HPE gaining some traction in cloud. And remember – you may not think HPE and Dell and VMware VCF are “true cloud” but these are customers answering the survey so their perspectives matter more than the purest view. The bad news is the Dell cloud is not setting the world on fire – but it’s above the line. And compared to Dell’s overall Net Score of 20, it has some work to do in cloud.

APEX must become the Dell cloud brand – not Dell reselling VMware. And that requires more maturity of APEX, its feature sets, its selling partners, its compensation models and its ecosystem. Including partners that are more than sellers. It has to include more tech offerings in a marketplace-like platform. Lots of work to do in our view and we think Dell is well aware of that.

Look at Oracle just below the magic 40% line – wow. We’ve been telling you for years, you can hate Oracle all you want...its pricing, its closed system all of that...sure. You can say it’s legacy, you can say it’s old and outdated bla bla bla...you can say Oracle is irrelevant and in trouble...you’re dead wrong. When it comes to mission critical workloads, Oracle is the king of the hill. They’re a founder-led company that knows exactly what it’s doing.

The last point is that while Microsoft, AWS and Google have major presence as shown on the X-axis, VMware and Oracle now have more than 100 citations in the survey (see table insert). And IBM had better keep the momentum from last quarter up or it won’t be long before they get passed by Dell and HPE in cloud.

So John Furrier might be right eventually. And we would think Snowflake quietly agrees that this Dell deal is all about access to Dell’s customers and their data so they can hoover it into the Snowflake Data Cloud. But
the data, right now anyway, doesn’t suggest that’s happening with VMware. And by the way we’re keeping a close eye on NetApp who last September inked a similar deal to VMware Cloud on AWS.

Key Takeaways on Dell-Snowflake – Game on in Supercloud

Let’s wrap with some closing thoughts on what this deal means in the context of emerging cloud ecosystems.

We’ve learned a lot from the cloud generally and AWS specifically. Two pizza teams, working backwards, customer obsession, flywheels and marketplaces have all become common parlance and often fundamental narratives within strategic plans, investor decks, and customer presentations. Cloud ecosystems are different. They take both co-opetition and partnerships to new heights.

When we look at as-a-service offerings like APEX, GreenLake and similar services…and hear the vendor noise being made around them we sometimes shake our collective heads ask “which movie were you watching last decade?” We really wish we would have seen these as-a-service offerings roll out in earnest back in 2015, three years before AWS announced Outposts, not three years after. But the good news is that not only was Outposts a wake up call for the on-prem crowd, but it’s showing how difficult it is to build a platform like Outposts and bring it on-prem. Outposts isn’t currently even a rounding error in the market. It really doesn’t do much in terms of database support and other services. And so the hybrid cloud vendors have had time to figure it out.

But now it’s game on. They’re promising a consistent experience between on-prem, into the cloud, across clouds and out to the edge. They call it multicloud — which has really been multivendor. We call it supercloud – a layer that runs on top of hyperscale infrastructure, hides the complexity of the cloud and stretches to the edge. Big vision. That’s going to require intense engineering to build out.

New Partnerships Required

It’s also going to require partnerships that go beyond the portfolios of companies like Dell. To replicate the cloud operating model you will need more and more deals like Snowflake. Not just in database – sure you’ll
need to have a catalog of databases – but also other services that customers can tap. Think about this. Can you imagine a day when Dell offers and embraces a directly competitive service inside of APEX? We find it hard to conceive. Especially thinking about Dell’s historical posture toward competitive partners like Nutanix and Cisco.

But think about how AWS approaches ecosystems. It offers Redshift and Snowflake—side-by-side and it happily does so. The Redshift team probably hates Snowflake…but the EC2 folks love them. Adam Selipsky understands that ISVs like Snowflake are a key part of the cloud ecosystem.

Again, we have trouble envisioning that with Dell or even HPE—maybe less so with HPE. But what’s this imply in terms of the thinking from traditional enterprise players? That the edge will allow companies like Dell to do a reach around on the cloud and create a new type of model that begrudgingly accommodates the public cloud but drafts off the new momentum of the edge? Right now, edge is mostly telco and retail to enterprise hardware vendors. It’s difficult to see traditional enterprise vendors replicating the robust ecosystem of the cloud.

What’s much more likely is companies like Dell will substantially replicate the cloud operating model for the pieces they control…which admittedly are big pieces of the market. But unless they’re able to really tap that ecosystem magic they’re not going to be able to grow much beyond their existing installed bases. Take that new adoption metric from ETR as an example (the lime green in the data charts above). By our estimates, AWS and Azure are capturing new accounts at a rate between 3-5 times faster than Dell and HPE. In the mature U.S. and EMEA markets it’s more like 10X. And a major reason is because of their robust ecosystems and the optionality and simplicity of transaction that brings to customers.

Dell for its part at $100B+ in revenue has the capability to drive that kind of dynamic if it can pivot its partner ecosystem mindset from resellers to cloud services optionality.

We have to be honest and say that feels years away. But the Snowflake deal is a start so we’ll keep watching, analyzing, bringing the data and reporting.

Keep in Touch

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Remember we publish each week on Wikibon and SiliconANGLE. These episodes are all available as podcasts wherever you listen.

Email david.vellante@siliconangle.com | DM @dvellante on Twitter | Comment on our LinkedIn posts.

Also, check out this ETR Tutorial we created, which explains the spending methodology in more detail.

Watch the full video analysis:

Image: koldunova_anna

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