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Sales Pulse Research Update   **December 4, 2018**

BI/Analytics/Big Data - Successful POCs in 2018 to Fuel Growth in 2019

- Machine Learning and AI have been driving interest and a vast number of POCs (Proof of Concepts) have been completed in 2018. Systems Integrators have reported a high degree of success with these PoCs because of advances in tools and because results have demonstrated strong ROIs. As a result of this activity, SIs are expecting accelerated growth in 2019.

- Field contacts indicate that budgets are being approved and end users and SIs are lining up resources to support these expanded production rollouts.

- POCs have included both NoSQL and Hadoop as data repositories. Production rollouts are expected to drive growth for both of these technologies. Legacy relational data bases are also involved in some applications so data base vendors, i.e. Oracle, Teradata, IBM, and others should benefit as well.

- Consolidation of Hadoop leaders Cloudera and Hortonworks has left openings for MapR and the NoSQL players, MongoDB and Elastic, to gain share in 2019. So far, there is no clear leader and Systems Integrators are presenting multiple technical options to clients and working with them to determine the best solution. We are already hearing, however, of some delays in implementation of Hadoop nodes from Cloudera and Hortonworks as end users question the roadmap of the combined companies. Cloudera needs to address this concern quickly to avoid significant disruption to revenue.

- We are monitoring the progress of the various solutions in this segment for indications that a particular technical approach and / or vendor(s) are taking the lead.

- Regardless of the choice of data repository, hybrid cloud is the leading architecture of choice. On-premise deployment is more often chosen for production with replication to the cloud. Microsoft Azure is more often chosen as the IaaS provider. Google's Cloud Platform is often the choice for machine learnings use cases. Solutions Architects expect AWS to lose market share in 2019 in this application segment.

- In addition to software vendors discussed in this update, the acceleration in investment in ML / AI projects in 2019 is expected to fuel growth in storage, cloud and professional services.

Vendors we continue to believe are best positioned include: **SPLK, MDB, ESTC, and AYX**. We still believe that Talend is benefitting, however cloud adoption is impacting their revenue growth (see below).

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Vendors:

Alteryx (AYX)

Citizen Data Scientists are becoming proficient using Alteryx's self-serve analytics platform. Alteryx is allowing marketing and sales teams at client accounts to determine how to target certain verticals, develop new prospect personas, and efficiently track the success of programs. This is facilitating expansion, especially in larger organizations.

SIs often see expansion into new use cases within a quarter or two of an initial implementation. SIs generally provide the services to enable this expansion. Very little help from Alteryx Professional Services is required. SIs are also seeing an uptick in BI and Data Discovery tools, like Tableau, Qlik, and Power BI to visualize new outcomes.

Talend (TLND)

Systems Integrators we spoke with are not seeing a pull-back of projects or slow-down of POCs for new use case testing, however they see that the "cloud first" strategy is leading to smaller deal sizes. Still, enterprise customers can't move all data integration offsite, into the cloud. Most data integration occurs onsite, near legacy databases being converged with new data sources.

The acquisition of Stitch is considered a positive move and should increase Talend's cloud-based data integration deployment. The overall view from SIs is that Stitch provides a value-add to the project portfolio vs. trying to create, from within, a faster way to bring prospects into the cloud for self-serve data integration. SIs generally believe that this acquisition will make it easier to onboard new clients into the cloud and offer valuable Professional Services offerings to deliver this for prospects who don't have the expertise to do this themselves. Stitch's technology is expected to be integrated quickly into Talend's solutions suite in the first half of 2019.

Splunk (SPLK)

Consistent with their recent report, Splunk partners see steady growth and are seeing considerable success with their cloud software subscriptions. Channel contacts are pleased with the support and incentives that Splunk provides for subscription sales and professional services assistance to grow the existing client base. As a typical client grows, they invariably graduate from Splunk Cloud to an on-premise Splunk Enterprise license base and data repository for operational and security analytics allowing the SIs and VARs to benefit from a land-and-expand model.

We are hearing a very enthusiastic response to Splunk 7.2 . This new release allows clients to move to an on-premise repository but leave behind an archive, managed by Splunk, for occasional data retrieval and restoration in AWS S3. Another new feature in 7.2, Smart Store, abstracts the compute and storage resources from indexers. Simply, you don't have to spend on adding indexers, but just add an abstraction layer that more cost effectively increases resources for new use cases. This has addressed the biggest complaint from Splunk customers, the cost to scale. In some cases this reduces expansion costs by 25%-30%. This has gone over well and Splunk should see less resistance to expansion with existing customers in 2019 from both direct and indirect clients. We expect massive roll out of 7.2 for clients to take advantage of this ASAP.

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MongoDB (MDB)

MongoDB announced high throughput clusters with Atlas on AWS on 11/28/18. This announcement is being well received by SIs and end users because this allows better scalability of data repositories in MongoDB's NoSQL data base. It therefore, makes the cloud a more viable alternative for production use cases, vs. just POCs. Most NoSQL or Hadoop clusters used to house Big Data/Machine Learning/AI databases are only connecting to the cloud, not recommended for full deployment in the Enterprise. This might suffice for SME/SMB clients, but larger companies implementing PB-size repositories must compete for resources for analytics and BI in an IaaS deployment. More scalability for MongoDB helps level the playing field as they compete with Hadoop nodes in the cloud. We'll continue to monitor the battle between NoSQL and Hadoop as 2019 progresses.

Cloudera (CLDR)/Hortonworks (HDP)

In following up our recent note on the CLDR/HDP merger, we discussed challenges as the merger progresses. We are hearing from our larger Global SI contacts that some customers are pushing back on implementations of Hadoop nodes for project use case roll outs and node expansions for additional use cases. This slowdown was not expected so soon, as one Solutions Architect lamented. As expected, Cloudera is reaching out to every large customers in the indirect channel of both Cloudera and Hortonworks to ease concern. Also as expected, Hadoop SIs and resellers believe that the combined company will be adopting the Hortonworks partner strategy, as it was more successful than Cloudera's.

Tableau (DATA)

Tableau Viewer allows non-data scientists to view data on mobile devices or a laptop. Although this product is arguably two years late, it finally is providing a good answer to the commoditization of the visualization market by Microsoft Power BI. Tableau Viewer is priced aggressive (~$12 / seat). Once a user experiences self-serve analytics and BI, the transition to create more templates from a simple dashboard drives a number of them to upgrade to Creator. The ability to obtain these capabilities via subscription also helps to make this cost effective. Most of the subscriptions are multi-year, so customer retention should improve as they come close to conversion of 100% of their customer base to subscriptions.

Once again, though, channels indicate that the data prep feature in Tableau Conductor has not gained significant traction, especially if a client is already using a legacy analytics engine. On a positive note, most clients using other data prep engines still prefer to discover new insights and view them in Tableau. Field contacts have told SPR that the feature function of Prep Conductor hasn't unseated many incumbent analytics products, even though Tableau offered data prep for free to try out.

Elastic (ESTC)

ESTC's new release, 6.5, of Elastic Stack has gotten positive response from our channel contacts. The UI, Dashboard, and analytics visualization improvements had been long overdue, since the market has been moving towards self-serve analytics. Easier customized dashboards for secure access by roles like security, operations, finance, and marketing are now available. This release delivers improvements for Operational Analytics metrics and log file analysis that customers have been asking for, somewhat leveling the playing field with Splunk. This version also provides interactive file import for source-based data integration to ingest new data into Stack. All these features are included with an upgrade to 6.5. SIs see this progress as solidifying customer retention and allowing Elastic to compete better in the market. They expect steady growth in 2019, much of it driven by machine learning use cases. Another note: Elastic Stack is

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present at EVERY Center of Excellence with nearly all Global Systems Integrators as it becomes a standard for POCs for new use cases in Big Data/Analytics/BI.

As always, we are happy to discuss in more detail.

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