

CGI Secure Data Fabric

Enabling Space Traffic Management



U.S. government organizations conducting space operations use data from multiple sources, with varying levels of sensitivity and classification. Federal-civilian, defense, intelligence, private sector and even foreign data contribute to the space traffic management (STM) mission. Protecting all the information – from classified data to intellectual property – can be an overwhelming challenge. Lacking other solutions, organizations use extremely stringent security protocols that force “stovepiping” of data. The question is: Will we be able to share all available mission critical data securely and still meet operational timelines?

The answer is yes. The solution is CGI Secure Data Fabric. Using enterprise-level digital transformation and Attribute-Based Access Control (ABAC), access rights are granted through a set of combined attributes. This approach – together with Blockchain technology – enables secure data management regardless of source complexity, classification or user base.

CGI SECURE DATA FABRIC – DEFINED

There are tools today that independently address data discovery, data access and data sharing, but there is no single solution that universally—or adequately—addresses all three... until now. Enter CGI Secure Data Fabric, CGI's effective and efficient method for securing all data elements within the data environment. The CGI Secure Data Fabric solution facilitates data sharing through a unique security platform that:

- promotes efficient access and discovery of data across and between organizations
- provides robust audit traceability
- promotes discoverability and validates access without the need for duplicating data
- maintains data integrity, authority, and non-repudiation

Together, these functions provide a secure data sharing platform that gives information seekers the insights they need, while allowing data owners to maintain full control of their data—without the need for a centralized, single-party controlled data repository.

ENABLING TECHNOLOGY

CGI Secure Data Fabric earns its name from the effects of its core enabling technologies – blockchain and ABAC. These technologies, when woven



CGI SECURE DATA FABRIC FOR GOVERNMENT

Agencies need to share data without duplication while ensuring authenticity.

- **MAINTAIN CHAIN OF CUSTODY**
Organizations and data providers need to know which users have access to data and what is done with it.
SDF enables data owners to define how to share their data internally or externally.
- **EMPOWER THE NEED-TO-SHARE, SAFELY**
Agencies need to control and understand who has access to sensitive information. Locking down data through security policies and user access privileges is extremely complex, builds in delay and even discourages allowable information sharing.
SDF employs a zero trust access policy with digital signature.

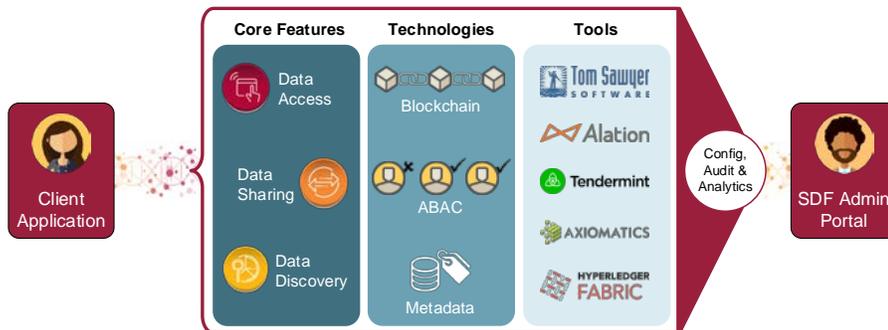
ACCESS CRITICAL INFORMATION AT THE RIGHT TIME

When timing is crucial, the operator must know what data is available and useful to users.

SDF enables rich search and discovery capabilities.

CGI Secure Data Fabric

together, create a secure environment that is ideal for data sharing, access and discovery across multiple security environments.



IMPROVING SPACE, DEFENSE AND INTELLIGENCE OPERATIONS

Space

The U.S. and its allies rely on space for economic well-being and national security. Satellites provide communications, navigation, timing for computers, earth observation, life-saving weather information and intelligence needed to understand potential adversaries' actions. Even as more satellites are launched every day, nations are threatening to deny the U.S. the use of space by degrading or destroying satellites.

The fact of a "congested and contested" environment has led to the need for STM, a means of providing real-time information regarding space objects' activities. In order to achieve effective STM, U.S. and allied governments and private sector companies need a solution that permits access to a wide variety of data sources from space and ground-based sensors, while maintaining control of multiple classification levels and protected Intellectual Property.

The unique combination of blockchain and ABAC provided by CGI Secure Data Fabric ensures that organizations needing space traffic information get it – securely – on time, every time.

Defense and Intelligence

Terabytes of data are collected every day – from U.S. government, industry and foreign partners using satellites, aircraft, ground systems and ships; and underwater and underground. Highly technical sensors collect data remotely, while human sources collect everything from publicly available information to extremely sensitive classified material.

Defense and intelligence officials must balance how to share as much information as possible with the people who need to know, while simultaneously keeping the mix of data safe and secure.

CGI Secure Data Fabric ensures real time secure access to any type of data that an end user is authorized to see – and ensures that they can not see anything else.

CGI'S ALIGNMENT WITH SPACE POLICY DIRECTIVE – 3

- Encouraging and facilitating U.S. commercial leadership in Science and Technology (S&T), Space Situational Awareness (SSA) and Space Traffic management (STM)
- Providing U.S. government-supported basic SSA data and basic STM services to the public
- Improving SSA data interoperability and enable greater SSA data sharing
- Developing STM standards and best practices
- Improving U.S. domestic space object registry

ABOUT CGI

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world. Operating in hundreds of locations across the globe, CGI delivers an end-to-end portfolio of capabilities, from strategic IT and business consulting to systems integration, managed IT and business process services and intellectual property solutions. CGI works with clients through a local relationship model complemented by a global delivery network to help clients achieve their goals, including becoming customer-centric digital enterprises.

For more information visit cgi.com or email space@cgifederal.com