Big Data and Advanced Analytics Survey 2014

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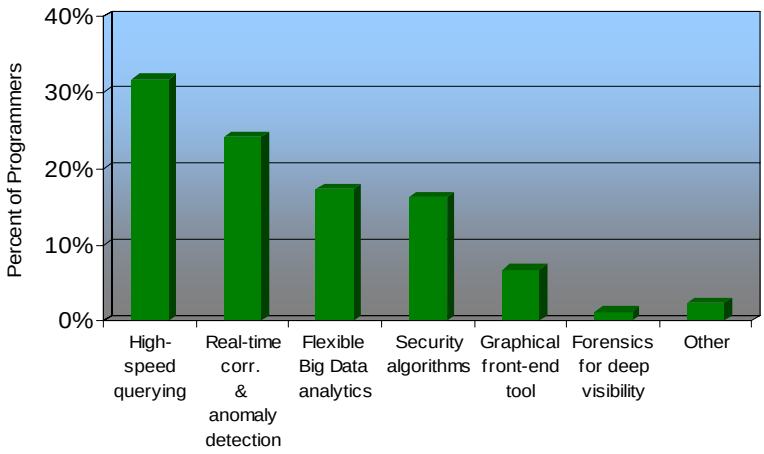
Most Important Areas for Vendor Action to Help Secure Big Data

Information security and maintaining the privacy of sensitive data are two of the top problems or risks that developers see in Big Data adoption, and -- as later analysis reveals -- more than 58% of Big Data developers have run into a situation in which traditional security mechanisms for data don't work with Big Data or unstructured data. Adopting the right security practices throughout their organizations and baking security into their Big Data projects is a critical component of securing Big Data, but developers may also hope for tech assistance from their Big Data vendors. In order to meet their security requirements, developers look for tools that query security intelligence data and provide flexibility in algorithms, analytics, and correlation across various types of data.

Which of the following would be MOST helpful things a vendor could supply to you to help secure big data?



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High-speed querying of security intelligence data is the top area for vendor action; 32% of Big Data developers report that high-speed querying is the most helpful thing a vendor could supply for them to help secure Big Data, and this consideration reprises its role atop the list. High-speed querying can help match the rate at which Big Data projects receive data, providing greater security to both structured and unstructured data.

An additional 24% of developers would find real-time correlation and anomaly detection of diverse security data to be the most helpful thing a vendor could supply for them to help secure Big Data. As diverse security streams come in, this feature would process the data and correlate the information. This area has increased nominally over the previous period.

Which of the following would be MOST helpful things a vendor could supply to you to help secure big data?

	Valid Percent
High-speed querying of security intelligence data	31.8
Real-time correlation and anomaly detection of diverse security data	24.1
Flexible big data analytics across structured and unstructured data	17.3
Security algorithms for various scenarios	16.3
Graphical front-end tool for visualizing and exploring big data	6.8
Forensics for deep visibility	1.2
Other	2.5
Total	100.0

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Network Provider Data Feeds for Predictive Analytics

About 7% of Big Data developers report that their company's data analytics primarily receive data from network providers. When they do, developers are slightly more likely to report that their company's predictive analytics receive data feeds from mobile apps and mobile internet usage history than they are to report that their organizations receive information regarding user's call and SMS history.

Of the 7% of Big Data developers whose company's predictive analytics primarily receive data from network providers, 76% report that their company's predictive analytics receive information about mobile apps and mobile internet usage history. Thus, these developers' companies are looking for how often a person uses an Internet radio app when in the car, or how often a person visits their favorite department store's website after a trip to the mall. Another 69% report that their companies' predictive analytics receive data about the calls and SMS sent out and received.

Note: This question was asked only of those developers who indicated that they perform predictive/advanced analytics based on data that is obtained from network providers.

What type of data from network providers feeds your company's predictive analytics?	Count	Percent of Responses	Percent of Cases
Mobile apps and mobile internet usage history (e.g., site/app, date, hour, duration)	32	39.5	76.2
Calls and SMS history (e.g., destination, date, hour, duration)	29	35.8	69.0
Geolocation data	18	22.2	42.9
Other	2	2.5	4.8
	-----	-----	-----
Total Responses	81	100	192.9
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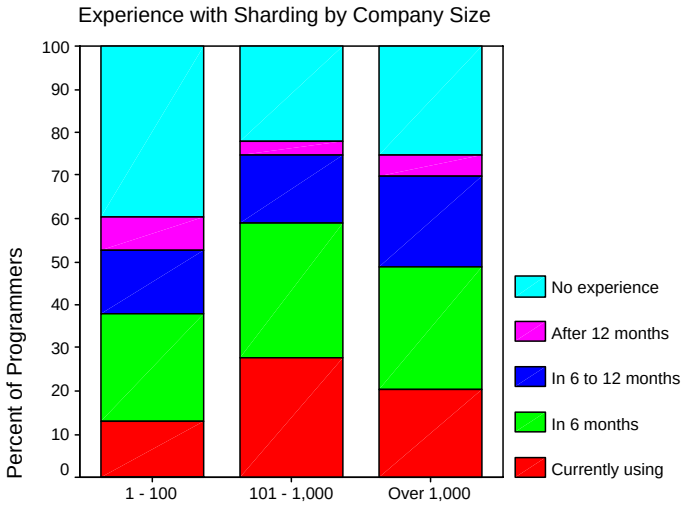
Note that this multiple response question allowed the developers to select as many responses as they wished, and thus the total number of cases will not come to 100%. The response column shows the percent of total responses, while the case column shows the percent of actual developers (cases) who responded.

EXPERIENCE WITH SHARDING BY COMPANY SIZE

Sharding is valuable for distributed computing applications, so it is no surprise that the medium-sized and large companies, most heavily involved with Big Data projects, are more likely than small companies to either be currently using database sharding or planning to do so.



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Specifically, only 13% of Big Data developers in small companies are currently using database shards, as contrasted with 28% in medium-sized companies and 20% in large companies. Forty percent of Big Data developers in small companies have no experience with sharding and no plans for sharding; 22% and 25% of those in medium-sized and large companies, respectively, report no experience with or plans for sharding.

About how many people are in your company at all locations?
*** What is your experience with data shards?**

			What is your experience with data shards?					
			Currently using them	Plan to use in 6 months	Plan to use in 6 to 12 months	Plan to use after 12 months	No experience or plans	Total
About how many people are in your company at all locations?	1 - 100	% within row	13.0%	25.0%	14.8%	7.4%	39.8%	100.0%
		% within column	14.3%	20.6%	20.3%	36.4%	34.4%	23.7%
	101 - 1,000	% within row	27.6%	31.5%	15.5%	3.3%	22.1%	100.0%
		% within column	51.0%	43.5%	35.4%	27.3%	32.0%	39.8%
	Over 1,000	% within row	20.5%	28.3%	21.1%	4.8%	25.3%	100.0%
		% within column	34.7%	35.9%	44.3%	36.4%	33.6%	36.5%
Total		% within row	21.5%	28.8%	17.4%	4.8%	27.5%	100.0%
		% within column	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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