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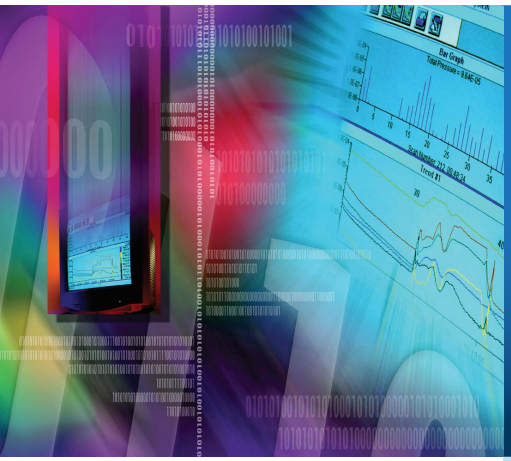

Alteryx Server: *Scaling Self-Service Data Analytics for the Enterprise*

Introduction

Social media, connected device, and cloud data all represent opportunities for organizations to harness information to increase market competiveness. Companies around the globe are embracing the notion of a data-driven culture and arming their front-line business users with an ever-increasing amount of data to improve productivity and make better, more informed decisions. However, even with all this new data, many decision-makers don't have timely access to all of the data available to them when they need it, collectively costing businesses billions of dollars annually.

Organizations are not only dealing with more data than ever before, they are also dealing with more data sources. The result? Larger and more complicated workflows and additional tools to complete the necessary analysis—usually requiring the help of IT. The downstream effect is both on the analyst driven to make sense of all of this data, and on the IT personnel who have to execute complex ETL tasks and govern access to information. Worse yet, processing this data requires more computing power, which can bog down desktops for hours at a time.

While the rise of self-service tools has empowered more users with the flexibility and power to run their own analytics, blending, analyzing, and sharing this data remains a key issue. Many analysts still spend a significant amount of time prepping and customizing existing reports instead of adding business value by working on new analytic projects. And sharing these insights with various decision-makers and other departments using cloud file sharing sources or Excel spreadsheets containing confidential company information sent via email can pose significant security risks. What's more, data governance and backup procedures present a completely different set of challenges.

However, with the right analytics tools, organizations like yours can overcome the challenges of a complex and changing data landscape—and gain a competitive advantage.

The Rise of Self-Service Data Analytics

In the past, business users who deployed modern, self-service analytics tools were a rarity, breaking from the status quo of using rigid enterprise BI tools. Today, that is quickly changing, as users experience firsthand the significant benefits of self-service tools.

Some of the benefits of adopting self-service data analytics tools, such as *Alteryx Analytics*, include:

- **Flexibly accommodating the ever-growing number of data sources:** With the rise of mobile, social, cloud, and big data, the amount of data floating in the digital universe now exceeds 2.7 zettabytes. The array of new data types and sources has led to a variety of new relational and NoSQL database technologies to handle this structured and unstructured data, many with unique syntaxes and coding languages. According to *Harvard Business Review*, "For typical organizations, the number of different data sources can range from less than five, but in many cases, more than 15."[1] Today's organizations need the flexibility to access, blend, and analyze any number of data sources with a single toolset and without having to code.
- **Democratizing data and data science skillsets:** Along with the increase in the variety of data sources comes a range of syntaxes, languages, and big data skills that organizations must use in order to access data. The result? A shortage of

1 *Harvard Business Review*, "Data Blending: A Powerful Method for Faster, Easier Decisions," 2015.

"The shift to the modern BI and analytics platform has now reached a tipping point. Organizations must transition to easy-to-use, fast and agile modern BI platforms to create business value from deeper insights into diverse data sources."

Gartner

skilled staff that has the programming skills to access and integrate these data silos, as well as the business knowledge to understand the data and apply the right analytics. Providing tools that make it easy to access and integrate both structured and unstructured data, and run advanced analytics on the combined dataset, reduces the need to staff hard-to-find data scientists.

- **Reducing manual data preparation tasks:** Accessing the variety of new data sources, joining them with internal and external data sources, and cleansing and processing the blended data file all require manually intensive labor. Many data analysts still use more than 10 different tools to do their jobs, spending far more time preparing data than analyzing it. And studies estimate that analysts spend as much as 80 percent of their time preparing data, leaving only 20 percent of their time for actual analysis. A single tool that can access, prep, blend, and analyze data from a variety of data sources reduces analysts' learning curve and eliminates the time-consuming chore of moving data between tools, leaving more time for value-added business analysis.

- **Empowering business users and reducing IT workloads:** Due to the growing number of data sources, tools needed to access these new data sources, and the complex workflows required to extract and transform data, many organizations rely on IT for assistance. However, this causes frustration among already stretched IT staff members, who need to focus on more strategic projects, as well as among the business users who must wait for IT to provide them with the data they need. Self-service tools both free IT staff from laborious data prep work and provide business users with the right tools to more quickly prep and analyze data.

The Challenge: Deploying Self-Service Tools at Scale

Historically, data access, data integration, and business intelligence tools have all been evaluated, purchased, deployed, and centrally managed by an organization's IT department. However, over the past decade, the tide has begun to shift from IT-led purchasing to line-of-business user-led purchasing. Why? Because data and analytics have become strategic, business-critical components for nearly every organization. The downside of this shift, however, is that line-of-business users have to procure and manage their own analytics tools, often without any thought of the downstream impact on the business and the IT staff required to support them.

While agility and flexibility are important for self-service models, organizations must also consider the IT controls and governance needed to support them. Fully decentralized self-service models can lead to duplicate data across the organization, increased security risks, and missed business opportunities. But by ensuring analytic governance is built into their platform of choice, organizations can rest assured that they are utilizing a modern BI platform that not only helps users access, blend, prepare, and analyze data faster, but also provides enterprise-ready solutions that are scalable and reusable, as well as provide data governance and improve cross-team collaboration.

Deploying an Enterprise-Ready Solution

Many organizations already reap the benefits of self-service data analytics tools and put data into the hands of their front-line staff and business partners. This data democratization is revolutionizing the way businesses connect and use information, providing new opportunities to capture and extract real business value. But taking advantage of a self-service platform doesn't mean trading governance and control for flexibility and agility: Data-driven decision-making can become a part of an organization's culture without creating chaos.

Gartner Press Release, Gartner Says Worldwide Business Intelligence and Analytics Market to Reach $16.9 Billion in 2016, February 3, 2016, http://www.gartner.com/newsroom/id/3198917

Key features of an enterprise-ready, self-service data analytics solution:

- Ability to run processes simultaneously on a scalable server infrastructure
- Simple, easy, and secure method for creating scheduled jobs
- Built-in APIs and macros for extensibility
- Centralized platform for collaboration and version control
- Standardized reporting, administration, and monitoring

If you want to deploy an enterprise-ready self-service data analytics solution, here are the benefits you can gain:

- **Scaled end-to-end data analytics:** Many analysts and business users are hamstrung by large-scale datasets and complex analytics that can cripple their computing platforms. A solution with built-in scalability can help users overcome the limitations of their current system, instead scaling it out on a server infrastructure to fit the business requirements and support better, faster decision-making.
- **Improved security and analytic governance:** By involving IT in the solution and running analytics on a server, you gain the peace of mind that data backups occur regularly and that high-availability options protect against crashes, power outages, failures, and even lost laptops. This helps the organization centralize and manage analytic processes with standardized administration, management, and monitoring. Further, your IT team can rest assured that corporate security rules for access, permissions, and analytic governance rules are in place.
- **Automated, simultaneous workflows:** By scheduling and automating multiple workflows to run when and where you want, you can ensure that decision-makers always have the latest data at their fingertips. What's more, you can choose to run more complicated, computing-intensive workflows during off hours or control how frequently analytic applications are refreshed, providing additional control.
- **Centralized sharing and collaboration:** By securely storing, sharing, and running workflows in a centralized location accessible to everyone on your team, you gain the confidence that you can easily reuse projects and ensure the integrity of workflows. Centralizing your practice makes it easier to manage your analytics when working with distributed teams, and empowering business decision-makers with self-service access to customized analytic apps and automated data refreshes allows analysts to focus on strategic projects instead of recreating weekly, monthly, and quarterly reports.
- **Extendable analytics:** By directly embedding workflows and analytics into internal applications, you can reduce the time required to execute processes and eliminate custom coding. Instead of creating new applications from scratch, you can embed processes using built-in APIs to extend the capabilities of these apps and put data into the hands of a greater number of decision-makers.

The bottom line? A modern BI and analytics platform provides the benefits of self-service data analytics as well as a solution that can be scaled across the enterprise without breaking existing IT controls.

Guidelines for Deploying Self-Service Data Analytics at Scale

Once you've deployed an enterprise-ready, self-service analytics solution, Alteryx recommends that you follow these guidelines to make the most of your investment:

- **Plan for the future:** When it comes to deploying a self-service data analytics platform across an organization, there is no one-size-fits-all recommendation for setting up your hardware infrastructure. Doing research and planning at the onset will help with long-term administration and management. Speak with your analysts to determine how many concurrent users will be accessing the system, the frequency of jobs that will be run, the average amount of data that needs to be processed, and how this might change over time. These are all factors that will impact your system performance and infrastructure needed.

- **Determine availability requirements:** Availability shouldn't be an afterthought. How important are the analytics that you deliver to the business? Work with your IT team to determine your organization's tolerance for downtime. Is it 5 minutes per year (99.999% availability) or is 8 hours and 45 minutes acceptable (99.9% availability)? For high-availability situations, factor in planned downtime due to hardware maintenance or service pack installations as well as unplanned downtime, such as that caused by a hardware failure. Once you have determined this tolerance, IT managers can help you make business decisions about how high of an availability solution your organization should have, and the failover and backup plans required.

- **Consider scalability options:** By deploying data analytics on a dedicated server, you can overcome the limits of your analysts' desktop systems and scale your analytic processing to fit your business requirements. You can scale incrementally by deploying components on a single machine, or distribute certain components on multiple machines as your usage and processing requirements grow. Again, it comes back to planning. Will you need to scale to allow more users to create analytic applications, scale to process a higher number of application execution requests, or scale to accommodate more business users accessing your web on the front end? Each scenario impacts how you will scale up or scale out your infrastructure.

- **Establish user roles and permissions:** As you begin to scale out your data analytics practice across the organization and enable more users to access this valuable data, security should be taken into consideration. From preventing unauthorized access to ensuring proper role and permission access, you will need to manage how users interact with the data and publish analytics. Built-in user authentication like email address and passwords, Window Active Directory, and proprietary encryption algorithms can ensure that all communications between systems remain safe and secure.

Conclusion

Deploying an enterprise-wide self-service data analytics solution doesn't mean you have to give up control or governance. You can support your analyst team and business decision-makers with more timely information, greater flexibility, and better collaboration while ensuring analytic governance.

Using a modern, flexible, and enterprise-ready analytics platform like *Alteryx Server* in your organization, you can move all of your analytic processing to one or more servers that can run complicated processes and workflows more quickly and efficiently, enabling you to take advantage of key business opportunities and maintain your competitive advantage. With greater processing power, collaboration, and speed, your data analysts can get the deep insights they need to help your organization.

To learn how you can empower everyone in your organization to use self-service data analytics, vist **www.alteryx.com/products/alteryx-server**

About Alteryx

Alteryx is the leader in self-service data analytics. *Alteryx Analytics* provides analysts with the unique ability to easily prep, blend, and analyze all of their data using a repeatable workflow, then deploy and share analytics at scale for deeper insights in hours, not weeks. Analysts love the Alteryx Analytics platform because they can connect to and cleanse data from data warehouses, cloud applications, spreadsheets, and other sources, easily join this data together, then perform analytics—predictive, statistical, and spatial—using the same intuitive user interface, without writing any code. Thousands of companies and data analysts worldwide rely on Alteryx daily. Visit www.alteryx.com or call 1-888-836-4274.

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