

# DRIVING DECISION- MAKING, SECURITY & INSIGHT WITH BIG DATA

**VION** 

**IBM**

# DRIVING DECISION- MAKING, SECURITY & INSIGHT WITH BIG DATA



---

## Introduction

**Chapter 1:** The Big Data Imperative

**Chapter 2:** Remove Big Data Roadblocks

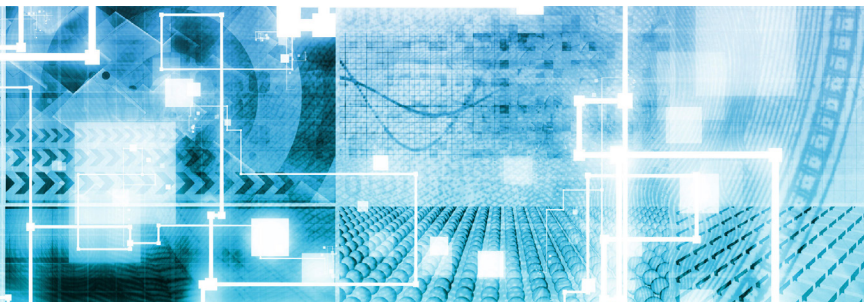
**Chapter 3:** Optimize Threat Detection  
and Prevention

**Chapter 4:** Eliminate Cyber Threats

**Chapter 5:** Extend Capabilities without  
Compromising Security or Compliance

**Chapter 6:** Put Powerful Experts on Your Side

**Why ViON?**



# INTRODUCTION



Big Data is a big deal and the push to understand, manage and put Big Data to work is only getting stronger. Big Data is growing at exponential rates and the high costs and risks of missed opportunities to use structured and unstructured data keep many up at night. As does the continued uptick in criminal activity, fraud, insider threats and cyber crime worldwide, which could be slowed or even stopped with the proper use of Big Data.

With a pressing desire to leverage Big Data to its full advantage while facing an increasingly complex Big Data landscape, many agencies and businesses are stuck. With so much data on hand, so much at stake, and so many solutions and varied approaches to Big Data challenges in the marketplace, they are unsure of where to turn or which direction to take. Yet, inaction only increases risk, particularly in the case of possessing potentially powerful information, but not knowing what to do with it.

ViON and IBM can help. In this eBook, we'll show you how to unravel Big Data complexities and get Big Data initiatives moving in the right direction fast to expand insight, security and capabilities across your organization. We'll also share real-world examples of how organizations are using ViON's DataAdapt solutions to derive maximum value and protection from Big Data now to stay ahead of the curve well into the future.

[Read on to learn more.](#)



# 1: THE BIG DATA IMPERATIVE

The time to act on Big Data is now. Every day that an organization spends evaluating how they are going to get their hands on and around Big Data is another day of lost opportunities. Big Data holds the promise of better understanding for targeting customers, optimizing business processes, improving healthcare and public safety, enhancing machine and device performance, strengthening security and law enforcement, and so much more.

Yet, as the volume, velocity and variety of data increase, so do the number of solutions required to manage and extract actionable intelligence from data. Some organizations are spending months and even years mired in analyzing which approach to take or trying to assemble, engineer and deploy Big Data solutions on their own.

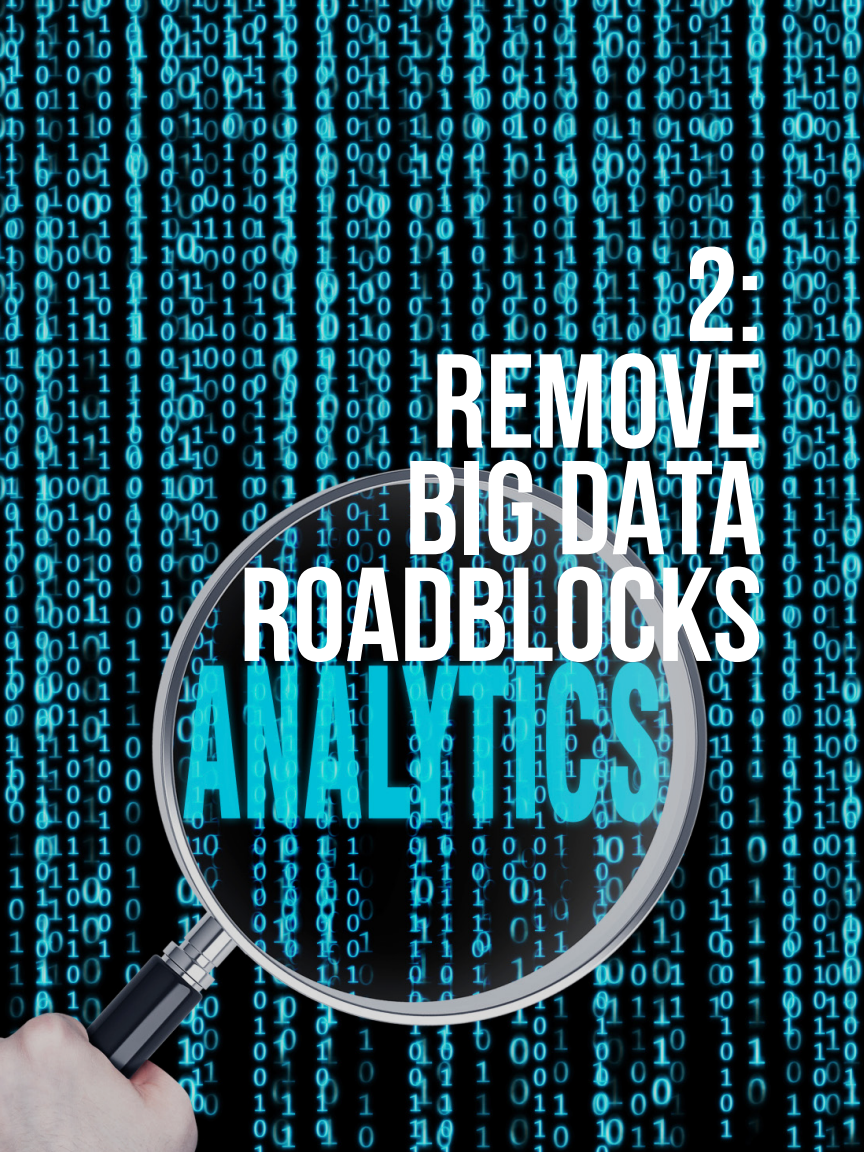
The paralysis by over-analysis that has frozen so many organizations into inaction is creating the perfect opportunity for threats, criminal activities and cyber crime to thrive. Domestic and internal criminal activities, fraud, false claims, and even insider threats from employees or people with malicious intent to harm, coupled with access to IT systems, are wreaking havoc around the globe.

We've seen a growing number of high-profile hacks and attacks on varied entities, with targets ranging from the White House and U.S. State Department to Anthem Health and the Office of Personnel Management (OPM), just to name a few in recent headlines. Fraudulent claims cost the Federal government an estimated \$300B per year. And we've experienced the devastating impact of insider threats during the DC Naval Yard and Fort Hood shootings, both of which were carried out by insiders who might have been stopped with proper Big Data access and analysis.

Sadly, it seems that organizations are not only missing opportunities to empower innovation, growth and efficiencies with Big Data. They are missing vital opportunities to protect their data, valuable information assets and people, by failing to move forward with Big Data initiatives now. ViON's DataAdapt solutions are designed to address these challenges by enabling analysts to apply advanced analytics, at speed and scale. This helps them uncover hidden connections buried within hundreds of terabytes of data, bringing rapid clarity to complex investigations and generating actionable insights, in near-real time.

# 2: REMOVE BIG DATA ROADBLOCKS

# ANALYTICS

A hand is visible at the bottom left, holding the handle of a magnifying glass. The magnifying glass is positioned over the word 'ANALYTICS', which is written in large, bold, cyan letters. The background is a dark blue field filled with vertical columns of binary code (0s and 1s) in a lighter cyan color, creating a digital or data-centric atmosphere.

Clearly, it's time to get into gear with Big Data. ViON's DataAdapt Big Data platform removes the roadblocks that have been standing in the way of public sector, enterprise and commercial organizations' ability to move forward and extract value from their Big Data.

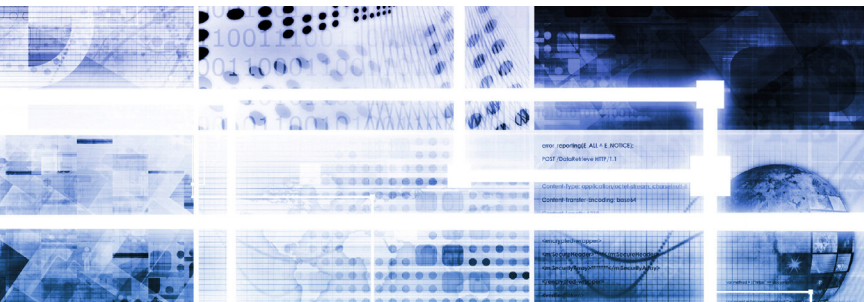
Thanks to ViON and IBM, you don't have to spend years – or thousands upon thousands of dollars – to build a Big Data platform. Instead, you can take confident first steps toward Big Data empowerment and success with DataAdapt A1000 Active Insight, which dramatically simplifies the process and increases speed to value of Big Data objectives.

The perfect entry-level Big Data solution, ViON's DataAdapt A1000 Active Insight solution includes a pre-configured Apache Hadoop® platform with purpose-built IBM BigInsights® software that enables advanced Big Data analytics capabilities fast. With DataAdapt Active Insight, organizations can:

- Quickly jump start Big Data initiatives and empower operational efficiencies by eliminating data silos and modernizing data warehouse environments
- Take advantage of pre-configured, pre-tested and optimized Big Data architecture instead of wasting time and money with DIY approaches
- Create a framework for Big Data exploration and discovery
- Leverage pre-built analytic capabilities to capture opportunities and drive decision-making

## DataAdapt A1000 Active Insight in Action

DataAdapt A1000 Active Insight provides a fast-track to Big Data insight for today's healthcare organizations that don't have time to slow down and build a Big Data solution from scratch. Using DataAdapt Active Insight, Federal or commercial healthcare organizations can leverage and extend the value of their current Big Data assets by aggregating their current database with data from pharmaceutical repositories, such as Drugs.com, and patient review websites. They can then analyze pharmaceutical items, signs and symptoms as well as pharmaceutical pairing trends. Pharma producers and suppliers can anticipate increases or decreases in need for certain products by geography and disease type. And healthcare organizations can identify pharma logistics requirements, unique items required temporally, and align supplies and services with disease trends.



# PHARMA PRODUCERS AND SUPPLIERS CAN ANTICIPATE INCREASES OR DECREASES IN NEED FOR CERTAIN PRODUCTS BY GEOGRAPHY AND DISEASE TYPE



# 3: OPTIMIZE THREAT DETECTION & PREVENTION

The background is a deep blue with a subtle grid pattern. A large, semi-transparent globe is centered behind the text. To the right, a large, glowing padlock icon is visible. Scattered throughout are binary digits (0s and 1s) and faint circuit-like lines. In the foreground, there are three tablets. The top-left tablet shows a world map with a login form overlay. The bottom-left tablet shows a similar world map with a clock icon and a login form. The right tablet shows a code editor or terminal window with HTML-like tags and binary code.

The complex and intricate web of today's threat matrix calls for a sophisticated and holistic approach to threat detection and protection. However, most agencies don't have the resources or expertise to engineer a complete solution for storing, reading and distributing data let alone the ability to integrate, analyze and extract intelligence from complex and disparate data sets. But without it, connections are missed, criminal activities thrive and catastrophes occur that might have been avoided altogether.

Today, a revolution in the data-to-decision (D2D) process is being driven by this need for real-time response. Investigators and analysts have access to more data than they can process in a timely fashion. Yet, organizations must apply reason, analysis and advanced analytics over massive sets of available data comprised of a range of formats; both structured and unstructured, in order to derive actionable intelligence and insights that can inform decisions. ViON's DataAdapt A2000 Threat Detect solution penetrates the increasing expanse of data as well as criminal sophistication and cultural depth of malicious insiders, terrorists, syndicates and individuals intent on obscuring their identities, relationships and criminal affiliations.

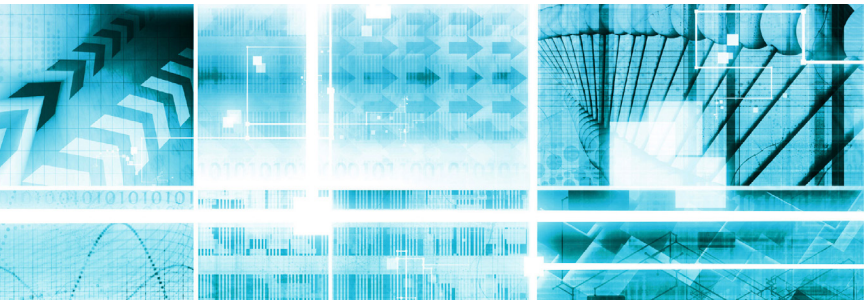
Powered by IBM's InfoSphere software backed by Cisco and NetApp hardware, ViON's DataAdapt A2000 Threat Detect delivers the speed, ease and economy of a Big Data appliance and utilizes proven entity resolution and analysis capabilities to reveal multiple degrees of separation between people, essential for mapping social networks and tracking coordinated movements that might otherwise avoid detection. Using DataAdapt A2000 Threat Detect, organizations can:

- Save time and accelerate missions with fully-integrated, flexible capabilities within a scalable proven platform

- Identify and prevent fraudulent and criminal threats with a powerful and configurable analytics engine
- Eliminate data silos (even across dispersed agencies), align data assets and uncover hidden intelligence, relationship intersections and coordinated nefarious activities

### **DataAdapt A2000 Threat Detect in Action**

For a law enforcement agency that wants to improve the accuracy and efficiency of police investigations, DataAdapt A2000 Threat Detect could help the department decrease criminal investigation time. The department could use DataAdapt A2000 Threat Detect to fuse data records from the DMV, FBI and DHS with public property and historical law enforcement records, enhancing visibility to more easily identify high threat individuals. They could easily conduct identity resolution and entity management analytics, as well as automated association and relationship link analysis, to better protect the community. DataAdapt A2000 Threat Detect could also provide another layer of protection with mobile entity recognition and the ability to establish alerts based on two (2) degrees of separation for known high threat individuals.



# LAW ENFORCEMENT AGENCIES CAN IMPROVE ACCURACY WHILE DECREASING CRIMINAL INVESTIGATION TIME





# 4: ELIMINATE CYBER THREATS

Everyone, across every industry and sector, is now vulnerable to digital crime. For organizations providing essential services, including utilities, government assistance, banking and telecommunications, the increasing threat of cyber crime is particularly daunting. While data breaches and hacks make headlines every day, nearly 60 percent of cyber attacks remain undetected. A new approach is required to isolate, identify and mitigate the risk of data and network compromise from cyber hacktivism, and analyzing Big Data is key.

With DataAdapt S2000 Cyber Secure, ViON delivers a turnkey, converged hardware and IBM software solution for Big Data cyber security. IBM's Streams technology, Security Intelligence Q-Radar and Netezza analytics platform coupled with Semantic Pattern Accelerator™ platform running pre-tested cloud-based architecture provides an unprecedented level of insight, control and analysis to stop cyber threats in their tracks.

Using DataAdapt S2000 Cyber Secure, organizations can:

- Enable near real-time data processing, correlation and anomaly detection to see and stop cyber attacks
- Strengthen overall security stance and streamline security operations with pre-defined rules and reports, offense scoring and prioritization, activity graphing, compliance reporting and workflow management
- Empower Big Data preservation and processing with long-term, multi-PB storage for structured and unstructured data and a distributed Hadoop infrastructure
- Examine data and eliminate threats with advanced, predictive analytics and forensics, decision modeling, interactive visualizations and more

## **DataAdapt S2000 Cyber Secure in Action**

A government organization that wants to improve their accuracy and efficiency in fighting cyber threats can use DataAdapt S2000 Cyber Security to ingest large volumes of sensor data in near-real time and keep vast amounts of data in persistent memory to power new depths of awareness and responsiveness. The agency gets new real-time security intelligence coupled with asynchronous security intelligence and is able to integrate massive sets of public and social media data above the proxy with NetOp and user history below the proxy. They can then provide a collaborative worksite for cyber analysts to identify and thwart cyber attacks, eliminate insider threat vulnerabilities and provide actionable predictions for Advanced Persistent Threats (APTs).



INGEST LARGE VOLUMES  
OF SENSOR DATA IN  
NEAR-REAL TIME AND  
KEEP VAST AMOUNTS  
OF DATA IN PERSISTENT  
MEMORY TO POWER NEW  
DEPTHS OF AWARENESS  
AND RESPONSIVENESS



**BIG  
DATA**

**5:  
EXTEND  
CAPABILITIES  
WITHOUT  
COMPROMISING  
SECURITY OR  
COMPLIANCE**



Government agencies are under tremendous pressure to expand capabilities and the use of technology to serve constituents. At the same time, they must meet regulatory standards, certifications and compliance requirements that often impede progress.

ViON's DataAdapt S1000 Rapid Deploy solution provides a service-oriented architecture (SOA) and interoperable software platform powered by IBM that speeds deployment of new applications without compromising security and provides a common, reusable and interoperable platform that enables Defense, Military and Federal System Integrators to on-board third-party applications and services in days rather than months. Using DataAdapt S1000 Rapid Deploy, agencies can:

- Eliminate 75 percent of cyber costs from deployment processes
- Speed third-party application and service deployments and deliver immediate access to mission applications in operational environments
- Quickly evaluate the functionality of new applications with actual mission data prior to accrediting new apps
- Reduce enterprise security vulnerabilities overall

### **DataAdapt S1000 Rapid Deploy Security Framework in Action**

Using DataAdapt S1000 Rapid Deploy, a Federal Systems Integrator (SI) could increase value to a major Program of Record to win a re-compete. DataAdapt S1000 Rapid Deploy enables rapid onboarding of critical mission apps from a variety of vendors that require certification and accreditation (C&A) and standardizes operational data into a classified network through a message broker. This allows the SI to secure, monitor, bridge and compute data, providing a virtual data layer enabling a trusted hosting platform. The SI can also accelerate compliance with government adopted Open Standards, Enterprise Services and Information Assurance (IA) culture, shortening time to value and reducing their Artificial Intelligence specialists' level of effort.



6:  
**PUT POWERFUL  
EXPERTS  
ON YOUR SIDE**

Big Data is difficult. ViON puts powerful experts on your side to quickly establish the infrastructure and capabilities to store, manage and harness Big Data to its full advantage. ViON is already helping forward-thinking Federal government agencies and private companies solve Big Data challenges with DataAdapt. Allow us to do the same for you.

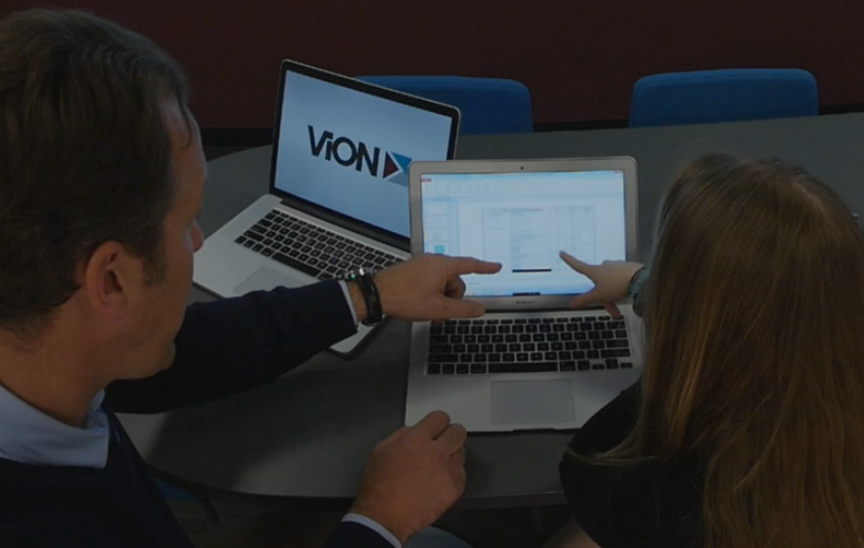
ViON's DataAdapt platform lets you benefit from our powerful partnership with IBM, well known for its ability to bring a new level of intelligence and efficiency to the way in which people, businesses, organizations, governments, and systems interact. The entire DataAdapt platform is pre-engineered to deliver the highest levels of performance and expansive capabilities without all of the costs and complexity of trying to take on Big Data on your own. But both ViON and IBM recognize that even the most powerful technology can't deliver on the promise of Big Data alone.

That's why all ViON DataAdapt technology solutions are delivered by Big Data experts, who assess current infrastructure, data assets and critical challenges, providing customized recommendations to meet highly specified mission objectives. Our experts can design, implement and even manage your select DataAdapt solutions, leveraging our proven expertise in Data Management, Engineering, Data Architecture and Analysis. A full Portfolio of Value Added Services, including consulting, education and support, further lifts the burden of traditional solution deployments.

DataAdapt delivery models are also highly flexible, and our experts can help you determine whether purchase, subscription-based or Cloud delivery will be most cost efficient for your agency or enterprise.



# WHY ViON?



ViON's DataAdapt platform is a preconfigured, validated architecture that takes the guesswork out of Big Data initiatives and dramatically speeds time to value for our customers. We partner with leading technology providers like IBM, YaData, L-3 Data Tactics, Cisco and NetApp to develop customized analytical solutions with extreme flexibility to meet today's market demands. ViON has over 35 years of experience in delivering enterprise data center solutions for the most complex public sector, enterprise and commercial customers, which we have built on to develop the DataAdapt platform. To learn how the ViON DataAdapt Analytics solutions can help you, please visit [www.vion.com/Solutions/Big-Data](http://www.vion.com/Solutions/Big-Data).

ViON Headquarters  
196 Van Buren Street  
Herndon, Virginia 20170  
(877) 857-ViON (8466)

[www.vion.com](http://www.vion.com)

